

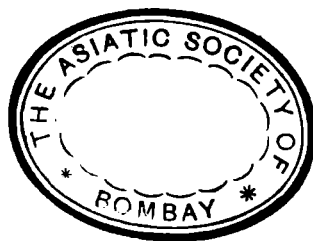
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ART. VI.—*Dharmasindhu, or the Ocean of Religious Rites, by the Priest Kashinatha. Translated from the Sanscrit and commented upon by the REV. A. BOUQUIN. (Art. 2nd.)*

[Read 15th July 1881.]

CHAPTER IV.

COMMON DEFINITION OF TITHIS (OR DATES).⁶⁴

There are two kinds of Tithis, viz., the Complete Tithi and the Defective Tithi.

Counting from sunrise, that Tithi which includes fully 60 Ghaṭikas is a Complete Tithi; that differing from it is a Defective Tithi.

The Defective Tithi is itself also of two kinds, viz., the Pure Tithi and the Encroached Tithi.

The Tithi which stretches from sunrise to sunset or, at (holy) times like Shivarātra⁶⁵ and others,⁶⁶ up to midnight, is a Pure Tithi; that differing from it is an Encroached Tithi.

The Encroachment is also of two kinds: the Morning Encroachment and the Evening Encroachment.

When the point of contact of one Tithi with the next occurs within 6 ghaṭikas measured from sunrise, then this (encroachment of the

⁶⁴ Cf. note 20 on the origin of Tithis, where we have shown them to be, in spite of the shine of astronomical reality lent to them by their relative inequalities following the law of the inequality of the moon's motion, but of an astrological character, resting, as they do, on a merely arbitrary division of the moon's orbit into 30 parts.

⁶⁵ Shivarātra or "Night of Shiva" is the day of vigil and fasting held in honour of Shiva and falling on the 14th Tithi of every month, but especially the 14th of the month Māgha and stretching up to midnight, after which time only cooked food may be taken. The ground of this vigil is the legend that a hunter obtained Moksha or final deliverance from active life and the awful course of transmigration, by his shaking down from a Bilva tree, upon which he had climbed to observe a deer, throughout the night, leaves upon a Lingam, Shiva's Phallus, and thus, though unintentionally, propitiated that god and gained his good-will.

⁶⁶ Like, for instance, Gokulāshṭami and others which will be described further on in the translation, and the fasting of which lasts also up to midnight.

first Tithi upon the solar day of the following Tithi) is the Morning Encroachment; but when the point of contact occurs within the 6 ghatikas preceding sunset, then this (encroachment of the second Tithi upon the solar day of the first Tithi) is the Evening Encroachment (*cf.* note 67).

This Encroachment will be further on explained in connection with the sacrificial vow of the eleventh Tithi. With certain peculiar Tithis the Encroachment is of greater length; the 5th Tithi, for instance, encroaches upon the 6th by 12 ghatikas, the 10th encroaches upon the 11th by 15 ghatikas and the 14th upon the 15th by 18 ghatikas.⁶⁷ Now, these Encroached Tithis may be taken for the performance of some rites, while they must be rejected for some others.

There being no doubt concerning the Complete Tithi and the Pure Tithi, a special definition of them is not necessary.

In connection with prohibitions a definition of the Defective Tithi is also unnecessary, for, according to the text "The prohibition concerns only the (settled) time of the abstention,"⁶⁸ the Tithi only must be considered which includes that very time in which something is prohibited, like, for instance, the eating of cocoanuts and other edibles on the 8th and other Tithis.

Here follows a definition of the Appointed (times for the performance of) sacrificial vows and other rites.

Concerning this point, that Tithi must be taken which includes the time appointed for each rite. For instance, the worship and other rites connected with the sacrificial vow of Vináyakachaturthi⁶⁹ being appointed for the middle of the day, that Tithi must be taken which includes the middle of the day. When a Tithi stretching over (parts of) two days either includes or does not include, or nearly includes the time appointed for a rite, then may, according to the text on "Pairs,"

⁶⁷ The term "Encroachment of one Tithi upon the next" is properly speaking a slip of language, for a Tithi does not encroach upon the other but upon the solar day in which the other Tithi occurs.

⁶⁸ The author does not say from which of the works named in note 19 he quotes here.

⁶⁹ Vináyaka is another name of Ganésha or Ganapati described in note 6; Chaturthi is the 4th Tithi of the month. Vináyakachaturthi, more commonly called Ganéshachaturthi, is therefore the 4th Tithi of every light half month, and is called so because it is dedicated to that god. The word "chaturthi" after Vináyaka is not in the text, but has been put into the translation by me for the sake of clearness, as this passage clearly refers to that holy Tithi.

either the preceding Encroached Tithi or the following Encroached Tithi be taken. The text on "Pairs" is as follows: "The Pairs of Two and the Fires; of the Ages and the Elements; of Six and the Sages; of the Vasus and the Holes; of the Rudras and the 12th; of the 14th and the Full Moon Date; of the Last Date of the Dark Moon and the First Date of the Light Moon, are very propitious."⁷⁰ Now here "Two" stands for the 2nd Tithi or date, "Fires" for the 3rd Tithi (&c), and the 2nd Tithi is to be taken which is encroached by the 3rd Tithi, and the 3rd is to be taken which is encroached by the 2nd. Thus is made the Pair of the 2nd and the 3rd Tithi, the Pair of the 4th and the 5th, of the 6th and the 7th, of the 8th and the 9th, of the 11th and the 12th, of the 14th and the 15th or full moon date, and of the 15th of the dark moon and the 1st of the (following) bright moon.

In some cases the definition given by special texts such as the following "For the sacrificial vow of Ganapati of the 4th Tithi the third broken Tithi of his mother⁷¹ is commended," should be observed. Should the Tithi which, according to a special text, is to be taken, be found not to include the exact time ordered for a (certain) rite,⁷² then should the regulation of general texts be followed. Now these

⁷⁰ To understand this passage one must remember that there are three Fires (*cf.* note 30) and that therefore the word "Fires" means three or the 3rd Tithi; that there are four Ages or Yugas (*cf.* note 60), and therefore the word "Ages" stands for the 4th Tithi; that there are five elements, and this word therefore stands for the 5th Tithi; that there are seven Sages corresponding with the seven stars of Ursa Major, and the word "Sages" therefore means 7th Tithi; that the Vasus, a kind of heavenly beings, are eight, viz., Apa, Dhruva, Soma, Dhava, Anila, Pāvaka, Pratyúsha, and Prabhása, and therefore the word "Vásus" stands for the 8th Tithi; that there are nine bodily holes, viz., the ears, the eyes, the nostrils, the mouth, the urethra and the anus, and the word "Holes" therefore stands for the 9th Tithi; that there are ten Rudras, a kind of celestial creatures, whose names, according to the Váyu Purána are Ajaikapád, Ahvibradhra, Hara, Nirrita, Ishvara, Bhuvana, Angáraka, Ardhabketu, Mrityu, Sarpa and Kápalin, and that therefore the word "Rudras" stands for the 11th Tithi; that finally "the Full Moon Date" is the 15th Tithi of the light half month, and the "Last Date of the Dark Moon" the 15th of the dark half month.

⁷¹ The mother of Ganésa or Ganapati (*cf.* note 6) is Párvati, the wife of Shiva. She is the tutelary divinity of the 3rd Tithi, while her son is that of the 4th (*cf.* note 69).

⁷² There are some sacrificial rites or ceremonies for the performance of which certain hours of the day are specified as absolutely necessary, like, for instance, the One-Meal-a-Day-Rite described in the next chapter, and many others, in connection with which the middle hours of the day only can be used.

(general) texts rule that, "The Tithi which includes a sunrise should be known as a complete Tithi for the performance of rites like ablutions, gifts and incantations (muttered and counted on a rozary)."

Thus is the common definition (of Tithis), the fourth chapter.

CHAPTER V.

DESCRIPTION OF SPECIAL RITES.

There are two kinds of rites, viz., those for the Gods and those for one's ancestors' manes.

The rites for the Gods are of six kinds, viz., the One-Meal-a-Day-Rite,⁷³ the Night-Meal-Rite, the Non-begging Meal-Rite, the Fast, the Sacrificial Vow⁷⁴ and the Donation-Rite.

Eating once only in the middle of the day and but one kind of food is the One-Meal-a-Day-Rite.

Eating in the night at the time of evening-tide is the Night-Meal-Rite.

Eating the food which is received on the same day and without begging is the Non-begging-Meal-Rite, yet some say, that eating the food which has been received on previous days and prepared by one's wife, son, &c., without begging it from them, is the Non-begging-Meal-Rite.

Eating neither by day or by night is the Fast.⁷⁵

Special rites as, for instance, sacrificial worship⁷⁶ and such like, are Sacrificial Vows. Renouncing one's right to one's property and giving it to others is the Donation-Rite.⁷⁷

⁷³ Quite literally translated the word "Ekabhukta" means only "One Meal" (*scil.* a day). However, though this meal is usually not connected with special religious ceremonies and sacrificial offerings others than those performed in connection with ordinary daily meals, it is itself a penitential observance prescribed to those who have come under God's displeasure like the widow, the widower, the sonless, &c., bears thus a special religious character, and may very properly be called a "Rite." The use of the word "Rite" in translating the following observances needs no explanation, as our author calls them Naktavrata, Dána-vrata, &c.

⁷⁴ The word we translate thus is "Vrata," *cf.* note 69.

⁷⁵ One must not imagine, however, that this fast is necessarily very rigid, as, according to the teaching of next chapter, a whole series of different kinds of food may be eaten without detriment to the fast.

⁷⁶ The word we translate thus is "Púja," which cannot be translated by "worship" alone, as it is always accompanied by a sacrificial offering.

⁷⁷ The word thus translated is "Dána," which some erroneously render by "Charity" or "Almsgiving-Rite," for the gifts, as will appear throughout the book, are not made to the poor but to Bruhmins, and not to them as poor, but to them as priests.

The above rites of One-Meal-a-Day, &c., are of three kinds ; sometimes they are to be performed as complement-parts of the Sacrificial Vows, sometimes they are to be performed instead of the fast of the 11th Tithi, and sometimes they are self-depending. Those which are performed as complement-parts (of other rites) and those which are substitutes for other rites will be described in connection with those chief rites (to which they are thus related).

Here follows a description of the self-depending Rites.

In connection with them is the day divided into five parts.⁷⁸ The first part is called "early morning," the second is called "forenoon," the third "mid-day," the fourth "afternoon" and the fifth "late afternoon." The six ghaṭikas following sunset constitute the Evening Tide.⁷⁹ For the One-Meal-a-Day-Rite the Tithi which among these times stretches over the mid-day time should be taken. Here, again, disregarding the first half of this Tithi's day,⁸⁰ which has 30 ghaṭikas, and beginning with the 16th ghaṭika, one should count 3 ghaṭikas as the best time for the meal. The time following thereon up to evening is of an inferior nature.

As to the extension of the Tithi on to the mid-day time, it is of six kinds, viz., when the Tithi reaches that chief time on the previous day, when the Tithi reaches it on the following day, when it reaches it on both days, when it does not reach it on either day, when with exact equality it reaches it nearly on both days, and when it reaches it nearly on both days but not equally. Now there can be no doubt as to this, that, when the Tithi reaches the chief time (of midday) on the previous day, the previous day should be taken (for the performance of such rites),⁸¹ and when it reaches it on the following day, then should the following day be taken. When the Tithi reaches it on both days, then should the text on "Pairs"⁸² be followed ; when it does not reach it on either day, but extends only to the inferior time of both days, then should

⁷⁸ "Day" means here of course the time from 6 o'clock in the morning to 6 o'clock in the evening, and as such a day consists of 30 ghaṭikas (*cf.* the text to note 31) every one of these 5 times is equal to 6 ghaṭikas.

⁷⁹ The word we translate thus is "pradosha." It implies something unholy, and its time is considered unpropitious to the reading of the Vedas and other most holy rites.

⁸⁰ We must never forget that a Tithi is very different from a day (*cf.* note 20 on Tithis).

⁸¹ *Scil.* such rites to the performance of which the time of mid-day is prescribed.

⁸² *Cf.* on this point the text of note 70, Chapter IV.

the previous day be taken ; when it reaches it nearly on both days equally, then should the previous day be taken ; when it reaches it nearly on both days though not equally, and there is sufficient time for the performance of a rite on both days, then should the text on " Pairs " be followed ; but if there is not sufficient time for the performance of the rite on either day, ⁸³ then should the first day be taken.

Description of the Night-Meal-Rite.

For the Night-Meal-Rite the Tithi which includes the Evening Tide of the six ghaṭikas following sunset should be taken. If from the two days of a Tithi, the Tithi on the first day includes that Evening Tide and on the second only nearly reaches it, then should that day in which the Tithi includes it be taken.

A usual meal also should not be taken, but after the evening twilight of three ghaṭikas after sunset is passed, as eating, sleeping, sexual intercourse and study are forbidden during the time of twilight. The ascetic, the sonless, the widower, and the widow, to whom eating in the night is forbidden, ought on Tithis which include the " Late Afternoon," to eat the Night Meal at the time of the eighth division⁸⁴ of the day. Thus also should the Night-Meal-Rite performed to the honour of the sun, on a Tithi which includes the Late Afternoon, take place at day-time. When the Tithi includes the Evening Tide on both days, then should the second day be taken ; when it does not include it on either day, then should likewise the second day, the Late Afternoon, the eighth division of the day, be taken for the performance of the Night

⁸³ The word I translate in this sentence by " day " is Tithi, which is an irregularity, but it can bear in this place no other meaning. It will be now and then seen that the author of our work confounds the two, though they differ so widely (*cf.* note 20). The meaning of the text is of course that a rite which requires four ghaṭikas for its performance, having to be done on a certain Tithi, the 4th Tithi for instance, and at a specified time, the chief time described above for instance, which lasts from the 10th to the 18th ghaṭika, if that 4th Tithi should begin with the 17th ghaṭika of the previous day and end just with the 16th ghaṭika of the following day, including thus only two ghaṭikas of the " chief time " on the first day and but one ghaṭika of the " chief time " on the second day, both times being insufficient for the rite, which should last four ghaṭikas, then should the first day be taken.

These rules are of course quite arbitrary.

⁸⁴ According to some the day of 30 ghaṭikas is to be divided into eight parts of 3½ ghaṭikas each. The eighth division would thus correspond with the time between half-past four and six o'clock in the evening. This time is kept up to this present day on the occasions and by the persons named above, for whom there is a general rule that they should not eat oftener than once a day.

Meal-Rite, but not night time. When the Tithi nearly includes the Evening Tide on both days equally, then should the second day be taken. When it includes it nearly on both days, but not equally, then should the first day, in which the Evening Tide included by the Tithi is longer, be taken; that is, if that included longer time is sufficient for the worship and the meal; if it is insufficient, then should not the first day, though it includes somewhat more of it, but the second day, be taken, following the rule (given above) concerning the Tithi which nearly includes the Evening Tide on both days equally. The meal of this Night-Meal-Rite being ordered by scriptural texts, must be eaten at night time even on Sundays, and at times of the sun's entrance into the mansions or of any other solar occasions; for the prohibition to eat at night on Sundays, or at the time of any other solar occasion, concerns meals eaten according to one's own wish (and not meals ordered by Scripture). The Night-Meal-Rite as ordered by the Scriptures to be performed instead of the fast of the 11th and other Tithis, must take place during that day-time which is ordered for the fast.

The Non-begging-Meal-Rite, which can be performed either by day or by night, follows the rule on fasts.

The definition of the rites for the ancestors' manes, which are to be performed on the day in which the Tithi includes the afternoon, will be given further on in connection with the explanation of each of them.

When the One-Meal-a-Day-Rite, the Night-Meal-rite, the Non-begging-Meal-Rite and the Fast are performed on the first day of the Tithi, then must on the following day, at the end of the Tithi, their completing break-fast⁸⁵ take place; but when the Tithi reaches over the third watch of the day, then, according to Madhava, must the completing break-fast take place in the morning.

Thus is the definition of rites such as the One-Meal-a-Day, &c., the fifth chapter.

CHAPTER VI.

Description of Sacrificial Vows.

Women and Shudras are not allowed to fast more than two nights. Without the permission of their husbands women should not perform fasts, sacrificial vows, &c. On fasting days and days on which the

⁸⁵ This break-fast constitutes the end of full fasts or of partial fasts like the One-Meal-a-Day, the Night-Meal, &c., and consists generally in choice food and, at least now, unspirituous drinks. It is a kind of revouge-taking feast, much after the manner of the Romish carnival.

ancestors' commemorative funeral rites are performed, one should not cleanse his teeth with a stick,⁸⁶ but with leaves, or with twelve mouthfuls of water. Holding a copper vessel filled with water, and the face turned towards the north, one should in the morning resolve upon sacrificial vows, like fasts and others.⁸⁷ Sacrificial vows should not begin or end in the intercalary month, during the setting of Jupiter and other planets, at the time of the inauspicious (astrological) conjunctions of Vaidhṛiti and Vyatipāta,⁸⁸ and of the Karṇa called Vishtī,⁸⁹ on

⁸⁶ This stick is usually a small twig of the Bábhul tree (a sort of Acacia Arabica), the end of which is beaten until its fibres form a sort of small brush, with which each tooth is rubbed in turn, and which must then at once be torn into pieces and thrown away. Bundles of such twigs are sold at all Indian bazaars.

⁸⁷ This act of resolving is performed in the manner described in note 27. The sight of multitudes of Brahmins and other orthodox Hindus coming out in the morning each holding a waterpot and murmuring this resolution is quite amazing to a newly-arrived European spectator.

⁸⁸ There are 27 such conjunctions, the above Vyatipāta being the 17th, and Vaidhṛiti the 27th. Their names in due order are as follows:—Viśhkambha, Pṛiti, Āyushmán, Saubhāgīa, Shobhana, Atiganda, Tukarmá, Dhṛiti, Shula, Ganda, Vṛidhi, Dhruva, Vyāghata, Harshana, Vajra, Sidhi, Vyatipāta, Varyána, Parigha, Shiva, Sidha, Sādhyā, Shubha, Shukla, Brahmá, Aindra and Vaidhṛiti. Some, as for instance the two above named, are entirely unholy, while others are holy in their beginning and unholy in their end, or *vice versa*, their auspiciousness or ominousness being already implied in their etymological meaning. They are of course entirely astrological and are adjoined to the Tithis in regular order, and lend to them their own character of sacredness or desecratedness. To find which of these astrological conjunctions is to be adjoined to each Tithi, the Jyotishasāra gives the following rule: "Mark the asterism (*cf.* note 25) of the sun on that Tithi, and count the number of asterisms which are between it and the preceding asterism of Pushya, both included; then, again, mark the asterism of the moon on that Tithi, count the number of asterisms which are between it and the preceding asterism of Shravana, add both numbers, subtract from the sum 27 (being the number of astrological conjunctions), and the rest will give you the number in due order of the yoga of that Tithi." The Grāhalāgava gives a more complicated rule to find the yoga or astrological conjunction of a Tithi, but we have said enough to show the unreality of its character, and a further description would be useless.

⁸⁹ This is the 7th of the astrological half Tithis called Karṇas, of which there are eleven, viz., Bava, Bálava, Kaulava, Taitila, Garaja, Vanija, Vishti (called also Bhadra and Kalgáni), Shakuni, Chatushpad, Naga and Kimstughna. Each of the 30 Tithis of the month is divided into two parts, making 60 Half Tithis, to each of which a Karṇa is adjoined; but as there are only 11 Karṇas, the first 7, from Bava to Vishtī, are repeated eight times over, covering thus 56 Half Tithis, wherefore they are called constant Karṇas, leaving the 4 last of the 60 Half Tithis to be covered by the 4 last of the 11 Karṇas.

rejectable days⁹⁰ and on the last Tithi of the dark half month. Thus also should on Defective Tithis no sacrificial vow be begun or finished according to the precept of Satyavrata,⁹¹ "The Tithi which includes a sunrise but does not stretch on to mid-day is a Defective Tithi, and on such a date no sacrificial vow should be begun or finished." Patience, truth, pity, donations, purity, restraining the senses, worship of the gods, oblations, pleasure and abstaining from theft are binding during the time of sacrificial vows.⁹²

Herein should the peculiarity of the voluntary sacrificial vows be known, that the burnt-offering (connected with it) should be performed with the Holy Sounds.⁹³ When the sacrificial vow of a fast

⁹⁰ Tuesday and Saturday chiefly.

⁹¹ The author of Dharmashastra.

⁹² Such a precept confining virtuous actions within certain limits may be surprising to a Western mind, not to a modern orthodox Hindu however, for in the two following verses,

भेदानृतस्तेयविषामिशस्त्रवध्याभिघाताहवशात्त्यादंभान्
सेनानिवेशाकरधातुहेमप्रवालरक्तानि कुजे विदध्यात्
लोहाश्मसीसन्नपुशस्त्रदासपापानृतस्तेयविषासवादं
प्रवेशद्विपबंधदीक्षा स्थिरं च कर्मार्कसुतेऽहि कुर्यात्

the Jyotishasara teaches that on Tuesdays and Saturdays one may cheat, provoke, betray, steal, lie, poison, murder, destroy, sin and commit other heinous crimes, though this probably does not mean that one *must*, or even that *every one may* perpetrate them, but rather that those who are in a special manner under the influence of Badness, the third of the three natural qualities which are the components of this universe, being compelled by their own nature to commit such acts, may do so impunibly only on Tuesdays and Saturdays, which days thus become a kind of safety-valve to the overstrained evil propensities of Badness, from the influence of which as little as from the influence of the two other natural qualities of Goodness and Indifference no one within this universe, not even Brahm himself, as far as a fourth part of him has been developed into this universe, can save himself.

⁹³ The word translated here by Holy Sounds is Vyâhṛiti, which refers chiefly to the three words Bhur, Bhuvar, Svar, which are pronounced at the beginning of nearly all incantations, prayers and rites. Bhur is the earth, Bhuvar the space between the earth and the sun, Svar the space between the sun and the Polar star. Beside these 3 worlds there are other 4, making in all 7 supra-mundane worlds, every next being higher and better than the preceding. The names of the last four are Mahar, Janar, Tapar and Satya loka. The souls that reach this last one are said to be exempted from further transmigration. Often is the name of the fourth, Mahar, and seldom the names of the last three used in connection with rites in the same manner as Bhur, Bhuvar, Svar.

is performed to the honour of a certain deity, then must one worship that deity, spiritually contemplate it, listen to recitations of its deeds, praise and glorify it by repeating its (numerous) names,⁹² &c. During a fast one should forsake the look and smell of food, the anointing oneself with oil, the chewing of pan-supári,⁹³ and the besmearing of one's body with fragrant unguents.⁹⁴ Married women in performing vows during the happy time of their wife-hood should not forsake the oil-ointment, the pan-supari, &c.

The following eight things do not impair a vow (with its fasts): Water, roots, fruits, milk, clarified butter (cf note 75), the (satisfaction of a) Brahmin's desires, the command of the family priest-teacher, and medicine. Should through neglect or other causes the vow be broken, then must a new vow with a three days' fast and shaving be observed. When one is too weak to perform a fast, then he should instead of it and as a penance give a repast to a Brahmin,⁹⁵ or the equivalent in money, or repeat 1,000 Gáyatri-incantations,⁹⁶ or perform

⁹² Vishnu, for instance, has 1,000 names which to repeat in due order is highly meritorious.

⁹³ The renowned leaf of the Piper Betel tree, with a piece of the Areca nut, lime, cardamoms, tobacco, and other ingredients which are chewed by natives after meals and presented to guests and visitors.

⁹⁴ The most used is powdered sandalwood mixed with sweet oil, also turmeric, aloe wood and saffron. It is rubbed on the forehead, arms, breast or sometimes on the whole body.

⁹⁵ If the giver is a Brahmin, the repast may be given in a cooked form, but if he is of another caste, then must the food be given in kind.

⁹⁶ The word Gáyatri means song or hymn. This name is given to that kind of hymns of the Rig Veda, the metre of which consists of a triplet of three divisions, with eight syllables each, but especially to that peculiar hymn contained in Rig Veda iii., 62, 10, which accompanies every religious rite, is considered as the most holy incantation of the Brahmins and other twice-born, and is so sacred that it is a great crime to any other but that privileged caste to pronounce it. It is usually preceded by the following four words:

ओं भूर्भुवः स्वः

Om, bhur, bhuvah, svah,

"Om" being the mystic monosyllable placed at the commencement of Hindu works, and uttered at the beginning and end of the reading of the Vedas and of prayers, so as not to be heard by profane ears. In latter Hinduism this word is said to be a compound of the three letters a, u, m, which stand respectively for Vishnu, Shiva and Brahma. But in the pantheistical Vedic Upanisads the word "Om" stands for Akshara, the Indivisible All. For the meaning of Bhur, Bhuvah, Svah, compare note 93. The Gáyatri itself is composed of 24 syllables,

12 times the breathing ceremony.⁹⁹ If one having made a vow is not able to perform it, then he should have it done by a substitute. One's son, wife, husband, brother, priest, friend, &c., may be one's substitutes. If the son or any other of the above named acts as a substitute for his father or for any other (friend or relative), he has a part in the recompense of the vow. The fast is broken by drinking water repeatedly, by chewing pan-supari once only, by sleeping at day-time, and by sexual intercourse, which is of eight kinds, viz., reflecting on it, singing about it, flirting, wanton looking on to it, concealed conversation in a secret place, the resolving to do it, the setting about doing it, and finally the committing it.¹⁰⁰ However if one is in danger of death there is no harm in drinking water repeatedly. Water contained in skins, other milk than that of the cow, lentils, limes and lime made from shells (*cf.* note 95) are reckoned as meat, and should be avoided at the time of a vow. Shedding tears or getting angry breaks the vow at once. If one during the time of his sacrificial vow eats food given by another, then does he who gives the food get the benefit of the vow. Sesamum seed and kidney beans excepted, all kinds of pulse, as peas, &c., the spotted bean (*Phaseolus Radiatus*), roots (like radishes, yams, &c.), all that is acid, salt sweet, as also animal food, should be avoided during the performance of vows. The *Panicum Colonum* grain, wild rice and wheat are not detrimental to a sacrificial fast. Rice, kidney-beans, barley, sesamum and *Panicum Italicum* seed, *Pisum*

and runs as follows :—

तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि
धियो यो नः प्रचोदयात्

Tat savitur varenyam bhargo devasya dhimahi dhiyo yo nah prachodayat, the t of the last word being counted as a full syllable, and its literal and sole meaning is as follows :—

“ We meditate on the glorious splendour of the divine Sun. May he enlighten our understandings.”

The word translated by “ Sun ” is “ Savitri,” and we follow herein the great Commentator Śāyana when he says that Savitri is always the sun, but often the not yet risen Sun. Hindu scholiasts spin the meaning of the Gāyatri into a length which its grammar does not permit.

⁹⁹ This breathing-ceremony is performed in the following manner :—one must close one's right nostril with the thumb and inhale the air through the left nostril only, then close both nostrils, and keep in the inhaled air as long as possible, then open the right nostril for exhalation, keeping the air out as long as possible, then again close with the thumb as before the right nostril to inhale through the left, and so on, repeating the process time after time up to the number prescribed.

¹⁰⁰ It is circumscribed here as it is with the text to note 92, that bad actions are to be avoided only at the holy times of vows, &c.

Sativum, peas and other grains ; red radishes, the *Arum Campanulatum* root and other bulbs ; rock-salt from Sindh,¹⁰¹ marine salts ; the produce of the cow, such as coagulated milk, clarified butter and milk ; the fruit of the Jacka-fruit tree, of the mango tree and of the cocoanut tree ; pot-herbs, the Piper Longum berry, cumin seed, dry ginger, tamarind, plantains, the *Anona Reticulata* fruit, myrobalans, sugar and all kinds of molasses, are all fit for oblations cooked without oil. Thus also are, say some, the cow's buttermilk and the buffalo's clarified butter.

Where the manner of the sacrificial vow is not specified, should an image of silver or gold of the weight of one *Māsha* (about 17 grains troy) be made and worshipped.

When the ingredients for the sacrificial vows are not specified, should an oblation of clarified butter be given. When the deity is not specified, should *Prajapati*¹⁰² be taken. When the incantation is not specially named, should that called *Vyāhriti*¹⁰³ be used everywhere. When the number of burnt offerings to be given is not specified, then should either 108 or 28 or 8 be taken.

In connection with (the performance of) a sacrificial vow when the fast is finished, should a repast be made to a Brahmin. When the concluding part of a vow is not specified, should one give a cow or gold to a Brahmin. The (incantation) word of a Brahmin is also a fitting component of a sacrificial vow, but everywhere must the Brahmin's word be requited by a present. A man who, having once resolved upon a sacrificial vow, gives it up, is like even unto the *Chandāla*.¹⁰⁴ Widows during vows and other rites should not wear gay or red coloured but only white clothes. Women at the time of delivery, menstruation, fever, or during an undertaken vow, should perform the rites of the body (as for instance fasting) themselves, but should have the other rites, as for instance the sacrificial worship (of the gods), performed by a substitute. But a rite which has not yet been begun should not be performed during delivery and such like times. Sub-

¹⁰¹ The country near the Indus river.

¹⁰² *Prajapati* in the Vedas is the epithet often given to the following gods : Sun, Moon, Ether, Fire, Winds, &c ; at a later time it was made to a separate deity, and invoked as the creator and the bestower of progeny and cattle ; sometimes even identified with *Brahm*, the Universal Essence. In Purānic mythology the name *Prajapati* is given to the ten lords of created beings, or great progenitors, the names of which are, according to *Manu*, 1.34, *Marichi*, *Atri*, *Angiras*, *Pulastya*, *Pulaha*, *Kratu*, *Vasishtha*, *Prachetas* or *Daksha*, *Bhrigu* and *Narmla*.

¹⁰³ Compare note 93 and also 98.

¹⁰⁴ The lowest and most despised caste.

stitutes are not allowed for rites to be performed in view of a special blessing, for a substitute may be taken only for obligatory constant rites,¹⁰⁵ or for occasional rites which are bound with special times¹⁰⁶; yet some say that a substitute is permissible even for rites performed in view of a special blessing, if the rite had already been begun (when the preventing sickness, &c., set in). No substitute is allowed for repeating the holy incantations, or to the householder (who is the leading person in the sacrificial vow), or for performing rites to the tutelary divinities (of certain days) and oblations to Fire.¹⁰⁷

Nothing prohibited should be taken as a substitute, say some. When several sacrificial vows or other rites fall on the same day, should those which are not contrary to each other, as, for instance, donations to Brahmins and (daily) burnt-offerings be performed one after the other; but when they are opposed to each other, as, for instance, the Night-Meal-Rite and fasting, then one of them should be performed by oneself, and the other by one's son, wife, &c. When the concluding part¹⁰⁸ of a sacrificial vow falls on the 14th and on the 8th Tithi, on which dates (according to the rule) no meal should be eaten during day-time, is the meal of that concluding part nevertheless allowed (at day time) according to the rule on concluding rites; for the above prohibition of the 14th and the 8th Tithi concerns only the usual meal one takes according to one's own pleasure daily. Thus also when unauspicious Tithis, like the 4th and others, on which meals should be eaten at night, fall on a Sunday, on which day meals should be eaten at day time, should the meal nevertheless be eaten at night. When a day happens to be both the 8th Tithi, on which eating by day is prohibited, and a Sunday, on which eating by night is prohibited, then should, taking both prohibitions, a fast be kept. When on the same day occur both an entrance of the sun into one of the mansions, at which time a householder who has a son should not fast, and the 8th or any other Tithi, on which meals are prohibited, then should one eat but very little, and thus keep the fast.¹⁰⁹ If during the performance of the

¹⁰⁵ Like, for instance, the three daily worships.

¹⁰⁶ As for instance the rites for the ascetors' manes (*cf.* note 47), or in connection with the birth of a child, or at the time of solar conjunctions, &c.

¹⁰⁷ Though Fire does not seem to be personified by modern Hindus in the same manner as it was in Vedic times, yet oblations to Fire are still obligatorily performed every day.

¹⁰⁸ The concluding part of nearly every rite and fast is a festive meal.

¹⁰⁹ We have already seen in note 75 how a fast is not necessarily broken by enjoying certain kinds of food.

rite called "the penitential vow of the lunar course,"¹¹⁰ the 11th Tithi (with its fast) occurs, should one nevertheless eat the number of mouthfuls falling on that day.¹¹⁰ Thus also should it be held when the fast called Kṛitchra¹¹¹ occurs (during the penitential vow of the lunar course). In the same manner, too, if the concluding part (*cf.* note 108) of an "intermediate fast"¹¹² falls on the 11th Tithi (with its fast) should one drink water only and thus keep the fast. When the concluding part of the one month's fast,¹¹³ or of the ancestors' funeral rite, or of the Pradosha-rite¹¹⁴ fall on the 12th Tithi with its fast, should the concluding meal rite be made of water. When a solar entrance into a sign, at which time a householder who has a son should not fast, occurs on the 11th Tithi with its fast, then should he drink but very little water and eat some roots, fruits and milk (and thus keep the fast, *cf.* note 75). If two fasts, or two Night-Meal-Rites or two One-Meal-a-Day-Rites fall on the same day, then should the following resolution be declared (*cf.* notes 27 and 87): "By means of this one ceremony shall I perform this (naming it) and that (naming it) fast," and thus the fast, the worship and the burnt offering be performed together. When a fast and a One-Meal-a-Day-Rite fall on the same day, and that day includes parts of two Tithis, then having recourse even to the inferior time of the day,¹¹⁵ the one rite should be performed during the time of the first Tithi and the other

¹¹⁰ The word thus translated is "Chándráyanam," which is a religious penance regulated by the moon's age. It consists in eating but 15 mouthfuls of rice on the full-moon date, and then decreasing the amount daily by one in accordance with the decreasing moon, in reducing it to 0 on the new moon date, then again in increasing it by one in accordance with the increasing moon until it comes again to 15 on the full moon date. This vow may begin either with 0 at the new moon, or with 15 at the full moon.

¹¹¹ It consists in taking no sustenance but water for a period of three or six or nine or twelve or twenty-one days. Hindus teach with their Shastras that taking but water no one can live more than 21 days; they were therefore much surprised last year to hear that the now famous American, Dr. Tanner, had lived on water for forty days.

¹¹² It consists in fasting on the first day, eating on the second, fasting on the third, and so on during the days fixed for the rite.

¹¹³ *Cf.* note 75.

¹¹⁴ A fasting rite performed to the honour of Shiva on the 13th Tithi. The word "Pradosha" used here differs in its meaning from the use made of it in the text to note 79.

¹¹⁵ This inferior time is usually the latter afternoon, when as a rule no rite ought to be performed.

rite during the time of the second Tithi ; but if that day consists of a single Complete Tithi (*cf.* Chapter iv.), then one of these rites should be performed by a substitute, such as one's son, &c. Following texts like this, "The rite performed in view of a special blessing is contrary to the constant rite"¹¹⁶ (*cf.* note 105) one should investigate which (of two rites falling on one day) should be performed, duly considering whether the one rite is voluntary and in view of a special blessing, and the other obligatorily constant, whether the one has a strong and the other a weak claim, whether they are opposed to each other or not, or whether they may be combined or not.

Thus is the general definition of sacrificial rites, the sixth chapter.

CHAPTER VII.

Description of the First Tithi.

For the worship, the sacrificial vow and other rites of the 1st Tithi of the light half-month (*cf.* note 20) should the first day of that Tithi be taken, if that day's afternoon is included in the Tithi. According to Madhaváchárya¹¹⁷ that first day should be taken even when its late afternoon only is included in the 1st Tithi. But if the Tithi does not include those portions of the first day, should the second day be taken. In the dark half-month should for the rites of the 1st Tithi always the second day be taken. For fasts also connected with the 1st Tithi of both half-months should the first day encroached by that Tithi be taken (*cf.* note 67). The declaration of one's resolve (*cf.* notes 27 and 87) to perform fasts and other rites on the 1st Tithi, including the afternoon of the preceding day, should be made on the morning (of that preceding day). Though the 1st Tithi may not reach back to the (morning) time when that declaration is made, nevertheless should the name of the 1st Tithi and not the name of the previous Tithi, in this case, for instance, the 15th Tithi of the preceding half month, be pronounced (*cf.* note 27). This rule should be followed also for the declaration of the sacrificial vow, the sacrificial worship or other rites of the 11th Tithi, when they are performed at the time of

¹¹⁶ The author does not say from which of the works named in note 19 he quotes.

¹¹⁷ Often called only Mádhava. He is regarded, together with the renowned Sáryana, as author of the celebrated commentary of the Big Veda, is the author of the Kálanirnaya, a treatise on times, and of several other works.

the fasting 12th Tithi of the light half-month, that is, the name of the 11th Tithi should be pronounced and not that of the 12th Tithi. But I think that in connection with other rites, such as the three daily worships, the oblation to fire, &c., the name of that Tithi, be it the 12th or another, should be pronounced, which includes the time (in which those rites are performed).

The declaration of rites may take place at dawn before sunrise, or in the morning after sunrise during the two Muhúrtas¹¹⁸ immediately preceding the third Muhúrta (which is forbidden).

Thus is the description of the 1st Tithi, the seventh chapter.

CHAPTER VIII.

Description of the Second Tithi.

For rites connected with the 2nd Tithi of the light half month, the second day encroached upon by that Tithi should be taken. As to the 2nd Tithi of the dark half month one should divide the (first) day on which it falls into two parts, if then the 2nd Tithi stretches on the first part, that first day should be taken, but if it be not the case, then should also here the second day encroached upon by that Tithi be taken.

Thus is the description of the 2nd Tithi, the eighth chapter.

CHAPTER IX.

Description of the Third Tithi.

In connection with the sacrificial vow to Rambhá¹¹⁹ should the first day encroached upon by the 3rd Tithi be taken. For all other rites of the 3rd Tithi except that of Rambhá, when the first day of the 3rd Tithi is encroached upon by the 2nd Tithi by three Muhúrtas (*cf* note 118) this first day should be rejected and the second day on which the 3rd Tithi stretches with three Muhúrtas should be taken. If the first day (of the 3rd Tithi) is encroached upon by less than three Muhúrtas by the 2nd Tithi, and the second day is encroached upon also

¹¹⁸ A Muhúrta is equal to two ghaṭikas or 48 minutes (*cf.* note 31).

¹¹⁹ Rambha is the name usually given to one of the most beautiful of the harlot nymphs called Apsaras, who inhabit the paradise of the god Indra. She is also often identified with Lakshmi (*cf.* note 9) and is then a kind of popular Venus. The 3rd Tithi of the month Jyeshtha is called Rambhá-triṭiya, because it is dedicated to that beautiful nymph, and Hindu women bathe and perform other ceremonies to her honour.

by less than three Muhúrtas by the 3rd Tithi, then should the first day be taken. When the first day is encroached upon by the 2nd Tithi by three Muhúrtas, and the second day is encroached upon by the 3rd Tithi by less than three Muhúrtas, should nevertheless this last be taken.

For the sacrificial vow of the 3rd Tithi to Gauri,¹²⁰ the first day of the 3rd Tithi, if it is the least encroached upon by the 2nd Tithi, were it but by one minute of the gnomon's stick,¹²¹ must be rejected, and the second day must be taken even if it includes but a very small part of the 3rd Tithi. But when on account of the shortness of the day¹²² no part of the 3rd Tithi whatsoever stretches on the following day of the 4th Tithi, then must the previous day be taken, even though it were encroached upon by the 2nd Tithi.

When at the time the days are long the 3rd Tithi covers over a first day with 60 ghatikas, and stretches on the second day with but a remnant of a ghatika,¹²³ should for the sacrificial vow to Gauri (*cf.* notes 120 and 71) that first full day be rejected and this second day in which the 3rd Tithi comes into contact with the fourth be taken.¹²⁴

Thus is the description of the 3rd Tithi, the ninth chapter.

CHAPTER X.

Description of the Fourth Tithi.

For all rites connected with this 4th Tithi, except the sacrificial vow to Ganesha, should the day on which this 4th Tithi meets with the 5th be taken.

For the sacrificial vows to Gauri and Ganésa (*cf.* notes 69 and 71) should that day on whose mid-day time the 4th Tithi stretches be taken ;

¹²⁰ Gauri is one of the epithets of Parvati (*cf.* note 71), to whom the 3rd Tithi of every month is dedicated.

¹²¹ Concerning the gnomon's stick, compare note 35.

¹²² That is, when the days being short the 3rd Tithi ends before sunrise. As an instance take the following example : The sun rises, say on a Monday, at 6h. 15m. o'clock ; the third Tithi which began on Sunday stretches on to Monday morning, but ends before sunrise, say at 6h. 10m., then must the Sunday and not the Monday be taken for the rites of the 3rd Tithi.

¹²³ Preference is given to this day because the 3rd Tithi is dedicated to Parvati and the 4th to her son Ganésa, and the day on which both Tithis meet is particularly holy. To understand this passage one must remember that some of the Tithis have more than 66 ghatikas, and can include two sunrises.

if it is on its second day that the Tithi includes the mid-day time, then should this second day be taken ; if the Tithi stretching over both days includes the mid-day time of both, or does not include the mid-day or either, or includes it nearly on both days equally, or nearly includes it on both days, but not equally, then should the first day be taken, the day on which the 3rd and the 4th Tithis meet having the preference.

For the sacrificial vows to the Serpentine Demons¹²⁴ should the first day be taken if its mid-day time is included in the 4th Tithi. If on both its days the 4th Tithi includes the mid-day time, or does not include it on either day, or nearly includes it on both days equally, or nearly includes it on both days but not equally, then must the second day, namely, that on which the 4th and the 5th Tithis meet, be taken.

For the rites of the inauspicious 4th Tithi (of the dark-half-month¹²⁵) should that of both days of the Tithi be taken which includes a moon-rise. If it is on the second day that the Tithi includes a moon-rise, then should the second day be taken. If this 4th Tithi includes a moon-rise on both days, then should the first day, namely, that on which the 3rd and the 4th Tithis meet be taken, but if it does not include a moon-rise on either day, should the second be taken.

Thus is the description of the 4th Tithi, the tenth chapter.

CHAPTER XI.

Description of the Fifth Tithi.

For all rites performed on the 5th Tithi of both the light and the dark half-months should the day on which the 4th and the 5th Tithis meet be taken ; except the fast to Skanda, ¹²⁶ however, for which rite the day on which the 5th and the 6th Tithis meet must be taken. For the rites to the Serpentine Demons also (*cf.* note 124) the following rule should be followed : that day on which the 5th is encroached upon by the 6th Tithi should be taken ; or when the 5th Tithi encroaches on the 6th Tithi by less than three Muhúrtas (*cf.* note 118) and the 4th Tithi on the 5th also by less than three Muhúrtas, then must this day

¹²⁴ The Nágas are a kind of demons with a human head and a serpent tail. They inhabit Pátála, the lowest of the seven infernal worlds described in note 11, the names of which are : Atala, Vitala, Sutala, Rasátala, Jalátala, Mahátala and Pátála.

¹²⁵ In contradistinction to the 4th Tithi of the light half-month, which is auspicious.

¹²⁶ For Skanda, the son of Shiva, compare note 11.

on which the 4th and the 5th Tithis meet be taken ; but when the 4th Tithi breaks up the 5th by more than three Muhúrtas, then must the other day (that is the day on which the 5th and the 6th Tithis meet) be taken, even though it had only two Muhúrtas of the 5th Tithi.

Thus is the description of the 5th Tithi, the eleventh chapter.

CHAPTER XII.

Description of the Sixth Tithi.

For the sacrificial vow of the 6th Tithi to Skanda (*cf.* note 11) should the previous day which is encroached upon by the 5th Tithi be taken. For all other rites of the 6th Tithi should its second day which is encroached upon by the 7th Tithi be taken ; yet if the first day of the 6th Tithi is encroached upon by the 5th Tithi by less than six Muhúrtas (*cf.* note 118) then should that first day be taken.

When the day on which the 6th and the 7th Tithis meet is a Sunday, it is called "the Lotus-conjunction."¹²⁷

Thus is the description of the 6th Tithi, the twelfth chapter.

CHAPTER XIII.

Description of the Seventh Tithi.

For all the rites of the 7th Tithi that day should be taken on which the 6th and the 7th Tithis meet. If however the 6th Tithi should last until sunset, and thus no part of the 7th can be got on that day (during day time), then must the following day, that on which the 7th and the 8th Tithis meet, be taken. This rule holds good also for all other Tithis.

Thus is the description of the 7th Tithi, the thirteenth chapter.

¹²⁷ Sunday being considered as a very auspicious day, and the lotus flower as the most beautiful flower, the meaning is self-evident.

ART. VII.—*Contributions to the Study of Indo-Portuguese Numismatics.* [Part 3rd.] By J. GERSON DA CUNHA, M.R.C.S.

[Read April 8th 1881.]

I.

Following in chronological sequence the vicissitudes of the numismatic history of Portuguese India, I must begin with the year 1580, when the sovereignty of Portugal passed from Cardinal D. Henrique to D. Philippe II. of Spain, the Viceroy of India being D. Luiz de Athayde, Conde de Athougua, who came out a second time, and continued in office from 1578 to the 9th March 1581. During his first viceroyalty, from the 10th of September 1568 to the 6th of the same month in 1571, he issued, amongst other useful measures, important resolutions relating to the Portuguese coinage in India. By a provision dated the 15th of November 1568, he commanded the issue of gold and silver coinage at Cochin, of which no specimen has unfortunately been preserved. The minting of this money was however met with considerable opposition from the people, the causes of which will hereafter be inquired into, when the viceroy gave a new regulation to the Mint on the 27th of August 1569. This new code of rules for the minting of money at Goa established that the future issue of the gold coinage should be entitled S. Thomés, each piece weighing 68·8 Portuguese grains, of the fineness of 43 points, or $20\frac{1}{4}$ carats, while the silver currency was to consist of *bastiões*, in substitution for the debased *patacões*, with its divisions of *meio bastião*, *tanga*, &c.

The coins extant of this coinage are the following :—

I. *Obverse*—P. R. (*Portugalix Rex*), the effigy of S. Sebastian standing to the right, pierced by four arrows. Round the margin a dotted rim, or *grènetis*.

Reverse—The coat-of-arms of the kingdom; on the left G and on the right A, the initial and final letters of Goa.

II. *Obverse*—Two arrows placed crosswise in the field, tied together in the form of the letter X, surmounted by a royal crown.

Reverse—The arms of the kingdom, having on the sides the letters G and A. The dotted rim, as in No. I. (See Plate III., fig. 1.)

All the coins are represented of the exact size.

Both the above coins are described by Mr. Teixeira de Aragão in his *Descrição Geral e Historica das Moedas Cunhadas em nome dos Reis, &c.*, Tome III., Lisbon, 1880, p. 154, and illustrated at Pl. I., figs. 10 and 11. Both coins are of silver. The weight of the first is given by the above-cited writer as 381 Portuguese grains, and the coin is said to be preserved in the collection of the late F. N. Xavier of Goa, while that of the second is 184 Portuguese grains. They are, moreover, called *bastião* or *pardao* and *meio bastião* or *meio pardao*, respectively. An example of the latter piece is also in the collection of Mr. J. M. de Sousa e Brito of Goa, who kindly lent it for illustrating this paper. Its weight is 147 grains troy. It is however supposed by some *connoisseurs* that this coin was struck during the reign of Cardinal Henrique.

The code of regulations given to the Mint of Goa by D. Luiz de Athayde in 1569 was put into execution not only during the first term of his viceroyalty, which ended in 1571, but also in the subsequent period filled up by the viceroys D. Antonio de Noronha, Antonio Moniz Barreto and D. Diogo de Menezes, who did nothing more than sign some provisions relative to the copper coinage, called *bazaruccos*, to be referred to further on, and to some other insignificant monetary matters. On his return to India in 1578, D. Luiz found his mint regulations in full force, which he completed by adding to the former issues of money that of a coin called *xerafim*, of the value of five *tangas*, of an alloy of silver and copper, in the proportion of one *larin* of copper to two and a half *larins* of silver.

Before proceeding on with the record of successive coinages struck under the rule of each viceroy in consecutive order, it may not perhaps be inopportune to consider here, for the clearer elucidation of the subject, the origin and meanings of each of these terms—viz., *xerafim*, *tanga*, and *larim*.

II.

The word "*xerafim*" is evidently derived from the Persian اشرفی (*ashrafi*), which was a gold coin, weighing about fifty grains, and being equal in this respect, if not in fineness, to the Venetian sequin or Dutch ducat.

Although originally Persian money, it became in course of time current in the Gulf of Cambay and in the countries along the Malabar Coast. The Portuguese were the first to adopt this designation for one of their

coins, and the East India Company applied it also to the gold *muhr* (مهر *muhr*, 'a seal,') struck at Mûrshedabâd, to distinguish it from the *muhr* issued in 1819, in which the absolute quantity of pure metal was reduced by adding $\frac{1}{12}$ th of alloy, in order to adjust the ratio of its value to that of silver, while the *ashrafi* always maintained a high degree of purity ($99\frac{1}{4}$ touch), and weighed, by the regulations of May 1793, a little more than 190 grains troy.¹

Filippo Sassetti, an Italian traveller of the sixteenth century, writing to his friend, Alessandro Rinuccini, of Florence, about 1585, refers to these *xerafins*, struck at Goa, which he writes *xaraffi*, connecting the word with *şarruf*, 'a money-changer,' which he writes elsewhere *xaraffo*, and derives from the latter the term *xarafaggio*, which he defines as the rate of exchange. As the passage is an interesting one, and relates to the period under discussion, I shall quote it here :—" Ora, sì come costà tra noi," he writes, " sono qua i banchieri, e fra essi ha d' uomini molto ricchi, e altri che per mantenere il banco loro aperto non hanno se non tanti basalucchi quanti bastano a cambiare una moneta d' oro e d' argento, pigliandone l' aggio, d' onde si sostentano; ch' è ora più ora meno, secondo l'abbondanza dell' oro ò della moneta. Chiamansi questi banchieri *xaraffi*, servendo l' *x* alla spagnuola per *s*. Di qui potrete riconoscere questo nome, facendosi menzione no so se nel Boccaccio o nel Novellino di tanti saraffi che furono dati, credo da Saladino, a non so chi, che per questo nome veniva anticamente a chiamarsi la moneta,² sì come oggi si chiama ancora certa molto trista che battono qui i Portoghesi in Goa, detti *xarafini*, che la piglierebbero da' Gentili."³

The connection between *xerafins* and *shroffs*, *i. e.*, between *ashrafi* and *şarruf* is entirely an imaginary one; for while *ashrafi* is derived, as it seems, from the Arabic شريف (*sherif*) 'noble,' اشرف (*ashraf*) its comparative, gold being the noble metal *par excellence*, the word *shroff*, common enough in our Indian bazârs, is derived from the Persian صرف (*sarrâf*), a money-changer, exchanger, or 'cambist,' from صرف (*sarf*), 'changing,' 'turning,' &c.

¹ Prinsep's *Ind. Ant.* Lond. 1858. Vol. II., U. T., p. 5.

² To the above quotation my learned friend, Count De Gubernatis, of Florence, adds this footnote—" Nulla di più servile che la moneta, la quale muta nome ad ogni mutar di padrone," which is true enough, but not in the case of our *shroffs*, who, instead of being masters, are servants of money.

³ *Storia dei Viaggiatori Italiani nelle Indie Orientali.* By Angelo De Gubernatis. Livorno, 1875, p. 301.

Now with regard to the word *tanga*, this is, unlike the *zerafim*, derived from an Indian source. When the Portuguese conquered Goa, they found the revenue accounts computed, amongst other coins, by what the natives called *tanké*, with their divisions and sub-divisions of *barganis* and *zoitolés*.⁴ It was but natural for the conqueror to adapt the old monetary nomenclature to the new currency, as he did, with some phonetic alterations. Thus he changed *tanké* into *tanga*, which was in those days divided into two kinds—viz., *tanga branca*, or 'white tanga,' which was but an imaginary coin, or money of account, not unlike the *mark* of the Anglo-Saxon kings, the *mancus*, *ora* or *thrimsa*, both of them being nominal sums rather than actual coins, and the *tanga* proper.

The *tanga branca* expressed a value equal to four *barganis*, which latter term was also of mere computation, introduced most probably by the Muhammadan predecessors of the Portuguese into Goa, and although variable, the average value could perhaps be fixed for all commercial purposes by taking one *barganim* as equal to twenty-four *leaes* or *bazaruccos*, while twenty-three *barganis* went to a pagoda of 360 reis.

These *bazaruccos* or *leaes* were copper coins struck by command of d'Albuquerque in 1510. They bore on the obverse a sphere, and on the reverse the royal coat-of-arms with A, the initial of Asia, or of Alburquerque, as others say.

Although the Portuguese borrowed the word from the natives of the country, which word was, moreover, used in the neighbouring principalities, being *tankam* where Telegu is spoken, and *taka* in the Dakhan, to signify a copper coin equal to 16 *paisas* or *dabbs*, it seems still to be of a far remoter antiquity. We may, perhaps, trace the origin of this word to the Sanskrit तङ्क (tank), its other form being तङ्ग (tang), which approaches more closely the Portuguese *tanga*. Now *tank* or *tang*, in Sanskrit, means not only a weight equal to four mashas, but also a stamped coin, especially of silver. Then we have the Sanskrit compounds of *Tanka-śālā*, 'a mint,' and *Tanka-pati*, the master of the mint; while the old Tamil name for a mint is *kambattam*.⁵ The Muhammadan rulers of India did eventually Persianize, so to speak, the word *tank* into تانك (tânke), and this name *tânke* we find applied to coins struck from the time of Mahmud of Ghazni. There were both silver and copper *tânkes* then, just as the Portuguese had their silver

⁴ *Memoria sobre as Moedas Cunhadas em Goa*. By F. N. Xavier. Nova-Goa, 1866, p. 55, *et seq.*

⁵ *Madras Journal of Literature and Science*. 1658. Vol. XIX., p. 231.

and copper *tangas* some centuries after. But the *tánkes* of Sikandar Lodi were mere mixtures of both silver and copper, and from their extremely variable character were not used in revenue returns. Sikandar Lodi did perhaps in this respect more than pursue the monetary policy of Muhammad bin Tughlak, who deteriorated the currency, and resorted to the extreme measure of forced currency. He attempted to introduce brass medals instead of money, imitating the paper-currency of China, but after a futile trial, he aimed at restoration of the ancient purity of the metal. It was this debasement of his coin which gave rise to the denominations of *tankanúkra* and *tanka síáh*, i. e., 'white or real tankah of silver,' and 'black tankah.' It appears that there were in the mediæval times, when the great unit was the *taka* of not less than 145 grains (*śataka* or *ser* being *śat-taka* or 100 takas), both gold and silver tankahs, the orthography of which has been preserved by Ibn Batuta as تنگہ , while the weight of the copper tankah was a little higher. But Baber, in his memoirs, gives a tank as a weight equal to 58·95 grains, whereas the Delhi tankah contained absolutely 173 grains, and the theoretical issue weight of 175 grains, and a touch of nearly pure silver. There was then the *kani*, a fraction, a mere weight of the tankah, i. e., $\frac{1}{4}$ of 175 grains, which is said to be of Drávidian source, and pronounced *canny*, but in the Koñkaṇ the word *kono* is used for 'a grain,' while *do-kani*, or '2 kanis,' is a well-known copper coin. Lastly, there was a coin of half a tankah. The authorized tankah of the Pathán dynasty is by Arabs called *dinar* of silver. Such was the extremely inconvenient diversity in the name, value, and weight of a coin, which was a common currency of a considerable part of India in the middle ages. It was but natural for the Portuguese, under those circumstances, to adopt a name familiar to the people, but in the design they of course furnished their own prototypes. The Emperor Akbar appears to have been the first to fix a standard for this coin by means of his *yak tánke-i-Akbar Sháhi*, and, as we are informed by the *Aín-i-Akbarí*, 5 *tánkes* made one *dám*, and 40 *dáms* one rupee. But before this time, the value of the *tanga*, from Ormuz in the Persian Gulf to Cambay and the Malabar Coast, was as variable as the weight *tola* (Sk. तोलक *tolaka*, Hind. تولہ *tolá*), in different parts of India, as witnessed by the Portuguese chroniclers of the period.⁶

Nikitin, who travelled in India in the 14th century, mentions tenka, described by his editor as *tankha*, represented by the rupee of Akbar,

⁶ *Subsidios para a Historia da India Portuguesa*. By R. J. de L. Felner. Lisbon, 1868. Pt. I., 25, 32; Pt. II., 20, 40; and Pt. III., 36, 51.

which remained unaltered from his time to the middle of the last century.⁷

Larim, described by Meninski as “*larinus, monetæ Persicæ genus, ex argento*,” was a Persian silver coin, originally current on the coasts of the Persian Gulf, but the use of which was propagated, and its manufacture imitated, in India. Its name is derived from the place where the original *Larim* was struck—viz., Lar or Laristan, the capital city of Caramania Deserta, a petty principality, which was finally reduced by Shah Abbas the Great, and which, by its possession of Gombrun, the chief emporium on the Gulf, had commercial relations with Cambay, the Malabar Coast and Ceylon. Camões mentions the place in his poem thus:—

“Aqui de Dom Philippe de Menezes
Se mostrará a virtude em armas clara,
Quando com muito poucos Portuguezes
Os muitos Párseos vencerá de Lara :
Virão provar or golpes e revezes
De Dom Pedro de Souza, que provára
Ja seu braço em Ampaza, que deixada
Terá por terra á fôrça só de espada.”

*Canto x., estancia civ.*⁸

⁷ *Major's India in the 15th Century*. Lond. 1857, p. 20.

⁸ *Obras de Luiz de Camões*. Lisbon. 1852. Tome I., p. 350.

With regard to the translation of the above stanza, although there are several translations of the *Lusiads* in English, I have not yet seen one to equal that of my friend, Captain Richard F. Burton, in the faithful rendering of the great Portuguese epic. His translation of the above passage runs thus:—

Here Dom Philippe de Menézes view
approved a doughty valiant man-at-arms,
who with his Portuguese exceeding few
shall quell the Lára Parsi's potent swarms :
Pedro de Souza too shall make them rue
reversèd Fortunes, Warfare's deadliest harms,
who had his prowess in Ampáza shown,
and took the land by sweep of sword alone.”

Burton's Lusiads. Lond. 1881. Vol. II., p. 398.

Lara is a paragoze for Lar, which was well known to the Portuguese from its neighbourhood to their once rich settlement of Ormuz. But the early Portuguese authors write it Lara or Larah, and describe it as an island in the Persian Gulf. Pietro della Valle distinguished Lar from Larek, the former of which he describes as a city half way between Schiraz and Mina (*Vicaggi*, Pt. II. Venetia. 1667, p. 405), capital of a great province,

Lary or *Larym*, although the earliest description of the coin is ascribed by modern numismatists to Sir John Chirdin, the period of whose travels in Persia does not go before 1657, is mentioned by Felner, in a document dated 1525, describing it in the Index, thus:—"Larym, palavra que, só de per si, significa a tanga larym ou de Larah," while the document divides the coin into two kinds, old and new *larym*, the former being one dynar less than the latter. The coins of Lar are enumerated thus:—Two falus are equal to one dynar, twelve dynars equal to one tanga, and three tangas and ten dynars are equal to one new *larym*. But at somewhat later date the *larym* is generally called "tanga *larym*."

Chirdin describes it thus:—"Il y a une monnoye tout le long du Golphe Persique, nommée *Larins*, qui est celle dont on s'y sert le plus dans le commerce.....Cette monnoye est d'argent fin et vaut deux *chryé* (shâhi) et demi, qui font onze sols trois deniers de notre monnoye. Elle est d'une figure tout extraordinaire, car c'est un fil rond, gros comme une plume à écrire, plié à deux, de la longueur d'un travers de pouce, avec une petite marque dessus qui est le coin du Prince.....On dit qu'elle avoit cours autrefois dans tout l'Orient." * But about this time the coin had ceased to be current in Persia, or perhaps since the

owned formerly by a prince, who was dispossessed of it about twenty-three years before the visit of Della Valle, which took place in 1622, by Abbas, king of Persia (p. 433), and inhabited by learned men (p. 439). Larek he calls an island, in the middle of the Persian Gulf, not far from Ormuz. It is probably the Larah of the Portuguese. With regard to the city of Lar, a modern writer says:—"The town is estimated to contain 1,200 inhabited houses, and the people reckon ten souls to a house; but it is hard to believe, looking down on Lar from the limestone hills, that its population can exceed 7,000. Almost all the houses are mud, the exception being a few stone or brick houses belonging to traders, and, of course, the residence of the governor; but even these are mud-plastered outside, and not distinguishable by height from the crowd of inferior buildings around them. There is a poor bazaar, roofed only for some 60 yards, and this again has been built within the last three years. Great plenty of *abambars* raise their domes all over the town. There has been a mud wall, but it was never strong, and has now vanished for the most part. The town is in good repair, and fairly clean, and some of its merchants trading with Bombay via Lingah, Bandar Abbas, and Tabiir are in very comfortable circumstances. Imperfect Hindustani is spoken by a few travelled individuals."—The *Pioneer*, June 1881.

* *Voy. de Chirdin en Perse, &c.* Amsterdam. 1711. 4to T. II., p. 92, or 12mo. T. IV., p. 279.

conquest of the country by Abbas the Great, for Chirdin adds: "Comme on n'en bat plus depuis la conquête du royaume, on n'en voit plus guères, mais on ne laisse pas de compter par cette monnoye en tout ce pais là, et aux Indes, le long du Golfe de Cambay, et dans le pais qui en sont proche. On dit qu'elle avoit cours autrefois dans tout l'Orient."¹⁰ In India the larym was struck by the Adil Shahi dynasty of Bijapur; several of whose specimens are preserved in different museums. One of these coins bears a distinct date, which is 1071 of Hejira, which is equivalent to 1659 A.D. The following legends, which are stamped upon these pieces of money, being incomplete, can be rendered legible or entire only by collation. They are on one side سلطان علي عادل شاه (Sultan Ali Adil Shah), and on the other ضرب لاري دانگه سكر (Zarb Lari Dangh Sikka).¹¹ Here the word *danyh* is evidently *tanga*, whose origin has already been explained, while *sikka* only means "a coining die," and also a certain weight, or a standard for other weights in India. It is supposed that this coin is an imitation of the Arab طویل (tovylah) from طويل (tovy) 'long,' originally confined to the province of Haşa, where they are still seen, although of copper, mentioned by Palgrave and others.

The *larim* consisted of a piece of thick silver wire, something more than three inches in length, a round thread as thick as a writing quill, bent double in its length to the breadth of from one to three inches, and then slightly flattened to receive an impression. Tavernier is the only writer who mentions a *larin* and its half (which seems to be a broken piece), the division taking place at the angle, giving at the same time engravings of both the *larin* and *demi-larin*.¹² Other writers speak of the unit alone, but of two forms, viz., straight and bent. This latter variety is doubled into the shape of a fish-hook, hence known by the name of 'hook-money' or 'fish-hook money.' It has a small mark, or a chequered pattern of the prince who issued it, stamped upon it. These pattern-stamps are supposed to have some mythological meaning, and are not merely a chance ornamental device, especially those of Ceylon, where they are known by the name of *Dudu-massu*, or in the low country

¹⁰ *Ibid.* Amsterdam edition of 1711. 12mo. T. IV., p. 279. Cf. Harris's Collection, Vol. II., p. 479.

¹¹ Cf. *The Numismatic Chronicle*. Lond. 1854. Vol. XVI., pp. 179 *et seq.*

¹² *Les Six Voyages de J. B. Tavernier*, between 1625 and 1664. A. la Haye, 1718. Vol. II., p. 589.

dialect *coco-ridi*, meaning 'hook-money.'¹³ Ribeiro, in his *History of Ceylon*, informs us that the Portuguese, who first obtained a footing in Ceylon as early as 1517, introduced into the island the use of pagodas, pardaos, and *larins*, besides striking there their own *tangas* with the royal coat-of-arms on one side, and the image of a friar on the other, of the value of 9*d.*, half-tangas and fanams.

As the description given by Tavernier of the *Larin* and the circumstances under which it was used are interesting, I insert here the following extracts :—

“Quoy qu'à Ormus et en d'autres ports du Golfe qui sont au Roy de Perse, comme l'isle de Bahren ou se fait la pesche et la vente des perles on fasse les payments en Abassis, on n'y parle toutefois que de *Larins*.

“Le *Larin* est une ancienne monnoye de Balsare et d'Arabie, et qui a cours jusqu'à l'isle de Ceylan, où l'on ne parle que de *Larins*. Cette monnoye est un fil d'argent plié en deux, de la grosseur d'un tuyau de plume ordinaire, et long de deux travers de doigt ou environ. Sur ce fil d'argent ainsi plié on voit le nom du Prince dans les pays duquel cette mon a esté fabriquée. Le huit *Larins* font un *or*, et les quatre-vingt *Larins* un toman.”¹⁴

With regard to the antiquity of this coinage nothing certain is yet known. In the absence of authentic information on this subject, the following extract from a writer who had occasion to observe the currency and note its peculiarities may be of some interest. Tavernier says:—

“Au reste, le *Larin* est une des ancienne monnoyes de l'Asie, et bien qu'aujourd'huy elle n'ait cours que dans les Arabies et à Balsara; néanmoins, depuis Bagdat jusques dans l'Isle de Ceylan tout le negoce se fait par *Larins*, et surtout le long du Golfe Persique, ou l'on prend 80 *Larins* pour un toman qui est 50 Abassis.”¹⁵

This coin seems, indeed, to have originally been struck at a remote era, as the type and simplicity of the style testify. All attachable pieces of money are an irrefragable proof of the comparatively rude state of society of the people who use it as a medium of exchange. The *larim*, then, not unlike the penannular ring of the ancient Celtic tribes, the Pharaohnic perfect ring in Egypt, the Chinese perforated money, and the monetary system of a simple and homely character prevailing even

¹³ Harris's Collection, *ut supra*.

¹⁴ *Les Six Voyages, ut supra*, Vol. I., pp. 135-136.

¹⁵ *Loc. Cit.* Vol. II., p. 590.

at the present day for the purpose of exchange or barter, or as a representative of property in all transactions of traffic and payment among some African races, bespeak an origin of a remote antiquity, or else of a currency in a low uncivilized condition. They are a connecting link in the ancient fabric of money, or a low stage of progress towards a full development of the beautiful medal money. But even when the minting of that particular coin has ceased, the new currency still continues, from attachment to old habits and traditions, to maintain and preserve the ancient shape or form, as is the case with the Chinese, who, though arrived at a higher stage of monetary progress, when medallie form of round discs of metal with a stamped and inscribed surface is used, still they have it perforated in the centre with a square hole, to be threaded or strung upon a cord, or slid upon a square rod of wood, or made with a suspensory ring or loop at the top of it, to suspend it from the owner's girdle for convenient carriage and safe custody.¹⁶

It appears that although the larim had ceased to be current in Persia for some time antecedent to the conquest of Laristan by Shah Abbas the Great, still the people used to reckon by it, so established was this coin in their estimation. In India it was mentioned, if not as a currency in use, at least as money of account as late as 1711 A.D.¹⁷ The larim was always of pure silver, and to prove its fineness it was the custom to heat it red-hot in the fire and put it into water. If it was not pure white, it ceased to be current money. Some of the specimens of this silver-wire money, especially of the hook-variety, bore one or two notches on the edge, which seem to have been made to test the standard of the metal. The weight of the larim varied from 68½ to 72 troy grains. The Portuguese chroniclers of the 16th century attached a high degree of value to the purity or fineness of this coin, its silver being then sold at nine pardaos the mark or 8 ounces. It was originally minted without any alloy. The Portuguese made use of the word *larim*, not unlike the Muhamadans of the word *tangah* or *tanké*, for two purposes, both as a metrical and a monetary expression.

¹⁶ For more information on this subject, see *Numismatic Chronicle*, Vol. XI., p. 170; Vol. XII., 1849-50, pp. 89 *et seq.*; Vol. XIII., 1850-51.

¹⁷ *Numismatic Chronicle*, 1854, Vol. XVI., p. 161. Also pp. 131, 159 and 165. The Portuguese chroniclers segregate *larym de Persia* from *larym simple*, the difference between the two implying that the latter was struck in India.

When they wrote one *larim* of copper and two and a half of silver, a weight of nearly 72 grains was meant, but the *tanga larim* was the coin itself. At a somewhat later date, when the coin ceased to be struck, *larim* became, like the *tanga branca*, a term of computation, or money of account.

Among other travellers of the 17th century, François Pyrard de Laval, who was at Goa for a couple of years from June 1608, describes the *larim* as current (see *Viagem*, translated by J. H. da Cunha Rivara. New Goa, 1858, Vol. I., p. 193,) at the Maldive Islands and at Goa, saying of the former that the king commands its issue, inscribing his name in Arabic letters; and Pietro della Valle, who travelled in the course of the years 1622 to 1624 along the Western Coast, speaks at length of the coin *lari*, describing its shape as *bizarra* or 'whimsical' (see *Viaggi*, Venetia 1667, Part II., page 577). His description of the coin is worth consulting, and, in spite of my reluctance to give a long string of quotations, which render the reading generally tedious, it is so interesting that I shall close the subject of the *larim* with it. He describes it as a "verghetta di argento, di peso determinato, addoppiata inegualmente, e nella piegatura dove si adoppia, segnata sopra con un tantino d'impronto. Si chiama Lari, perche era moneta propria de' Principi di Lar, da loro inventata, quando eran separati dal Regno della Persia. Ma per la sua bontà, e per la difficoltà del falsificarsi: consistendo il suo valore solamente nel peso, e nella purità incorrotta dell'argento; è riuscita moneta, in tutto l'Oriente, tanto accetta, che nõ solo i Chani di Lar, che ne furono gli autori, ma l'han battuta poi, la batton continuamente, tutti i Principi dell'Asia, e Turchi, e Persiani, e Mogholi, e altri, con ritenerne sempre, in ogni luogo, il suo vero eprimiero nome: nè vi è moneta, in somma, in tutte queste parti, che corra più di questa: valendo a punto, ogni cinque Lari, una Piastra, ò Patacca di Reali di Spagna, ò Pezza da otto."¹⁸

Before dismissing the subject of what may be called the philology of numismatics, I may refer here in short to two other terms, one of which, though current even at the present time amongst the British, was originally Portuguese. It is the word *pagoda*. That eminent numismatologist, Mr. Thomas, of London, speaking of this coin, says:—"The name of this coin among Europeans is 'pagoda;' a Portuguese

¹⁸ *Opus Cit.*, pp. 577-78. For the hook-money of Ceylon, see the *International Numismata Orientalia*. Lond. 1879. *Ancient Coins and Measures of Ceylon*. By Mr. Rhys Davids, pp. 33 *et seq.*

appellation derived from the pyramidal temple depicted on one side of it."¹⁹ Now there are several varieties of this gold coin, differing in type and module, their weight, assay and value being also variable. Thus the old pieces vary in weight from 60 to 120 grains troy, which is supposed to show some connection with the drachma and diadrachma of gold of the ancient Greeks, while the device and symbols of many of the old Hindû coins are said to confirm the testimony of a direct descent from a Bactrian prototype. I refrain from entering on the discussion of such a subject, which is beyond the scope of this paper.

And with regard to the origin of the word *pagoda*, it must be observed that the Portuguese on their arrival in India found here several kinds of this coin in use in the country, each under a special denomination, some of them belonging to the former rulers of the places they had conquered, and others issued from the mints of the petty rājas or chieftains of the Malabar and Carnatic. The former were by them called *gadianacas* and *dramos*, and the latter *pagodes*. The term *dramo* may perhaps be traced to *dharan*, one of the divisions of the Hindû metrical system, equal to 3200 ratis or 10 nishkas, while *gadianaca* is certainly derived from *gadhyanam*, a weight stated in the *Līlāvātī* (an Indian work on mathematics) to be equal to 48 *gunjas* or red *abrus preicatorius* seed, each *gunja* averaging about two grains troy.²⁰ Amidst so many denominations, which the Portuguese were averse to employ in their monetary transactions, they adopted the

¹⁹ Prinsep's *Ind. Ant.*, *ut supra*. Vol. II., U. T., p. 17.

²⁰ The metrical system in use in Southern India is as follows :—

2	gunjas are equal to...	1	dugala.
1	dugala is	„	... 1 fanam.
2	fanams are	„	... 1 dharana.
2	dharanas	„	... 1 hoṇa, such as māda or pratāpa.
2	hoṇnas	„	... 1 varaha or hūn or pagoda.

The chronicles of the first two centuries of the Portuguese dominion in India mention only pagodes and pardaos, but not *mādas*, a Telegu term for half-pagodas. Mention is made of *son-toco* (Śuvarṇa-ṭanka), and *hām-toco* (Rāma-ṭanka), 'the stamped gold coin of Rāma,' with various symbols; amongst others those of *padma* or 'lotus' and *Śaṅkha* or 'sacred conch-shell' are not uncommon. They were probably introduced into the country from the neighbouring princes of Banavāsi first and of Vijayanagara afterwards.

In the *New Conquests*, or provinces annexed to the Goa territory only about a hundred years ago, the accounts were kept until lately in *sanvoy* and *nixary* pagodes, each of them being divided into 2 *pratāps*, one *pratāp* into 5 *damos*, a *damo* into 4 *pagos*, a *pago* into 4 *visvos*, and a *visvo* into 4 *cannos*. The value of these pagodes was nearly 6 *xerafins*.

simple plan of designating all the gold coins of the Hindu princes by the generic name of *pagode*, having regard to the Hindu religious symbols on their obverse, which were either the figures of Śiva and Pārvatī and a device of the varāha (वराह), a wild boar, one of the avatārs of Vishṇu, or a representation of a temple, of an elephant, &c. Now *pagode* in Portuguese means a Hindû temple, and it was most probably the representation of a temple or an idol on the coins that induced the early Portuguese to name them in this fashion. This word may be traced to the Pāli *dagoba* (Sk. *dātu-garbha*, 'receptacle of relics,' or *dātu-gopa*, 'hole of relics'), the Buddhist shrine, which instead of being pyramidal, is an arched, dome-like monument.

The Muhammadans on their side appear to have simplified the process of monetary nomenclature by coining a generic term of their own to apply to the whole series of gold coins bearing on one side the effigies of Durgā, Viṣṇu, the Swāmīs, and other saints, to avoid the inconvenience of especial designations which the natives of Southern India were in the habit of employing in their trade accounts. They used the term *hūn* (هون), which is derived from the Kanarese ಹೊನ್ನ (honna), and simply means 'gold.' To this source may now be traced not only the modern Kanarese *honnu*, the designation of half a pagoda, but also, perhaps, the word *hundi*, generally used for a bill of exchange.

One other word the Portuguese adopted from the natives of the country was *pardao*, to which they attached a value different from that of the original coin, called *pratāpa* (प्रताप), the latter being the name of the king in the legend in Devanāgarī characters on one kind of these coins. The Muhammadans had already mangled the word, calling it *partab* (پرتاب), which the Portuguese made *pardao*, adding *d'ouro* to mean a golden *pardao*, in contradistinction to the silver coin of the same designation. Although the original *pratāpa* was but the half of a pagoda, the Portuguese golden *pardao* was equivalent to the unit. The Portuguese eventually extended the designation of *pagodes* even to the gold mohurs issued from the mints of the Moghul emperors, calling them "pagodes de Agra," or "Agra pagodas," as distinctly mentioned in a document dated the 29th of October 1597.²¹

²¹ *Arch. Port. Oriental.* Fasc. III., Pt. II., p. 782. By comparing the works of Abder-Bazzak, who travelled in India in 1443, with those of Ludovico de Varthema, between 1504-5, the difference in the spelling of the original *pratāpa* becomes palpable. What the former writes '*partab*' is by the latter called '*pardao*.'

In conclusion, it must be mentioned that the Portuguese never issued any pagoda of their own, as far as I am aware, and the so-called *Firingá* or *Porto-Novo hûns*, bearing on one side three figures, one male and two females, and on the other a merely granulated surface, as described by Marsden in his *Numismata Orientalia*, Lond. 1823, Pt. II., p. 741, were not coined under the influence of the Portuguese, but under that of the Dutch, who were their successors in the establishment at Porto Novo, up to the period of its cession to the English.

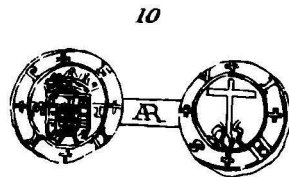
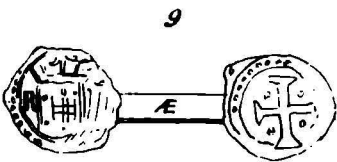
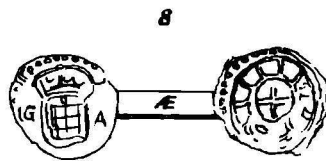
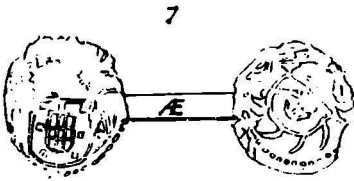
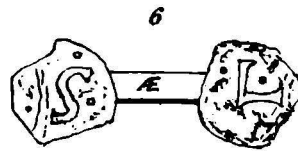
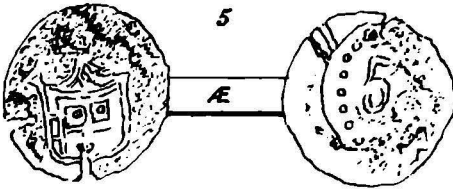
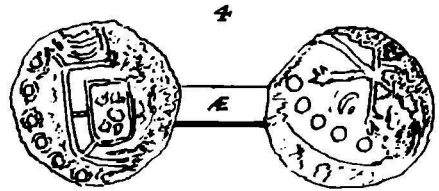
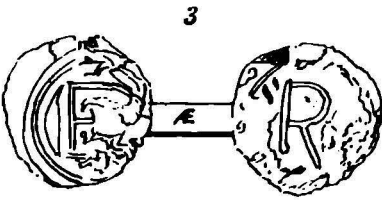
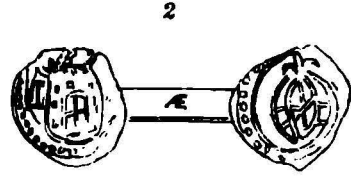
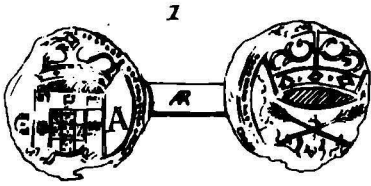
III.

I shall now pass on to consider the subject of copper and tin or tutenag coinage, issued during the sixteenth century in Goa and other mint towns of the Portuguese settlements in India. But the theme is so vast in both its historical and commercial aspects, that in contemplating such a numismatic survey one is deterred at the very outset by the meagre materials whereon to build up even the bare outline of the subject. To enter into a discussion of the successive epochs, or of the serial order of mintages of the different viceroys, most of whom were in the habit of repeatedly regulating the currency, either by recalling the old coinages, supposed to have been much debased by their predecessors, which were then consigned to the crucible, and recoined

This writer says, moreover, of Goa, which he calls Goga, that it paid "annually to the king of Decan ten thousand golden ducats, called by them *pardai*. These *pardai* are smaller than the seraphim of Cairo, but thicker, and have two devils stamped upon one side of them, and certain letters on the other."—(*The Travels, &c.*, edited by G. P. Badger, Lond. 1863, pp. 115-116.) It is evident from the above that prior to the Portuguese conquest of Goa the current coin of the country was the pagoda, bearing on one side the "two devils" of Varthema, which are the effigies of Śiva and Pārvatī, and the legend of Śrī Kṛishṇa or Sadasiva and other kings of Vijayanagara on the other.

Barbosa, writing of Vijayanagara in 1514, says:—"The money is of gold and is called *parda* and is coined in certain cities of this kingdom of Narsinga, and throughout all India they use this money..... This coin is round, and made in a mould. Some of them have some Indian letters on one side, and two figures on the other, of a man and woman, and others have nothing but the lettering on one side."—(*Descrip. of the Coasts of East Africa and Malabar*. Lond. 1866, pp. 81 and 86.)

In conclusion I must refer in short to the kind of pagoda called *varāha mudrā*, or 'boar-stamped' gold coin, the boar being the badge of the ancient Chālukya families, as well as of the Cholas and others who issued these coins. The generic term *ora* in Kōṅkaṇī for pagodas may be traced to this source.



into a new type and different standard; or else by altering, often without any justifiable motive, the rate of proportion between the monetised and the unwrought metals. To enter into such a discussion is, I say, easy enough from printed chronicles and even unedited official papers; but the absolute want of numismatic documents, from the extremely heedless fashion of the viceroys enforcing changes in the monetary system without even preserving in a Government cabinet the superseded specimens *ad futuram rei memoriam*, render the treatment and illustration of this part of the subject immensely difficult. However, with the aid of only a few examples, which chance has thrown in my way, having been somehow saved from the melting pot, I shall now endeavour to record in chronological order the vicissitudes this coinage has undergone, referring to historical facts embodied in the proclamations, edicts, provisions, resolutions, decrees, &c., preserved in the archives of the Government.

I have already described the copper coinage of Affonso d'Albuquerque struck in Goa and in Malacca; but only three specimens of this early mintage, viz. *leal* or *bazarucco*, *cepayqua* or *dinheiro*, and one other type of the latter, are described by Mr. Aragão at p. 113 of his work, quoting the *Lendas* of Gaspar Correa, *Decadas* of João de Barros, and *Livro dos Pezos*, &c., of Antonio Nunes, as well as the *Commentarios* of Braz d'Albuquerque, the natural son of the great Portuguese hero. Of this first Portuguese coinage in India, the only specimen I have hitherto seen in India is the *cepayqua* or *dinheiro* belonging to the collection of Mr. J. M. de Sousa e Brito of Goa (see Plate III., fig. 2).

Obverse—The royal coat-of-arms, having to the left a letter resembling I.

Reverse—A sphere with a trefoil on the top. The rims are dotted.

This specimen is considerably worn out. Its weight is 50 grains troy, while the *cepayqua* described by Mr. Aragão weighs 60 Portuguese grains. The letter 'I' may be the numeral one, indicative of the value of the coin, meaning 'one *cepayqua*,' as conjectured by Mr. Aragão in reference to his *leal*, or it may be the initial of *India*, just as the Greek A mentioned by Gaspar Correa as inscribed on Albuquerque's *esperas* and *leaes* I supposed to be the initial of Asia; but Mr. Aragão believes it to be the initial of Albuquerque's name. It seems, moreover, from statements of chroniclers, that the type of Albuquerque's coins was changed even during the short period of his governorship, which did not exceed five years.

D'Albuquerque's successor, Lopo Soares de Albergaria, was probably a party to a regulation left by Fernão de Alcaçova in 1517 for copper coinage, which left an enormous profit to the Government.²² A quintal of copper was coined into 3,774 *reaes*, or $23\frac{1}{4}$ *pardaos*, a fact worth recording for comparison with subsequent issues. Diogo Lopes de Sequeira, seeing the benefit this coinage yielded to the royal treasury, decreed in 1518, and advised his successor in 1519, that the copper pieces should be freely exported, while gold and silver coinages should at first be not only forbidden to be exported, but even stopped from being struck, subsequently, in the new capital city of Goa.²³ Some reduction in the value of the copper coinage appears to have taken place during the government of Lopo Vaz de Sampaio, which ended in 1529, being succeeded by Nuno da Cunha, who ordered the issue of copper pieces, at the rate of 4 *pardaos* per one arroba of the metal, or one-fourth of a quintal. No specimen of this coinage has unfortunately been preserved for us.

Nuno da Cunha's successor, D. Garcia de Noronha, whose rule extended from 1538 to 1540, commanded the issue of copper *reaes* or *bazaruccos* at the rate of 18 *pardaos* a quintal, on account of the rise in the price of copper in the market, increasing at the same time the military pay of soldiers from four to six tangas; for tangas went in those days of frugality of living as far as rupees, just as in the Saxon period shillings went to pounds.

Mr. Aragão attributes, on account of its weight of 160 Portuguese grains, a copper real or bazarucco, having on one side the letter R. or B., and on the other I, which he supposes to be either the initial of King D. João III., or the numeral one indicative of its value, to this period. But his specimen is considerably worn out, while two well-preserved specimens in my collection, apparently similar, bear the letter R on the obverse and F on the reverse, which would carry them later to the reign of one or all of the three Fillippes, who sat from 1580 to 1640 on the throne of Portugal. (See Plate III., fig. 3.) Its weight is 166 grains troy, equal to 200 Portuguese grains nearly. The second specimen, which is considerably clipped, weighs only 125 grains troy. It was Martim Affonso de Sousa, who governed from 1542 to 1545, that raised for the first time the copper coinage to the exorbitant value of 36

²² *Arch. Port. Oriental*. Fasc. V., p. 8.

²³ *Ibid.*, p. 31 and p. 19. *Ibid.*, Fasc. II., pp. 174 et seq.

pardaos the quintal, the market price being between 18 to 20 pardaos.²⁴ This was the source of all future fluctuations and troubles in the then not unimportant commercial circle of Goa,²⁵ We do not hear of any complaint in other settlements, although in 1544, as Gaspar Correa tells us, even the Cochin mint issued *bazaruccos* similar to those of Goa, of which fifty pieces went to one tanga.²⁶ Each piece weighed about 84 grains.

Such a state of things gave cause to no little discontent among the people, which found expression in representations and memorials to the Government, indicating the inconvenience and unreasonableness of the measure. A similar outcry was also raised with respect to the silver coinage a quarter of a century later. The monetary history of this period is, indeed, under an economic and financial point of view, of considerable interest even at the present day. It is extremely curious, for instance, to study by original documents the troubled state of the little commercial world, when during the viceroyalty of D. Pedro Mascarenhas, between 1554-55, the silver *patacões* were issued, the value of which were not only in entire disproportion to the market price of the bullion, but even the coinage was debased by reducing it to the standard of billon. Such a defalcating policy of the Government gave very naturally origin to no little amount of quarrels and contentions between the Senate of Goa and the Government, resulting at the end in the Viceroy D. Antão de Noronha, between 1564 and 1568, suspending the coinage, and that extant circulating for its intrinsic worth.

But to return to the copper coinage. D. João de Castro, a man of clear intellect and fair play, reduced the abnormal rate of the copper coin of his predecessor from 36 to 25 pardaos the quintal.²⁷ The enthusiastic biographer of D. João de Castro, whose government extended from 1545 to 1548, gives a sensational narrative of how people came with tears in their eyes to beseech the Governor to remedy the evil by reducing the high standard of the coinage, which had enhanced the price of food, copper pieces, struck from the metal imported as merchandise from Portugal, being the currency most in use amongst Christians, Muhammadans, and Hindûs in the country.²⁸

²⁴ See Mr. Aragão's *Descrição*, &c. Lisbon, 1880, p. 130.

²⁵ *Ibid.* Fasc. II., pp. 174—187.

²⁶ *Lendas da Índia*, Tome IV., p. 429.

²⁷ *Vida de D. João de Castro*. By Jacinto Freire de Andrade. Paris, 1869, pp. 27-28.

²⁸ *Arch. Port. Oriental*. Fasc. I. Pt. I. (Second edition of 1877), p. 29.

Mr. Aragão describes the S. Thomé and pardao S. Thomé, two gold coins already mentioned by me in Part II., and a copper *bazarucco* weighing 114 Portuguese grains, all struck during the government of D. João de Castro ; while a pardao S. Thomé, different from the former both in type and in weight, is attributed to his successor, Garcia de Sá.²⁹

The redress of grievances about this copper question did not however last long. D. Constantino de Bragança, whose rule extended from 1558 to 1561, issued a proclamation on the 22nd of October 1559, directing that the copper coin called *tanga*, of the value of 60 reis, should be struck at the rate of 42 pardaos the quintal, the market value of the unwrought metal being only 25 pardaos.³⁰ The frequent fluctuations the copper coinage underwent in the course of a few years are indeed a test of the loose and unsystematic manner in which the Government treated this affair, expecting to derive from it as much profit to the treasury as was possible with the evident injury to the interests of the people. It was plainly a short-sighted policy. The rate of the copper coinage fixed by D. Constantino at 42 pardaos was by his successor, Conde de Redondo, reduced to 35, besides establishing a determined value for the whole currency of the country. But D. Antão de Noronha, who governed from 1564 to 1568, raised it again to 42, while the price of the metal was only its half. This anomaly went on for some years yet, when D. Luiz de Athayde first reduced it to 35, and then raised it again to 42 pardaos the quintal.³¹ Skipping over about a decade, which is otherwise full of interest from the mass of memorials addressed by the Senate of Goa to the Government, proclamations of the viceroys, and royal letters from King D. Sebastião and Cardinal Infante, all of which throw considerable light on the subject of the gold and silver currency

²⁹ *Opus Cit.*, p. 140.

³⁰ *Arch. Port. Oriental*, Fasc. V., Pt. I., pp. 419-420.

³¹ It would be extremely tedious to relate in detail all these monetary alterations, and the inconvenience resulting from them to the people. The code of regulations of the mint of Goa, by D. Luiz de Athayde, already referred to, is a valuable document to the numismatic history of Goa at this period. But I refrain from quoting here its extracts, from their great length. The whole document is published in the *Annaes Maritimos e Coloniaes*, Lisbon, 1844, No. 2. Cf. also *Memoria das Moedas, &c.*, by Mr. M. B. Lopes Fernandes, Lisbon, 1856, pp. 335 *et seq.*, the work often referred to of Mr. A. C. Teixeira de Aragão, from p. 148, and the *Arch. Port. Oriental*, Fasc. I., p. 61 ; II., pp. 66-67. There are several other documents worth quoting, relative to the numismatic period under consideration, but they are much too long for our limits.

of the period, and especially the copper coinages which are said to have been minted by Albuquerque in 1510 at 13 pardaos the quintal, and now raised to the enormous rate of 42, I shall pass on to describe the issue of *bazaruccos*, which are, as far as I am aware, unedited. These are the copper coins described in Part II. as having on the obverse a sheaf of arrows and a bow, and on the reverse the usual coat-of-arms of the kingdom. I have already illustrated this specimen at Plate II., fig. 3. its weight being 155 grains troy. I have now to add another specimen of the same type, but weighing nearly the double of that of the former, being 305 grains troy (see Plate III., fig. 4). Now these *bazaruccos* having been issued some time prior to 1577, are probably those attributed to the viceroy Antonio Moniz Barreto, who ruled between 1573 and 1577.

Next to this type of the copper *bazarucco* one may perhaps place, without incurring the risk of an anachronism, the copper *bazaruccos* illustrated at Plate II., figs 4 and 5; the former bearing on the obverse the letters BCCO, and the latter the numeral 15. Now these coins weigh 305 and 200 grains troy, respectively. They belong to my cabinet, as well as those of the sheaf of arrows type. I have to add now one other, also pertaining to the same collection. It bears the coat-of-arms on the obverse, and the figure 5 on the reverse (see Plate III., fig. 5). It weighs 285 troy grains. Then come the other copper *bazaruccos*, bearing letters, which are initials of the names of kings. The little copper *bazarucco* having on one side the letter S and on the other a cross, was apparently struck during the reign of King D Sebastião, while the *bazarucco* bearing the letter F, already described, was issued during the time the Filippes of Spain were kings of Portugal. (See Plate III., fig. 3.) The little *bazarucco* of the S type weighs 45 grains troy, but it is much clipped and worn out. (See Plate III., fig. 6.) All these coins are unpublished. The arrow type *bazaruccos* were evidently struck during the reign of King D. Sebastião, from 1557 to 1578.

To pass on now to record the alterations subsequent to the year 1577 of the copper coinage, which was for many years the financial topic of the day, we find that among the successors of the viceroy Antonio Moniz Barreto, from 1577 to 1584, D. Francisco Mascarenhas is the only viceroy whose *bazaruccos*, described by Mr. Aragão at p. 168 of his work, have been preserved, and to whom the Senate of Goa presented that remarkable document containing the numismatic history of Goa

from the time of Albuquerque.³¹ During his government the copper coinage was minted at the rate of 57 pardaos the quintal, while its market value was only 22, and he reduced it to 47 on hearing the representation of the Senate. From 1584 to 1600 we find no innovation in the type or standard of the copper pieces, the weight of the *bazarucco* being then 123 Portuguese grains, except the issue of tin *bazaruccos*, five of which were equivalent to four of copper. From 1600 to the middle of the century we hear of constant fluctuations in the value of the copper and tin coinages, two and even three old pieces being exchanged for one new piece, on account of the low standard and introduction of false coin from the neighbouring countries into Goa, the process of fabrication being facilitated by the abundance of the metals and the ease with which the rude colonial type of the Portuguese coinage could be imitated.

Before closing this chapter I must describe in short the prevalent types of the copper *bazaruccos*, the emission of the earliest of which has been attributed to the time of D. Filippe II. The specimen figured at Pl. III., fig. 7, has on one side the royal coat-of-arms between the letters G and A for Goa; and on the other a wheel, allusive to St. Catherine's wheel, the patron saint of Goa. This specimen belongs to the collection of Mr. J. M. de Sousa e Brito. Its weight is 50 grains troy.

Two other *bazaruccos* in my cabinet (Pl. III., figs. 8 and 9) have one the coat-of-arms between rather indistinct G and A on the obverse, and a wheel and a cross on the reverse; and the other the coat-of-arms between the letters B or R, the initials of *bazarucco* or *roda*, and another letter, which is almost invisible, on the obverse; and a cross with stars in each angle on the reverse. Their weight is 35 grains troy. Of the latter kind there are two specimens in my collection, one of them weighing 40 grains troy. None of the copper *bazaruccos* bears any date, but Mr. Aragão, at p. 273 of his work, describes a *bazarucco* bearing the year 1698, belonging to the collection of Mr. Roberto of Lisbon, and weighing 94 Port. grs. It is attributed to the time of the Viceroy Camara Coutinho, who governed India from 1698 to 1701.

IV.

I shall now proceed to enumerate from authentic documents the issues of money in chronological succession under the heading of each sovereign and his viceroys in India, and to describe the coins hitherto

³¹ *Arch. Port. Oriental*, Fasc. II., pp. 216-221.

preserved or known to be existing in India and elsewhere, in both public and private collections.

KING D. FILIPPE I. 1580—1598.

During the rule of this monarch, the Viceroy Fernão Telles de Menezes, who held the reins of the government of Portuguese India for a short period of only seven months, from the 10th March to the 17th September 1581, caused the mintage of *xerafins*, first issued during the sway of his predecessor, to cease altogether, as prejudicial both to the State and people.³³ His successor, D. Francisco Mascarenhas, whose rule extended until November 1584, being enlightened by the Senate of the city of Goa with a lengthy and lucid statement, already referred to, on the inconvenience resulting from frequent alterations in the standard of money, struck there from the time of D. Albuquerque onwards, confirmed the cessation of the issue of the *xerafins* of five tangas, and commanded the coinage of copper pieces with the abatement of ten pardaos in the price stipulated for on one quintal or 58,752 *kil.* of the metal. Mr. Aragão describes at page 168 of his work a *bezarucco* with the numeral $7\frac{1}{2}$, weighing 134 Portuguese grains, belonging to this viceroyalty. He was followed by D. Duarte de Menezes, Conde de Tarouca, who governed until the 4th May 1588, on which date he died. His share in the monetary history of Goa is confined to the reissue of the silver *xerafins*, of which no specimen is now available.³⁴ His successors in a series of years from 1588 to 1617 appear to have avoided interfering with the currency then in vogue, the only exception being Manuel de Sousa Coutinho, whose rule ended in 1591, and who is said to have decreed the issue of silver *xerafins* with a considerable amount of the alloy³⁵; Mathias d'Albuquerque, whose sway extended up to 1597, commanded the issue of coins in four metals, although, with the exception of his silver tanga, described at page 177 by Mr. Aragão in his work, no specimen of his coinage has been preserved. He also attempted to fix the price of gold S. Thomés at eight tangas and a half each³⁶; and D. Francisco da Gama, Conde da Vidigueira, the grand-

³³ *Arch. Port. Oriental.* Nova Goa, 1857. Fasc. II., p. 219.

³⁴ Fasc. I., p. 2.

³⁵ *Livro de Mon.*, MS., fol. 340.

³⁶ Fasc. III., Pt. II., p. 783. With regard to the first issue of S. Thomés, which F. N. Xavier and others attribute to Garcia de Sá's rule, Aragão places in the period of the government of D. João de Castro. See *Opus Cit.*, p. 137.

son of the great navigator, Vasco da Gama, who returned to Lisbon in 1600, did nothing more than to forbid the circulation of the pagodas of less than 43 *pontas*, or $20\frac{1}{4}$ carats, in the country.³⁷ In the meantime King D. Filippe I. died, and was succeeded by D. Filippe II.

D. FILIPPE II. 1598—1621.

The circulation of the pagodas, which had by the former viceroy been suspended, was now, in the year 1598, resumed by the Conde da Vidigueira. Of his successors, Ayres de Saldanha, D. Martim Affonso de Castro, D. Fr. Aleixo de Menezes, André Furtado de Mendonça and D. Jeronymo de Azevedo, from 1600 to 1617, we have only specimens of coinage struck during the government of the last, all the other viceroys having left us but some dry written documents relating to that interminable question of copper and tin *bazaruccos*, and their enhanced circulating value in relation to the price of the corresponding metals in the market. The last viceroy appears, moreover, to have nearly put an end to this affair by his provision, dated the 11th of June 1616, enforcing the issue of tutenag *bazaruccos* at the actual price of that amalgam, with the addition of six *pardaos* for the cost of mintage.³⁸ Of the coins struck during the government of D. Jeronymo de Azevedo, there were silver tangas, its multiples and divisions, besides the copper and tutenag *bazaruccos*. A contemporary writer, Manoel Barboza, in his work entitled *Remissiones Doctorum, &c.*, printed at Lisbon in 1618, describes the coins current in Portuguese India, thus:—"Gold Coins:—*Gold pardao* of 18 carats, value from 320 to 340 reis. *Gold S. Thomés* of 18 carats, weighing 1250 (?). Those struck by the order of viceroys in India are worth 10 tangas or 600 reis. The *Venetians* (sequins) are current in India, being introduced from Venice to Ormuz and other eastern countries. They are worth from $11\frac{1}{2}$ to 12 tangas, or from 690 to 720 reis. Then the *pagodes*, of the value of $9\frac{1}{2}$ to 10 tangas, or from 570 to 600 reis. Silver Coins:—*Leal*, worth 12 reis, but no document is yet found relating to the issue of this kind of coin. *Tanga* is worth 60 reis. *Salures*, Persian coin brought from Ormuz, the value of each being about 90 reis. *Xerafins* or *bastiões* are coins struck in India by the command of viceroys, of the

³⁷ Fasc. III., Pt. II., p. 762.

³⁸ *Livro de Alvarás*. MS. II., fol. 21. *Arch. Port. Oriental.*, Fasc. I., Pt. II., pp. 218, 224, 228.

value of 300 reis."³⁹ It is apparent from the enumeration of coins above that the writer alludes to the currency of the country some years prior to the publication of his book, for in 1618 the *bastiões* had ceased to pass current. Pyrard, in 1608, says :—" First, there are the so-called *bazaruccos*, of which 75 go to a *tanga*. Then there are old *bazaruccos*, of which 115 are equal to one *tanga*. Lower than this coin are small unstamped copper pieces, called *Arco*, of which 240 go to a *tanga*. Of these coins one is of iron and the other of *calaim*, a metal from China."⁴⁰ In 1611 *bazaruccos* were struck at Bassein and Damaun.⁴¹

Of silver tangas, coined during the viceroyalty of D. Jeronymo de Azevedo, and which are by some writers attributed to that of the Conde de Linhares, only three specimens have been preserved, one at Lisbon and the others at Goa. The former is described in the *Hist. Gen.* Tome VI., p. 346, where also the law of 20th March 1617 for the city of Goa to cease striking the tutenag and tin *bazaruccos*, but to coin only, in case of need, those of copper, as was decreed in 1605, and still earlier in 1583, is given in full.⁴² The latter are described in the above quoted *Memoria* of Mr. F. N. Xavier, p. 80 (see Plate III., fig. 10).

Obverse—In the field the royal coat-of-arms, with the monetary mark M. T., one letter on each side, the marginal inscription being F. II., R. P., i.e., *Filippus II., Rex Portugalæ*.

Reverse—A cross on Calvary, the legend around being I. H. S. V., i. e., *In Hoc Signo Vincas*, a motto, in reference to the cross, adopted by the Portuguese on their coinage of the kingdom, years before. Its weight is 30 Portuguese grains.

The mint mark M. T. means, according to Mr. F. N. Xavier, Malacca Tanga, which, in conformity with the Government resolution dated the 27th August 1631, was ordered to be struck. Although it bears the name of D. Filippe II., it was in reality coined in the reign of his successor, the resolution above referred to determining that the type should be similar to that of the preceding years. The example in the cabinet of the late Mr. Xavier bears on one side the legend *in extenso*, and the letters I. T., or 'one tanga.' Its weight

³⁹ Fasc. V., Pt. I., p. 327.

⁴⁰ *Opus Cit.* Vol. II., pp. 55 *et seq.*

⁴¹ Fasc. VI., pp. 870, 976.

⁴² *Memoria das Moedas Correntes em Portugal, &c.* By M. P. Lopes Fernandes. Lisbon. 1856. Vol. I., p. 170.

is Port. 30 grains, equal to 25 troy grains. I may mention here once for all that the relation of these two kinds of weight to the metrico-decimal system is as follows :—One gramme = Port. grains 20·07843, and English troy grains 15.

Mr. Aragão at pp. 196—198 of his work describes a *tanga* and *meia tanga*, struck during this government, explaining the letters M. T. to mean *meia tanga*. He also describes two copper pieces of one and five *bazaruccos*. Silver specimens weigh 60 and 29 Portuguese grains respectively, while of the copper coins, that of five *bazaruccos* weighs 289 grains, and of one *bazarucco* 58.

De Azevedo's successor, D. João Coutinho, Conde de Redondo, whose rule extended from November 1617 to November 1619, had a great deal to do with the rate of exchange of the tin, tutenag and copper coinage of *bazaruccos*. He also decreed the issue of silver *bazaruccos*, of which only two specimens have been preserved, of 30 and 10 *bazaruccos*, the latter described by Mr. Aragão at p. 201 of his work, from the collection of the late Mr. F. N. Xavier. For a specimen of the *bazarucco* 30, see Pl. IV., fig. 11. It belongs to the collection of Mr. Sousa e Brito. No specimen of 20 *bazaruccos* has been hitherto found. The 30 *bazaruccos* has on the obverse the coat-of-arms of the kingdom, and on the reverse the numeral 30, indicative of its value of 30 *bazaruccos*, the rim being beaded all round. Its silver is 11 dinheiros in fineness, and weight 15 grains troy.*³

On the death of the Conde de Redondo, Fernão de Albuquerque, who governed up to December 1622, ordered the minting of *bazaruccos* at a more reasonable rate. It was during his rule that King D. Filippe II. died, being succeeded by D. Filippe III. on the 8th of April 1621.

D. FILIPPE III. 1621—1640.

The successors of Fernão de Albuquerque, D. Francisco da Gama and D. Fr. Luis de Brito, have left no new type of coinage. The former, however, issued several provisions regulating the value of coins in circulation, which documents have fortunately been preserved. It was however reserved for their successor, and one of the most distinguished viceroys Portuguese India ever had, to cause considerable

*³ For documents relating to this coinage, see *Arch. Port. Oriental*, Fasc. VI., pp. 1160 *et seq.*

alteration in the coinage of the country. This was D. Miguel de Noronha, Conde de Linhares, whose beneficent rule extended from October 1629 to December 1635. On the 13th November 1630, he commanded the issue of the new silver coinage of the standard of *reales* or dollars, under the designation of *patacões* of the value of six tangas, *meios* or half *patacões*, *tangas*, and *half tangas*, the weight of the *patacão* being fixed at 345 Portuguese grains, and value at 360 reis, that of the remaining coins being regulated in proportion to this, the fundamental unity of the new monetary scheme.⁴⁴ Then on the 5th November 1631, gold S. Thomés, of the standard of 39½ points, and value of three xerafins and twelve reis, were struck, having on one side a cross and on the other the numeral 912, their value in reis; while the pagodas of 38 points, weight 66½ Portuguese grains, were allowed to circulate at the value of 14 tangas and 12 reis.⁴⁵ The issue of the gold S. Thomés gave rise to a new denomination and to a controversy. As they bore no effigy of the saint in whose honour they were first struck, the two varieties were known by the name of *Santomés velhos* and *Santomés novos*, or 'old' and 'new' S. Thomés. The controversy arose with the Court of Portugal from the suppression of the figure of the saint, and stamping instead a cross, which was of the order of S. Bento, the viceroy being one of its knights. The viceroy explained that it was not personal vanity that had induced him to stamp the cross of the Order to which he belonged, but only the desire to produce a new type, and in accordance with the practice prevailing during former vicerealties, when pieces of money bearing new designs, such as the images of S. Sebastian and S. Philip were coined. The new coinage was however forbidden, a royal edict ordaining that S. Thomés should in the future bear the impress of the saint on the obverse, having on the reverse the Cross of the Order of Christ, of which the king was Grand Master, and to which allegiance in the form of a certain amount of pecuniary tribute was paid in the country. His silver coinage was also suspended, his gold coinage only remaining, struck in 1634, and styled *xerafim* and *half xerafim*, of the standard of old S. Thomés, their value being 300 and 150 reis, respectively. They were admitted into circulation at Goa, Cochin, and Malacca.⁴⁶

⁴⁴ *Livro de M.* IV., fol. 125.

⁴⁵ *L. de M.* No. 104, p. 242.

⁴⁶ See *Memoria, &c.*, *ut supra*, pp. 60-82. Navarrette, writing about the middle of the seventeenth century, says:—"The coin that passed at Colombo

Of the silver money issued by the viceroy, Conde de Linhares, only two specimens have been preserved, belonging to the collection of the University of Leyden. They are described and illustrated by Mr. Aragão at pp. 218 *et seq.* of his already mentioned work.

His successor, Pedro da Silva, whose rule extended from December 1635 to the 24th of June 1639, decreed by a resolution, dated the 16th of January 1637, that silver money of the standard of the *tostão*, struck in Portugal, should be issued, consisting of *xerafins*, weighing $312\frac{1}{2}$ Portuguese grains, *meio xerafim*, *tanga* of the weight of $62\frac{1}{2}$ grains, and *meia tanga*.⁵⁷

But now a new era dawned for Portugal and her dependencies. The Portuguese had long borne with inimitable patience the weight of the Spanish yoke, which had, by depriving them of their former glorious conquests, atoned in part at least for their past guilty career in the Eastern land and sea. A plot long formed now broke out; and the Spanish ruler being driven away, the grandson of the Duke of Bragança, who had been deprived of his right by Philip II. of Spain, was in 1640 proclaimed king, under the title of D. João IV. But on ascending the throne, the sovereign of Portugal, now become once more independent, found his vast ultramarine empire a mere wreck. Such a retribution for an egoistical and overbearing policy in India, barring of course some brilliant acts of valour and heroism, was indeed far above the wages of their misdeeds. But to return to numismatics.

Although the dynastic change took place in 1640, it would seem that in those days of slow navigation the news was not known in India, or else a party favorable to Philip of Spain continued to govern India; for as late as the following year coins were struck bearing the effigy of S. Philip, in honor of the king of that name. Reference will be made to the coinage struck in this year in the sequel, but it is time to describe here the two following specimens of silver coins struck in 1640. (See Plate IV., figs. 12 and 13.)

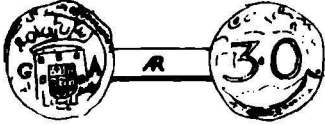
Obverse—The effigy of S. Filippe with a long cross in the right hand between the letters S. F. (S. Filippe), and below the year 1640.

Reverse—The coat-of-arms of the kingdom, with the monetary mark G. A. The former of these specimens weighs 65 grs. troy, and the latter $32\frac{1}{2}$ grs. They belong to the collection of Mr. Sousa e Brito.

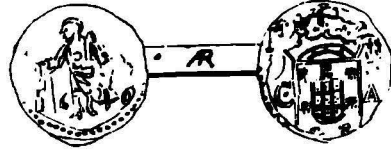
was vize-dollars, rupees, and S. Thomas's, pagodes, pieces of eight, and a particular coin for the country like that they had at Malaca."—*Churchill's Collection of Voyages*. Lond. 1732, Vol. I., p. 272.

⁵⁷ *Liv. V.*, p. 219.

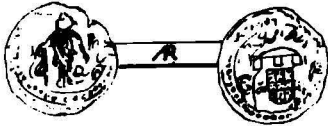
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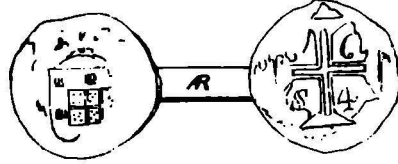
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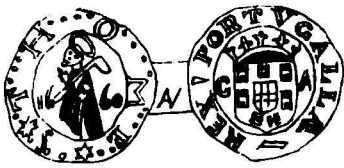
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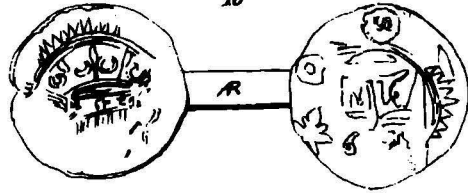
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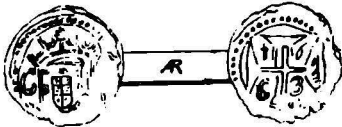
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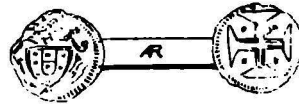
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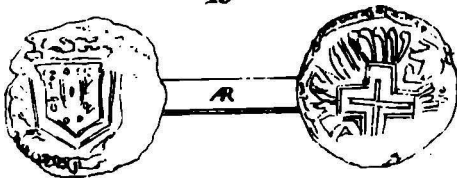
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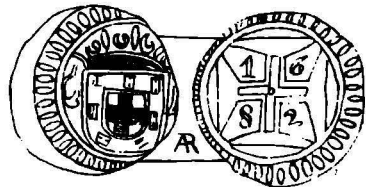
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19



20



D. JOÃO IV. 1640—1656.

The last viceroy of the late monarch of the dynasty of the Philips of Spain, Antonio Telles de Menezes, who governed from 1639 to 1640, issued silver *xerafins* and *tangas* with their halves, described by Mr. Aragão at pp. 225-226 of his book. The first viceroy of the new reign of D. João IV., João da Silva Tello de Menezes, whose rule ended in December 1645, appears to have retained, without any considerable alteration, the monetary system in vogue during the vicerealty of his immediate predecessors, changing, however, the effigy of S. Philip for that of S. John, a childish flattery keenly appreciated by kings rather than by saints, whose figures the coins bore. His successor, D. Filipe Mascarenhas, in the government of India from 1645 to 1651, by the deliberation of the Council of the State Treasury, issued on the 14th of January 1646 a new silver coinage for circulation at Mozambique, called *crusados*, of the value of 400 reis, of the standard and fineness of the *xerafins* current in the country, and of the weight of the *patações* struck in 1630,⁴⁹ while all gold bullion from China and Mozambique imported into Goa was ordered to be taken over to the mint for coining S. Thomés of the standard of old S. Thomés, of the value of 4 *xerafins* and half *tanga* apiece.⁵⁰ In 1649, by the decree dated the 15th June, more silver *xerafins* of the standard of those current were struck,⁵⁰ and in 1650, by the resolution of the 18th February, silver *xerafins* with a new type, consisting of, instead of the figure of S. John, which was impressed in honour of the reigning monarch, the Cross of the Order of Christ on one side, and the royal coat-of-arms on the other, its weight being 211 Portuguese grains, while that of the *pardao* hitherto current was 220 grains, and 25 *vintens* in value, each vintem of 12 *reis*.⁵¹

One of these pieces, bearing date 1654, is in my cabinet.

Obverse—The royal coat-of-arms.

Reverse—The Cross of the Order of Christ, with the date 1654 in its angles. (Plate IV., fig. 14.) Weight 78 grains troy.

Of the successors of the viceroy, Dom Filipe Mascarenhas, D. Rodrigo Lobo da Silveira, Conde de Sarzedas, was the only one, in the

⁴⁹ *Liv.* VI., fol. 153. The silver used in the manufacture of this coinage was obtained from Japan, and from 100,000 dollars paid by the Dutch in satisfaction of one of the stipulations of the peace treaty.

⁵⁰ *Ibid.*, p. 120.

⁵⁰ *Ibid.*, VIII., folio 76.

⁵¹ *Liv. de Monções*, 22, fol. 14.

course of ten years, from 1650 to 1660, to issue the tin coinage of *bazaruccos*, which was continued by the succeeding governors. Mr. Aragão also informs us that during his government were issued three silver coins—viz., *xerafins*, *meios xerafins*, and *tangas*, two of which he describes at p. 238 of his work. In this interval King D. João died, on the 6th of November 1656, and was succeeded by D. Affonso VI.

D. AFFONSO VI. 1656—1667.

In 1660 was issued, according to Tavernier, the gold S. Thomé, of the value of four rupees, of which he gives an illustration in his book of travels.

Obverse—Area is occupied by the figure of S. Thomas, with a nimbus round the head, and club on left shoulder, and the year 1660. In the margin S. TOME.

Reverse—The area contains the royal coat-of-arms with the mint mark G—A (Goa), and the margin has the words *Rex Portugaliæ*. (Plate IV., fig. 15.)

This engraving has also been copied by both Mr. Lopes Fernandes, Vol. I., p. 208, of his work before mentioned, on the coins current in Portugal from the time of the Romans to 1856, and by Mr. Aragão at Pl. II., fig. 10. Now among the documents existing in the archives of the Goa Secretariat, there is no mention made of this type, and as Tavernier is known to have been one of those travellers endued with a powerful imagination, one may perhaps be justified in doubting of such a coin having ever been in circulation. The engravings furnished, for instance, by this writer of the zodiacal series of coins of the Emperor Jahângîr, are not merely ill-designed and incorrect, but have little analogy to the originals, as Marsden has demonstrated in his *Numismata Orientalia*, Lond. 1823, Pt. II., p. 612. But as the description given of the Portuguese currency in India by the author has some historical interest, I append it here below :—

“ La monnoye d’or que les Portugais font battre à Goa est à meilleur titre que nos Louys d’or, et pese un grain plus que notre demi-pistole. Du temps que j’étois à Goa cette piece valoit quatre roupies, ou six francs de nostre monnoye. Ils la tiennent ainsi haute afin que les marchands qui viennent de tous les costez des Indes leur apporter des marchandises, ne transportent point hors du pais leur monnoye d’or, et ils appellent cette piece *Saint Thomé*.....Ils ont aussi des piéces d’argent, qu’ils appellent *Pardos* (pardaos) et qui passent pour la valeur

de 27 sols de notre monnoye ; comme aussi quantité de petite monnoye de cuivre et d'estain."⁸⁸

The next 10 years, from 1660 to 1670, do not show us any considerable alteration in the coinages above referred to, except a silver *tanga*, struck during the government of Antonio de Mello de Castro, and described by Mr. Aragão at p. 247 of his book.

During the viceroyalty of João Nunes da Cunha, Conde de S. Vicente, whose rule extended from October 1666 to November 1668, it was forbidden, by a decree dated the 9th July 1667, to admit any foreign coinage of copper, tin, or tutenag, into the dependencies of Chaul, Bassein, and Damaun, only the ancient and modern *bazaruccos* struck at Goa being allowed to circulate, and silver *xerafins* were issued on the 28th November 1668, weighing 211 Portuguese grains apiece, the value of a mark of silver being coined into 21 *pardaos*, 4 *tangas*, and 12 *reis*. He also forbade the use of debased pagodes, except those of Barcelor, called *sanagaris pataxa* and the *agramutes* (? Agra muhrs). In the meantime D. Affonço was succeeded by King D. Pedro, who ruled from 1667 to 1706.

D. PEDRO II. 1667—1706.

The Viceroy Conde de Lavradio commanded in 1672 the issue of silver *xerafins* from old dollars of the same weight and standard as those coined on the 21st November 1668, and fixed the standard of both gold and silver coinages, which were fluctuating for some years, from the intrinsic value of the metals not being equal to their conventional or legal values, and from the officers of the mint being extremely arbitrary in their mint regulations, while D. Fr. Antonio Brandão and Antonio Paes de Sande restored in 1670 the value of the gold S. Thomés, slightly altered by their predecessors, to that of five *xerafins*, caused the mintage of tin money to cease from the 11th January 1680, and ordered all the silver *abbássis* and *mahnúdis* brought from Persia to be taken as so much bullion over to the mint to be coined into *xerafins*, weighing 111 Port. grains apiece, *tangas*, and half *tangas*, from February 1681.⁸⁹ Mr. Aragão describes at p. 255 of his work a silver S. Thomé, bearing the date 1672, and at p. 258 *meia tanga* and five *bazaruccos* struck during the years 1678 and 1679. The

⁸⁸ *Les Six Voyages, &c.*, 1718. Tome II., pp. 614-615.

⁸⁹ *Liv. de Mon.* XIV., fol. 102.

specimens of the silver coinage of this period are extremely rare. The following are, as far as I am aware, unique—

Obverse—The coat-of-arms of the kingdom.

Reverse—Area, the cross of the Order of Christ, with the year 1664, rather indistinct, in the angles. On the margin the letter S, the T being invisible, the two letters being initials of S. Thomé. Then there are two countermarks round the edge resembling an O and a star, made probably at the readjustment of the coin. This specimen is in my collection. Weight 156 grains troy. (Plate IV., fig. 16.)

Mr. Aragão, at p. 247 of his work, describes a silver tanga bearing the date 1665, supposed to have been struck for the province of Bassein.

A piece of two *tangas* in silver :—

Reverse—The Cross of the Order of Christ in the field, and within a beaded rim, having the year 1663 in the angles.

Obverse—The royal coat-of-arms within a similar circle, with the mint mark G—A (Goa). Weight 30 grains troy. (Plate IV., fig. 17.)

Then there is the silver tanga :—

Reverse—The Cross of the Order of Christ within the border, as in the above specimen, with four stars in the angles of the cross.

Obverse—The royal coat-of-arms. Weight 18 grains troy. (Plate IV., fig. 18.) The two tangas above described belong also to my collection.

From 1670 to 1680 we have no document reporting any alteration in the monetary system in vogue. As for the specimens of the coins struck between 1678 and 1690, Mr. Aragão describes, as already mentioned, a silver tanga, bearing the date 1678, belonging to the collection of the late Mr. F. N. Xavier of Goa, and a copper coin of the value of five *lazaruccos*. It was during the rule of the Viceroy Conde de Alvôr, from 1691 to 1696, that both gold and silver coins were issued, called St. Thomé, xerafim, meio xerafim, and tanga, all of which are described at pp. 262-263 of Mr. Aragão's book. A peculiarity worth noting about the type of the silver xerafim and tanga is the substitution of the Cross of the Order of Christ, which was prevalent in former issues, by that of St. George. (See Plate IV., fig. 19.)

Obverse—The coat-of-arms of the kingdom.

Reverse—The Cross of St. George, with various ornaments all round. Weight 232 Port. grains. In my collection.

A tanga of the same type is described by Mr. Aragão at p. 253 of his work.

About this time Goa was visited by a considerably larger number of visitors than in the time of Pyrard, some of whom have noted down in their travels the coinage current in Goa. One of these seems to be Mr. William Barret, who, writing in 1684, gives of the Goa coinage a detailed account, to which I may well add the description of currencies in other Portuguese settlements at that time. But before doing so, I must allude, in short, to a silver coin which has borne the varying denomination of silver St. Thomé, xerafim and rupia, the last being the name now prevailing for a silver coin of that standard. There are several specimens of it bearing the date from 1682 to 1689. (See Plate IV., fig. 20.)

Obverse—The coat-of-arms of the kingdom between the letters G. A., its monetary mark.

Reverse—The Cross of the Order of Christ, with the year 1682, the numerals in the angle of the cross. Its weight is 212 Port. grains.

“For the mony of Goa,” says Mr. William Barret, “there is a kind of mony made of lead and tin mingled, being thicke and round, and stamped on the one side with the sphere or globe of the world, and on the other side two arrows and 5 rounds : and this kind of mony is called Basaruchi, and 15 of these make a vinton of naughty mony, and 5 vintons make a tanga, and 4 vintenas make a tanga of base mony ; so that the tanga of base mony is 60 basaruchies, and the tanga of good mony 75 basaruchies, and 5 tangas make a seraphine of gold, which in merchandize is worth 5 tangas good mony : but if one would change them into Basaruchies, he may have 5 tangas and 16 basaruchies, which overplus they cal cerafagio, and when they bargain of the pardaw of gold, each pardaw is ment to be 6 tangas good money, but in merchandize they use not to demand pardaves of gold in Goa, except it be for jewels and horses, for all the rest they take of seraphins of silver *per adviso*.

“The roials of plate, I say, the roial of 8 are worth per custom and commandment of the King of Portugall 400 reies, and every rey is one basaruchie and one-fourth part, which maketh tangas 6 and 53 basaruchies as their just value, but for that the said roials are excellent silver and currant in divers places of India and chiefly in Malacca, when the ships are to depart at the in due times (called Monsous) every one to have the said roials pay more

than they are worth, and the overplus, as is above said, they call *serafagio*. And first they give the just value of the 100 roials of 8, at 5 tangas 50 basaruchies apiece, which done, they give seraphins 5, 6, 7, 8, 9, 10, 12, 15 until 22 by the 100, according as they are in request.

“The duckat of gold is worth 9 tangas and a halfe good mony, and yet not stable in price, for that when the ships depart from Goa to Cochin, they pay them at 9 tangas and three-fourth partes and 10 tangas, and that is the most that they are worth.

“The larines are worth by just value basaruchies 93 and three-fourth parts, and 4 larines make a seraphine of silver, which is 5 tangas of good mony, and these also have *serafagion* of 6, 7, 8, 10, untill 16, by the 100, for when the ships depart for the north, to say, for Chaul, Diu, Cambaia, or Bassaim, all carry of the same, because it is mony more currant than any other.

“There is also a sort of seraphins of gold of the stampe of Ormuz, whereof there are but fewe in Goa, but being there, they are worth five larines and somewhat more, according as they are in request.

“There is also another kitle sort of mony, round, having on the one side a crosse, and on the other side a crowne, which is worth one halfe a tanga of good mony, and another of the same stampe lesse than that which they call *Imitino de buona moneda*, which is worth 18 basaruchies three-fourth parts a piece.

“Note that if a man bargain in merchandize, it behooveth to demaund tangas of good mony : for by nominating tangas onely, is understood to be base mony of 60 basaruchies, which wanteth of the good mony *ut supra*.” **

Writing of Cochin, he says :—“The mony of Cochin are all the same sorts which are currant in Goa, but the duckat of gold in value is 10 tangas of good mony.”—*Ibid.*, p. 411.

Of Malacca he writes :—“For the mony of Malacca, the least mony currant is of tinne stamped with the armes of Portugall, and 12 of these make a chazza. The chazza is also of tinne with the said armes, and 2 of these make a challaine.

“The challaine is of tinne with the said armes, and 40 of these make a tanga of Goa good mony, but not stamped in Malacca.

“There is also a sort of silver mony which they call *Patachines*, and is worth 6 tangas of good mony, which is 360 reyes, and is stamped

** Hakluyt's Collection of the Early Travels, &c. Lond. 1810. Vol. II., p. 410.

with two letters S. T., which is S. Thomas, on one side, and the arms of Portugall on the other side.

“There is also a kind of mony called cruzados, stamped with the armes of Portugall, and is worth 6 tangas good mony, the larines are every 9 of them worth 2 cruzados, which is 12 tangas good mony, and these larines be of those which are stamped in Balsara and Ormuz. The roials of 8 they call Pardaos de Reales, and are worth 7 tangas of good mony.”—*Ibid.*, p. 411.

Of Ormuz he says :—“Touching the mony of Ormuz, the bargaine in merchandize at so many leches by the barre, which lech is 100 Asaries, and maketh larines 100 and a halfe, which maketh pardaos 38, and larines one-halfe, at larines 5 by the pardao. One asarie is sadines 10, and every sadine is 100 danarie.

“The larine is worth 5 sadines and one-fourth part, so that the sadine is worth of Aleppo money 1 medine and one-fourth part, and the larine is in Balsara worth of Alleppo money 6 medines and a half.

“The pardao is 5 larines of Balsara.

“There is also stamped in Ormuz a seraphine of gold which is little and round, and is worth 24 sadines, which maketh 30 medines of Aleppo.

“The Venetian money is worth in Ormuz larines 88 per 100 meticals, and the roials are worth larines 86 lesse one sadine, which is every thousand meticals 382 asures ; but those that will not sel them, use to melt them, and make them so many larines in the King of Ormuz his mint, whereby they cleare 2 per 100, and somewhat more : and this they doe because neither Venetian money nor roials were as currant in Ormuz, *per aviso*.”—*Ibid.*, p. 408.

Passing on now to describe the coinage struck subsequent to 1690, we find that from that year to 1706 there was little or no change in the type or standard of the currency in use, except in readjusting copper and tutenag coins, whereby two old pieces were made equivalent to a new one, and even three to one, to which allusion has already been made.

In the meantime King D. Pedro II. died in 1706, being succeeded by D. João V., whose reign continued till 1750, and it covers by twenty years more, the rest of the period allotted to this paper.

D. JOAO V. 1706—1750.

The first viceroy of this reign, D. Rodrigo da Costa, from 1707 to 1712, does not appear to have made any alteration in the currency,

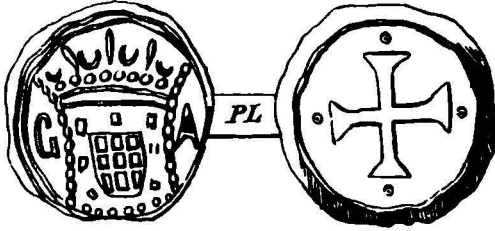
which was considerably modified by his successor, Vasco Fernandes Cesar de Menezes, who allowed, besides, private parties to send gold to the mint for coining money, a concession not apparently the first of its kind, and to receive 96 S. Thomés, of 5 xerafins each, per one mark of gold, after paying the seignorage, cost of mintage, &c.

This new issue of S. Thomés gave again rise to the denomination of *velhos e novos*, or old and new S. Thomés. He also decreed the minting of tin *bazaruccos* with an alloy of tutenag and lead in certain proportions in two distinct series of coins. To this time may perhaps be attributed the tutenag *bazarucco* illustrated at Plate V., fig. 21.

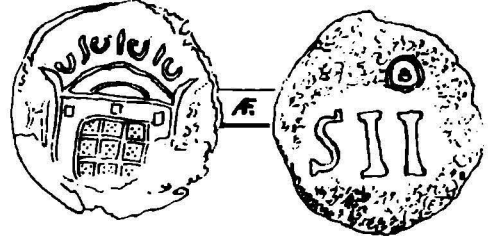
The originals of this and the following coins are in my collection. They all, with the exception of the first, the attribution of which by Mr. Aragão to the reign of D. Pedro II. is worth recording (see p. 258 of his work), weighing 130 Portuguese grains, bear dates as well as the mint mark G. A. The other specimen, fig. 22, bears the coat-of-arms on one side, and the initial of the name of D. João V. and the numeral 15, indicative of the value of the coin in *bazaruccos*. The specimens, figs. 23 and 24, bear the date 1722, and also their value in $7\frac{1}{2}$ and 5 *bazaruccos*. They weigh 180 and 152 Portuguese grains respectively. But the most curious, and hitherto inedited coin, is the tutenag specimen, discovered at Tanna some years ago while laying the foundation of a house. (See Plate V., fig. 25.) It is partly broken at the edge, but the type is fortunately entire. It bears the coat-of-arms of the kingdom, with the mint mark D. and B., which seem to stand for Damaun and Bassein, on the obverse, and the Cross of the Order of Christ on the reverse, with the year 1723 in the angles.

In conclusion, it remains to describe the silver coin bearing the portrait of King D. João V., which is so uncouth as to be styled a libel on the physiognomy of that not otherwise handsome person. It is known by the name of rupia, having its division of *meia rupia* or *pardao*, *meio pardao*, *tanga*, e *meia tanga* (see Plate V., figs. 26 and 27, for the specimens of the first and second coins); but as the subject of the silver coinage of D. João V. is an extensive one, I reserve it for further consideration in the next and concluding paper of this series.

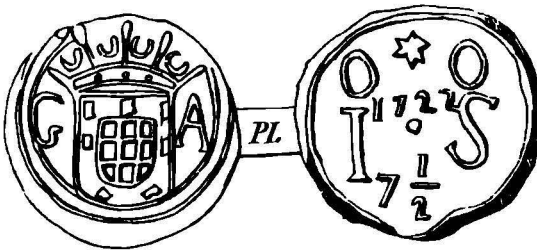
21



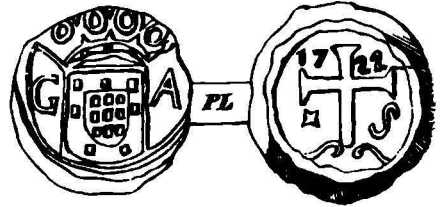
22



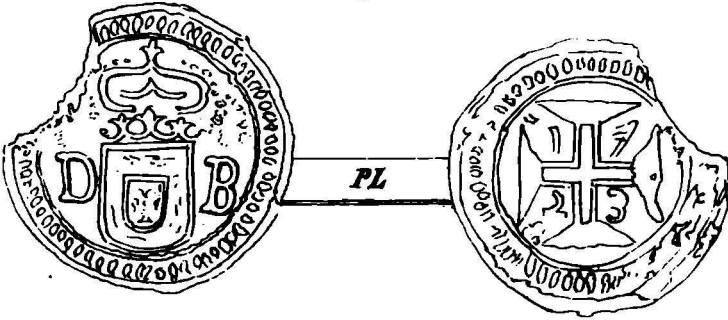
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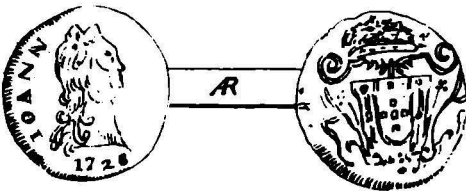
24



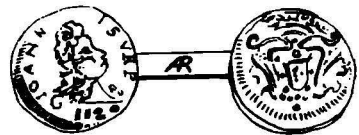
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26



27



ART. VIII.—*List of Plants seen at Mahableshwar at the end of the last hot season ; or a small contribution to the Botany of the Hill.*—By J. C. LISBOA, G.G.M.C.

[Read 6th August 1881.]

The numerous Natural History Societies established in most of the counties of England, have done a considerable amount of good by the publication of their local floras. Such catalogues when written with care, and after a detailed study of each individual plant, are of no small assistance to the student of local botany. He derives great relief from the knowledge that instead of having to wade through a general flora, the particular locality he has chosen to study contains only a certain number of already described orders.

These local floras (like the general ones) must also be ultimately of considerable assistance to us in throwing light on the various as yet unsettled questions of great scientific value, such as the geographical distribution of plants, and the co-relation of botany to the geology and physical history of a country. But before we in India entertain any thoughts of investigating these subjects, it is necessary that we should be possessed of an accurate knowledge of the character, habits, the origin and limits of the constituent elements of the flora. No attempts have as yet been made to ascertain what orders or species are numerically abundant or proportionally larger in India, in the plains and valleys and in the hilly districts ; nor how these orders and each species by which they are represented, are affected by elevation, cold or heat and moisture.

In the three papers which I read before this Society, I gave a long list of plants not described in Dalzell and Gibson's *Bombay Flora* (the best work on the plants of this Presidency that we have), and have now ready another list which I intend submitting to you at a future meeting. I also quoted at that time Sir J. D. Hooker, who in the note to a plate representing *Crinum brachynema*, which flowered in England in 1871, expresses his surprise that such a fine and sweet-scented plant from so explored a country (India) should not have found a place in either Roxburgh or Dalzell and Gibson, adding that the omission

showed how much there remained "to be done in the long-hunted field of British India."

The authors of the *Bombay Flora* themselves acknowledge that their catalogue of Bombay plants is not complete, and that "new species had been found whilst the last sheets (of the *Flora*) were passing through the press," so much so that the Cryptogamic portion of the catalogue had, to meet the wants of the readers, "to be literally transcribed" from the work of Mr. Graham. And there is, indeed, a great blank to be filled up in this department. On our hills, and especially on that of Mahableshwar, grow numerous species of ferns, many of which still await identification.

Before attempting, then, to discuss questions of scientific interest such as those we have referred to, it becomes necessary, in the first place, to examine and describe accurately all the species of plants which grow in our Presidency, for from the presence of some plants, as well as the absence of others, as also from the irregular distribution of various species, many important lessons may be learnt.

It is well known that an intestine war is continuously going on amongst plants, the vigorous or fittest to live gradually crowding out or destroying such as are not; the climate, soil, and other circumstances which make the former grow vigorously and extend themselves operating injuriously on the latter. Various experiments, conducted some years ago at Chiswick and Rothamsted, by Mr. Lawes and Dr. Gilbert, have satisfactorily established this fact.

A correspondent, whose letter appeared in the *Times of India* of 9th ultimo, says:—"Another disappearance from this neighbourhood (Ramghaut, Matheran), is that of a very beautiful fern (*Acrophorus immersus*), which about five years ago used to be found in great quantities growing on the trees. One in particular, which was then covered with them, fell down, and was removed about two years ago, and now very few specimens of this fern are to be found in the neighbourhood. It is to be feared, too, that they will not increase, for this fern is surprisingly local in its habit. For instance, I know of three rocks in three different places at Mahableshwar, each of which is covered with a splendid growth of *Acrophorus immersus*, but not a single specimen is to be found on any of the thousand of similar rocks within a few feet, and apparently subject exactly to the same influences." The same correspondent has the following in to-day's (6th August 1881) *Times of India*:—"The wood below the fort on Parbut Hill contains two sorts of climbing fern (*Lygodium scandens* and

Lygodium flexuosum), which have of late years become rarer and rarer at Matheran, and are now to be found there, so far as I know, only near the bottom of the track below Elphinstone Spring, by which the descent is made in Long Walk, and in the water-course below Harrison's Spring."

Dr. J. G. Smith (*Matheran Hill*, first edition) says:—"Near the Malet Spring *Nepholobolus adnascens* was seen before the tank was built, but has disappeared of late. . . . The barren frond of an *Athyrium* found on Garbut many years ago has led to the most careful search being made for a fruitful specimen of the same, but without success; and a small *Ophioglossum*, reported to be on the trees, has hitherto eluded observation on the hill top."

This destruction is due to the law of the survival of the fittest. Every one who has visited Mahableshwar must have been struck with the little variety of the vegetation of the hill as compared with that of the Konkan, or even of Matheran. *Jambul*, *Pishas* and *Ghellas* are the commonest plants seen everywhere. If these in propagating themselves so abundantly and gregariously have displaced other plants of less vigorous growth, we have no record or means of ascertaining. It is not unreasonable to suppose that if this propagation continues unchecked as hitherto, it will result in the extirpation of the herbaceous and shrubby plants which now exist along with them.

The hand of man is also busy in the same work. The demand for timber for machinery, building purposes, fuel, packing cases, &c., made in consequence of the several new industries which have of late sprung up amongst us, has led to the denudation of our forests, and the almost complete extinction of some of the species. Col. Beddome (*Flora Sylvatica*), in the notes appended to the figure of *Calophyllum tomentosum*, says:—"Thousands of these trees have lately been destroyed by the axe of the coffee-planters in Malabar, Coorg and Travancore; large quantities still remain, but chiefly in very inaccessible places. In the ghat forests of South Canara they are felled by the Forest Department, and floated down the rivers to the coast depôts." Dr. Birdwood (*Veg. Prod. of Bombay*) says that "*Calophyllum angustifolium* is everywhere becoming scarce and calls for a strict conservation." *Pterocarpus marsupium*, highly esteemed on account of its strong, close-grained, reddish brown wood, and of the true kino which it yields, was "common formerly in South and Central India, though now in many places rare or nearly extirpated."—(See Brandis' *Forest Flora*.) It has been remarked that some of the most handsome and sweet-scented orchids which

grow at Mahableshwar are getting scarce there. It will be no wonder if in a few years they are completely extinguished, if no check is put on the indiscriminate uprooting and selling them in cart-loads for a trifle, as is done at present by the hill-men.

Though great are the advantages of a general flora descriptive of all the plants of this Presidency, still no one can deny the utility, in a scientific point of view, of a manual or catalogue of the plants of a hill like Mahableshwar, of which the climate, altitude and excessive moisture during four months of the year have a considerable influence on the habits and distribution of some species. Such a catalogue will be subsidiary to the general flora, and very serviceable to many gentlemen who, whilst in the plains, have no leisure to devote themselves to the study of Botany, but who, whilst at the hills, do not like to remain idle nor strangers amongst the beautiful works of God.

The list given below was written towards the end of the last hot season, in consequence of an observation which fell from a friend about the paucity of plant species on the hill, and with no intention of laying it before the Society. It is now brought forward rather reluctantly, with the sole desire that it might serve the purpose of inducing all those who are engaged in botanical pursuits to direct their attention to the subject. The present is but a small contribution towards a more thorough exploration of the botany of the hill, which can only be effected by several persons coöperating and visiting the hill during the hot and cold seasons, and if possible during the rains, for I am afraid that some of the herbaceous annuals and bulbous plants flower and die away before the end of September.

The investigation of the botany of Mahableshwar will be much facilitated if the Superintendent, who is fortunately a medical officer, be allowed to spend a small sum from the station fund to form a herbarium, depositing part in the Frere Hall, and sending duplicates to that of Poona for comparison with similar forms of the plains. I feel certain many visitors would come forward to voluntarily take part in this work.

As the list given below is incomplete and imperfect, it would be premature to offer any general remarks regarding the distribution, habits, &c., of the vegetation.

Curcuma caulina, *Micromeria Malcolmiana* and *Ophelia multiflora* appear to be confined to the hill so far as my limited observation goes, and from an examination of an imperfect specimen of a flower, I am

of opinion that *Crinum brachymena* is pretty common midway between Mahableshwar and Panchgunny. The place is arid and devoid of vegetation. This handsome *crinum* flowers at the beginning of June, when no vestige of the leaves is to be seen. These appear about a month later, and completely wither and disappear in the hot season. The plant is not described in any Indian Flora, neither does Hooker mention the locality in the Bombay Presidency from which Mr. Woodrow collected the bulb which he sent to Kew.*

Turraea villosa is common to Mahableshwar and the Anamallay hills only, for it is not described as existing anywhere else. *Ficus virgata* is not mentioned in the Catalogue and the Flora of the Bombay Presidency; it however thrives well, and appears to me to have been planted.

A visitor to the hill is struck at once by the fact that the vegetation there consists chiefly, almost exclusively, of the trees *Eugenia jambolana*, *Actinodaphne lanceolata*, *Randia dumetorum*, *Lasiosiphon eriocephalus*, and in some places of *Terminalia chebula*, and of bushes and herbs *Pavetta Indica*, *Colebrookia ternifolia*, *Euphorbia Rothiana*, *Allophyllus Cobbe*, *Scutia Indica* and *Pteris quadriaurita*. It will be seen that these and many other plants have a large geographical range, and that a few are restricted to high ghats, but their distribution and associations are different. Though the temperature of Lingmala, a valley about three miles east of Frere Hall, is suitable, the *Cinchona* plantation has failed there. This failure is attributed to canker which attacked the young plants four years after they were laid out, said to be induced by the long dry weather followed by excessive rain. It is premature to discuss the causes of the decay of the trees, which did well for about four years. We have no data before us respecting the condition and habits of the vegetation of the valley. Speaking generally it is of stunted growth. *Eugenia jambolana* does not grow at Mahableshwar to be so tall a tree as in the Konkan, and on the slopes of the valley it becomes smaller, almost shrubby. *Meme-cylon edule* does not appear to attain such a goodly size as here below. And it is a well observed fact that the species of *Hymenodictyon*, a genus closely allied to *Cinchona*, which in the plains grow to a good height, assume at Mahableshwar and Matheran a shrubby habit. Now may the causes which produce this change have had an influence

* I have learnt on further inquiry made since the above was written, that the specimen referred to was obtained at Rotunda Ghaut, Mahableshwar.

on the cinchona-trees, which we see even at the present day at Ling-malla of a shrubby habit, after having been planted so many years ago?

It will be observed, also, that in the list given below there are no species representing Anonaceæ and Guttiferæ, which love moisture and heat, and are common in the Konkan. We do not see in it also *Briedelia montana*, *Cocculus macrocarpus* and other plants which are common even at Matheran. But nothing can be concluded from this, because, as I have stated above, my list is incomplete, and such plants may yet be detected. In the list there is also an absence of grasses, but these and the ferns can best be studied only after the rains and in the cold season.

RANUNCULACEÆ.

Clematis triloba : D.C. Prod. I., 8 ; W. and A. Prod. II. ; Dalz. and Gibs. B. Fl. 1. *Moriel* or *ranjai*.

Seen in leaves and fruits ; exists also in Mawal districts, and successfully cultivated in some of the Poona gardens. Flowers large, pure white, sweet-scented. Appear September—October.*

MAGNOLIACEÆ.

Michelia champaca : D. C. Prod. I., 79 ; Roxb. Fl. Ind. II., 656 ; W. and A. Prod. 6.

Champa or *sonachampa*.

PAPAVERACEÆ.

Argemone Mexicana : Roxb. Fl. Ind. II., 571 ; W. and A. Prod. 18 ; Grah. Cat. B. Pl. 6 ; Dalz. and Gibs. B. Fl. Suppl. 3. *Darûri* or *Kantedhotra*, yellow flowering Mexican thistle. *Fico del Inferno* of the Spaniards.

Common everywhere. From its seeds an oil is obtained by the poor inhabitants of the Konkan.

Is in flower all the year round.

CAPPARIDÆ.

Capparis divaricata : D. C. Prod. I., 252 ; W. and A. Prod. 27 ; W. Ic. t. 889 ; Hook. Fl. Brit. Ind. I., 174 ; *C. stylosa*, W. and A. Prod. 25 ; Dalz. and Gibs. B. Fl. 10.

Common at the foot of the Mahableshwar hill, between the Beema and Krishna. It is a desert plant, found also in S. Mahratta Country in dry rocky places.

Flowers greenish white. Appear April—May.

* I have given the flowering season of some plants, though I did not see them in flower. In such cases the periods have been inferred from what I have observed of the plants elsewhere.

C. tener : Dalz. in Hook. Kew Journ. Bot. II., 41 ; Dalz. and Gibs. B. Fl. 9.

It has a long range, on hills extending from Assam to Burmah and Tenasserim, Konkan, Canara and Ceylon.

It appears to be rare at Mahableswhar.

C. spinosa, var. *Murrayana* : Grah. Cat. B. Pl. 9 ; W. Ic. t. 379 ; Dalz. and Gibs. B. Fl. 9 ; Hook. Fl. Brit. Ind. I., 173. *Kabbar* Arab., *Kalvary*, Scind.

In ravines at Mahableswhar ; also found along the Ghauts as far north as Malsej.

Flowers large, white, handsome.

Cleome speciosissima : Dalz. and Gibs. B. Fl. Suppl. 5.

Probably run out of cultivation.

BIXINÆÆ.

Flacourtia Ramontchi : W. and A. Prod. 29 ; Grah. Cat. B. Pl. 10 ; Dalz. and Gibs. B. Fl. 10 ; Hook. Fl. Brit. Ind. I., 193. *Támbát*.

The fruit is eaten.

Flowers November—March. Fruit ripens May—June.

TERNSTRÆMIACEÆ.

Camelia thea. A specimen brought to me from a garden formerly cultivated by Chinese appeared to be of vigorous growth.

MALVACEÆ.

Sida spinosa : D. C. Prod. I., 460 ; *S. alba* ; D. C. Prod. I. c. ; W. and A. Prod. 158 ; Dalz. and Gibs. B. Fl. 17 ; Roxb. Fl. Ind. III., 174 ; Hook. Fl. Brit. Ind. I., 323.

Flowers small, white ; appear in the rainy and cold seasons.

Malva sylvestris var. *Mauritiana* : D. C. Prod. I., 432 ; Roxb. Fl. Ind. III., 181 ; W. and A. Prod. 45 ; Dalz. and Gibs. B. Fl. Suppl. 6 ; Grah. Cat. B. Pl. 12. Cultivated.

STERCULIACEÆ.

Eriolæna Candollii : Dalz. and Gibs. B. Fl. 24 ; Hook. Fl. Brit. Ind. I., 370.

Flowers yellow, large and showy ; appear in the hot season.

TILIACEÆ.

Elæocarpus ganitrus : Roxb. Fl. Ind. II. 592 ; Dalz. and Gibs. B. Fl. 27 ; Grah. Cat. B. Pl. 22 ; Hook. Fl. Brit. Ind. I., 400. *Rūdrák*.

Flowers in the cold season.

The tuberculated nuts are used as necklaces by fakirs.

E. oblongus : W. and A. Prod. 82 ; Dalz. and Gibs. B. Fl. 27 ;
Grah. Cat. B. Pl. 21. *Kas* or *Kasso*.

A very handsome tree when in flower ; found at Wai and Lingmalla,
below the Cinchona plantations.

Flowers in the hot season.

GERANIACEÆ.

Oxalis corniculata : Dalz. and Gibs. B. Fl. 42 ; Grah. Cat. B. Pl.
35 ; D. C. Prod. I., 692. *Ambūti*, *amrūl*.

Common everywhere.

RUTACEÆ.

Evodia Roxburghiana : Hook. Fl. Brit. Ind. I., 487 ; *Xanthoxylon*
triphillum, Grah. Cat. B. Pl. 36 ; Dalz. and Gibs. B. Fl. 46.

A rare shrub or small tree. I saw only one (male) specimen on the
road from Mahableshwar to Panchgunny.

Flowers—white—towards the end of the hot season.

Murraya Kænigi : Hook. Fl. Brit. Ind. I., 503 ; *Bergera Kænigi*,
W. and A. Prod. 94 ; Dalz. and Gibs. B. Fl. 29 ; Grah. Cat. B. Pl. 24.

Kadhini (*Kudianim*).

Flowers in the hot season ; ripens its fruit in the rainy season.

The flowers white. The leaves are used in chutneys.

Atalantia monophylla : D. C. Prod. I., 535 ; W. and A. Prod. 91 ;
Dalz. and Gibs. B. Fl. 28 ; Grah. Cat. B. Pl. 22. *Mákur limbú* or
rhan limbú.

Seen at Sydney Point.

Flowers October—November ; fruits in February.

Strong walking-sticks are made of it.

MELIACEÆ.

Turroea villosa : Hook. Fl. Brit. Ind. I., 542 ; Bedd. Fl. Sylv. An.
Gen. 64.

Not seen by me.

OLACINEÆ.

Mappia fœtida : Hook. Fl. Brit. Ind. I., 589 ; *M. oblonga*, Dalz.
and Gibs. B. Fl. 28. *Gūra* ; *Naruk* (?)

Common. Seen in fruit.

CELASTRINEÆ.

Celastrus Rothiana : Dalz. and Gibs. B. Fl. 47. *Yekls*.

A small unarmed shrub ; not common.

RHAMNACEÆ.

Zizyphus rugosa : W. and A. Prod. 162.; Dalz. and Gibs. B. Fl. 49 ; Grah. Cat. B. Pl. 39 ; Hook. Fl. Brit. Ind. I., 636. *Z. glabra* : Roxb. Fl. Ind. I., 614. *Turun*.

Common.

Flowers small, greenish—February—April ; fruit in May.

Scutia Indica : W. and A. Prod. 165 ; Dalz. and Gibs. B. Fl. 50 ; Grah. Cat. B. Pl. 39 ; Hook. Fl. Brit. Ind. I., 640. *Chimat*.

Common.

Flowers yellowish green or whitish—March—April ; fruit in May.

AMPELIDÆ.

Vitis lanceolaria : W. and A. Prod. 128.

Sissus lanceolaria : D. C. Prod. I., 632 ; Grah. Cat. B. Pl. 33 ; *S. muricata* : Dalz. and Gibs. B. Fl. 40.

Very common.

Flowers in the hot season.

Leea sambucina : Roxb. Fl. Ind. I., 657 ; D. C. Prod. I., 635 ; *L. staphylea* : Roxb. Fl. Ind. I., 658 ; W. and A. Prod. 132 ; Dalz. and Gibs. B. Fl. 41 ; Grah. Cat. B. Pl. 33. *Dinda*.

Flowers small, greenish white, generally appearing in March ; the fruit ripens in May.

SAPINDACEÆ.

Allophyllus Cobbe : Hook. Fl. Brit. Ind. I., 673 ; Roxb. Fl. Ind. II., 268 ; *Schmiedelia Cobbe* : D. C. Prod. I., 610 ; W. and A. Prod. 109 ; Grah. Cat. B. Pl. 29. *Tipin*, *Mendri*.

Very common shrub.

Flowers—small, whitish—in May.

Cardiospermum canescens (?)

My specimen is very imperfect.

ANACARDIACEÆ.

Mangifera Indica.

On the top of the hill it does not thrive well ; even the grafted trees do not produce good fruit.

LEGUMINOSÆ.

Crotolaria Leschenaultii : D. C. Prod. II., 125 ; W. and A. Prod. 186 ; Dalz. and Gibs. B. Fl. 54 ; Grah. Cat. B. Pl. 44. *Dingallá*.

Common at Mahableshwar.

Flowers after the rains.

Indigofera pulchella : Roxb. Fl. Ind. III., 382 ; W. and A. Prod. 203 ; Dalz. and Gibs. B. Fl. 60 ; Grah. Cat. B. Pl. 46. *Chinnatti*.

Not uncommon.

This shrub flowers in the hot season. Flowers are large, bluish purple, handsome.

Atylosia (Lawii) lineata : Dalz. and Gibs. B. Fl. 74.

Common. At Lingmalla.

Bauhinia racemosa : W. and A. Prod. 295 ; Dalz. and Gibs. B. Fl. 82 ; Grah. Cat. B. Pl. 64 ; *B. parviflora* : Roxb. Fl. Ind. II., 373. *Aptah*.

The leaves are used in making native cigarettes ; also given as a precious present in the *Dussera* festival days.

Flowers white or yellowish white, rather small for the genus ; May—June.

Pongamia glabra : D. C. Prod. II., 416 ; W. and A. Prod. 262 ; Dalz. and Gibs. B. Fl. 77 ; Grah. Cat. B. Pl. 55 ; *Galedupa Indica* : Roxb. Fl. Ind. III., 239. *Karunj*.

Flowers white, mixed with a slight tint of blue and purple ; appear during the hot season. Oil is extracted from the seeds, and used in skin diseases and for lamps.

Casalpinia sepiaria : Roxb. Fl. Ind. II., 360 ; Dalz. and Gibs. B. Fl. 80. *Chillur, Mysore thorn* by the English.

Common at Wai.

Flower yellow—February, March and April ; fruit in May.

Cassia fistula : Roxb. Fl. Ind. II., 333 ; Dalz. and Gibs. B. Fl. 80 ; Grah. Cat. B. Pl. 62 ; W. and A. Prod. 285. *Bhawa*.

Flowers in the hot season, in long pendulous racemes ; large, of a bright yellow colour. The pulp of the long cylindric pods is officinal in the British and Indian Pharmacopœias ; used as a purgative.

Tamarindus Indica : Dalz. and Gibs. B. Fl. 82.

At Wai.

Albizia Lebbek : Dalz. and Gibs. B. Fl. 88 ; *Mimosa sirissa* : Roxb. Fl. Ind. II., 544 ; *A. speciosa* : W. and A. Prod. 275 ; Grah. Cat. B. Pl. 53. *Sirus, siris*.

Flowers—white, fragrant—towards the end of the hot season.

A. stipulata : Dalz. and Gibs. B. Fl. 88 ; Hook. Fl. Brit. Ind. II., 309 ; *Acacia stipulata* : D. C. Prod. II., 469 ; Grah. Cat. B. Pl. 58. *Shirsha*. Large tree. Flowers April, May and June, of a pinkish colour.

A. odoratissima (?)

The specimen received was imperfect for identification.

ROSACEÆ.

Rubus lasiocarpus : Dalz. and Gibs. B. Fl. 89.

Common.

Flowers—white—in the cold season; ripens its fruit in the hot season.

R. rugosus : Dalz. and Gibs. 89.

Said to exist at Mahableshwar, but not seen by me.

The roses thrive very well. I have seen some pear trees at Lingmalla and in private gardens in fruit, but these were small. Strawberries and raspberries are cultivated and produce tolerably good fruit.

CRASSULACEÆ.

Bryophyllum Calycinum : Grah. Cat. B. Pl. 82; Hook. Fl. Brit. Ind. II., 413.

Kalanchoe pinnata : Dalz. and Gibs. B. Fl. 105.

Ahircánamahirávana in Mah. and *Zakkamhayát* in Hind.

Common.

COMBRETACEÆ.

Terminalia chebula : Dalz. and Gibs. B. Fl. 91; Grah. Cat. B. Pl. 69; Roxb. Fl. Ind. II., 433. *Hirda*.

Does not appear to grow so tall as in the plains.

T. arjuna : Dalz. and Gibs. B. Fl. 91; *Pentaptera arjuna* : Roxb. Fl. Ind. II., 438; Grah. Cat. B. Pl. 69. *Arjün, Sidra*.

Calycopteris floribunda : Hook. Fl. Brit. Ind. II., 449; *Getonia floribunda*, Dalz. and Gibs. B. Fl. 91; Grah. Cat. B. Pl. 70.

Uksey, Baguli.

Common everywhere, on hills up to 2,500 feet.

Flowers numerous and greenish white.

MYRTACEÆ.

Eugenia jambolana : Roxb. Fl. Ind. II., 484; *Syzigium jambolanum* : Grah. Cat. B. Pl. 73; Dalz. and Gibs. B. Fl. 93. *Jambul*.

Commonest tree on the hill; but does not produce such large fruits as in the Konkan.

E. jambos : Roxb. Fl. Ind. II., 494; *Jambosa vulgaris* : Grah. Cat. B. Pl. 74; Dalz. and Gibs. B. Pl. Suppl. 35. *Jambli* or *gulab jam*.

Saw only one tree cultivated in a private garden.

Careya arborea : Dalz. and Gibs. B. Fl. 95; Grah. Cat. B. Pl. 74; W. and A. Prod. 334; *Kūmba*.

Flowers—large—in March and April.

Psidium guyava : Hook. Fl. Brit. Ind. II., 468 ; *P. pyrififerum* and *P. pomiferum* : Grah. Cat. B. Pl. 72 ; Dalz. and Gibs. B. Fl. Suppl. 34 ; *Perū, Guava*.

Cultivated, but does not thrive well. Fruit small.

MELASTOMACEÆ.

Memecylon edule : Roxb. Fl. Ind. II., 260 ; Dalz. and Gibs. B. Fl. 93 ; *M. tinctorium* : Grah. Cat. B. Pl. 71. *Unjun* or *unjunā*.

Very common.

Flowers of a pretty purple colour ; in February, March and April.

LYTHRACEÆ.

Lagerstræmia parviflora : Roxb. Fl. Ind. II., 505 ; Grah. Cat. B. Pl. 67 ; Dalz. and Gibs. B. Fl. 98. *Naneh, Bondareh*.

Common in some places on the Ghauts. Looks beautiful when covered with small white flowers ; they appear in May.

Woodfordia floribunda : Hook. Fl. Brit. Ind. II., 572 ; *Grislea tomentosa* : Roxb. Fl. Ind. II., 233 ; Grah. Cat. B. Pl. 67 ; Dalz. and Gibs. B. Fl. 97. *Dhauri*.

Not uncommon on the Ghauts.

Flowers pretty, red ; appear from December till April.

SAMYDACEÆ.

Casearia graveolens : Dalz. and Gibs. B. Fl. 11 ; Hook. Fl. Brit. II., 592.

Seen in fruit in May.

CUCURBITACEÆ.

Trichosanthes palmata : Roxb. Fl. Ind. III., 704 ; Grah. Cat. B. Pl. 79 ; Dalz. and Gibs. B. Fl. 103. *Mūkal, Koundal*.

Common.

Flowers in the hot season ; fruit globose, size of an orange.

Zehneria umbellata : Hook. Fl. Brit. Ind. II., 625 ; *Bryona umbellata* : Grah. Cat. B. Pl. 78 ; Dalz. and Gibs. B. Fl. 101. *Gometta*.

Not uncommon.

Fruit bright red, about 1—1½ inch diameter, smooth or shortly silky.

Citrullus vulgaris : Dalz. and Gibs. B. Fl. 102 ; Hook. Fl. Brit. Ind. II., 251 ; *Cucurbita citrullus* : Grah. Cat. B. Pl. 79. *Turbooj, water-melon*. Cultivated.

UMBELLIFERÆ.

Hydrocotyle Asiatica : Roxb. Fl. Ind. II., 98 ; Grah. Cat. B. Pl. 84 ; Dalz. and Gibs. B. Fl. 105. *Bhamni*.

Common near the banks of rivers. Official in the Ind. Pharmacopœia ; used in leprosy.

RUBIACEÆ.

Anthocephalus cadamba : Hook. Fl. Brit. Ind. III., 23 ; *Nauclea cadamba* : Grah. Cat. B. Pl. 87 ; Dalz. and Gibs. B. Fl. Suppl. 43 ; Roxb. Fl. Ind. I., 512. *Nhew, Cadumba*. Near the Dhoobie's Waterfall ; probably planted.

The fruit is about the size of a small orange ; eaten by the natives.

Randia dumetorum : Grah. Cat. B. Pl. 89 ; Dalz. and Gibs. B. Fl. 119 ; Hook. Fl. Brit. Ind. III., 110. *Ghela*.

Very common.

Fruit employed for intoxicating fish ; used also as an emetic.

Vangueria spinosa : Roxb. Fl. Ind. I., 536 ; Grah. Cat. B. Pl. 90 ; *V. edulis*, Dalz. and Gibs. B. Fl. 114. *Alû*.

Fruit round, size of an apple ; appear in the hot season. Eaten both raw and roasted ; but it is not palatable.

Pavetta Indica : Grah. Cat. B. Pl. 92 ; Dalz. and Gibs. B. Fl. 112 ; *Ixora pavetta* : Roxb. Fl. Ind. I., 385. *Paput*.

One of the commonest shrubs at Mahableshwar.

Covered with corymbs of white flowers in April and May.

Psychotria vaginnans W. and A. Prod. 434 ; *Grumîlia congesta* : Grah. Cat. B. Pl. 92 ; *G. Vaginnans* : Dalz. and Gibs. B. Fl. 111 ; *Psychotria truncata* (?) Hook. Fl. Brit. Ind. III., 163.

Not uncommon at Mahableshwar. Flowers small, white ; appear in the hot season.

Rubia cordifolia : Grah. Cat. B. Pl. 93 ; Dalz. and Gibs. B. Fl. 121 ; *R. munjista* : Roxb. Fl. Ind. I., 374. *Munjit, Indian madder*,

Common.

Flower in the hot season.

Coffea arabica : Cultivated, one seen at Lingmalla appeared to thrive well.

Cinchona cordifolia, C. condimènia. A few plants of stunted growth are still to be found at the Lingmalla Cinchona plantations and in Carvalho's garden.

COMPOSITÆ.

Ageratum conyzoides : D. C. Prod. V., 108 ; *A. cordifolium* : Roxb. Fl. Ind. III., 415 ; common.

Flowers almost throughout the year. This plant is of poor growth.

Vernonia Indica (?) Clarke Comp. Ind. 16 ; *Decaneuron dendigulense* : D. C. Prod. V., 67.

Specimens seen were imperfect ; were out of flower.

V. divergens : Clarke Comp. Ind. 14 ; *Decaneuron divergens* : D. C. Prod. V., 68 ; *Eupatorium divergens* : Dalz. and Gibs. B. Fl. 123.

Bündar.

Common.

Flowers November—April.

Blumea holosericea : D. C. Prod. V., 412 ; Dalz. and Gibs. B. Fl. 125 ; *B. fusciculata. Bombarti* (at Matheran), *Bāmbūrdha* (?)

It is well known by its soft white leaves and the aroma with which it fills the air.

Lactuca Heyneana : D. C. VII., 140 ; *Brachyrampbus Heyneanus* : Dalz. and Gibs. B. Fl. 132 ; *B. sonchifolius* : D. C. Prod. VII., 177 ; Dalz. and Gibs. B. Fl. 132.

Not common.

CAMPANULACEÆ.

Lobelia nicotianæfolia : D. C. Prod. VII., 381 ; Dalz. and Gibs. B. Fl. 133. *Daxul, Doñul, Bokenul.*

Common.

Terminal racemes of showy white flowers ; appear January—April.

MYRSINACEÆ.

Mæsa Indica : D. C. Prod. VIII., 80 ; Dalz. and Gibs. B. Fl. 136. *Aiki.* Very common.

Fruit size of a small pea, appear in April and May, used by natives to intoxicate fish. Flowers small, white ; appear January—March.

OLEACEÆ.

Olea dioica : Roxb. Fl. Ind. I., 106 ; D. C. Prod. VIII., 286 ; Dalz. and Gibs. B. Fl. 159.

Parrjamb, Karamba.

Common.

Flowers white, February—March. Fruit ripens at the end of the hot season.

Jasminum latifolium : D. C. Prod. VIII., 308 ; Dalz. and Gibs. B. Fl. 138 ; Roxb. Fl. Ind. I., 93. *Kūsar.*

Common.

Flowers large, white, fragrant ; appear March—April.

STYRACEÆ.

Symplocos racemosa : D. C. Prod. VIII., 255 ; *Hopea racemosa* : Dalz. and Gibs. B. Fl. 140. *Lendá, Lodhrá, Kãolá* (?)

This small tree is common at Mahableshwar.

SAPOTACEÆ.

Achras tomentosa : Bedd. Fl. Sylv. An. Gen. 141 ; *Sapota tomentosa* : D. C. Prod. VIII., 175 ; Dalz. and Gibs. B. Fl. 139.

Kanta-Kũmbã, Kũmbul.

Common.

Seen in fruit in May. It is ovoid, size of an olive. Flowers of a dull white ; February—March.

APOCYNACEÆ.

Carissa carandas : Roxb. Fl. Ind. II., 523 ; D. C. Prod. VIII., 332 ; Dalz. and Gibs. B. Fl. 143. *Kãrándá.*

Common on the lower hills towards Satara. Fruit ripens in May. Flowers white ; February—April.

Wrightia tinctoria : D. C. Prod. VIII., 406 ; Dalz. and Gibs. B. Fl. 145. *Kallãh-Kũdhã.*

Not uncommon.

Flowers in the hot season.

Plumeria acutifolia : Dalz. and Gibs. B. Fl. Suppl. 52 ; Roxb. Fl. Ind. II., 20. *Khairchampã.* Cultivated.

Flowers fragrant, white, pale yellow in the centre ; appear in the hot and cold seasons.

ASCLEPIADACEÆ.

Calotropis gigantea : Dalz. and Gibs. B. Fl. 149 ; *Asclepias gigantea* : Roxb. Fl. Ind. II., 30. *Arkãñ, Arkã, Rowñ.*

Flowers all the year round.

Gymnema sylvestre : D. C. Prod. VIII., 621 ; Dalz. and Gibs. B. Fl. 151. *Asclepias geminata* : Roxb. Fl. Ind. II., 45.

This twining plant is not uncommon at Mahableshwar, where it is known as *Lamtãñ* or *Kowñ*.

Flowers yellow, small, appearing towards the end of the hot season.

Hoya viridiflora : Dalz. and Gibs. B. Fl. 153 ; *Asclepias volubilis* : Roxb. Fl. Ind. II., 36. *Dhorñ.*

Not uncommon.

Green flowers ; appear in March—June. The follicles 3—4 in. long.

Sarcostenma brevistigma : D. C. Prod. VIII., 538 ; Dalz. and Gibs. B. Fl. 149. *Somã, Some.*

At the foot of Mahableswhar.

Flowers white, in the hot season.

LOGANIACEÆ.

Buddleia Asiatica: D. C. Prod. X., 446; Dalz. and Gibs. B. F. 180. Rare. At Lingmalla.

A very ornamental plant; underside of the leaves covered with a white tomentum, and the white flowers form a long terminal panicle.

GENTIANACEÆ.

Canscora diffusa: Grah. Cat. B. Pl. 158; *Pladera virgata*: Roxb. Fl. Ind. I., 401.

Common in the ravines and over the rocks at Mahableswhar.

An annual, with small pale red flowers, which appear November—April.

Ophelia multiflora: Dalz. and Gibs. B. Fl. 156. *Korū*.

Common.

Small plant about a foot high; sold in the bazaar in a dry state in bundles, each containing about 20 plants; used in dyspepsia.

Flowers white.

BORAGINEÆ.

Coldenia procumbens (?) D. C. Prod. IX., 558; Dalz. and Gibs. 171. A small annual spreading plant, with white flowers.

Cynoglossum cælestinum: Dalz. and Gibs. B. Fl. 173. *Misardhi*. Common.

SOLANACEÆ.

Datura alba: Dalz. and Gibs. B. Fl. 174. *Dathura*, *thorn-apple*. Common. Thrives well.

Flowers large, white and long.

Solanum giganteum: D. C. Prod. XIII., 258; Dalz. and Gibs. B. Fl. 175.

A very common prickly shrub named *Kūtri* at Mahableswhar, also *chinah* or *chunah-jhar*.

Flowers purplish violet; February—April. Fruit round, red, size of a pea; in May.

S. Indicum: D. C. Prod. XIII., Pars. I., 309; Dalz. and Gibs. B. Fl. 174.

Common.

Flowers all the year round. Berry size of a cherry, yellow when ripe.

S. lycopersicum : Dalz. and Gibs. B. Fl. Suppl. 61. *Tomato, Welwangi.*

Common in gardens. Thrives well.

Physalis Peruviana : Dalz. and Gibs. B. Fl. Suppl. 61. *Phopti, Cape gooseberry, Winter cherry.*

Common.

Wild and cultivated. It differs from the species found in the plains in its being covered with white tomentum.

S. tuberosum : Dalz. and Gibs. B. Fl. Suppl. 61. *Bátátá, alú, potato.*

Cultivated ; but of late the quality is said to deteriorate.

Nicotiana tabacum :

Growing wild near Mahableshwar village, perhaps run out of cultivation.

BIGNONIACEÆ

Heterophragma Roxburghii : Dalz. and Gibs. B. Fl. 160. *Warus.*
Very common.

Flowers March and April ; fruits at the end of May.

ACANTHACEÆ

Strobilanthes callosus : Dalz. and Gibs. 188. *Karwī.*

Common.

Flowers deep blue, large, handsome ; appear in August—September every five or seven years.

S. Neesiana (?) *Wakti.*

The smell of the glutinous bracts and leaves is very strong ; used as fuel, and in building *tatties* or huts.

Lepidagathis prostrata : Dalz. and Gibs. B. Fl. 190.

Common.

A small prostrate plant. Leaves spinously pointed.

Æthiëma reniformis : Dalz. and Gibs. B. Fl. 192. *Wcyotī.*

Common.

Calyx bracts covered with clammy, strongly aromatic hairs.

Flowers whitish, with a bluish tinge ; February—April.

Rungia repens, R. parviflora, Pittápapadá.

These two plants are also to be found at Mahableshwar ; Dalz. and Gibs. B. Fl. 195-6

Blepharis asperima : Dalz. and Gibs. B. Fl. 192. *Akrá.*

Common.

Flowers blue.

VERBENACEÆ.

Callicarpa cana : Dalz. and Gibs. B. Fl. 200. *Eisur*.

Very common.

Flowers pale red ; February—April.

Vitex negunda : Roxb. Fl. Ind III., 70 ; *V. bicolor* : Grah. Cat. B. Pl. 201. *Nirgūnda*.

Common.

Flowers light blue, throughout the year ; fruit black, size of a pea.

Lantana aculeata. Dalz. and Gibs. B. Fl. Suppl. 68.

LABIATEÆ.

Ocimum sanctum : Dalz. and Gibs. B. Fl. 204. *Tulsi*.

In gardens.

Flower pale purple.

Pogostemon purpuricaulis : Dalz. and Gibs. B. Fl. 207. *Pangli*.

Very common.

The leaves smell of black currants when bruised. Flowers minute, red coloured.

Colebrookia ternifolia : Dalz. and Gibs. B. Fl. 209. *Bamni*, *Dussai*, *Dussari-ka-jhar*.

Very common.

Flowers white, numerous in dense spikes like a squirrel's tail ; appear February—March.

Micromeria Malcolmiana : Dalz. and Gibs. B. Fl. 209.

On the banks of the Yenna, and in the valley in which Carvalho's garden is situated. It possesses a far stronger smell than peppermint.

Flowers minute, reddish coloured.

Leucas stelligera : Dalz. and Gibs. B. Fl. 211. *Būmbi*.

Common.

Flowers white, in verticels an inch in diameter.

PLANTAGINEÆ.

Plantago minus : Cultivated. Thrives well.

CHENOPODIACEÆ.

Atriplex ambrosioides : Mentioned by Dalz. and Gibs. B. Fl. Suppl. 73, under the name of *Chenopodium ambrosioides*. Flowers greenish.

The whole plant when bruised emits a strong fragrant camphoraceous smell.

AMARANTHACEÆ.

Ærua lanata : Dalz. and Gibs. B. Fl. 217.

A common weed.

Flowers white.

POLYGONACEÆ.

Polygonum glabrum : Dalz. and Gibs. B. Fl. 214. *Ruktrûra*.

Common near Yenna and ditches.

Stem reddish and flowers numerous, rose-coloured ; appear in the hot season.

P. chinense : Dalz. and Gibs. B. Fl. 214. *Parull*, *Parull*.

Common.

A scandent flexuose plant with white flowers in globular heads, These appear in February—April.

P. elegans : Dalz. and Gibs. B. Fl. 214.

Common.

Flowers reddish ; appear in the hot season.

P. rivulare : Dalz. and Gibs. B. Fl. 214. Seen near water-courses, close to a Chinese garden near the lake.

LAURACEÆ.

Actinodaphne lanceolata : Dalz. and Gibs. B. Fl. 312 ; *Tetranthera lanceifolia*, Grah. Cat. B. Pl. *Pisa*.

The commonest tree at Mahableshtar next to the *Jambûl*.

Flowers of a pale yellow colour, in the cold season ; ripens its fruit in May—red when ripe.

Machilus Macrantha : D. C. Prod. XV., 40 ; *M. glaucescens*, Dalz. and Gibs. B. Fl. 221. *Gûlûm*.

Common.

Flowers small, white ; appear January—February ; fruit globose, size of a plum—black when ripe.

THYMELACEÆ.

Lasiosiphon eriocephalus. Described in Dalz. and Gibs. B. Fl. 221 under the name of *L. speciosus*. *Rumetta*.

One of the commonest shrubs in Mahableshtar, covered from October—April with yellow flowers in terminal heads surrounded by an involucre of oblong hoary leaflets.

The bark is employed in intoxicating fish.

ELEAGNACEÆ.

Elæagnus latifolius : Brand. For. Fl. 390 ; *E. kologa* Dalz. and Gibs. B. Fl. 224. *Ambgûl*, *Nurgi*.

Very common.

A very large climbing shrub, easily known by its leaves, which are green above and silvery shining beneath. Fruit oblong, size of a small date, red when ripe; eaten by the natives. Flower January—February.

SALICACEÆ.

Salix tetrasperma: Dalz. and Gibs. B. Fl. 220. *Walūnj*, *Būcha*, *Indian Willow*.

Very common.

A very handsome tree, with lanceolate leaves, covered with white tomentum beneath.

Flowers in the cold season.

LORANTHACEÆ.

Loranthus longiflorus: Dalz. and Gibs. B. Fl. 110.

A very common plant with honeysuckle-looking flowers; these appear in March and April.

L. cuneatus: Dalz. and Gibs. B. Fl. 110. Flowers yellow; appear in the hot season.

L. obtusatus: Dalz. and Gibs. B. Fl. 109.

Common on trees at Mahableshwar.

Flowers red, pedicelled; appear in May; berry nearly globose.

EUPHORBIACEÆ.

Euphorbia neriifolia; Dalz. and Gibs. B. Fl. 226. *Thor*.

Not common.

Flowers February—March. Leaves fall off in the cold season and reappear towards the end of hot season.

E. Rothiana: Dalz. and Gibs. B. Fl. 226.

Very common.

Flowers February—April.

In Dalz. and Gibs. B. Fl. an error is made in describing *E. Rothiana* and *E. glaucæ* as if they were one and the same species.

Jatropha curcas: Dalz. and Gibs. B. Fl. Suppl. 77. *Jampal*, *Erundi*.

Planted at Wai.

Flowers in the rainy season; fruits in the hot season.

Homonoya riparia: Brand. For. Fl. 445; *Adelia neriifolia*, Dalz. and Gibs. B. Fl. 231. *Taniki* (?)

Flowers of a reddish colour; November—March; seen in fruit in May.

Ricinus communis: Dalz. and Gibs. B. Fl. Suppl. 78. *Erendi*.
Planted.

Glochidion lanceolarium: Dalz. and Gibs B. Fl. 235. *Bomáh*.
Common.

Flowers January—April; ripens its fruits in the rainy season.

Phyllanthus emblica: Roxb. Fl. Ind. III., 671; *Emblica officinalis*,
Dalz. and Gibs. B. Fl. 235. *Áola, auñli*.

Flowers March—May; fruit ripens October—February.

The fruit is used as medicine and also as pickle; employed more-
over in dyeing and tanning.

P. reticulatus: Brand. For. Fl. 453; *Anisonema multiflora*, Dalz.
and Gibs. B. Fl. 234.

Not common.

Flowers nearly throughout the year.

A small shrub.

P. polyphyllus: D. C. Prod. XV., 352; Bedd. Fl. Sylv. An. Gen.
190.

Was brought from one of the valleys; it resembles *P. emblica*.

URTICACEÆ.

Ficus glomerata: Brand. For. Fl. 422; *Covellia glomerata*, Dalz.
and Gibs. B. Fl. 243. *Umbur*.

Common.

Fruit ripens April—July; eaten by the natives of the place; does not
grow to be a high tree as in the Konkan.

F. cordifolia: Dalz. and Gibs. B. Fl. 242. *Pair*.

Seen near the temples at the village of Mahableshwar.

Fruit smooth, black, size of a cherry; ripens May—June; resembles
F. religiosa.

F. virgata: Roxb. Fl. Ind. III., 530; Brand. For. Fl. 419.
Unjir.

Common, appears to be cultivated.

Cannabis sativa: Dalz. and Gibs. B. Fl. Suppl. 79. *Bhang*,
Ganjah, Hemp.

Seen only in gardens; thrives well.

Artocarpus integrifolia: Dalz. and Gibs. B. Fl. 244. *Phunnus*,
Jack-fruit tree.

AROIDEÆ.

Arisæma Murrayii: Dalz. and Gibs. B. Fl. 258. *Nág, snake-lily* of
Europeans.

Very common.

Scape 4-6 in. long; appears soon after the first shower of rain, before the leaves.

SCITAMINEÆ.

Curcuma exulina : Dalz. and Gibs. B. Fl. 275. Wild Arrowroot. Chowur.

Common, especially on the flat land between Elphinstone Point and Arthur Seat.

Formerly sago was manufactured from the tuberous roots of this plant.

ORCHIDACEÆ.

Ærides Lindleyana : Dalz. and Gibs. B. Fl. 265.

This beautiful orchid is very common.

Flower pinkish lilac, sweetly fragrant, the smell lasting for days.

Dendrobium chlorops (?), *D. barbatum* (?).

Seen without flowers.

AMARYLLIDÆÆ.

Agave cantula : Dalz. and Gibs. Suppl. 93; *Aloe Americana* : Roxb. Fl. Ind. II., 167. Planted.

Thrives as well as on the plains.

Crinum brachynema : Flowers white, sweet scented—appear in June, before the leaves.

GRAMINEÆÆ.

Arundinaria Wightiana : Bedd. Fl. Sylv. An. Gen. 230; *Bambusa, arundo* : Dalz. and Gibs. B. Fl. 299. *Chiwari*.

I believe it is common.

A small bamboo, 8-9 ft. high; walking-sticks made of this are sold in the bazars.

FILICES.

Cheilanthes farinosa : Bedd. Ferns S. Ind. p. 65, t. 190. *Silver fern*.

Rather stunted in its growth; common, but not so abundant as at Matheran.

Pteris quadriaurita. Bedd. Ferns S. Ind., p. 11, t. 31.

Very common.

Of various heights, attaining sometimes under shade, 1-8 ft.; the lowest pair or sometimes two lowest pair of pinnae bipartite.

Pleopeltis Wightiana : Bedd. Ferns S. Ind. p. 60, t. 130.

Fronds 3-5 in. long, coriaceous, opaque, lanceolate.

Seen growing in the decayed trunk of a tree in the compound of the "Albania."

ART. IX.—*Dharmasindhu, or the Ocean of Religious Rites,*
by the Priest Kashinatha. Translated from the Sanscrit and
commented upon by the REV. A. BOURQUIN. (Atr. III.)

[Read 8th Nov. 1882.]

CHAPTER XIV.

Description of the Eighth Tithi.

For the rites of the 8th Tithi of the Light half Month should its second day, but for those of the 8th of the Dark half Month its first day be taken. When the festival of Shiva and that of his wife (Párvati¹⁸⁹) meet on that Tithi, should, even in the Dark half Month, its second day be taken. For the rite of the 8th which falls on a Wednesday of the Light half Month that (of its two days) should be taken on which at least two Ghatikas of the Wednesday are included in the time between the morning and the afternoon. But if the 8th falls on a Wednesday in the Late Afternoon in the Dark half of the Month of Chaitra and in that of Shrávana and the three following, it should not be observed. Some people fast to the honour of Kála Bhairava¹⁹⁰ on all the 8th Tithis of the Dark half Months.

For the rite of the 8th of the Dark half of the Month of Mārgashirsha, as the birth of Bhairava (cf. preceding note) falls on it, the rule for that festival should be followed, and that day (of the two) be taken on which the Tithi includes a Mid-day. When the Tithi includes a Mid-day on both its days, the first is to be taken; the Kaustubha, however, teaches that that day should be taken, on which the Tithi includes an Evening Tide (cf. note 79). If it includes an Evening Tide on both its days, the second is to be taken, as there is thus no clashing of rules. ¶ When it includes an Evening Tide on its first day

¹⁸⁹ The word of the original is Shakti, a personification of the female energy. Besides these two names she is also called Durgá. Her day is regularly the 8th of each half month; but I cannot make out to which festival of Shiva the text refers here, unless it is just the festival of Kála Bhairava, mentioned in note 129.

¹⁹⁰ Kála Bhairava, or the Black Awful One, is one of the names of Shiva.

and a Mid-day on its second day, then, according to the custom of the learned, that first day should be taken on which the Tithi includes an Evening Tide.

The prohibition in connection with the 8th concerns only Day-Meals and not other rites, according to the text: "On Sundays and on Full Moon and New Moon days Night Meals, and on the 14th and the 8th *Day-Meals* " (*scil.* are prohibited). Following the text: "The prohibition concerns only that time in which something is prohibited," my opinion is, that one should fast on the 8th only and eat during the 7th or the 9th Tithi. Learned men, however, should see whether I am right or wrong.

Thus is the fourteenth chapter, a description of the 8th Tithi.

CHAPTER XV.

Description of the Ninth Tithi.

For rites of the 9th Tithi that day should be taken on which the 9th is encroached upon by the 8th. Thus is the fifteenth chapter, a description of the 9th Tithi.

CHAPTER XVI.

Description of the Tenth Tithi.

For rites of the 10th Tithi, like fasts and others, that day should be taken on which the 10th meets with the 9th; but if the first day of the 10th is not thus encroached upon by the 9th, its second day, on which it meets with the 11th, is to be taken.

Thus is the sixteenth chapter, a description of the 10th Tithi.

CHAPTER XVII.

Description of the Eleventh Tithi.

There are two kinds of fasts connected with the 11th Tithi, viz., merely abstaining from prohibited food; and fasting in connection with sacrificial vows. The first is to be performed in the Dark half Month by such persons as householders who have a son, &c.; the fast connected with a vow should not be performed in the Dark half Month by householders who have sons, yet though they do not resolve upon a vow with holy incantations, nevertheless they should abstain from food following in that the rule of the Fast-according-to-Strength (cf.

the rule given further on in this chapter). Thus also should it be held with the 11th Tithi of the Light half Month when there is a decrease of the Tithi (that is, when the Tithi has no sunrise). But on the 11th Tithis of the Dark half of all the months from the light 11th of Ashádha to the Light 11th of Kárttika, beginning with householders who have a son, all may perform the sacrificial vow of the 11th. Those who are desirous of being absorbed into Vishnu, or of obtaining long age or posterity may perform their Desiring rite at both the half months, for concerning them there is no prohibition. To Vishnuvite householders the fast of the 11th of the Dark half Month is obligatory. This rite of the 11th is obligatory to all Shivaites-Vishnuvites, Sun-worshippers and others, for it is said that to fail to perform it is a sin. Yet as by performing it one gets riches (sons), &c. this rite of the 11th is also a Desiring one (that is, one performed with a desire for a certain blessing).

Some writers say that if the 11th Tithi is encroached upon by two Ghatikas of the 10th, one ought to eat on the 10th, and then if the 12th begins before the next Sunrise, and is thus a very Pure Tithi, one must fast twice uninterruptedly, (viz., once throughout the 11th Tithi and once) throughout the 12th Tithi. Thus do they keep it with the 11th Tithi, but it is not lawful.

People between eight and eighty years of age should perform the fasting vow of the 11th Tithi. People over eighty who have the strength ought also to fast.

If married women perform fasts, vows, &c., without the permission of their husband, or father, their vows are fruitless, the life of their husband is thereby shortened, and they shall go to hell.

People who are weak may according to their strength choose one of the next ways of fasting, of which each following is better than the preceding: Eating once only, at night, eating only food fried in butter, unboiled grain food (*i.e.*, prepared without salt, and by baking, roasting, &c.), or fruits, or sesamum seed, or milk, or water, or ghee, or the Five Products-of-the-Cow,¹³⁰ or the air; but the fast of the 11th must on no account be altogether omitted.

If one has forgotten to fast on the 11th, he should perform a sacrificial vow on the 12th Tithi. If he fails to do so on the 12th, let him

¹³⁰ Namely pure milk, coagulated milk, butter, urine, and cow-dung.

perform the propitiatory rite of the Mouthfuls after the shape of Barley.¹³¹ But if one has omitted the fast on account of infidelity, let him perform the rite of the Mouthfuls after the form of an Ant.¹³² A wife, a son, a brother, a sister, &c., may perform the sacrificial fast of the 11th in lieu of a weak husband, father, &c., gaining thereby the merit of hundred sacrifices.

Description of the Day of the Fasting Fow of the Eleventh Tithi.

Two kinds of people perform this rite, viz., the Vishnuvites and the Shivaites.

Rule for Vishnuvites specially.

Though great writers say that those who wear the sign of consecration to Vishnu (cf. note 178) are Vishnuvites, and those who do not are Shivaites, yet the Nirnayasinthu says that the ancient sages teach that one is a Vishnuvite or a Shivaite according to what his ancestors have through many generations been. This last opinion has been received and is followed by the learned of all countries.

The encroachment on this Tithi is also of two kinds, viz., 1st, when the 10th breaks upon the 11th at the time of dawn, and 2nd, when it breaks upon it at the time of sunrise. The dawn is constituted by the 4 Ghatikas that precede sunrise. Sunrise is evident. If the 10th Tithi is somewhat longer than 56 Ghatikas, and thus stretches over the dawn of the 11th, were it only with one minute, it is a Dawn-Encroachment, and is to be observed by the Vishnuvites; if it has more than 60 Ghatikas and thus oversteps the sunrise of the 11th Tithi, were it only with one minute, it is a Sunrise-Encroachment, and must be observed by the Shivaites.

When there is some doubt about these Encroachments caused by the want of agreement of astrologers, or by the disputes of Brahmins

¹³¹ Cf. for Mouthfuls note 110; "after the form of barley" means that very little must be eaten at the beginning and the end of the fast, while more food is allowed at the middle, barley being stout at the middle and thin at the ends. This fast, which lasts one month, begins with eating but one rice ball on the first day, then the number increasing by ball every day, it runs up to 15 balls in the middle of the month, veers then towards its completion with a daily decrease of one ball until its last day with one ball only.

¹³² Here more food is allowed at the beginning and end of the fast, while little should be taken in the middle, after the form of an ant, which is stout at both ends but thin in the middle. For the amount of daily mouthfuls and their decrease or increase during the fast, which lasts a month, cf. note 110.

about conflicting rules, the 11th should be disregarded and the 12th taken for the fast.

The 11th Tithi is of two kinds, viz., the Encroached and the Pure Tithi.

The Vishnavites should disregard the 11th, which is encroached upon by the 10th at dawn, and fast on the 12th Tithi.

The Pure 11th Tithi, whose dawn is not encroached upon, is itself of four kinds, viz., 1st, when the 11th only is Overstepping; 2nd, when the 12th only is Overstepping; 3rd, when both (the 11th and 12th) are Overstepping; and 4th, when none is Overstepping. The expression "Overstepping" refers to the Tithi stretching over part of the sunrise of the next day.¹⁵³

The following are illustrations of these four cases :—

1st. The 10th lasts 55 Ghatikas (after sunrise), the 11th 60 Ghatikas and 1 Pala, the 12th again less, viz., 58 Ghatikas: this is the Pure 11th Tithi which alone is Overstepping, and in connection with it should the Vishnavites fast on its second day, but the Shivaites on its first day.

2nd. The 10th has 55 Ghatikas, the 11th has 58, and the 12th has 60 Ghatikas and 1 Pala. This is the Pure 11th Tithi with an Overstepping of the 12th alone, and in connection with it should the Vishnavites fast on the 12th, and the Shivaites on the preceding day.

3rd. The 10th has 55 Ghatikas, the 11th 60 Ghatikas and 1 Pala, and the 12th has (a whole day less the above 1 Pala plus) 5 Ghatikas; This is the Pure 11th Tithi with an Overstepping of both the 11th and the 12th, and in connection with it should all Vishnavites and Shivaites fast on the second day.

4th. The 10th Tithi has 55 Ghatikas, the 11th has 57, the 12th has 58. This is the Pure 11th Tithi with no Overstepping, and in connection with it should the Vishnavites as well as the Shivaites fast on its first day.

Thus is, in abridgment, the rule especially for the Vishnavites.

Rules for Shivaites.

Here it must be observed that the 11th Tithi is of two kinds, viz., when its sunrise is encroached upon and it is then an Encroached

¹⁵³ And having thus more than 60 Ghatikas, the number of Ghatikas which constitutes a complete Tithi.

Tithi, and when it is not thus encroached upon and is then a Pure Tithi.

Each of these two again has a fourfold subdivision, viz., when the 11th only is Overstepping, when there is a Double-Overstepping, when the 12th only is Overstepping, and when there is no Overstepping on either day. Accordingly there are in all eight kinds of 11th Tithis, and the following examples are their illustrations :—

1st. The 10th has 58 Ghatikas, the 11th has 60 Ghatikas and 1 Pala, the 12th Tithi is a subtractive Tithi with 58 Ghatikas : this is the Pure 11th Tithi which alone is Overstepping.

2nd. The 10th has 4 Ghatikas, the 11th 2 Ghatikas, and the 12th is a subtractive Tithi¹³⁴ with 58 Ghatikas. This is the Encroached 11th Tithi which alone is Overstepping. In connection with these two Tithis Shivaite householders should fast on the previous day ; but ascetic wanderers, non-desiring¹³⁵ householders, hermits of the forest, widows, and Vishnuvites should fast on the following day. Some writers say that Shivaites who desire to please Vishnu should fast on both days.

3rd. The following is an example of the Pure 11th Tithi with a Double-Overstepping : The 10th has 58 Ghatikas, the 11th 60 Ghatikas and 1 Pala, and the 12th has (the rest of that whole day, less the above 1 Pala plus) 4 Ghatikas.

4th. The following is an Encroached 11th Tithi with a Double-Overstepping : The 10th has 2 Ghatikas, the 11th has (the rest of that day plus) 3 Ghatikas of the following day, the 12th has (the rest of this day of the 11th plus) 4 Ghatikas.

In both of these last cases ought the Vishnuvites as well as the Shivaites to fast on that day which contains the last part of the 11th Tithi.

5th. The following is a Pure 11th Tithi with an Overstepping of the 12th Tithi : The 10th has 58 Ghatikas, the 11th has 59, and the 12th has 60 Ghatikas plus 1 Pala. In connection with it Mádharma says that, on account of its being a Pure Tithi, Shivaites ought to fast on

¹³⁴ The subtractive Tithi is that which is less than 60 Ghatikas, does not include a sunrise, and is therefore not numbered as a Date in the Calendar. Its Ghatikas are added to those of the preceding Tithi.

¹³⁵ Namely, such householders who, having sons, riches, &c., do not perform desiring sacrifices.

the 11th Tithi and not on the 12th ; but the Hemádri says that all should fast on the 12th, while some other writers say that those Shivaïtes should fast on the 12th who long after final emancipation from personality.

6th. The following is an Encroached 11th Tithi with an Overstepping of the 12th : The 10th has 1 Ghatika after sunrise, the 11th has 58 Ghatikas and is a Subtractive Tithi, the 12th is an Additive Tithi, and has 60 Ghatikas and 1 Pala. Here the 11th being an Encroached Tithi, the Shivaïtes should fast on the 12th.

Thus Shivaïtes should disregard the 11th Encroached Tithi when it has a Double-Overstepping, or when the following 12th is Overstepping.

On the above six kinds of 11th Tithis with Oversteppings should the Vishnuvites reject the 11th and fast on the 12th.

7th. The following is a Pure 11th Tithi with no Overstepping on either day : The 10th has 57 Ghatikas, the 11th has 58, the 12th has 59. Here should Shivaïtes fast on the 11th and not on the 12th, but Vishnuvites, who regard it as an Encroached Tithi, should fast on the 12th.

8th. The following is an Encroached 11th Tithi with no Overstepping on either day : The 10th has 2 Ghatikas, the 11th has 56 Ghatikas, and is thus a Subtractive Tithi, the 12th has 55 Ghatikas. Here also should Shivaïtes fast on the 11th and Vishnuvites on the 12th. With this last case of the 11th Tithi with no Overstepping, it must be held as it was with the two first of these eight cases, namely, that ascetics, widows, and people who desire emancipation from personality, should fast on its second day. As to those Shivaïtes who desire to please also Vishnu, it seems to me that according to analogous cases they ought to fast on both days.¹⁸⁶ The learned men of our times disregard the rules of the Hemádri and what it teaches about the 11th being a Non-Desiring Tithi, *i.e.*, a Tithi on which Desiring Rites [cf. note 168] cannot be performed, and follow Mádharma in establishing general rules for the Shivaïtes. Nowhere do they say that two fasts ought to be kept, or that on a Pure 11th Tithi with an Overstepping of the 12th all should fast on its second day. Let it thus be known that in all countries the rules given by Mádharma generally prevail.

¹⁸⁶ One fast to Shiva and the other to Vishnu.

Thus have eighteen kinds of the 11th Tithi for the Vishnuvites and eighteen kinds for the Shivaites been described and carefully illustrated. More details are given in large works. Now if I gave here a more detailed description with more illustrations of every one of the times or the rules of the 11th Tithi, it would only confuse the ignorant. I have therefore written a separate list of them (at the end of this work), which can be consulted.

When the 10th Tithi stretches over midnight, it is called the Skull-Encroachment;¹³⁷ when it has 52 Ghatikas it is called the Shadow-Encroachment; when it has 53 Ghatikas it is called the Swallowing-Encroachment; when it has 54 Ghatikas it is called the Full-Encroachment; when it has 55 Ghatikas it is called the Over-Encroachment; when it has 56 Ghatikas it is called the Great-Encroachment; when it has 57, the Destructive-Encroachment; when it has 58, the Greatly-Destructive-Encroachment; when it has 59, the Terrible-Encroachment; and when it has 60, the Monster-Encroachment. These distinctions of the Encroachment are given by Nárada, and some of them are followed by many of the followers of the system of Madhu and others. Madhaváchárya, as well as all other writers, agree that when the 10th Tithi has 56 Ghatikas it is an Encroachment. When the 10th encroaches upon the 11th with 15 Ghatikas, the sacrificial vow must be performed without fast. Yet it should be noted that the accompanying rites of the sacrificial fast, like the Resolving¹³⁸ and the worship, ought not, in spite of the 11th being encroached upon, to be quite rejected, but they ought to be performed at the mid-day time instead of the morning.

Manner of the Sacrificial Fast.

In the morning of the day preceding the fast, after having performed the obligatory rites, one should pronounce the following Resolution: "Beginning with the 10th Tithi shall I perform a sacrificial fast of three days. O God! O Lord of Gods! O Krishna! remove all hindrances." Then should one eat the One-Meal-a-day-Meal at mid-day time. In connection with this meal one should avoid eating in brass vessels, meat, Cicer lentils, sleeping by day, eating much, drinking

¹³⁷ Midnight being considered the highest part of the night as the skull is of the human body. All the following names of the Encroachments are descriptive of the magnitude of number of the Tithis' Ghatikas.

¹³⁸ Concerning this Resolving. compare notes 27 and 87.

much water, eating more than once in a day, sexual intercourse, honey, telling lies, pease, Paspalum grain, green vegetables, another man's food, gambling, oily sesamum cakes, Pan-Supari, &c. During the time of this rite (of the 10th) one must cleanse one's teeth with a twig (cf. note 86), at night sleep on the ground ; but on the morning of the 11th Tithi one must wash one's teeth with leaves and not with a twig. Thereafter, having bathed and performed the usual obligatory rites, one must take Darbha grass in one's hand, turn one's face northwards, hold a copper vessel filled with water, express the following resolution : " Having fasted on the 10th I shall eat to-morrow, O Lotus-eyed Vishnu ! Protect me, O Imperishable !" and bestow a two-handsful of flowers on the idol of Vishnu.

People who are not strong may, according to their strength, pronounce the following resolution : " On the 11th I shall take only water " ; or, " On the 11th I shall take only fruits " ; or, " On the 11th I shall eat only once, " &c. Shivaites should pronounce the resolution with the incantation of Rudra,¹³⁹ Sun-Worshippers with the usual Gáyatri incantation.¹⁴⁰

When the 10th Tithi stretches over sunrise, Shivaites should pronounce this Resolution in the night of the 11th Tithi. If the 10th stretches over midnight, then should all sexes pronounce it after the Midday-time of the 11th Tithi. After having pronounced the Resolution one must consecrate some water by repeating thrice the incantation called " the Gayatri of eight syllables, " ¹⁴¹ and drink it. Thereupon making a tent of flowers (for the idol) one should worship Vishnu by means of flowers, fragrant spices, ghee, burning lights, offerings of superior eatables, nice songs, divine hymns and beautiful music, flat prostrations and great exclamations, and by keeping awake during the night ordered by the law.

¹³⁹ The Rudra incantation runs as follows :—

ओं तत्पुरुषाय विद्महे महादेवाय धीमहि ।

तन्नो रुद्रः प्रचोदयात् ।

Om tatpurusháya vidmahc, mahadeváyadhimahi,

tan no Rudra prachodayát.

Let us know that Supreme Person, meditate on that Great God !

Let him, Rudra, enlighten us !

¹⁴⁰ Compare note 98.

¹⁴¹ The Eight-syllables Incantation runs as follows :

ओं नमो वासुदेवाय=Om Namu Vasudevaya ! Praise be to Vasudeva.

Rules to be observed in connection with the Eleventh Tithi.

One should not speak to, look on, or touch a heretic, should abstain from sexual intercourse, speak the truth, abstain from day sleep, and keep the rules given in the foregoing definitions. If one has by chance seen a heretic, let him look at the sun and be pure! If a grown up man has knowingly touched a heretic, let him bathe, look at the sun and be pure! If he has talked with him, let him meditate on the purifying Vishnu, or perform other rites and be pure!

If the sacrificial rites for dead ancestors fall on a fasting day, the food which remains after the rite is performed must be gathered in a vessel, smelt at, and thus given to cows and other (cattle). If one by way of substitution keeps the fast nominally by eating only bulbs, roots, fruits, &c., let him first distribute those bulbs, roots and fruits upon the plates of the Brahmins who sit there in the place of his ancestors, and eat then what remains. The following text: "O king, when the sacrificial rites for dead ancestors fall on the 11th Tithi, that day should be omitted and the rite performed on the 12th Tithi," concerns the Vishnuvites, and is in accordance with their custom. At the time of the half Month in which the 16 Mahalaya¹⁴³ rites for dead ancestors are to be performed, the Vishnuvites should pronounce the following Resolution: "I shall perform the Mahalaya of the 11th and that of the 12th (on one day) by means of an expedient," and then perform both of them on the 12th.

When the rite of purification from the uncleanness of child-birth or death occurs during the time of a Desiring-fast, one ought to perform oneself the bodily rites (like fasting, for instance), and at the end of the purifying rite to perform worship, the Donation rite to a Brahman and to give him a meal.

When the rite of purification from the uncleanness of child-birth or death occurs during the time of a usual obligatory fast, one ought to bathe, to adore Vishnu, and to fast oneself, but the sacrificial worship, &c., may be performed by a Brahmin substitute. The Donation rite may be omitted, and may not be performed at the end of the purifying rite.

The same rule holds good for the rite of purification from menstruation.

¹⁴³ These sixteen rites take place in the second half of the month Bhādrapada, and begin with the Full Moon.

On the morning of the 12th, having performed the usual obligatory worship, one must perform the sacrificial rite to Vishnu, pronouncing the following incantation : “ For the sake of this sacrificial rite, O Vishnu! be gracious to him who is blinded with the darkness of ignorance, give him the sight of knowledge, O Thou of the handsome face ! ”

If the rules concerning the 10th and following two Tithis have been broken, if one has slept by day, or drunk much water, or told a lie, one must declare (and confess) the transgressed rule, and repeat 108 times the incantation of Eight Letters (cf. note 141) to Vishnu. If the transgression is small, one must repeat 300 times the name of a god.

If one during the time of performing a sacrificial rite hears the voice of one who is impure from menstruation, or that of a low caste man, of a washerman, of one who is impure on account of child-birth or death, one should repeat 1008 Gáyatri incantations (cf. note 98), after which a Completing-Meal consisting of offered eatables mixed with leaves of the Tulasi shrub should be eaten. Eating Myrabolams in the Completion-Meal-Rite destroys the sin which occurs from talking (to people to whom one should not speak, or at times when one should not speak). This fast Completing-Meal-Rite must be performed on the 12th, as it is a great sin to omit doing so on that Tithi.

When the 12th Tithi stretches only a little after sunrise, (and there is thus not time enough) for the rites of that Tithi which ought to be performed up to Midday, then should one anticipate and perform those rites during the latter part of the night. Some say, however, that the morning oblation to the Fire should not be preponed. The sacrificial rites for dead ancestors being forbidden by night, they cannot thus be anticipated. At a time of great trouble, or of the rites to dead ancestors, or of Pradosha-rite (cf. note 114), the Completing-Meal-Rite (of the 12th) should be performed by drinking water only. When much remains of the 12th Tithi after sunrise, then should the first part of the day, which is called Harivasara, be rejected and the Completing-Meal-Rite be performed afterwards.

When the 12th does not stretch—even with one Pala—over sunrise, then must the Completing-Meal-Rite be performed on the 13th.

Several writers say that when the 12th stretches over the Mid-day-time, then the Completing-Meal-Rite must take place during the 6 first Ghatikas of the morning, and not at the time of mid-day or in the afternoon ; but others say that when there is a difficulty of time for the many rites, it may be performed in the afternoon.

When the moon is in conjunction with the sidereal mansion Shravana (cf. note 25) on the 12th Tithi of either the Light or the Dark half Month, one who is strong enough must fast both on the 11th and on the 12th Tithi; one who is not strong may nominally keep the fast of the 11th by eating only fruits (bulbs), &c., and fast on the 12th, which is in conjunction with Shravana.

When the conjunction called the Shrinkhala of Vishnu¹⁴³ occurs on the 11th Tithi, then must the fast which is ordered for the 12th Tithi when it is in conjunction with Shravana be observed on the 11th, and the Completing-Meal-Rite must take place on that day of the 12th on which the moon is no more in conjunction with Shravana. But if the conjunction of the moon with Shravana lasts only a very short time (on the first day) of the 12th, then the Completing-Meal-Rite may be performed on that day, as it is a sin to fail to perform that rite on the 12th Tithi.

Here is the rule concerning the conjunction called the Shrinkhala of Vishnu, in the month of Bhádrapada on the 12th Tithi: One must during the 12th Tithi abstain from the following eight things: Sleep by day, eating the food of another man, eating more than once, sexual intercourse, honey, eating in brass vessels, meat, and oily things. Then the following also should be abstained from: Gambling, anger, peas, Paspalum grain, Phaseolus pulse, sesamum seed, flour, the Ervum lentil, Collyrium, lying, coveting, fatigue, travelling, burdens, study, Pan-supári, &c.

All these rules should be kept in connection with the Desiring rites.

In connection with usual obligatory rites these special rules must be observed by people who are strong enough to do so. If one is not strong enough to keep the special rules, let him fast one day and night only, for there is no doubt that he who keeps his senses in subjection, who is a believer and trusts in Vishnu, gets rid of his sins by fasting on the 12th Tithi only.

Both he who says to another "Eat"! and he who himself eats on a fast day, will go to hell, but by performing the sacrificial fast of the 11th Tithi one is assimilated to Vishnu and gets riches.

¹⁴³ This conjunction consists in the 11th Tithi being encroached upon by the 12th Tithi, which itself continues for some Ghatikas after the sunrise of the following day, and in these two days being in conjunction with Shravana.

That is the description of the sacrificial fast of the 11th.

For other rites of the 11th Tithi, that day should be taken on which the 11th and the 12th meet.

Thus is the seventeenth chapter, a description of the 11th Tithi.

CHAPTER XVIII.

Description of the Twelfth Tithi.

For the rites of the 12th Tithi, that of its days should be taken which is encroached upon by the 11th Tithi.

The glorious 12th Tithi is of eight kinds :

1. The 12th which meets with a Pure Overstepping 11th Tithi, and is called the "Expanding."
2. The 12th which is itself a Pure Overstepping Tithi, and is called the "Abounding."
3. The 12th which is called the "Three Tithis' Touch," when, namely, the 11th lasts somewhat over sunrise, then cometh a subtractive 12th on that same day, and finally the 13th at the time of next sunrise; a day and a night thus touching three Tithis.
4. The 12th, which is called "Increase at the half Month," and occurs when the Dark Moon Date or the Full Moon Date are Additive Tithis.
5. The 12th, which is called the "Victorious," from its being in conjunction with the Sidereal Mansion of Pushya (which is said to grant victory).
6. The 12th Tithi which is called "Triumphing," and is in conjunction with Shravana.
7. The 12th which is called "Conquering," and is in conjunction with the mansion of Punervasu
8. The 12th, which is called the "Sin destroying Tithi," and is in conjunction with the Mansion of Rohini.

At the time of these eight kinds of Tithi, everyone who wishes to get rid of his sins and to be finally emancipated from personality should fast. The keeping of the 12th Tithi which is in conjunction with Shravana is as obligatory as that of the 11th Tithi. When the fast of the 11th and that of one of the above eight 12th Tithis meet on one day, one fast only instead of two, is to be observed. When they fall on two days people who are strong enough must fast on

both days. When one begins to perform two rites but then (sees that he) is not strong enough to perform the two accompanying fasts, let him fast on the 12th Tithi only and get thereby the benefit of the two fasts. For that fast even that 12th Tithi is to be taken which is in conjunction with Shravana only for two Ghatikas; but when it is in conjunction with Pushya, (Punervasu), &c., the fast ought to be performed only if those conjunctions last from sunrise to sunset.

As to the Completing-Meal-Rite of the fast of the 12th Tithi on which there is such a conjunction, all agree that it ought to be performed either at the end of both the Tithi and the conjunction, or at the end of either of them.

Thus is the eighteenth chapter, a description of the 12th Tithi.

CHAPTER XIX.

Description of the Thirteenth Tithi.

For the rites of the 13th Tithi of the Light half Month its first day should be taken, but for those of the 13th of the Dark half Month the second.

The rite of Pradosha (cf. note 114), which is accompanied by the worship of Shiva and the Night-Meal-Rite, must be begun on a 13th Tithi which falls on a Saturday and be performed either on every 13th Tithi which falls on a Saturday during a whole year, or on twenty-four 13th Tithis of the Light half Month. For it should that day of the 13th be taken, which includes the Evening Tide of 6 Ghatikas after sunset. If on both its days the 13th includes or equally nearly includes the Evening Tide, then the second day should be taken. If it includes it nearly on both days but not equally, then should the first be taken, namely if it includes more of the Evening Tide and there is sufficient time for the worship of the Gods and the meal; if not, one should follow the previous rule and take the second day. If the 13th does not include the Evening Tide on either of its two days should the second be taken.

Thus is the nineteenth chapter, a description of the 13th Tithi.

CHAPTER XX.

Description of the Fourteenth Tithi.

For the rites of the 14th of the Light half Month its second day should be taken, for those of the 14th of the Dark half Month its first day.

It is in connection with this Tithi that the fruit-desiring Rite of the Night of Shiva occurs on every 14th of every Dark half Month. For this rite that day should be taken on which the Tithi includes midnight, following therein the manner of the Great Night of Shiva (cf. note 65). If the 14th includes midnight on both its days, the second should be taken as it includes more of the Evening Tide. Some sects observe the 14th Tithi when it does include an Evening Tide, but concerning this the original rules should be followed. As the prohibition to eat by day on the 14th is a usual obligatory one, so far as eating is concerned, the 14th is to be disregarded and the Meal to be taken either on the 13th or on the 15th Tithi. Yet those who perform the rite of the Night-of-Shiva must eat the Completing Meal on the 14th, for as a prohibition cannot affect a settled precept, the rule that "food is prohibited during the daytime of the eight *and of the 14th Tithi*," does not apply here.

Thus is the twentieth chapter, a description of the 14th Tithi.

CHAPTER XXI.

Description of the two Fifteenth Tithis, viz., of the Full Moon and of the Dark Moon Dates.

The sacrificial vow of Savitri ^{1**} excepted, one must for the rite of the Full Moon and of the Dark Moon Dates take their second day. It being said by some writers that for the family traditional rites of the Full Moon Date of the months of Shrāvana and Phalguna their first day (though) encroached upon should be taken, some people take the first day of the Full Moon Date in all the months; but one ought herein to follow the original rules. If the 14th breaks upon the first day of the 15th by *less* than 18 Ghatikas, then, according to the text "18 Ghatikas of the 14th constitute an encroachment," no harm is done to the first day of the 15th and it can be taken for the performance of traditional family rites. But if the 14th breaks upon the first day of the 15th by *more* than 18 Ghatikas, it seems to me that it ought not to be taken.

When the 14th falls on a Tuesday or on a Monday it is very propitious for donations (to Brahmins), for bathing and other ceremonies. So also is the 7th that falls on a Sunday and the 4th that falls on a Tuesday.

^{1**} A sacrificial fast performed in the second half of the month of Vaishákha to Savitri, the wife of Brahma, by Hindu women to propitiate her and gain longevity for their husbands.

Rites of the Monday on which the Dark Moon Date falls, like, for instance, the rite of the worship of the *Ficus religiosa*, are performed on that Monday, if the Dark Moon Date nearly stretches at least over two Ghatikas of the afternoon; but learned men say that if it stretches only over the 6 Ghatikas of the Late-afternoon, or even only on the night, the rite ought not to be performed.

For the hair-cutting rite, &c., wandering ascetics ought to take the Full Moon Date which includes the 3 Muhurtas of the time of sunrise, but if it does not include the third of these Muhurtas, they must take the day on which the 14th and the 15th meet.

Thus is the twenty-first chapter, a description of the 15th Tithi.

CHAPTER XXII.

Description of the Time for Sacrifices.

The "Worship of Wood and Fire"¹⁴⁵ must be performed in the end, and sacrifices in the beginning, of the half-months. It must be well observed that here the word "Upavása" means the "Worship of Wood and Fire." The time for the sacrifice is that stretching from the fourth part of the last day of the half month to the third part of the first day of the following half month, and learned men recommend the morning for it. The sacrifice must not be performed in the fourth part of the 1st Tithi.

If both the 15th and the following 1st are complete Tithis, no difficulty arises, for one gets then the ordered time for the performance of the "Worship of Wood and Fire" on the 15th, and for that of the sacrifice on the 1st.

If the 15th is an Encroached Tithi, one must first count the Ghatikas by which the following 1st Tithi is increased or decreased, and take half of them, and then, if there has been a decrease subtract the half of the decrease from the 15th Tithi; but if there has been an increase, one must add the half of it to the 15th Tithi.

¹⁴⁵ The word I translate thus is "Anváthnam." This rite consists in taking on the day preceding the sacrifice fuel-twigs, in worshipping them with incantations, in throwing them either into the three domestic sacrificial fires, if one follows the ritual called Revelation, or into the one domestic fire, if one follows the ritual of Tradition (cf. note 30), and finally in meditating on and worshipping the Fire.

The conjunction of the two Tithis being thus established, let the time for the "Worship of Wood and Fire" and for (the sacrifice) be determined.

When there is neither decrease nor increase, the conjunction of the two Tithis is clear (for then it is) just where they meet. This conjunction is of four kinds: the Forenoon-conjunction, the Mid-day-conjunction, the Afternoon-conjunction, and the Night-conjunction. Dividing the day into two parts, the first half is the Forenoon, and the second half the Afternoon. The conjunction of the Forenoon and the Afternoon consisting of one Muhurta=two Ghatikas is called the "Mid-day-Turning," or according to the Kanastubha the "Veering around." The common practice of learned men, however, now, is to consider as the Mid-day-conjunction only the very minute on which the two Tithis meet, and not 2 Ghatikas.

Now if the conjunction of the 15th Tithi with the following 1st Tithi, which is determined by the above rule of adding or subtracting the half of the increase or decrease, takes place in the Forenoon or in the Mid-day time, then the "Worship of Wood and Fire" must be performed on the day preceding that of the conjunction, and the sacrifice on the day of the conjunction; but if the conjunction occurs in the Afternoon or in the Night, then the "Worship of Wood and Fire" must take place on the day of the conjunction and the sacrifice be offered on the following day. The following examples illustrate the case:—

1st. The 15th Tithi has 17 Ghatikas, the following 1st Tithi has 11 Ghatikas; the decrease is thus 6 Ghatikas and the half of it is 3 Ghatikas, which 3 Ghatikas being subtracted from the 17 Ghatikas of the 15th Tithi leave to it 14 Ghatikas, at which time the conjunction is then considered to occur. This makes a Forenoon-conjunction, at least if the length of the day is 30 Ghatikas, but it is a Mid-day-conjunction if the length of the day is 28 Ghatikas. In this case the sacrifice must take place on the day of the conjunction, and the "Worship of the Wood and Fire" is to be performed on the previous day.

2nd. The 15th Tithi has 14 Ghatikas, the following 1st Tithi has 19 Ghatikas. Here there is an increase of 5 Ghatikas the half of which is $2\frac{1}{2}$ Ghatikas, which being added to the 15th Tithi brings it to $16\frac{1}{2}$ Ghatikas, at which time the conjunction is then considered to take place. This makes an Afternoon-conjunction, and in connection

with it must the "Worship of Wood and Fire" be performed on the day of the conjunction and the sacrifice on the following day.

Here is another description for simple people.

Let the Ghatikas of the 15th which remain after sunrise be counted together with the Ghatikas of the following first Tithi, and then if their sum is *less* than the length of the day, it makes a Forenoon-conjunction; if their sum is *equal* to the length of the day, it makes a Mid-day-conjunction, and if it is *more* than the length of the day it makes an Afternoon-conjunction. Thus do people now generally establish this conjunction by counting the Ghatikas of the 15th Tithi and those of the 1st Tithi remaining after sunrise and comparing their increase or decrease.

According to the Kaustubha and other works the Ghatikas of the 15th which occur before its sunrise on the day of the 14th ought to be counted together with the Ghatikas which occur after its sunrise; then again should the Ghatikas of the following 1st Tithi which occur on the day of the 15th be counted together with those that occur on its own day and then one should look as to the increase or decrease of the 1st Tithi in comparison with the 15th. The following examples illustrate this view.

1st. The 14th Tithi stretches up to 22 Ghatikas after sunrise, the 15th up to 17 Ghatikas after sunrise (of the following day) having thus 38 Ghatikas on the day of the 14th and 17 Ghatikas on its own day, which counted together make 55. Again the following 1st Tithi having 43 Ghatikas on the day of the 15th and 11 Ghatikas on its own day, has in all 54 Ghatikas. There is thus a decrease of 1 Ghatika of the 1st Tithi as compared with the 15th, the half of which decrease is $\frac{1}{2}$ Ghatika which $\frac{1}{2}$ Ghatika being deducted from the Ghatikas of the 15th remaining after sunrise leaves to it $16\frac{1}{2}$ Ghatikas making thus an Afternoon-conjunction. But if the former rule were followed, it would give in this case a Forenoon-conjunction.

2nd. The 14th has 24 Ghatikas remaining (after sunrise); the 15th has 17 Ghatikas after sunrise and has thus 36 Ghatikas on the day of the 14th plus 17 on its own day, making in all 53 Ghatikas. Again the following 1st Tithi has 43 Ghatikas on the day of the 15th and 11 Ghatikas on its own day making in all 54 Ghatikas. Here, following the same rule as that used for the previous example where

we found a decrease, we find an increase of 1 Ghatika the half of which is $\frac{1}{2}$ Ghatika, which $\frac{1}{2}$ Ghatika being added to the 17 Ghatikas of the 15th Tithi, brings it to $17\frac{1}{2}$ Ghatikas, making thus an Afternoon-conjunction.

Thus it is clear that these two manners of establishing the conjunctions are opposed to each other as their decrease, increase, &c. are differently reckoned. According to the last rule (of the Kautubha, &c.) the decrease or increase never surpasses two Ghatikas. The plural form which (instead of the dual form referring to the Ghatikas) occurs in the following text: "The Ghatikas by which the following day is increased or decreased," is a mistake, as can be seen in the Purushártha Chintámani.

Special Rules concerning the Full Moon Date.

When the conjunction occurs after the Forenoon, that is when it begins with the 13th Ghatika of the day and before the middle of the day (*i.e.* the 16th Ghatika) and there is during these 2 Ghatikas sufficiency of the Full Moon Date for the performance of the "Worship of Wood and Fire," then should that rite be performed on that day of the conjunction and during the time of the Full Moon Date, and the sacrifice should follow at once. Some writers, however, say that the performance of both rites on the same Full Moon Date is defective.

In connection with the Dark Moon Date the two rites must be performed at two different times and never on the same day.

If on a Full Moon or a Dark Moon Date the conjunction occurs in the afternoon, then the sacrifice may without harm be performed during that fourth part of the day (*viz.*, the afternoon). But if there is on the Dark Moon Date an Afternoon-conjunction, and the following 1st Tithi is encroached upon by the 2nd Tithi with more than three Muhurtas so that the moon is visible on that day, then, as sacrificing when the moon is visible is forbidden, the sacrifice must by people following the school of Baudháyana and others be performed on the Dark Moon Date and the "Worship of the Wood and the Fires" on the 14th Tithi. Yet if the 2nd Tithi encroaches upon the 1st Tithi with 7 Ghatikas only (*i.e.* less than 4 Muhurtas) the followers (of the ritualistic rules of the ancient Sage and author) Baudháyana and others may perform the sacrifice on the 1st Tithi though the moon is then somewhat visible.

As the visibility of the moon does not convey a prohibition to the Apastambas (cf. note 148) and the Ashvaláyanas (cf. note 143), they may perform the sacrifice on the 1st Tithi.

When a sacrifice is performed on the conjunction day then must it be ended on the 1st Tithi and not on the 15th (*i.e.* the conjunction day); if it is ended on the 15th it is valueless and must be performed again.

Thus are the rules for the sacrifice of the cooked rice to the Smárta domestic Fire (cf. notes 30 and 145).

Some writers, again, say that the sacrifice of the cooked rice to the Smárta domestic Fire may be ended on the 1st Tithi. Thus there is really no strict rule. After having performed the sacrifice of the cooked rice in the Forenoon, one must after the conjunction only perform the meal rite to a Brahmin. Jayanta says that the sacrifice of the cooked rice is to be performed in the early morning nearest to the conjunction.

Thus do (different) writers give different rules.

In connection with the sacrifice to the three Shrouta domestic Fires (cf. notes 30 and 145) one must on the 1st Tithi only perform the meal-rite to Brahmins; all the other rites must be performed on the preceding day, for, according to the Purushártha Chintámani the 1st Tithi is of no use for them.

The followers of Kátyáyana¹⁴⁶ ought, in connection with the Full Moon Date also, to follow the general rule as given above, for the Nirnayasindhu and many other authorities agree, that the full moon does not make any difference to them. Some other writers, however, say that the Kátyáyanas ought at a Forenoon-conjunction on the Full Moon Date to perform the "Worship of Wood and Fire" on the day of the conjunction and the sacrifice on the following day.

*Special rules for the Followers of Kátyáyana¹⁴⁶ concerning the
Dark Moon Date.*

Let the day of the Dark Moon Date be divided into three parts, the Forenoon being the first, the Mid-day being the second, and the

¹⁴⁶ Kátyáyana is an ancient Sage and author of Vedic Sutras of the Yajur, of Treatises on Ritual and on Grammar. His descendants accepted in common life his rules on ritual and have followed them until this present time. They are called after him the Kátyáyanas. Some authors opine that all those who follow the ritualistic rules of Kátyáyana are Kátyáyanas.

Afternoon being the third. If the conjunction occurs during the night, the Kātyāyanas ought, like other sects, to perform the offering of the rice balls to dead ancestors and the "Worship of Wood and Fire" on the day of the conjunction (that is the 15th) and the Sacrifice on the following day (*i.e.* on the 1st Tithi), though the moon may then be visible. There is a general agreement as to this point.

If the conjunction occurs in the Forenoon or in the second part of the day called Mid-day, then the "Worship of Wood and Fire" and the oblation of rice balls to dead ancestors must be performed on the day preceding the conjunction and the sacrifice on the day of the conjunction.

When on the 14th Tithi the third part of the day called Afternoon is pervaded by the Dark Moon Date, then there is no doubt that the oblation of the rice balls to dead ancestors must be performed on that afternoon of the 14th which is pervaded by the Dark Moon Date. Some other writers say that when the Dark Moon Date only nearly touches the afternoon (of the 14th Tithi); the oblation of the cooked rice to one's ancestors ought to be performed on the day of the Dark Moon and not on the 14th Tithi. However, some other authors again say that it may be performed at the end of the 14th, as the moon is very dim then.

There are four kinds of Afternoon-conjunctions :—

1st. When the Dark Moon Date is included in the afternoon of the conjunction day. Example: The 14th has 29 Ghatikas, the Dark Moon Date 30, the following 1st Tithi 29, and the length of the day is 30 Ghatikas. Here the "Worship of the Wood and of the Fires" and the oblation to dead ancestors must be performed on the Conjunction-day and the sacrifice on the following day.

2nd. When the Dark Moon Date is included in the afternoon of the day preceding the Conjunction-day. Example: The 14th has 20 Ghatikas, the Dark Moon Date 22 Ghatikas, the following 1st Tithi has 24 Ghatikas, and the length of the day is 30. Here according to the Kaustubha, as the 1st Tithi includes on the day following the conjunction day (that is the 15th Tithi) a full morning of 6 Ghatikas and fully three parts of the 1st Tithi, and thus time enough to perform the sacrifice, the "Worship of the Wood and of the Fires" and the oblation to dead ancestors must take place on the

day of the conjunction and the sacrifice on the day of the 1st Tithi. Some other writers however following the text, "when the afternoon of the 1st Tithi includes 6 Ghatikas of the 2nd Tithi then, as the Moon has become visible and therefore the sacrifice cannot be performed, the Worship of Wood and Fire must be performed on the 14th Tithi," say that the Worship of Wood and Fire and the oblation to dead ancestors should take place on the 14th and the sacrifice on the day of the conjunction. Here is another example illustrating this case : The 14th has 18 Ghatikas, the Dark Moon Date 18, the following 1st Tithi has 19 Ghatikas and the length of the day is 27; now as the 1st Tithi includes the morning but not the three parts of the day (necessary to a sacrifice) the followers of Kátyáyana (cf. note 148) according to all authorities must perform the sacrifice on the conjunction day (*i.e.* the 15th) and the "Worship of Wood and Fire" and the oblation to dead ancestors on the preceding day of the 14th Tithi.

3rd. When the Dark Moon Date nearly pervades the afternoon of both days equally or unequally. Example : The 14th has 25 Ghatikas, the Dark Moon Date 25, the following 1st Tithi 24, and the length of the day is 30. Here both Afternoons include equally (the Dark Moon Date) ; concerning such a case we have seen above that there are two opinions, viz. that of the Kaustubha and that of other authorities.

Another illustration of this case : The 14th has 25 Ghatikas, the Dark Moon Date 20, the following 1st Tithi 17, and the length of the day is 27. Here also the afternoon of both days alike nearly includes the Dark Moon Date. All agree that here the Kátyáyanas should perform the sacrifice on the conjunction day (*i.e.* the 15th) and the "Worship of Wood and Fire" and the oblation to dead ancestors on the preceding day.

Here is an example where both afternoons nearly include the Dark Moon Date, but not equally : The 14th has 25 Ghatikas, the Dark Moon Date 23, the 1st Tithi 23 and the length of the day is 30. Concerning this case also two different opinions are given by the authorities mentioned in the former case.

A further example illustrating this case : The 14th has 25 Ghatikas, the Dark Moon Date 22, the 1st Tithi 18, and the length of the day is 30. Here also do both afternoons nearly include the Dark Moon Date, but not equally, and concerning it all agree that the

Kátyáyanas (cf. note 146) should perform the sacrifice on the conjunction day and the "Worship of Wood and Fire" and the oblation to dead ancestors on the preceding day of the 14th Tithi.

A last illustration of this case: The 14th has 25 Ghatikas, the Dark Moon Date 27, the following 1st Tithi 29, and the length of the day is 30. Here should the "Worship of Wood and Fire" and the sacrifice (sic! instead of "sacrifice" it ought to be the "oblation to dead ancestors") be performed on the conjunction day and the sacrifice on the 1st Tithi.

4th. When the afternoon of the conjunction day nearly includes the Dark Moon Date: The 14th has 31 Ghatikas, the Dark Moon Date has 26 Ghatikas, the following 1st Tithi 23 Ghatikas, and the length of the day is 30; or again: the 14th has 28 Ghatikas, the Dark Moon Date 22, the following 1st Tithi 17, and the length of the day is 27; in both these cases the "Worship of Wood and Fire" and the oblation to dead ancestors must take place on the conjunction day and the sacrifice on the following day of the 1st Tithi.

Thus even for Kátyáyanas (cf. note 146) the visibility of the moon does not always imply a prohibition; in some cases the prohibition holds good and the sacrificial rites, &c. must be performed on the preceding day, while in other cases they may be performed on the day the moon is visible. The same is the case with regard to the daily oblation of rice balls to deceased ancestors. Concerning the meal given to Brahmin in honour of deceased ancestors on the Dark Moon Date, a general description will be given further on in the work.

Rule for Sama-Vedists concerning the Sacrifice.

In connection with the Full Moon Date they should follow the general rule given above. In connection with the Dark Moon Date if there is a Night-conjunction, they should perform the sacrifice on the following 1st Tithi, even if the moon is then visible; if there is an Afternoon-conjunction and the 1st Tithi includes a Morning of 6 Ghatikas and stretches over the three first parts of the day, affording thus time enough for the sacrifice, then it should be performed on the 1st Tithi even though the moon should be visible and the "Worship of Wood and Fire" and the oblation to dead ancestors must take place on the Conjunction day (*i.e.* the 15th). If there is not sufficient time on the 1st for the sacrifice, then it must be performed on the Conjunction day and the "Worship of Wood and Fire" and the oblation to ancestors on the previous day of the 14th Tithi.

Thus should the Sama Vedists like the Kátýāyanas (of. note 146) observe as much as possible the prohibition of the visibility of the moon. This is the rule for the Sama-Vedists.

Thus is the twenty-second chapter, a description of the time of the sacrificial rites (of the 15th Tithis).

CHAPTER XXIII.

Definition of the time for the Oblation of Rice Balls to dead Ancestors.

For the oblation of rice balls to dead ancestors should the followers of Ashvaláyana¹⁴⁷ take, from among the five parts into which the day is divided, the fourth part, namely the afternoon, of that day and night on which the Dark Moon Date and the 1st Tithi meet. If the conjunction occurs in the afternoon this oblation is performed during the afternoon on the day of the "Worship of Wood and Fire."

If the conjunction occurs in the Mid-day time or in Forenoon, the oblation must take place on the day of the sacrifice after the sacrifice has been offered and during the afternoon.

When the conjunction of the two Tithis occurs at the time of the conjunction of day and night then the sacrifice of rice balls to dead ancestors must take place on the day of the "Worship of Wood and Fire" (in the afternoon).

Both the Apastambas¹⁴⁸ and the followers of Hiranyakeshi¹⁴⁹ perform the oblation of rice balls to dead ancestors on the day of the conjunction. It must be performed either in the afternoon or just when the sun stands over the tree (i.e. mid-day).

When the day is divided into five parts, the fourth is the afternoon; but when it is divided into nine parts the seventh is the afternoon.

It has been shown above that the Sankhyāyanas,¹⁵⁰ the Katyā-

¹⁴⁷ Ashvaláyana is an ancient Sage and author of Sutras, or Rules on the Ritual of the Rig-Veda. His descendants and others who follow his rules in common life are called after him Ashvaláyanas.

¹⁴⁸ Apastamba is the name of an ancient Sage and author of Sutras, or Rules on Ritual. His descendants and the followers of his rules are called after him Apastambas.

¹⁴⁹ Hiranyakeshi, an ancient Sage and author of Sutras, or Vedic Rules on Ritual. His descendants and followers are called after him Hiranyakeshayanas.

¹⁵⁰ Sháukhyāyana or Sháukhyayana is an ancient sage and author of Sutras, or Rules on the Ritual of the Rig-Veda. His descendants and the followers of his rules are called after him Sháukhyāyanas.

yanas and the Sâma-Vedists should perform the oblation of rice balls to deceased ancestors on the day of the "Worship of Wood and Fire." The day being divided into three parts it must be performed during the third part, viz. the afternoon.

If the oblation of rice balls to dead ancestors and the meal given to Brahmins in their honor fall on the same day, then must Rig-Vedists, who keep the domestic sacrificial fire, perform them by amalgamation. "Amalgamation" means here that both rites must be performed at the same time.

If the 15th Tithi is a defective Tithi, then only the meal to Brahmins in honor of dead ancestors should take place on the first day and only the oblation of rice balls to them on the second day.

People who keep the three domestic sacrificial fires ought only to make the oblation of rice balls in the North Fire and not by amalgamation (with the other rite).

When the Dark Moon Date is complete, people who keep the three sacrificial fires ought to perform the rites in the following manner: Firstly the "Worship of Wood and Fire," then the oblation to all divinities, then the oblation of rice balls to dead ancestors then the meal to Brahmins in honour of dead ancestors.

A man who keeps the sacrificial fire and whose father is still alive, should perform the oblation of rice balls to his deceased grandfather (his grandfather's father), &c., up to three generations at that specified time or at the end of the daily fire oblation, and either with balls or without rice balls. If such time cannot be got the oblation of the rice balls to ancestors should not be commenced.

If a sacrificial rite is neglected, then the Four-Feeted-Penance¹⁵¹ rite must be performed. If two sacrificial rites have been neglected the Half-Penance rite¹⁵² must be performed.

¹⁵¹ The Four-Feeted-Penance derives its name from the four days over which it stretches. It is performed as follows:—Let one on the first day eat only once at the time of Mid-day, and only twenty-six handfuls of rice fried in ghee; on the second day eat only once at night and take only twenty-two handfuls of food; on the third day only twenty handfuls of food which has been received yet without begging; on the fourth day keep a full fast.

¹⁵² The Half-Penance derives its name from the fact that it stretches only over six of the twelve days of a Full-Penance which will be described later on. It is performed as follows:—On the first day one should eat but once, viz., in the afternoon; on the second day only once, viz. at night; on the third and fourth day eat only food which has been received, yet without begging; and on the fifth and sixth fast.

As by the neglect of three sacrificial rites the domestic sacrificial Fire is destroyed, it should be renewed and reconsecrated.

If the oblation of rice balls to dead ancestors has been omitted then the penance of Vaishvanara ¹³³ should be performed ; or, in lieu of the omitted rite one should pronounce the following words : " I offer seven oblations" and, by throwing four times ghee into the Fire, perform a full Fire oblation.

Thus is the twenty-third chapter, a definition of the time of the sacrificial rite to dead ancestors.

CHAPTER XXIV.

Rules for the Meal to Brahmins in honor of Dead Ancestors in connection with the Dark Moon Date.

For the Meal to Brahmins in honor of dead ancestors, that day should be taken, whose fourth part of the five into which the day is divided, viz. the afternoon, includes the Dark Moon Date. Either the first or the second day of the Dark Moon Date may be taken, of their afternoons fully or nearly include the Dark Moon Date. If the afternoons of both days nearly include the Dark Moon Date. but not equally, then that day whose afternoon includes more should be taken. When the afternoons of both days include the Dark Moon Date equally, then if there has been a decrease of the (15th) Tithi, the first day should be taken, but if the (15th) Tithi has increased or is like the 14th the second day should be taken.

Here follow examples of the afternoons of both days nearly including the Dark Moon Date, and that equally when there is either decrease or increase or likeness :

The 14th has 19 Ghatikas after sunrise, the Dark Moon Date has 23, and the length of the day is 30. Here the afternoons of both days include equally 5 Ghatikas of the Dark Moon Date, and as there is an increase of 4 Ghatikas of the 15th as compared with the 14th, the second day should be taken.

Another example : The 14th has 23 Ghatikas after sunrise, the Dark Moon Date 19. Here as the afternoons of both days include equally 1 Ghatika, and as there is a decrease of 4 Ghatikas, the first day should be taken.

A further example : The 14th has 21 Ghatikas after sunrise, and the Dark Moon Date also 21 Ghatikas. Here both afternoons

¹³³ I cannot find any particulars concerning the manner of this Penance Rite.

include 3 Ghatikas alike, and as there is neither decrease nor increase, but the 14th and 15th are equal, then the second day should be taken.

When both the afternoons include fully (that is during their own length, viz. 6 Ghatikas) the Dark Moon Date, then as there is forcibly an increase (of the 15th as compared with the 14th), the second day should be taken.

When the afternoon of neither of the two days includes the Dark Moon Date, then those who keep only one domestic sacrificial Fire as well as those who keep all three domestic Fires must take the first day, *i.e.* the day on which the 14th meets with the 15th and includes that time of the 15th or Dark Moon Date which is called *Sinivali*.¹⁵⁴

As for those who keep no sacrificial Fire as women, Shudras¹⁵⁵ &c. they must take that day on which the 1st Tithi meets with the 15th Tithi and includes that time of the 15th or Dark Moon Date, which is called "Kuhu"¹⁵⁶; thus at least is the opinion of Madhavacharya as to the Dark Moon Date of those people, and it is generally accepted by all learned men.

The Purusharthachintamani says that people who keep the sacrificial domestic Fire and are followers of the Rig-Veda or of the Black-Yajur-Veda must perform the meal to Brahmins in honor of dead ancestors on the day preceding that of the sacrifice (that is on the 14th) even then if its afternoon does not include the Dark Moon Date.

Thus when the afternoons of both days are completely pervaded by the Dark Moon Date, the meal to Brahmins in honor of dead ancestors must be performed on the second day. If the afternoons of both days include nearly the Dark Moon Date and there is an increase of the 1st Tithi, then must the meal to Brahmins in honor of dead ancestors be performed on the first Tithi after the sacrifice.

When the afternoon of the second day includes the Dark Moon Date and there being a decrease of the 1st Tithi, the sacrifice is

¹⁵⁴ *Sinivali* is the first watch of the whole time of the Dark Moon Date.

¹⁵⁵ The last of the four castes into which Hindu society was divided in ancient times and which are not allowed to wear the sacred shoulder cord. The word Shudras is now used for all lower divisions of castes within the pale of Hinduism.

¹⁵⁶ *Kulu* consists of the two last watches of the whole time of the Dark Moon Date.

performed on the Dark Moon Date, then must Rig-Vedists take the first day which includes the time of the Dark Moon Date, called *Siniváli* (cf. note 154); the Black-Yajur-Vedists¹⁶⁷ must take the second day which includes the time of the Dark Moon Date called *Kuhu* (cf. note 156); and the Sama-Vedists may take either.

When the afternoon of the first day includes more of the Dark Moon Date than that of the second day, then Sama-Vedists must take the first day, but Black-Yajur-Vedists the second. It is said that even when the afternoon of neither of the two days includes the Dark Moon Date, Sama-Vedists must take the first and Black-Yajur-Vedists the second day.

When both the Dark Moon Meal and the Yearly Meal to Brahmins in honor of deceased ancestors, or both the Dark Moon Meal and the Monthly Meal to Brahmins in honor of deceased ancestors; or both

¹⁶⁷ One must remember that the Veda called Yajur exists in two Recensions, viz. the *Vajasaneya* or White Recension and the *Taittiriya* or Black Recension, which are at variance in many points, that this difference arose probably before the text of the Yajur was committed to writing at a time when the Vedas were still transmitted orally from one generation to the next. The legend of the *Matsya Purana* relates that the author of the Yajur-Veda, the Sage *Vaishampáyana* imparted that Veda first to his pupil *Yájnavalkya* charging him to teach it to his twenty-six fellow-pupils. Before *Yájnavalkya* had time to do so, however, he contrived to offend his teacher, the Sage, who at once commanded him to relinquish the acquired Vedic words he had confided to him. *Yájnavalkya* vomited them at once in a tangible form on the ground. The teacher transforming then his twenty-six other disciples into so many *Taittirís*, or partridges, bade them pick up the vomited Veda, which through its contact with the ground, had already become soiled and blackened and was ever afterwards called the Black-Yajur, also *Taittiriya-Yajur-Veda*.

Being left without Veda, *Yajnavalkya* by means of pleasant Hymns gratified the Sun, who to reward him appeared in the form of a horse, or *Vajin*, and gave him a fresh Yajur text, called therefore *Vajasaneyin Text*, also *White-Yajur-Veda*.

The true meaning of this legend is not difficult to surmise. As it has always been with scholastic or philosophical schools, numerous examples of which we see in Greek history of philosophy, and even in our own times, in the relation of *St. Simon*, *Comte*, *Spencer* to each other, that, namely, a spirited and progressive disciple separates from his teacher, rejects parts of his system, and, adding to that which he retains new conceptions, makes, so to say, a new system, and despises the fountain from which he had first drawn; so also *Yájnavalkya*, after having mastered his teacher's philosophy, rejected parts of it, established a new method, and called the old system of his former master by a bad name, the Black Yajur or the Yajur of Partridges.

the Dark Moon Meal and the Water-Pot Donation Meal¹⁵⁹ to Brahmins in honor of dead ancestors occur on the same Dark Moon Date then both are to be performed on the same day; but different divinities must be worshipped. On such occasions the monthly meals, the yearly meals, &c., ought first to be performed, and then the Dark Moon Meal to deceased ancestors should be performed with food separately prepared.

The Vishvadeva Rite¹⁶⁰ must be performed before the Dark Moon Meal to Brahmins in honor of deceased ancestors with the food that remains from the Monthly Meals or the Yearly Meals, or fresh food can be expressly prepared.

People who keep the sacrificial domestic Fire when these rites meet thus on the same day, must first perform the Vaishvadeva Rite, then the oblation of rice balls to dead ancestors, then the Yearly, Monthly Meals to Brahmins in honor of deceased ancestors, etc.

The Dark Moon Meals to Brahmins in honor of deceased ancestors may be performed even by people who have not been invested with the sacred cord, by widowers and by travellers.

People who have neglected to perform the Dark Moon Meals to Brahmins in honor of dead ancestors must repeat hundred times the Rig-Veda incantation which begins thus: "Niyúshu vâcham."¹⁶⁰

Thus is the twenty-fourth chapter, concerning the meal rites to deceased ancestors on the Dark Moon Date.

¹⁵⁹ This Water-Pot-Donation-Rite consists in the usual Meal Rite to Brahmins in honor of one's deceased ancestors with this difference, that handfuls of water are poured upon the ground to refresh them and a pot filled with water given to every one of the Brahmins who represent one's ancestors. It is very meritorious to give a pot of gold, silver and other metals (cf. note 32).

¹⁶⁰ The Vishvadevas are a kind of divinities, lower than the gods, but higher than deceased ancestors. They must be propitiated daily and the oblation offered to them according to this text must be performed before the meal to Brahmins who represent the ancestors. In the Vedas, the word Vishvadevas seems to mean all the gods of the Universe.

160 न्यू ३ पुवाचं प्रमहे भ्रामहे गिरुंद्रायसदने विवस्वतः ।
नूचिद्विरत्नं ससतामिवाविदन्नुदुष्टतिर्द्विणोदेषु शस्यते ।

"We bring to the glorious Indra, whose throne is in the Sun, a sweet Hymn of Praise, (for) he accepts with eagerness the gift of the good, and bad praise is not acceptable to gift-givers."

In giving the meaning of this Mantra of the Rig-Veda Mand. I. 53. 1, I do not follow entirely Sayana's Commentary, for his supply of extra words only confuses the simplicity of the text. His taking "gira" as a Nom. Pl. is evidently in this place a mistake.

CHAPTER XXV.

On the time for beginning Sacrificial Rites.

The periodical sacrificial rite and the offering of cooked rice should begin on the Full Moon Date and not on the Dark Moon Date.

Laying the sacrificial domestic Fire ¹⁶¹ should take place after the daily burnt offering which is performed on the entering a new dwelling place.

When the periodical sacrifices of both the Dark and the Full Moon Date is begun on the date of the Full Moon, then neither the intercalary month, nor the month of Pausha, nor the setting of Venus and other Planets are detrimental to them ; but if one has neglected to begin them at the time of Full Moon, some writers say, that then due regard must be paid to Pure months (for their beginning) ; other authorities even say that they ought always to be begun during a Pure month.

Thus is the twenty-fifth chapter, a description of the beginning of sacrificial rites.

CHAPTER XXVI.

Times for Irregular Sacrificial Rites.

There are three kinds of Irregular sacrificial rites :—

1st. Obligatory Irregular sacrificial rites, like the oblation of the first-fruits, the Four-months' sacrifice, &c.

2nd. Occasional Irregular sacrificial rites like the child-birth-sacrifice, &c.

3rd. Desiring Irregular sacrificial rites, as those connected with the Sun, &c.

All those rites are of great importance.

The sacrifice completing rites are also Irregular rites. They are of two kinds ; viz., Obligatory and Occasional.

¹⁶¹ As the daily burnt offerings to the All-Spirit, to the Gods, the Vishvadevas (cf. note 159), the Ganas (a kind of maleficial demi-Gods under the supervision of Ganapati, cf. note 6), the Demons (cf. the Sandhyāpustakam) and even to the crows and the two dogs Shama and Shabala (cf. ibidem) are obligatory, on entering a new residence the place for the domestic sacrificial Fire must be prepared and the Fire kindled at once for ever (cf. note 30) as soon as one has offered one burnt offering on a provisory place, where the Fire which one has brought from the old residence is kept.

There is some uncertainty as to whether Irregular sacrificial rites must be performed at the very moment of their occasion or during the space of two days. It is doubtful as to whether they ought to take place at the Dark Moon, or at the time of the Mansions of the Gods (cf. below) in the Light half month.

When the rule that they are to be performed at the Dark Moon Date is followed, if there is an Afternoon-conjunction, then the Irregular sacrificial rite must take place either on the day of the Conjunction and during the very time specified, or in the course of two days; the Regular rite then follows. But when there is a Mid-day or a Forenoon-conjunction then the Regular rite must be performed on the Conjunction day and the Irregular rite must follow at once.

The 14 sidereal Mansions beginning with Kṛittika and ending with Visháka are called the Mansions of the Gods.

A description of the oblation of the first fruits will follow in the second part of this work.

The Initiatory sacrifice is to be performed on the 14th Tithi.

Thus is the twenty-sixth chapter, a general definition of Irregular Rites.

CHAPTER XXVII.

On Sacrifices of Animals.

The sacrifice of animals should be performed on one of the four Full Moon Dates of the rainy season, beginning with the month of Shrávana, or either on the day of the Sun's southward course or on that of its northward course.¹⁶²

If the Full Moon Date is Defective then the general rule of the 15th given above for the Irregular sacrificial rites should be followed.

Thus is the twenty-seventh chapter, on the time for the sacrifice of animals.

CHAPTER XXVIII.

Times for the Sacrificial Rites called Four Months' Sacrifices.

There are four kinds of Four Months' sacrifices :—

1st. That which is called the Life-Long.¹⁶³ Let the Vishadeva rite (cf. note 159) be performed on the Full Moon Date of the month of Phalguna or of the Month of Chaitra; then, counting either from

¹⁶² On this double motion of the Sun compare note 28 and the text to it.

¹⁶³ The reason of the name of this and of the two following rites is evident from the description of the rites themselves.

the one or the other of these two months, let a rite be performed on the same date of all the following fourth months up to one's death.

2nd. That which is called the One-Year-Long. Its time is the same as that of the above rite, only that it lasts but one year and that its end consists in performing either a Savana or an Animal or a Soma sacrifice.

3rd. The Twelve-Days-Rite, which consists in this, that an All-Gods-Rite (cf. note 159) is performed on the first-day, a Varura-Praghása-Rite (cf. note 167) on the fourth day, the sacrifice called Saka on the eighth and ninth days, and the sacrifice called Shunásiriya on the twelfth day.

4th. The Much-Practiced-Rite,¹⁶⁶ which consists in this that a rite is performed on four consecutive days and ended on the fifth.

Some writers say that these last two rites, viz., the Twelve-Days-Rite and the Much-Practiced-Rite should begin on a day of the Northening course¹⁶⁵ of the Sun, in the Light half month and during the Conjunction of one of the Sidereal Mansions of the Gods, and that they should have their end-rite in the Light half month. Some other writers however say that their end should occur in the Dark half Month.

If the Twelve-Days-Rite and the Much-Practiced-Rite are ended by offering a Savana¹⁶⁶ or any other like sacrifice, then they may be performed once only; but if they are not so ended, they must be performed every year.

Some writers even say that a rite of one day only is sufficient and that it is to be performed on one of the four Full Moon Dates beginning with Chaitra.

Other writers again mention a rite of seven days, namely the Vaishvadeva (cf. note 159) on the two first days, the Varura-Praghása¹⁶⁷ on the third day, the Domestic-Sacrifice on the fourth

¹⁶⁵ The reason of the appellation of this rite is very probably this, that being easier to perform than the preceding ones, it is oftener practiced than they.

¹⁶⁶ Compare note 28.

¹⁶⁶ This rite consists in oblations of the Soma-juice and forms the completing part of other sacrifices. Particulars will be given later on in the work.

¹⁶⁷ A kind of oblation to Varuna (the God of the Ocean) at which time barley is both offered and eaten. As this and the following rites will again appear and be explained in the course of this work; and as it would take too much time to give here a satisfactory description of them, I refer to the translation of latter chapters.

day, the Great Ghee oblation on the fifth day, the oblation to dead ancestors and other other-like concluding rites of the Saka-Sacrifice on the sixth day, and the Shunásiriya-Rite on the seventh day. For these rites of seven days the same time of the Light half Moon must be taken, which are ordered for the rites of the five days.

Thus is the twenty-eighth chapter, a definition of the time for the rites called Four-Months-Rites.

CHAPTER XXIX.

Description of the time for Desiring and Occasional Rites.

Regarding Desiring rites¹⁶⁸ the general rule which has been given for the Irregular rites should be followed and the Dark Moon Date be taken, or they may be performed during the conjunction of the lunar sidereal Mansions of the Gods in the Light half Month.

A wife should perform the (thanksgiving) sacrifice for child-birth on the Date of the Moon's change after the removal of the uncleanness of delivery, which for twenty days precludes the performance of rites.

Occasional rites like, for instance, that connected with the conflagration of one's house, should be performed at once after their occasion has arisen, and a Moon's change should not be waited for. But as to rites for which there is no such occasion one should perform them on the date of the Moon's change.

Those sacrificial rites, which obligatorily accompany sacrifices, must be performed along with those sacrifices by which they are occasioned ; no other time should be looked for.

If during a sacrifice a defilement¹⁶⁹ of the things to be offered occurs and one becomes aware of it after the part of the sacrifice

¹⁶⁸ Desiring-rites are such which are not obligatory but are only occasional and performed for the sake of certain blessings, like getting a son, riches, long life, &c.

¹⁶⁹ This defilement occurs by the things to be offered and the Brahmins who officiate being touched or even only looked upon by a low caste man ; by their being touched by another Brahmin who has not bathed and put on newly washed cloths, by cats, dogs, rats, crows, fowls, &c. by the fall of flies, insects into the offerings to be burnt and by a host of other causes.

called *Svishtakrit*¹⁷⁰ has been performed, and before the *Yajur-Veda-Incantation* called *Samishta*¹⁷¹ is pronounced, then must one perform the penitential rite which is occasioned by the defilement at that very time and begin the sacrifice again with the *Sowing-Ceremony*;¹⁷² but if one becomes aware of the defilement only towards the end of the sacrifice, then must that sacrifice be finished and a fresh one from the very kindling of the Fire be performed.

This is the twenty-ninth chapter, a definition of Desiring and Occasional sacrifices.

CHAPTER XXX.

Laying the Sacrificial Fire.

The laying of the sacrificial fire (cf. note 161 and 30) must take place on the Date of the Moon's change and of the conjunction of certain lunar sidereal mansions. For it that Date of the Moon's change should be taken which lasts throughout the rite from the time of pronouncing the Resolution to that of the final oblation. If such a 15th Date cannot be obtained, such a one may be taken

¹⁷⁰ The word *Svishtakrit* means "the fulfilling of the desire" scil. one has to get some special blessing by means of the sacrifice offered. The part of the sacrifice called by that name consists in a burnt offering of a mixture of ghee, boiled rice, fruits, &c. and is supposed to cause the whole sacrifice to be pleasant to the gods, and to effect it, that they grant that which one wishes to obtain by means of the whole sacrifice.

¹⁷¹ *Samishta* is the *Yajur-Veda* incantation which is pronounced at the end of the Sacrifice to unify its different parts and to fructify them.

¹⁷² In order to understand the meaning of this ceremony one must remember that at the time of sacrifices before the rice, &c., can be offered, it must in the hands of the officiating Brahmin figuratively pass through the natural process of sowing, watering, threshing, cleansing, and cooking. The officiating Brahmin therefore takes handfuls of rice and pretends to sow it in a winnowing wicker basket, then throws handfuls of water on it to represent the rain. Thereupon he waits some minutes repeating incantations and meditating upon the rice which is supposed to spring up and to grow. When it is imagined as ripe it is reaped in the basket, winnowed, washed with water and cooked with many incantations. When it is cooked it is offered in oblation. This "Sowing Ceremony" of the text refers to the sowing of the rice in the basket.

which lasts from the time of laying the Garhapatya-fire to that of laying the Ahavania-fire.¹⁷³

The following is the rule concerning the lunar sidereal mansions : If each of the two days of the 15th Tithi includes the time which is necessary for the performance of the rite, that day of the two should be taken which has the conjunction of the ordered Tithi. If a day can be had which has the threefold advantage of being in the season of Vasanta (cf. note 29), of being in connection with the date of the Moon's change and of having the ordered lunar sidereal conjunction, it is excellent ; if the Vasanta season is wanting, it is middling ; and if it has either only the date of the Moon's change, or only the ordered lunar mansion, it is bad.

The Ashvaláyana-Sutra gives the following seven lunar sidereal mansions as the ordered ones : Krittika, Rohini, Vishakhá, Purvá-phalguni. Uttaráphalguni, Mriga and Uttarábhadrápada. Other Sutra works give the following seventeen : Krittika, Rohini, Uttara-phalguni Uttarábhadrápada, Uttaráshádhá, Mriga, Panervasu, Pushyá, Purváphalguni, Purváshádhá, Hasta, Chitra, Vishákhá, Anurádhá, Shravana, Jeshtá and Revati (cf. note 25).

According to the text : " For the laying of the Fire before the Soma-sacrifice ¹⁷⁴ one must not look for a (propitious) season or for a conjunction with a lunar sidereal mansion ; " the time for the laying of that fire is in accordance with that of the Soma, and one does not want to look for a special time.

Thus is the thirtieth chapter, a description of the time of the laying of the sacrificial fire.

¹⁷³ For these Fires compare note 30. The three Fires are not always glowing ; at ordinary times or when the house-holder entitled to offer the three Fires-Oblations is absent, two are covered over with ashes and the third only kept burning for the daily burnt-offering which the wife has to perform. This passage refers probably to the rekindling of the two extinguished Fires from the burning third one and to the ceremonies accompanying it.

¹⁷⁴ It is to be performed with the juice of the Soma-plant (*Asclepias acida*). It is now it seems quite out of use and the manner of its performance is difficult to ascertain.

CHAPTER XXXI.

Description of Eclipses ¹⁷⁵

The time of a solar or lunar eclipse is propitious as long as the eclipse is visible. If the eclipse sets in and is apparent in another island but invisible in one's own country, its time is not propitious. Thus also if the eclipse begins before sunrise, the time of the eclipse before sunrise is not propitious, yet if the eclipse is made invisible by clouds, &c. then one ought to ascertain from astronomical works, almanacs, &c. the exact time it begins and ends, and to perform the ceremony of bathing, donations to Brāhmins, &c.

Eclipses of the Sun on a Sunday and of the Moon on a Monday are called "Gem Eclipses," and rites of donations to Brahmins, &c. performed then are very meritorious.

The regular order for rites during an eclipse is as follows: At the beginning, bathing; in the middle, oblation worship of the gods, meal to Brahmins in honor of one's deceased ancestors; at the end, rite of donation to Brahmins; and when the eclipse is passed, bathing.

The following is a rule concerning the degrees of merit of the water used for bathing.

Bathing in cold water is more meritorious than bathing in warm water; bathing in water which has been drawn by one's self is more meritorious than in water prepared by another; bathing by plunging is more meritorious than pouring the water over one's self; bathing in a pond is more meritorious than in flowing water, yet bathing in a large river is better than it; after that come the following kinds, of which each is more meritorious than the preceding: bathing in holy rivers, in the Ganges and in the sea.

For the (two) baths in connection with an eclipse, one must keep one's cloths on; some writer however say that the cloths are to be retained only for the bath after the eclipse.

¹⁷⁵ In order to understand this description of eclipses with their defilement and rites one must remember that the eclipses of the Sun and Moon are attributed to the evil power of Rahu, a kind of demon belonging to the class called Daityas. He is believed to snap at the Moon and Sun at the time of partial eclipses and to swallow and disgorge them again at the time of total eclipses. This he does to revenge himself upon the Sun and Moon for that, that they prevented him from tasting along with the Gods, with whom they had mixed in disguise, the Nectar of Immortality which they had just found and were going to drink.

If one does not bathe after the eclipse is passed the defilement accruing from childbirths or deaths remains.

The bath of the eclipse should not be accompanied by incantations.

Married women should bathe from the head down; but other women should bathe even the head at the time of an eclipse.

The rites connected with an eclipse as bathing, donations to Brahmins, meal rites to Brahmins in honor of one's deceased ancestors, &c., must be performed even if there is then a defilement from childbirth or death.

If an Occasional bath-rite (like that of an eclipse) occurs during the time of menstruation, a woman must perform the bath by pouring over herself water from a pot. Let her not wring her cloths, nor change them.

In connection with an eclipse it is very meritorious to fast three days or one day, and to perform the rite of donations to Brahmins, &c. Some writers say that those who fast one day, should do so on the day before the eclipse, but some others say that they ought to do so on the very day and night of the eclipse.

The householder who has a son ought not to fast on occasions like eclipses, solar conjunctions, &c.; some say that even if he has (only) a daughter he ought not to fast. Some authors say that on the day of eclipses, libations of water ought to be made to the gods and to deceased ancestors.

The sight of the demon Ráhu (cf. note 175) (at the time of an eclipse) brings defilement to all, therefore the cloths, &c., which have been touched during an eclipse must be washed, or cleansed by other proceedings.

At the time of eclipses donations of cows, fields, gold, grain, &c., are very meritorious.

The Brahmin who leads a penitential life and is learned is most worthy of donations; now, giving to a worthy Brahmin is very meritorious.

Following the text: "at the time of a lunar or solar eclipse, all waters are like the water of the (holy) Ganges, all Brahmins like Vyása (the supposed author of the Vedas), all donations like the donation of fields," some think that every thing is alike meritorious.

Some others teach that there are degrees of merits, that giving to a non-Brahmin is meritorious, that giving to a Brahmin who is so

by name only is doubly meritorious, that giving to a learned Brahmin who is conversant with the Vedas is hundredfold and thousandfold meritorious, and that giving to a worthy Brahmin is endlessly meritorious. A non-Brahmin is a Brahmin ¹⁷⁶ who has not had the holy ceremonies of investiture performed (cf. note 57) and is thus a Brahmin by caste only: making donations to such a one is only meritorious in the manner settled above. The Brahmin only by name is a Brahmin who has had the holy ceremonies of Garbhadránam &c. (cf. note 54) performed, but has not studied nor taught the Vedas; giving to him is only doubly meritorious. Giving to a Brahmin who has studied and is conversant with the Vedas is thousandfold meritorious. He who is both learned and leads a godly life is a worthy Brahmin; giving to him is endlessly meritorious.

A meal rite to Brahmins in honor of one's deceased ancestors at the time of an eclipse is to be performed by giving raw grain or gold. If possible one should do it with cooked food.¹⁷⁷

At a solar eclipse the meal to Brahmins in honor of deceased ancestors should be performed after the manner of that which is performed in holy places of pilgrimage, viz. with food the chief component of which is ghee.

He who eats of the meal to ancestors at the time of an eclipse commits a great sin.

A rich man should perform the Weighing-Rite at the time of an eclipse.

¹⁷⁶ A non-Brahmin according to other writers is a man belonging to other castes. Giving to him according to all authorities is a *very little* meritorious. The author of our work the Dharmasindhu, a Brahmin of the Brahmins, tries even to shut this small door by which giving to other castes but Brahmins is meritorious, and explains the expression "non-Brahmin" in the unwarranted manner of the text.

¹⁷⁷ As that which the Brahmins eat is said to be fully enjoyed by deceased ancestors, the best and most meritorious rite is to give cooked food. But here is a difficulty, for Brahmins during eclipses are forbidden to eat and will take upon themselves the sin of breaking the rule only when large sums of money are paid down to them. To a rich man only therefore is it possible to give a meal to Brahmins at the time of an eclipse.

He who goes to receive the investiture of vedic incantations and the (sacred) mark¹⁷⁸ at the time of a solar or lunar eclipse need not look for a propitious month, or a Star-conjunction, &c. as is the case with it when it is done in holy places of pilgrimage and at the time of Grand-conjunctions.

As to the manner of receiving the investiture of vedic incantations and the mark one must look for it in the works called Tantras.¹⁷⁹

To take the "mark" means *now* to receive the (holy) doctrine (by word of a Priest). In all former Yuga-Ages (cf. note 60) the "mark" of investiture was taken; in this present (bad) age of Kali however the investiture by "word only" is received.

Receiving the investiture by "word only" means, when the holy incantations only are communicated to an adept at the time of a solar or lunar eclipse, near a holy river, in a holy place, and in a temple of Shiva.

For the initiation with holy incantations a solar eclipse is the best time. Some writers even say that if it is performed during a solar eclipse, one will fall into poverty and other like troubles.

On the day of a solar or lunar eclipse one should first bathe, fast, and then repeat without interruption from the beginning of the eclipse to the end, praying incantations.

Burnt offering should be made in the ratio of १५ to the number of incantations and libations in the ratio of १५ to the number of burnt offerings.

If one is unable to make burnt offerings let him repeat fourfold incantations. One should first pronounce the chief incantation, then the incantations of the names of the divinities, putting these names in the accusative case and saying: "I refresh this or that

¹⁷⁸ It was in former times the custom at the time of Brahmanic investiture to have the mark of Brahmanism and of the Divinity to which one consecrated oneself marked with a red hot iron on the forehead and other parts of the body.

¹⁷⁹ The Tantras are a kind of treatises teaching mystical and magical incantations for the attainment of superhuman power and for the worship of the gods. As they contain incantations to do evil to one's enemies and protect oneself from the evil influence of demons, scarcellors, &c., they are very much read and studied in India now.

god with my libation. Praise!" Then taking with both hands water mixed with barley one should make libations in the ratio of $\frac{1}{15}$ to the number of the burnt offerings.

At the end of the worship one should also utter a chief incantation, then say: "I anoint this or that divinity," pouring at the same time some of the holy water on one's own head and thus perform the Anointing-Rite in the ratio of $\frac{1}{15}$ to the number of libations. Finally, let one make meals to Brahmīns in the ratio of $\frac{1}{15}$ to the number of Anointings.

Thus should the rite called "Purascharana" be performed which consists in the five following ceremonies: Repeating incantations, burnt-offerings, libations, anointings, and meals to Brahmīns.

If one cannot make the libations or any other of these rites let him repeat the worship of incantations fourfold the number settled for every one of them.

This rite of Purascharana must not be performed at the time of an eclipse which has begun before sunrise, or ends after sunset.

In connection with this rite of Purascharana even a householder who has a son should fast.

As it is a sin for a man who performs this rite of Purascharana to neglect the usual obligatory rite of bathing, donations to Brahmīns, &c. which are connected with the eclipse, he should have them performed by his son, wife, &c. as substitutes.

Here follows the manner how to perform the Purascharana rite.

Having bathed before the beginning of the eclipse, one must pronounce the following resolution: "I, of this or that tribe, of this or that name, at the time of this eclipse of the sun or of the moon, desiring the fruit of this or that incantation, which I repeat with the name of this or that divinity shall perform the rite of Purascharana in the form of repeated incantations lasting from the beginning to the end of the eclipse"; whereupon one should prepare one's seat, perform the Nyāsa-rite¹⁵⁰ before the eclipse sets in, and then from the beginning to the end of the eclipse repeat the chief incantation.

¹⁵⁰ This rite consists in repeating incantations and attributing special divinities to every member and part of the body. In pronouncing the name of the god to which this or that member is consecrated one must touch the different parts with the forefinger of the right hand.

On the following day after having performed the usual obligatory rites of bathing, &c. one must pronounce this resolution: "In order to complete the incantations of the rite of Purascharana performed at the time of an eclipse by means of such and such a number of incantations, I give burnt offerings in the ratio of $\frac{1}{16}$ to the number of incantations, make libations in the ratio of $\frac{1}{16}$ to the number of burnt offerings, perform anointings in the ratio of $\frac{1}{16}$ to the number of libations, and meals to Brahmins in the ratio of $\frac{1}{16}$ to the number of anointings"; and then one should perform the burnt offerings and other rites, or instead of them repeat incantations in the ratio of 2 or 4 to 1 of the number ordered for each of those rites.

On the day of the eclipse the son, or wife, &c. who has been ordered (by father, husband, &c.) to perform as substitute the usual obligatory rites of bathing, &c., must pronounce the following resolution: "I of this or that name,¹⁹¹ of this or that tribe, in order to get the fruit accruing from bathing at the beginning of the eclipse, shall perform the bath of the commencement of the eclipse", and then he should instead of his father, &c., bathe, make donations to Brahmins, &c.

Those who do not perform the rite of Purascharana ought nevertheless at the time of an eclipse to repeat the incantation taught by their spiritual teacher, that of the name of their beloved divinity, and that of the Gáyatri. If they fail to do so the incantations are defiled.

During an eclipse, he who sleeps is punished by sickness; he who pisses, by poverty; he who discharges excrements by becoming a worm (in the next stage of transmigration), he who has sexual intercourse by becoming a town swine,¹⁹² he who anoints himself (with sweet oil) by leprosy, and he who eats by hell.

The food which has been cooked before the eclipse should not be eaten after the eclipse, but thrown away.

The water also which has stood (in pots) during an eclipse should be thrown away, as the penance called Kritchra is ordered to him who has drunk such water.

¹⁹¹ The name to be used is not that of him or of her who acts as a substitute but of him for whom they act.

¹⁹² A town swine is more abominable than a wild or country swine on account of the filthiness of its food.

Rice-water, curds, food fried in ghee or oil and milk which have been prepared before the eclipse, may be taken after the eclipse.

At the time of an eclipse some of the holy Darbha-grass should be thrown into the ghee, and in the milk and other products of the cow (for preservation from defilement).

Here is a description of the Defilement of Eclipses.

At the time of a solar eclipse the four watches preceding the watch of the eclipse are defiled; at that of a lunar eclipse the three watches preceding the watch of the eclipse are defiled. When a solar eclipse occurs in the first watch of the day, then one ought not to eat during the four watches of the preceding night; when the eclipse occurs at the second watch of the day, should one not eat from the second watch of the preceding night.

When a lunar eclipse occurs during the first watch (of the night), should one not eat from the second watch of the preceding day; if the eclipse occurs during the second watch of the night, then should one not take food from the third watch of the preceding day.

For children, aged and sick people the defilement of the eclipse lasts only half a watch or six Ghatikas.

A strong man who eats at the time of this defilement must perform a penance of a three days' fast.

If one eats during the very time of the eclipse, one must perform the Prájápatya ¹⁸³ penance.

If the moon rises when the eclipse has begun already, then one should abstain from food on the preceding day, as its four watches are defiled.

Some people say that when there is a full eclipse of the moon, four watches are defiled, but that if it is a partial eclipse the defilement is only of three watches.

When the moon sets during the time of an eclipse, one should regard the following text: "when either sun or moon set during the time of an eclipse, one should after their next day's rising bathe and thus be purified and then do one's daily work." As the words "one should bathe and be purified" mean here that by bathing after the sun's or moon's disc has become visible, the previous defile-

¹⁸³ The Prájápatya penance is the same as the Four-Footed-Penance described in note 151 repeated thrice.

ment (of the eclipse) is removed, my opinion is, that before having previously bathed after the moon or sun have become visible, one should not draw water or cook food.

Some say that as a householder who has a son ought not to fast at the time of the sun setting or rising during the time of the eclipse, he should avoid a defilement of six Muhurtas before the setting in of the eclipse and eat afterwards.

Mádhava, following the usual custom of the learned, says that even a householder who has a son should fast fully. This is the right teaching.

If the sun sets during its eclipse, or the moon rises during its eclipse, one who keeps the sacrificial domestic fire should perform the "Worship of Wood and Fire," and in connection with it drink water, but eat no food.

If the moon sets during its eclipse, then the daily bath, burnt offering, &c. must be performed on the next morning; yet if from astronomical books or almanacs it appears that the eclipse is over in a very short time after the moon's setting, then one must bathe and perform the burnt offering after the eclipse is passed. If the eclipse (according to almanacs, &c.) lasts a longer time after the moon's setting so that it oversteps the time of the daily burnt-offering (*i. e.*, the morning), then, following the rule given for the "rising when the eclipse has set in," it seems to me that he should perform the daily Sandhyá ¹⁸⁴ and burnt offering during the time of the eclipse, bathe at the time at which, according to almanacs, the eclipse ends, and perform the Brahma libations ¹⁸⁵ and other usual daily obligatory rites.

By performing the meal rite to Brahmins in honor of one's deceased ancestors, in connection with an eclipse falling on a Dark Moon Date, one gets both the fruit accruing from the meal rite to deceased ancestors, which ought to be performed on that Dark Moon

¹⁸⁴ The Sandhyá may be said to be the most sacred ceremony of the ritual of the Brahmins. It consists briefly in bathing ceremonies, incantations, oblations to gods, ancestors, ancient sages, demous, men, crows and the two dogs Shama and Shabala, in worship of the penates, and prayers. For a full definition of this rite I beg to refer to my translation with annotations of the "Book of Sandhyá of the Rig-Vedists," which will shortly be published.

¹⁸⁵ The Brahma libation consists in pouring water on the ground as a refreshment to the gods, to ancestors, and to the ancient sages.

Date, and that of a meal rite to ancestors in connection with a solar conjunction.

If the Yearly or other Occasional meal rites to Brahmins in honor of one's deceased ancestors fall on the day of an eclipse, then, if one can do so, one should perform it with food. But if one cannot get Brahmins to eat the food, then one should perform it by giving them raw grain or gold (cf. note 177).

Counting from one's own birth's solar conjunction (cf. chap. II.) the eclipse which occurs during the third, the sixth, the tenth, and the eleventh solar conjunctions, is propitious; that which occurs during the second, fifth, seventh, and ninth solar conjunctions is middling; and that which occurs during the first, fourth, eighth, and twelfth solar conjunctions is unpropitious.

One on whose birth-solar-conjunction or on whose birth-star an eclipse occurs is very unfortunate. Let him perform the penance ordered by Garga¹⁵⁶ or the Disc-Donation-Rite, which is as follows:—

At the time of a lunar eclipse he should make a lunar disc of silver and a serpent of gold, and at the time of a solar eclipse a solar disc of gold and a serpent of gold, and put them in a brass or copper pot filled with ghee; then prepare a donation of sesamum, cloths, and the Brahmins-Gift, and pronounce the following resolution: "I make a donation of this disc, &c. in order to be freed from all un-luckiness coming from this or that eclipse which has fallen on my birth-star or my birth-solar-conjunction, and to get the benefit accruing from the eclipse which occurs on one of the eleven conjunctions." He should then meditate upon the Moon, the Sun, and the demon Rāhu, worship and say: "O Thou tenebrous one! Thou destroyer of Moon and Sun, for the sake of this disc of gold avert all calamities from me! Worship unto thee, O Thou harasser of the Moon! For the sake of this gift of a (golden) snake save me from the fear of the defilement (of this eclipse), O Thou Imperishable son of Simhikā!"¹⁵⁷ Then giving those gifts to a Brahmin, whom he has already worshipped he should say: "In order to get a blessing and to destroy the un-luckiness coming from this eclipse I give unto thee this golden snake in the form of Rāhu (cf. note

¹⁵⁶ Garga is the name of an ancient Sage and author of Rules on Ritual. I am unable to ascertain the manner of the penance ordered by him in this case and referred to in the text.

¹⁵⁷ The mother of Rāhu (cf. note 175), a ferocious feminine demon.

and this golden solar disc, or silver moon disc (if this eclipse is a lunar one), which are deposited in this brass vessel filled with butter, and add, according to my ability, sesamum, cloths, and the Brahmins' gift." It seems further to me that these donations should be made also then when the eclipse occurs in the fourth and other unlucky solar conjunctions.

The man upon whose birth-solar-conjunction or birth star an eclipse of the sun or moon falls, should not look at their disc so long as Ráhu seizes upon them (cf. note 175). Other people also should not look at the eclipse immediately, but only through a thin cloth or reflected in water. When there is a total eclipse of the moon, one should avoid performing joyful ceremonies (like marriages, &c.) for seven days, counting from the 12th of the half month to the 3rd of the next half month; if it is a total eclipse of the sun, the nine days between the 11th and the 4th should be rejected. If the eclipse is partial, three days should be rejected, beginning with the 14th.

According to the degrees of the eclipse's magnitude, which can be ascertained in almanacs, &c., more or less days should be rejected.

If the moon or sun set during the eclipse, the previous three days are to be rejected.

If the moon or sun rise during an eclipse, the following three days should be rejected.

If the eclipse is total, the star which is in conjunction (with the moon) during the eclipse must be rejected, whenever it recurs during the six following months.

If it is a quarter-eclipse (or a half eclipse), &c., the star in conjunction should be rejected in the ratio of $1\frac{1}{4}$ month per quarter.

If one gives to the Brahmin that gift which one in one's Resolution had made the vow to give only after the eclipse, one must give it double.

Thus is the thirty-first chapter, a description of Eclipses.

CHAPTER XXXII.

Rules for Bathing in the Sea.

One may bathe in the sea on a Full Moon, Dark Moon and other such Dates, but one must avoid doing so on Fridays and Tuesdays.

The holy fig tree and the sea may be worshipped but not touched, yet one may touch the first on a Saturday and the last on the Dates of the moon's change.

In connection with the Rite of Ráma's Bridge¹⁹⁹ bathing in the sea is not prohibited.

For further rules on sea-bathing one should look in other works. Thus is the thirty-second chapter, rules for bathing in the sea.

CHAPTER XXXIII.

Rules concerning prohibition in connection with certain Tithis, Sidereal Lunar Mansions and Days.

On the 7th Tithi one should not touch oil, wear black cloths, wash one's self with Emblic Myrabolan fruits, quarrel or eat one's food in copper vessels.

On Joyful Tithis (like the 1st, the 6th, and the 11th) one should not anoint one's self with oil.

On Worthless Tithis (the 4th, the 9th, and the 14th) one should not have one's hair shaved.

On Victorious Tithis (the 3rd, the 8th, and the 13th) Shudras and other low caste people should not eat meat.

On Full Tithis (the 5th, the 10th, and the Full Moon 15th) one should abstain from sexual intercourse.

On Sundays anointing one's self with oil should be avoided.

On Tuesdays one's hair should not be shaved.

On Wednesday one should abstain from sexual intercourse.

On the sidereal lunar mansions of Chitra, Hasta and Shravana one should avoid oil ; on that of Vishákhá as also on the 1st Tithi of both half months one should not shave one's face. On the sidereal lunar mansions of Magha, Krittiká Uttaráphalguni, Uttaráshádha, and Uttarábhádrapadá one should abstain from sexual intercourse.

On the 7th Tithi one should not eat sesamum, nor make libations with water mixed with sesamum.

On the 8th Tithi one should not eat cocoanuts.

On the 9th Tithi one should not eat gourds.

On the 10th Tithi one should not eat Patol cucumbers.

On the 11th Tithi one should not eat the Phaseolus Radiatus pulse.

On the 12th Tithi one should not eat Cicer lentils.

¹⁹⁹ This rite of Ráma's Bridge refers to the pilgrimage made to the sacred place Rameshvara and to the bathing ceremonies which are performed there in the sea at a place supposed to be that where Ráma, with the help of the Ape-God Hanumán and his host of Monkeys, built his bridge stretching from India's South Coast to Ceylon.

On the 13th Tithi one should not eat the Solanum Melongana Vegetable.

He who uses oil, has intercourse with a woman, or eats meat on the Full Moon or Dark-Moon Dates, on the day of a solar conjunction, and on the 14th and 8th Tithis, will be born again in the womb of a low caste woman.

On a Full Moon or Dark Moon Date, on the day of a solar conjunction and on that of a Meal-Rite to Brahmins in honor of one's deceased ancestors, one should not wring one's cloths (after bathing). In the night one should not bring earth, cow-dung, or water. In the Evening Tide one should not bring the urine of the cow.

On a Dark Moon Date and the other Dates of the Moon's change, one should necessarily make the sesamum oblation and perform the Donation Rite for one's own salvation. On those dates one should not study (the Vedas), but one must perform the Rite of Purification,¹⁸⁹ the Sipping ceremony¹⁹⁰ and the Brahmácharya-Rite.¹⁹¹

On the 1st Tithi, on the Dark Moon Date, on the 6th and 9th Tithis, on the day of a Meal-Rite to Brahmins in honor of one's deceased ancestors, on one's birth-day, on days of sacrifices, on fasting days, on Sundays and at the time of Mid-day-Bathing one should not cleanse one's teeth with a twig (cf. note 86).

On days when one cannot get twigs or on days when cleansing one's teeth with a twig is forbidden, one should wash one's mouth with twelve mouthfuls of water or with tree-leaves.

These prohibitions concern only the time of the Tithi, or of the Sidereal Lunar Conjunction, or of the days on which something is prohibited.

Thus is the thirty-third chapter of the Ocean of Religious Rites, a list of prohibitions concerning certain Tithis, Sidereal Lunal Conjunction, &c.

¹⁸⁹ This rite consists in going at least one mile away from one's house for evacuation. This must be done near a tree and on dry grass. After returning home one must rub one's body with earth and bathe.

¹⁹⁰ The Sipping ceremony consists in sipping water with incantations to the honor of gods, deceased ancestors, ancient sages, &c.

¹⁹¹ The Brahmácharya Rite consists in abstaining from sexual intercourse.

It is not for learned, wise, and industrious men who are conversant with the Mimánsa¹⁹² and the Dharmashástra¹⁹³ and can from their knowledge of previous writers perform their (religious) duties, that I have written this easy work, called the Dharmasindhu, but rather for the stupid, the lazy, the ignorant who yet wish to know the rules of (their own) religion.

May the Great Vittala (cf. note 2) be who is so kind to the faithful be pleased with my work.

Those who wish to know and investigate the original texts used here may look in the Kaustubha, the Nirnayasindhu, the works of the great Mádhava and others.

Though there may be grammatical or other mistakes in this work yet it is worthy of being accepted with kindness and examined by the learned; for did not Vishnu himself accept the poor Brahmin Sudáma's handful of rice though it was mixed with chaff?¹⁹⁴

Thus is the end of the first part of the work called Ocean of Religious Rites written (by me) the Priest Káshinatha and the son of the Priest Ananta (cf. note 16).

MAY IT BE AS A BURNT OFFERING TO THE GREAT RAMA.

END OF THE FIRST PART.

¹⁹² Mimánsa is one of the great divisions of Hindu philosophy. It is divided into two parts: the Purva-Mimánsa and the Uttara-Mimánsa. Our text here refers to the first, the Purva-Mimánsa, which is rather an interpretation of the vedic ritual than a philosophical work.

¹⁹³ Under this appellation are included all treatises on Hindu law and customs.

¹⁹⁴ This refers to an anecdote related in the Mahabháráta of a poor Brahmin who came to the incarnated Krishna in Dváraká to pray for riches and happiness, and gained his purpose though he had with him to propitiate the incarnated Vishnu but a handful of coarse rice mixed with chaff.

ART. X.—*Antiquarian Remains at Sopârâ and Padaņa.*By BHAGVÁNĀLĀL INDRĀJĪ.¹

[Read 25th May 1882.]

This paper treats of two groups of antiquarian remains. One of these groups was found in and near the ancient city of Sopârâ, about five miles north of Bassein and thirty-seven miles north of Bombay. The other group belongs to Padaņa Hill, a great block of trap in Sâlsette, about fifteen miles north of Bombay.

In December 1881, I received from Mr. James M. Campbell, Compiler of the *Bombay Gazetteer*, some notes on remains at Sopârâ, and a rough sketch of a mound locally known as Buruda Râjâchâ Killâ, that is, the Fort of the Basket-Making King. These notes and the sketch had been obtained through the kindness of Mr. W. B. Mulock, the Collector of Thâna, whose exertions, during the past year, have brought to light a large number of inscribed Silhâra land grant stones and other early Hindu remains.

Finding from the rough sketch that the Buruda Râjâ's fort was much like a stûpa, the desire overtook me of seeing Sopârâ, a name which, under slightly varying forms, occurs in the Nâsik, Junnar, Kârle, and Nânâghât inscriptions, but about which nothing has yet been written. On the seventh of February I went with Mr. Campbell to Sopârâ. We found three short inscriptions from a small hill to the south-west of the town known as Vakâlâ or Brahmâ Tekdi, saw several other remains, and satisfied ourselves that the Buruda King's fort was a stûpa, and that Sopârâ was rich in objects of antiquarian interest. At our first hurried visit of one day we had not time to open the stûpa or to make a detailed search. We therefore returned to Sopârâ during the Easter holidays (April 7—10) to make further inquiries and with the special object of opening the stûpa. During the four days we stayed at Sopârâ we opened the stûpa and made a careful search for ancient remains.

Sopârâ is a large village in the Bassein sub-division of the Thâna district. It lies about thirty-seven miles north of Bombay, and three

¹ I am indebted to Mr. Ratirâm Durgârâm, B.A., for much help in preparing this paper for the press.

and a half miles south-west of the Virârstation on the Baroda railway. It appears as a holy city in Buddhist, Brâhmanical, and Jain books, and as a wealthy city and emporium in Aparânta or the Konkaṇa from B. C. 250 to about A.D. 1500. About the middle of the third century before Christ, Aṣoka sent to Aparânta one of his missionaries, Dhammarakhita (Sk. Dharmarakshita) the Yona or Yavana, that is the Greek or Baktrian. This missionary is said to have preached the Buddhist faith to 70,000 hearers, of whom a thousand men and more than a thousand women, all of them Kshatriyas, entered the priesthood.¹ Aparânta included, I believe, all the coast country from Navsâri to Gokarṇa. It was bounded on the west by the sea and on the east generally by the Sahyâdris, though perhaps at times it included a little of the Deccan.² Of all this coast Sopârâ was the capital.³ It was the chief city as early as the time of Aṣoka, as in it were engraved his rock edicts, a fragment of which was found in April 1882, and will hereafter be noticed in detail. I believe Dhammarakhita made Sopârâ the centre of his missionary efforts, and that it was from Sopârâ that Buddhism spread over Western India.⁴ It is worthy of note that Dhammarakhita was a Yona or Yavana; and Aṣoka's choice of him as missionary to Aparânta seems to show that there was at that time a Yavana element in the population of the western coast. In Aṣoka's time there was a Yavana ruler in Surâshtra or Kâthiâvâr, with which Aparânta was closely connected by sea.⁵ And in the first century after Christ the Junnar and Kârle

¹ Turnour's Mahâwanso, 71, 73. The text runs:—

'Tathâparântakân Yonân Dhammarakhitanûmakân.

* * * * *

Gantvâparântakân Thero Yonako Dhammarakhito.

Aggikhandhopaman Suttan Kathetva Janamajjhago.

So Sattati Sahassân' Pâne Tattha Samâgate.

Dhammâmata Mapayisi Dhammâdhammesu Kowido.

Parisānaṇ Sahassancha Itthiyocha Tatodhikâ.

Khattiyānaṇ Kulâyewa Nikkhamitwāna Pabbajun.'

² Indian Antiquary, VII. 259.

³ The explanation of the word Aparânta in the Yâdava Kosha, अपरान्तास्तु पाषाण्यस्ते च शूर्परेकादयः seems to show that Śurparaka was the chief place in Aparânta. Mallinâtha's commentary on verse 53, Raghuvamṣa, Canto iv.

⁴ It is curious to find the French friar Jordanus, 1500 years later (A. D. 1320) writing of 'Supera' as an important Christian missionary centre. Yule's Mirabilia V. Mr. J. M. Campbell.

⁵ Indian Antiquary, VII. 257.

cave inscriptions record gifts by Yavanas who had Indian names and were apparently settled in India.¹

Like several other places Sopârâ is honoured in Buddhist books as the birth-place of Gautama Buddha in one of his previous births, and as having been visited by Gautama during his last and greatest appearance on earth. Buddhist writers say that in one of his former births Gautama Buddha was Bodhisat Suppâraka,² and that at the request of Punna (Sk. Pūrṇa), the son of a slave girl who had risen to be one of the chief merchants of Sopârâ (Sûrpâraka), Gautama came to Sopârâ and had a temple built there in his honour. In the neighbourhood of Sopârâ he converted to Buddhism a Brâhmanical sage named Vakkali, who lived on the Musalaka hill, and five hundred widows, to whom he gave his nails and some of his hair as relics, over which they built a stûpa, which was called the Widows' Stûpa or the Vakula Stûpa. While at Sopârâ Gautama also converted to his faith two powerful Nâga kings, Krishna³ and Gautama, who lived in the sea and harassed Sopârâ.⁴

Brâhmanical writings also speak of Śûrpâraka as a holy place. The Mahâbhârata mentions that while visiting various places on the western coast, Arjuna, the third of the Pândava brothers, came to the very holy Śûrpâraka.⁵ From there, crossing a little inlet of the sea, he reached a famous forest where in times of yore the gods had performed austerities and pious kings had offered sacrifices. There he saw the altar of Richika's son, the foremost of bowmen, surrounded by crowds of ascetics, and worthy of worship by the pious. He saw the holy and pleasant shrines of Vasu, of the Marudganas, of Ashvin, Vaivasvat, Âditya, Kubera, Indra, Vishṇu, Savitṛi, Vibhu, Bhava,

¹ Archæological Survey of Western India, No. X., 32, 43, 55.

² Hardy's Manual of Buddhism, 13. The Mahâwanso calls it Suppârakapaṭṭanaṃ where Vijaya (s. c. 540?) landed. (Turnour, 46.)

³ The Kanheri or Krishnagiri Hill, with the celebrated Buddhist caves, fifteen miles south-east of Sopârâ, perhaps takes its name from this Nâga king Krishna.

⁴ Legend of Pūrṇa in Burnouf's Introduction à l'Histoire du Bouddhisme Indien, 235—274. I should not here fail to record my obligations to Dr. DaCunha and Mr. Campbell for explaining to me the French original.

⁵ Mahâbhârata (Bom. Ed.) Vanaparva, Chap. CXVIII. The Calcutta Edition has Surppâraka. The Harivamṣa, (Chap. 39, verse 28, and Chap. 40, verse 39), calls it Surppâraka, 500 bows (3,000 feet) broad and 500 arrows (1,500 feet) high, the height being, I believe, in consonance with the idea of Sanskrit poets that the palaces of large cities touched, nay, supported the sky.

Chandra, Divākara, Varuna, the Sādhyagaṇas, Dhātri, the Pitris, Rudra with Ganas, Sarasvatī, Siddhagaṇa, and other holy gods. He gave clothes and jewels to Brāhmanas, returned to Śūrpāraka, and from Śūrpāraka went with his brothers by sea to the famous Prabhāsa, or Somnātha Pattana in South Kāthiāwār. I have no doubt this Śūrpāraka is Sopārā. The fact that it is reckoned among the holy places on the western coast, and that Arjuna, coming from the south, is said to have gone from Śūrpāraka to Prabhāsa, prove to my mind that the ancient Śūrpāraka is the present Sopārā.¹

Jain writers also mention Sopārā. Their mythical king Śrīpāla married Tilakasundari, the daughter of king Mahasena of Sopārakanagari.² The well-known Jain priest and writer Jinaprabhasūri, who flourished in the beginning of the fourteenth century, and compiled his work from old stories and personal observation, mentions Sopāraka as one of the eighty-four holy places of the Jains. He notices that during the lifetime of that saint it had an image of Rishabhadeva, the first mythical Tirthaṅkara.³ Of the eighty-four Jain sects or *gachchhas*, one is called Śorpāraka *gachchha*, or the sect which originated in Sopārā.⁴

Western India cave inscriptions contain six references to Sopārā. A Kārle inscription of the beginning of the first century after Christ records a gift of money to make a pillar by Sātimita, son of Nandā and nephew and disciple of the reverend Dhamutariya from Sopā-

¹ Though I have no hesitation in identifying Sopārā with Śūrpāraka, I do not quite see what place of Brāhmanical celebrity near Sopārā is situated in a forest, reached from Sopārā by crossing a small arm of the sea, and has an altar of Jamadagni and shrines of Brāhmanical gods and sacred bathing places, *tirthas*. The legend of Purāṇa mentions a place apparently near Sopārā where five hundred Brāhmanical Rishis lived whom Budd ha converted to his faith.—(Burnouf's Introduction à l'Histoire du Bouddhisme Indien, 285.) Perhaps this may be the place mentioned in the great epic as situated somewhere in the Kanheri forest, a tract which still requires to be carefully explored.

² Śrīpāla-charita, Chap. III. The Jains still regard Sopārā as holy, and not a few visit it as a place of pilgrimage. Some broken carved stones in Sonārbhāt, about 200 yards south of the Rāma Kunda (see below p. 281) mark the site of one of the old Jain temples.

³ The text is सोपारके जीवन्तस्वामि ऋषभदेवप्रतिमा.

⁴ List of 84 Jain *gachchhas* or sects.

raka.¹ Ushavadâta, the son-in-law of the Kshatrapa Nahapâna, records in a Nâsik cave inscription, in the beginning of the first century after Christ, the gift of a rest-house with four doors and four verandahs, and an almshouse in ᅇorpâraga. The same inscription mentions another gift of 32,000 cocoa palms in Nânagola village to the mendicants of the Charaka order who lived in Râmatîrtha in ᅇorpâraga.² About the same time a Nânâghât inscription records the excavation of a cistern by one Govindadâsa of Sopâraya.³ A little later, about the middle of the first century after Christ, inscription XII., in a cistern recess marked No. VII. in the Kanheri caves, records the gift of a cistern by the worshipper Samika, a merchant of Sopâraka; and, about the end of the second century, inscription V. in Kanheri Cave III. records the gift of something in the district or *Ahâra* of Sopâraka. This ends the list of early Indian references to Sopârâ.

Among foreign references the earliest and the most important is its identification with the Ophir of Solomon, made by Benfey and Reinand. The point has been ably discussed by these and other scholars. I need only remark that the antiquarian remains found at Sopârâ strengthen the identification of Benfey and Reinand.⁴ The Greek geographer Ptolemy, about the middle of the second century after Christ, has, among the Ariake ports, a Supara between Nusalipa (Naosâri) and Simylla (Chemuda?) which is very probably our

¹ This inscription has been effaced and another carved below a small hole which has been cut into the pillar. The later inscription may be translated, 'The gift of a pillar containing relics by Sâtimita, nephew of the reverend Dhamutariya from Sopâraka.' It seems from this that Dhamutariya died after the pillar and the first inscription were carved; that a hole was cut into the pillar, and relics were placed in the hole and the inscription changed. See my *Kârle Cave Inscriptions* VIII. and IX. in *Arch. Sur.* X. 32.

² Nâsik Inscription XIII.

³ Nânâghât Inscription VIII. The Nânâghât is in the Sahyâdri hills about half-way between the north-eastern and the south-eastern lines of the Peninsula railway. It was the old highway of trade between Paithana, the capital of the Deccan and Sopârâ. I trust, at an early date, to have a paper on the Nânâghât inscriptions ready for publication. Cf. *Bombay Gazetteer*, XIV. 287-291.

⁴ Benfey in McCrindle's *Periplus* 127; Reland in Bitter's *Erdkunde Asien*, VIII. Pt. 2, 386; Reinand *Memoir Sur l' Inde*, 222. Sir Henry Yule (*Cathay*, I. 227) considers the connection between Ophir and Sopârâ plausible. A summary of the chief views held on the position of Ophir is given in the *Bombay Gazetteer*, XV. 317.

Sopârâ.¹ About a hundred years later (A. D. 247) the author of the *Periplus of the Erythræan sea* notices Ouppara as a local mart between Barugaza or Broach and Kalliena or Kalyân.²

In the sixth century (545) the Greek merchant and monk Kosmas Indikopleustes has a doubtful reference to Sopârâ under the name of Sibor near Kalliana.³ In the beginning of the tenth century (915) the Arab traveller Maçudi mentions Subara along with Thâna and Saimur as coast towns where the Lar dialect was spoken.⁴ About forty years later, the Persian travellers Ibn Haukal and Al Istakhri place Surbârah and Surabâya between Cambay and Sanjân, perhaps confusing it with Ulpâr near Surat.⁵ At the beginning of the eleventh century the Arab geographer and traveller Al Biruni (1030) calls it Subara, and restores it to its right place, forty-eight miles south of Sanjân and forty north of Thâna.⁶

About sixty years later, A. D. 1094 (Śâka 1016), in the grant of the Śilhâra king Anantadeva, exemption from tolls, at the ports of Śrîsthânaka, Nâgapura, Surppâraka, and Chemuli, was granted to ships belonging to two brothers, Bhâbhaṇa and Dhaṇama, the ministers of Anantadeva.⁷ About the middle of the twelfth century (A. D. 1135—1145) Sopârâ (Śûrpâraka) had the honour of sending the Konkaṇa delegate, Tejakaṇtha, to a literary congress held in Kâshmir. The Konkaṇa king who sent Tejakaṇtha is named Aparâditya.⁸ About the middle of the twelfth century the African

¹ Bertius' Ptolemy, 198.

² *Geographiæ Veteris Scriptores*, I. 30.

³ Kosmas Indikopleustes quoted in Yule's *Cathay*, I. CLXXVIII. This and the three following references I owe to the kindness of Mr. Campbell.

⁴ Elliot and Dowson, I. 24. *Prairies d' Or*, I. 254, 381.

⁵ Elliot and Dowson, I. 30, 34.

⁶ Beinaud's *Fragments*, 121; Elliot and Dowson, I. 66.

⁷ *Indian Antiquary*, IX. 38.

⁸ *Journal B. B. R. A. S.*, XII. Extra Number CXV. Dr. Bühler (ditto 52) seems to identify this Aparâditya with the Aparâditya of the Parel and Thâna stone inscriptions which are dated Śaka 1109 (A. D. 1187). Mr. Telang (*Ind. Ant.*, IX. 44.) has doubted the correctness of Dr. Bühler's identification. The kindness of Mr. Mulock enables me to settle the point. During the current year Mr. Mulock has collected and placed at my disposal fifteen Śilhâra stone inscriptions which throw much light on several unknown periods of North Konkaṇa Śilhâra history. From these materials I am preparing a paper which I hope, ere long, to have the honour of laying before the Society. One of these stones, found in the village of Chânjeh, near Uraṇa, in the island of Karanjâ.

geographer Al Idrisi describes Subara as a mile and a half from the sea, a very well-peopled city with a great trade, one of the emporiums of India.¹ In 1322 the traveller and missionary Friar Jordanus went from Thâna to 'Supera' on his way to Broach. He brought with him and buried the bodies of his four companions who had been killed by the Musalmâns of Thâna. There would seem to have been Christians at that time in Sopârâ, as the friars are said to have been buried in a church, and Jordanus is said to have made many converts.²

In the fifteenth century, with the rest of the Thâna coast, Sopârâ seems to have passed to the Musalmân rulers of Ahmadabad. Early in the sixteenth century the building of the Musalmân fort of Bassein, and later, under the Portuguese, the establishment at Bassein of the Court of the General of the North took from Sopârâ its former importance.³ Of several coins I collected at Sopârâ about ten were of Shâh Jahân (A. D. 1625—1658). They were square in shape, made of white metal, and bore the legend of Shâh Jahân in Persian. I believe these coins were perhaps struck at Sopârâ to replace the Portuguese white metal coins, which were current in this part of the country. I may mention that except here I have never found a white metal Moghal coin. (Plate II., fig 9.)

These references prove that from B. C. 250 to about the end of the fifteenth century Sopârâ was not only a place of sanctity,

records a grant by king Aparâditya in Śaka 1060 (A. D. 1138). This Urana Aparâditya is different from the Aparâditya of the Parel and Thâna stones (A. D. 1187). Between the two Aparâdityas come two kings, Haripâla, whose name occurs in two unpublished stone inscriptions, dated Śaka 1072 (A. D. 1150) and 1075 (A. D. 1153), and Mallikârjuna, whose name occurs in two other unpublished stone inscriptions dated Śaka 1078 and 1082 (A. D. 1156 and 1160). As Dr. Bühler fixes Mankha's date between A. D. 1135 and 1145, there seems no doubt that the Aparâditya mentioned in Mankha's book is the first or Urana Aparâditya and not the second or Parel and Thâna Aparâditya.

¹ Jaubert's Idrisi, I. 171; Elliot and Dowson, I. 85.

² Mirabilia, VI., VII. An extract from Dr. W. Germann's Thomas Christen, 187, kindly supplied by the Rev. H. Bochum, S.J., places this beyond doubt, and shows that the Sopârâ church was dedicated to St. Thomas.

³ In 1500 the Mirât-i-Ahmadi has a doubtful reference to Sopârâ under the form Sorab, which is mentioned as a Konkana port trading with Gujarât.—Bird's *Mirât-i-Ahmadi*, 129.

but was one of the leading cities and trade centres on the western coast of India.

The following statement shows the different forms under which the name Sopârâ occurs:—

AUTHORITY.	SPELLING.
Sûryodgamanasûtra	Suppâraka.
Mahâwanso.....	Suppârapattanam.
Legend of Pârṇa	Sûrpâraka.
Yâdavakosha	Ŝurparaka.
Mahâbhârata (Bom. Ed.).....	} Sûrpâraka.
Ŝrikanthacharita	
Ŝripâlacharita	Sopârakanagari.
Jinaprabhasûri	} Sopâraka.
Kârle Inscription	
Kanheri Inscriptions.....	
List of 84 Gachchhas	Sorpâraka.
Nâsik Inscription	Ŝorpâraga.
Nânâghât Inscription	Sopâraya.
Mahâbhârata (Cal. Ed.)	Surppâraka.
Ptolemy	Supara.
Periplus	Ouppara.
Kosmas	Sibor (P)
Silhâra Copper-plate.....	Surppâraka.
Maçudi	Subara.
Ibn Haukal	Surabâya.
Al Istakhri.....	Surbârah.
Al Biruni	} Subara.
Al Idrisi	
Jordanus.....	
	Supera.

The modern village or country town which stands on the site of the old city is called Sopârâ. It lies on the west bank of a creek or back water which winds between the railway bridge on the Bassein creek and the Vaitarṇâ. Though Sopârâ is no longer a port, the old landing-place is still shown on a low mound about fifty yards east of the Bhâtelâ lake to the east of the town. The part of the creek near Sopârâ is still called the Sopârâ creek, and at high tide boats of from ten to twelve tons still pass, within a mile of the town, both from the Vaitarṇâ and the Bassein creek.

Sopârâ has about 2,000 people and 600 houses. Of the people the class which has the most markedly local character are the Sâmvedi Brâhmanas, who number about 4,000 in Sopârâ and the

neighbouring villages. They live as husbandmen and know nothing of the Śâstras. They can be readily distinguished from the other inhabitants by their pentagonal faces and muscular frames. They have sixteen *Gotras* or family stocks, and four subdivisions, Nâik (Sk. Nâyaka, leader), Vajhe (Sk. Upâdhyâya, priest), Joshi (Sk. Jyotishî, astrologer), and Bhatâre (Sk. Bhaktakara (?), cook or cultivator). Besides the Hindu Sâmvedis there are others of the same caste who were converted to Christianity by the Portuguese. They are locally known as Kirastâun (किरस्ताउं), but in their surnames, dress, manners, and some religious practices they do not differ from their Hindu brethren. Another class of people who seem to have been long settled in Sopârâ are the Bhandâris, or palm-juice drawers, a strong sturdy set of men. The rest of the upper class Hindus are probably more recent settlers, Lâda Vânis from Cambay, Palshe Brâhmaṇas from the Deccan, and Śrimâli Vânis and Brâhmaṇas from Gujarât. The Musalmâns are an important class at Sopârâ. There is among them a strong trace of the Nâita or foreign element introduced by the Arab and Persian refugees and merchants who settled on the west coast of India chiefly between the eighth and the thirteenth centuries.

Old Sopârâ spread far beyond the present town. The exact area cannot be made out, but the remains show that buildings stretched about a mile from east to west over modern Sopârâ and the neighbouring village of Gâs. As in the modern town, most of the houses of old Sopârâ must have been built of wood, which when ruined leave no trace except their foundation plinths. It is this which at first sight gives Sopârâ so modern an air, but in various places examination brings to light sculptured and dressed stones, pieces of broken images and large old bricks, and, besides these, the surest sign of an old city, an extensive provision for storing water. Of seven reservoirs the four largest are the Bhâtela, Chakrâla, Khâre or Śirmoli, and Gâs lakes, the last a great sheet of water 800 yards long by 120 broad, with two cross dams. Besides these reservoirs or lakes there are three old ponds or *kundas*, and several old wells. The *kundas* are Râmakunda, Pokaraṇa, and Boghâ Tirtha. Of these Râmakunda is the most important, and though much filled with earth, eleven stone steps may still be seen. On its banks are some Brâhmanical sculptures of about the eleventh or twelfth century. The pool, or *kunda*, is still regarded as holy. It is the 'Râmatirtha in Sopârâga' mentioned in Nâsik Cave Inscription XIII. Pokaraṇa is

a square reservoir built of dressed stones with steps on all four sides. Boghâ Tirtha, also called Bud Talâvdi, though now much filled with earth, seems to have been a well-built stone-lined reservoir.

The Antiquities of Sopârâ come under four heads :—

- I. A fragment of the VIIIth of Aṣoka's Edicts.
- II. Inscribed stones at Vakâlâ or Brahmâ Hill.
- III. A brick Buddhist stûpa.
- IV. Sculptures at the Chakreṣvar temple.

I. **The Asoka Rock Edict.** The most important discovery that has yet been made at Sopârâ is a broken block of basalt bearing a fragment of one of Aṣoka's edicts. The stone was found near the Bhâtelâ pond to the east of the town close to the old landing-place. It appears to be a fragment of a large block of basalt. It has the remains of six lines in the Aṣoka character, which, when compared with other copies of Aṣoka's edicts, proved to be part of the eighth edict. Plate I. gives a copy of the inscription. The dark letters are those preserved on the Sopârâ stone, the other letters are filled from the Girnâr and other edicts. The copy shows that the fragment is about one-third of the original edict.

The fourteen or fifteen edicts of Aṣoka which have been discovered in Girnâr, Kapuredi-gaḍi, Kâlsi, Dhauri, and Jaugadâ, have always been found in a group. In no case have separate edicts been found. For this reason I think that a complete set of edicts was inscribed in or near Sopârâ. After this fragment was discovered I made a careful search on the banks of the Bhâtelâ pond. Many blocks of basalt were examined, some of them loose, others built into Musalmân tombs, but on none of them were there traces of an inscription.¹ There is no large single rock near Sopârâ suited for engraving a

¹ Bâla Miah, the police *patel* of Pelâr, about five miles east of Sopârâ, told me that he believed the inscribed stone had lately been left near the Bhâtelâ pond by some one who had charge of the stone and had broken it, and was afraid his carelessness would be found out. This agrees with a story which many of the people of Sopârâ tell, that about ten years ago there was a large stone covered with letters near the brick *stûpa*; that an Assistant Collector ordered the *patel* of Sopârâ to take special care of the stone, but that within the last five or six years the stone has disappeared. Much inquiry has since been made at Sopârâ, but no trace of this stone has been found. This stone may have had part of the Aṣoka edicts, but it is also possible that a minute examination of the Musalmân and Christian buildings in the neighbourhood may bring to light some more fragments.

Handwritten text in a non-Latin script, possibly a form of cuneiform or a similar ancient writing system. The text is arranged in approximately 12 horizontal lines. The first line contains 10 characters, the second 10, the third 10, the fourth 10, the fifth 10, the sixth 10, the seventh 10, the eighth 10, the ninth 10, the tenth 10, the eleventh 10, and the twelfth 10. The text is enclosed in a hand-drawn, irregular border that resembles a piece of parchment or a tablet. The characters are stylized and vary in shape, including some that resemble the letter 'K' or 'T' in the Latin alphabet, but they are clearly distinct from modern alphabets. The overall appearance is that of a historical document or a collection of inscriptions.

set of edicts. The fragment found seems to show that the edicts were engraved on the large blocks of basalt which are common in the neighbourhood of Sopârâ, and that the blocks were built together like a wall or a face of rock. In time the blocks must have got separated, and then have been broken by the people for their petty wants, or have been used by Musalmân or Christian builders.

The fragment preserved is the lower left hand corner of the eighth edict. A narrow strip of the face of the stone on the extreme left has been broken off and has carried with it the first letters of three lines. All that remains are the beginnings of six lines. On filling in the missing letters of these six lines from the edicts as found at Girnâr, Kâlsi, Kapuredi-gaḍi, Dhauli, and Jaugadâ, each line when entire seems to have contained from fifteen to twenty letters. From this it would seem that three or four top lines have been lost, and that the original edict consisted of nine or ten lines. In the seventh line six letters seem to have been omitted at the first engraving, and to have been entered by the engraver in smaller size above the line. The form of the letters and the language of the inscription resemble the Girnâr edict. As at Girnâr the letter τ is used instead of the σ of the Kâlsi, Dhauli, and Jaugadâ edicts.

To show what is missing in this fragment I give the transcripts of the edict from Girnâr, Kâlsi, Kapuredi-gaḍi, Dhauli, and Jaugadâ, the last from a photograph kindly sent me by General Cunningham, the others as taken by myself from the originals. The numbers show the lines of the original inscriptions.

Girnar.	Kālsi.	Kapuredi-gaḍi.	Dhauri.	Jaugadā.	Sopārā.
(¹) अतिक्रांतं अंतरं राजानो विहारयातां अयासु एत मगव्या अजा-नि च एतारिसनी	(⁸⁹) अतिक्रांतं अंतरं देवानं प्रिया विहालयातं निखमिषु हिदा मिग-विया अंनानि च हेडिसा-नि अभिलामानि हुसु दे-वानं पिये पियदसि ला-जा दसवसाभिसिते सते निखमिथा संबोधि	(¹⁷) अतिक्रांतं अ-तरं देवानं प्रिया वोहार-यात्रा नाम निकमिषु अ-त मगया अजानि च ए-दिज्ञानि अभिरामानि अ-भवसु स देवानं प्रियो-प्रिय-दसि राजा दसवसाभिसि-तो संतं निकामि संबोधि तेन ता भ्रंमयात्रा अत्र इयं होति शमणबेभ-णानं दसने दानं बुढानं दसानं हिरन[प]टि विधा-नि] जनपदस जनस दंशान भ्रमानुसठि भ्रम्मप-रिपुछा च ततोपया एषा भ्रयो रति भोति देवानं प्रियस प्रियदसिस रज्जो भागो अजो	(⁹) -- कंतं अंत-लं लाजानो विहालयातं नामनिखमिषु -- मि-गविया अंनानि च एदि-सानि अ -- लामानि हुवाति नं देवानं पिए (⁴) पियदसी लाजा दसवसाभिसि -- निखमि संबोधितेने ता -- तेस होति समन बाभ-नानं दसने च दाने च वढानं दसने च	(¹⁰) -- कंतं अंत-लं लाजा -- -- -- -- या अंनानि च ए -- -- -- मानि हुवाति नं से देवानं पियो (¹¹) पियदसी लाजा दस -- -- -- ततेस होति च दाने च वढानं दसने च -- -- -- हिल्लनपटिविधाने -- -- -- व (¹²) हिल्लनपटिविधाने च -- -- -- धंम पलिपु -- -- -- ला-मे होति देवानं पियस (¹³) पियदसिने ला-जिने भागे अ --	(¹) ----- (²) ----- (³) ----- (⁴) ----- (⁵) निखमिथासं -- -- -- हेत इयं होति बं-भ -- -- -- च बुढानं दसने हिरनपटिविधाने च -- -- -- (⁶) [धं] मानुसठि धंम -- -- -- (⁷) -- ये रति होति देवा -- -- -- (¹⁰) जिने भागे अ (नि)
(²) अभीरमकानि अहंसु सो देवानं प्रियो प्रियदसि राजा दसवसाभी-सितो संतो अयाय संबोधि	(⁹⁰) तेन ता धंमयाता यता इयं होति संमनब-भनानं दसने च दाने च विधानं दसने च हिल्लन-पटिविधाने चा जनपदसा जनसा दसने धंमानुसथि चा धंमपलिपुछा चा त-तोपया एस भुयेलाति होति देवानं पियसा पि-यदसिसा लाजिने भागे अंने				
(³) तेनेसा धंमयाता एत यं होति बाह्मणसम-णानं दसणे च दाने च धैरानं दसणे च					
(⁴) हिरणप्रटिविधानो च जनपदस च जनस दसंनं धंमानुसस्टी च ध-मपरिपुछा च					
(⁵) तदोपया एसा भुयरति भवति देवानं प्रियस प्रियदसिनो राजो भागे अंजे					

I would offer the following translation of this edict :—

“ For long, kings have started on pleasure tours where were (which consisted of) the chase and other such amusements. For this reason a religious tour was started by the ten-years-installed king Piyadasi (Sk. Priyadarṣi), dear to the gods, who had reached true knowledge. In which (tour) this happens : Visiting and making gifts to Brāhmaṇas and to Buddhist monks, visiting old men, making gifts of gold, looking after the land and the people, giving instruction in religion and making inquiries as to (the state of) religion. By such means this (religious tour) becomes a source of great delight in other parts (of the dominions) of king Piyadasi (Sk. Priyadarṣi) dear to the gods.”

In support of this translation I would offer the following remarks :—

अतिकारं अन्तरं Sk. अतिक्रान्तमन्तरं ‘for long,’ ‘a long time since.’ Prof. Kern gives in Sanskrit अतिक्रान्ते अन्तरे ‘in past times,’ but this is unnecessary as the accusative of अन्तरं is an accusative of time referring to जयासु in the sense of ‘till,’ thus अतिक्रान्तमन्तरं यावत् विहारयात्रां न्ययासिषुः. like तेन बहुदिनं परिचर्या कृता.

राजानो—The Kālsi edict has here देवानां पिया which would show that देवानां पिया was a term commonly used for a king.¹ विहारयात्रां Sk विहारयात्रां ‘on pleasure tours,’ Kap. has बोहारयात्रा नाम—where the बो is, I think, a mistake of the engraver for वि, the two letters being closely alike, and नाम also in Dhauli which has विहालयानं नाम is redundant, meaning ‘named,’ ‘called.’

जयासु Sk. न्ययासिषुः. Kālsi and Dhauli have निष्कमिषु and Kap. निकमिषु all of which stand for Sanskrit निरक्रमिषुः, a synonym for न्ययासिषुः in the sense of ‘started,’ ‘went out.’ एत probably Sansk. अत्र. Kap. has अत which is no doubt अत्र. Dhauli, too, appears to have had अत as the first letter अ is distinct. Kālsi has हिदा which also must stand for इह in the sense of अत्र. The Kachchhi word for ‘here’ is still हिडां.

एतारिसानी is I think a mistake of the engraver for एतारिसानी. Kālsi has हेडिसानि for Sansk. ईदृशानि, a word which much resembles the present Kachchhi word for ‘such’ हेडो. Kap. has एरिसानि and Dhauli एदिसानि both for Sansk. ईदृशानि.

¹ Ind. Ant., X. 108.

अहंसु Sk. अभुवन्. Kālsi has हुसु, which is the same the अ being dropped. Kap. has अभवसु but Dhauri हुवन्ति for Sansk. भवन्ति in the present tense, which would seem to show that pleasure tours were still in vogue at the time Priyadarṣi wrote. After हुवन्ति Dhauri and Jaugadā have न, which I think an expletive.

सो Sk. तत्. Kālsi and Dhauri omit सो, but Kap. has स, and Jaugadā से both for तत्. तत् is used here in the sense of तस्मात् कारणात् 'for that reason' or 'therefore.' The meaning is that because the pleasure tours of former kings, which principally consisted of the chase and other such amusements, were a source of annoyance to the people, and caused loss of animal life, for that reason king Priyadarṣi started a religious tour.

अयाय Sk. अयायि in the sense of 'was started.' Kālsi and Sopārā have instead निखमिथा which appears to stand for Sanskrit निष्कामिता. Kap. has निकामि and Dhauri निखमि for Sansk. निरकामि. Gīrnār is the only edict which has अयायि which on the analogy of निष्कामिता and निरकामि must be taken with धमयात्ता and not with संबोधि as Messrs. Kern and Senart have done reading धि for षि, though none of the five has an Anusvāra. I must therefore read संबोधितेन in the sense of 'by one who has reached true knowledge.' I especially differ from these two great scholars in this point, as the निखमिथा of Kālsi and Sopārā, the निकामि of Kap. and निखमि of Dhauri which are used for अयाय of Gīrnār mean 'started' or 'was started' and go with धमयात्ता and not with संबोधि assuming there was an Anusvāra. Another difficulty if संबोधि is adopted and इयायि or निखमिता taken with it, is that धमयात्ता has no verb. The 'behold' of M. Senart and 'began' of Prof. Kern are mere additions, there being nothing in the original for which they stand. The only difficulty I feel is about दशवर्षाभिषिक्तः सन् in the nominative case, where, according to my reading of the passage, the Sanskrit idiom would require दशवर्षाभिषिक्तेन सता. This must have been a Prākṛit idiom.

धैरानं Sansk. स्थविराणां may mean 'of old men' or 'of the Theras' (Seniors). That the former meaning is intended, appears from बुढानं in Kap. and Sopārā, बुढानं in Dhauri and Jaugadā, and विधानं in Kālsi, all of which stand for बुढानां; and we know that Aṣoka several times inculcates respect to old men in his edicts. हिरण्यपट्टविधानं Sk. हिरण्यप्रतिविधानं means 'gifts of gold.' It seems here to have some technical ritualistic meaning.

जनपदस्य च जनस्य दसनं means looking after the country and the people.

तदोपया is a little difficult. Kâlsi and Kap. have ततोपया. I believe it stands for तदुपायात् 'by such means.'

भुयोरति may mean, 'producing repeated desire' or 'producing great desire.' It is a Bahuvrîhi compound attributive to भ्रमेयाञ्च and may be dissolved into भ्रूयसी रतिर्यस्यां सा; or it may be an adverb भ्रूयसीरतिर्यथास्यात्तथा 'so as to produce great pleasure.' Dhauri and Jaugadâ have एते अभिलामे for एसा भुयोरति where अभिलामे refers to the collective notion of all that Priyadarṣi does in his religious tour.

भागे अत्रे Sk. भागे अन्ये 'in other parts (of his dominions),' that is, other than the part he visits at a particular time.

The sense of the edict is that while the pleasure tours of former kings were disliked by the people on account of the forced labour, the exactions, the loss of animal life, and the general oppression with which they were attended, Priyadarṣi's religious tours were so popular that, when he went to one part of his kingdom, the people of other parts considered the place where the king was touring highly fortunate, and longed to see him come to their part of his realm.

II. **Vakâlâ** or **Brahmâtekdi**, the second object of antiquarian interest in Sopârâ, is a basalt hillock about a mile south-west of Gâs village; it stretches from north to south, sloping gently westward, and ending towards the east in a steep rocky face. The hillock is thickly overgrown with *karand* (*Carissa Carandas*) bushes, with here and there some brab-palm and *râyan* (*Mimusops Indica*) trees. At the foot of one large *râyan* tree are pieces of the pedestal of a medieval image later than the eleventh century. **Brahmâtekdi**, one of the names of the hill, suggests that the image may have been of **Brahmâ**. Near this *râyan* tree is a flat level space where **Brâhmaṇas** are fed in the discharge of vows and during scares caused by the outbreak of epidemic diseases. To the east of the hill is a small pond known as the **Vakâlâ** pond, from which the name of the hill is popularly derived. To the south-west is an old well called **Visrâl** which is regarded as holy. At some distance to the west are two large ponds much filled with silt, whose beds are tilled during the hot weather. Further west, covered with brush wood, is **Nirmal** hill, with a modern temple of **Ṣankarâchârya**.

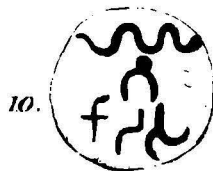
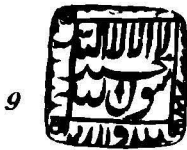
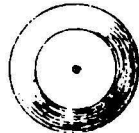
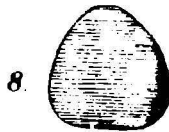
Vakâlâ Hill Inscriptions.

- 1. ḠḠḠḠḠ
- 2. ḠḠḠḠḠ
- 3. ḠḠḠḠ
- 4. ḠḠḠḠḠḠ
- 5. ḠḠḠḠḠ

6. *Legend on Gotamiputra Yejñā Sri Coin.*

obverse. ḠḠḠḠḠ ḠḠḠḠḠḠḠḠ

reverse. ḠḠḠḠḠḠḠḠḠḠḠḠḠḠḠ



The chief objects of interest found on the Vakâlâ hill are four inscribed blocks of basalt, the letters much resembling those used in the fragment of the Aṣoka edict.¹ The inscriptions are all of the same age, and consist of personal names in the genitive case. (Plate II.)

Inscription I. was found a little to the north of the large *râyan* tree, on a block of undressed basalt in shape an irregular hexagon, eighteen inches long and eighteen inches high. It lay by the side of several other blocks of basalt, which looked as if they had been arranged in a circle somewhat like a south Indian tomb. The inscribed stone lay to the east of the circle, close to it, and apparently belonging to it. The stone was partly buried, but the inscribed side was exposed. The letters are distinct and well preserved.

Transcript.

सत्रुमदनस

Sanskrit.

सत्रुमर्दनस्य

Translation.

Of Śatrumardana.

Note.—Śatrumardana is a man's name. It is a name likely to have been used by one of the warrior classes, meaning 'killer of enemies.'

Inscription II. was found on a block of basalt three feet long by two broad, about fifty yards to the west of the former stone. It was half buried and only three letters were at first visible. The letters are distinct, large, and well preserved.

Transcript.

दत्ताय भेमिय.

Sanskrit.

दत्ताया भैम्याः

Translation.

Of Datâ (Sk. Dattâ) the daughter of Bhîma.

Note.—From the feminine form of the genitive the word Datâ seems to be the name of a woman.

Inscription III. was cut on a similar undressed block of basalt, about two feet broad, two and a half long and two feet high, which was found in Gâs village, in front of the house of a Sâmyedi

¹ The only letter which differs in form from the letters of the Aṣoka inscription is ऋ.

Kirastán. Though now lying in Gás village and used as a bathing and washing stone, according to the owner's story, it was brought from Vakâlâ hill. The inscription, which consists of three large distinct letters, is of the same age as the two other inscriptions.

Transcript.

बधुय

Sanskrit.

बधुः

Translation.

Of Badhu.

Note.—From the feminine form of the genitive the word seems to be a woman's name.

Inscriptions IV. and V. are cut on two sides of an irregular block of basalt, about a foot and a half across and a foot and a half high, which lies in Gás village, in front of the dwelling of Báb Náik, a Sámvedi Bráhmaṇa. The owner of the house states that this stone was brought from the old pond at the eastern base of Vakâlâ hill.

Transcript.

कोडस कलवाडस

Sanskrit.

कोडस्य कलवाडस्य

Translation.

Of Kalavâda, a Kotta.

Note.—Koda (Sk. Kotta) is I believe a tribal name, and Kalavâda the name of a man. About the time of this inscription the Koda tribe seems to have been widely spread over India. A coin, which I brought from Sâhâranpore for the late Dr. Bhâu Dâji, has *Kâdasa* engraved on both sides in letters much resembling the letters of this inscription. (Plate II, fig. 10.) At the end of the second century after Christ a Kotta king was reigning in Upper India. Skandagupta's inscription on the Allâhâbâd pillar states that he punished the scion of a Kotta family in Pâtaliputra.¹ This would show that the Kottas were ruling in India for nearly 300 years.

Inscription V. is cut on the other side of the same stone as Inscription IV. The letters are worn and somewhat dim.

¹ This verse has not hitherto been properly rendered. It reads दण्डैर्पाहय-
तेव कोडकुलजं पुष्याङ्घ्रे क्रीडता, that is '(by whom)' while playing in Pushpâ-
vhaṇa, '(Pâtaliputra) the scion of the Kotta family was, as it were, punished.'

Transcript.

उग्रदेवय

Sanskrit.

उग्रदेवायाः

Translation.

Of Ugradevâ.

Note.—From the feminine form of the genitive the word seems to be a woman's name. I cannot account for these two inscriptions being cut on the same stone except by supposing that the inscription originally cut became useless and was slightly defaced, and a second inscription cut on the other side.

The fact that five inscriptions, three of them bearing the names of women, and two of them bearing the names of men, all in the genitive case, have been found in the Vakâlâ hill calls for explanation. As noticed above, Inscription I. is cut on a stone which lay close to a circle of undressed blocks of basalt, and apparently belonged to it. This seems to show that the circle is connected with Śatrumardana, whose name is carved on the stone in the genitive case, and that in the same way the other inscribed stones originally belonged to other circles. Though the meaning of these circles of undressed stones is not certain they seem to be memorial circles, probably tombs. One of them was opened but yielded nothing except some enamelled pieces of earthenware. Two other circles on the hill top were also opened, but after digging two feet below the surface, the work was stopped, as the ground was a mass of large blocks of stone which seemed never to have been moved.

These circles may have been empty memorial tombs, or the contents may have been close to the surface and taken away. It is also possible that the contents may be below the level to which the digging was carried. In any case, the circles seem to be tombs. As Inscription IV. gives the tribal name, they were perhaps Koda tombs, and from the form of the letters I think they are of the second century before Christ.

Vakâlâtekdi, the present name of the hill, looks as though it was originally Vakulatekdi, or the hillock of the *vakula* tree (*Mimusops elenghi*). The Buddhist legend of Punna (Sk. Puṇṇa), translated by the late M. Burnouf, notices that, on his way to Sopârâ, Gautama went to a place, apparently near Sopârâ, where five hundred widows lived. He preached the law and converted them to Buddhism. In answer to their prayer, Gautama gave the widows

some of his hair and nails. The widows built a *stûpa* over the relics, and the presiding goddess of Jetavana, who had come with Gautama, planted a branch of the *vakula* tree near the *stûpa*, and, from this, besides as 'The Widows' *Stûpa*, it came to be known as 'The Vakula *Stûpa*.' May there not be some connection between this Vakula *stûpa* and the Vakâlâ hill? I did not find near or on the hill any vestige of a *stûpa*. But it is worthy of note that of the five Vakâlâ inscriptions, three give the names of women. All are in the genitive case with some word understood. I have taken the unexpressed word to be "tomb"; but it is possible that the inscriptions relate to the *stûpa*, and that the unexpressed word is "gift," each stone marking the gift of the woman (perhaps one of the widows of the legend) whose name it bears.

III. **Buruda Râjâcha Kota.**—Buruda Râjâcha Kota, or the Basket-Making King's Fort, is the name of a large brick mound about half a mile west of modern Sopârâ, on the east border of Mardes village. According to a local story, Sopârâ had once a Buruda king, who lived with his wife on this relic mound. He was a kindly king and lived a most simple life. He levied no taxes, and met his expenses from the sale of bamboo baskets which he made with his own hands. His wife was a *sati* and lived an equally simple life. If ever she wore ornaments they were of bamboo chips, or palm leaves. She used to fetch water on her own head, and her chastity and goodness enabled her to walk on the water and fill her jar from the centre of the Chakrâla lake, where the water was undisturbed. The village women, well dressed and with rich ornaments, upbraided the simple queen for her bamboo and leaf ornaments, telling her that such ornaments were unworthy of a queen, and that she should wear rich jewels and pearls. The queen asked her husband to give her ornaments like those worn by other women. The king said 'Of what use are jewels?' But the queen persisted, and he levied a betelnut from every house and gave her ornaments of betel.¹ Wearing them she went as usual to fetch water, but the unrighteous-

¹ Beads, with delicate ornamental lines and like betelnuts in shape, are found in the neighbourhood of Sopârâ, and are called by the people the Buruda queen's ornaments. The story goes that these beads were once of betel and are now of stone. They appear to be clay ornaments which were formerly used by the people. (See Plate II., fig 8.)

ness of which she had been guilty in obliging her husband to levy a tax on the people weighed her down, and as she found she could not walk on the water she filled her jar at the muddy shore. The king asked why the water was muddy, and she told him that she had sunk when she tried to walk on the water and had filled her jar at the side of the lake. The king stopped the levy of the betel tax, seeing that this was the result of his wife's forsaking her simple mode of life.

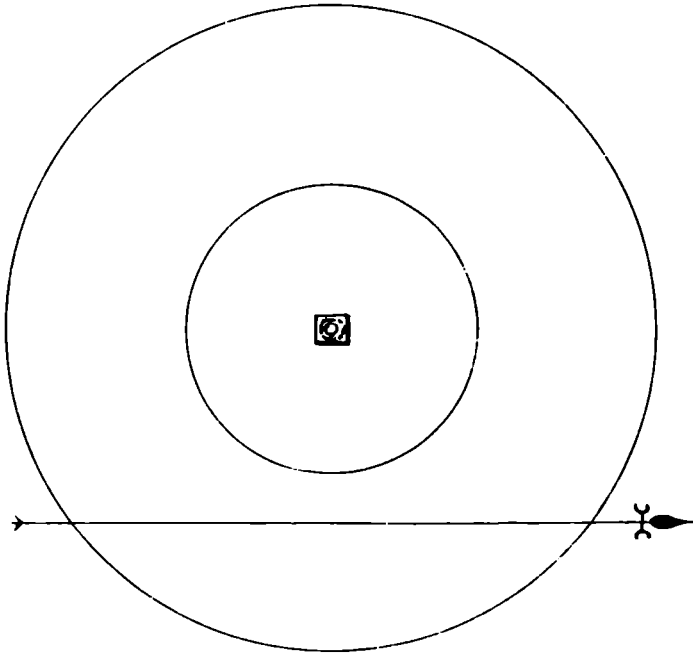
It is said that his subjects once went to this simple king to reason with him because he had no army. The righteous king patiently replied that God was his protector. Some of his people dissatisfied with his answer banded together and came against the city as if about to attack it. The king was told that an invading army was advancing against the city. Without a sign of anger he cleft with his knife some bamboos that were lying before him, and at that instant the band of his pretended enemies perished. The origin of this Buruda king's story may perhaps be the likeness in sound between the Prākṛit सुव्यारअ, a winnowing basket maker or Buruda (Sk. शूयकारक) and सुव्यारअ the old name of Sopārā.

The Buruda Rājā's fort is a large dome-topped mound in a rectangular enclosure, surrounded by a ruined wall, and about ten feet above the level of the road. Its original shape was a round plinth, from the centre of which with a terrace eighteen feet broad, rose a dome half a circle or nearly three-quarters of a circle in shape. Most of the dome has fallen and hidden the plinth, while portions of both the plinth and the dome lie scattered on the ground. The whole appears like a small conical heap on a large mound of clay and brick. The height of the tope is about thirty-one feet and the diameter sixty-seven feet. The outline of the plinth is well preserved on the east, and gives a fair idea of its original form. On the east of the terrace is the grave of one Ramjān Khān, a *fakir* who lived on the tope, and who has a fragment of a Hindu temple as a head-stone. Karanj bushes and other trees have grown on the mound. The people say that till within the last fifty years the land round the tope was a thick wood, and that it was cleared and turned into a garden by a Pathān *fakir* named Shaikh Amir, who planted the jack, mango, and cocoanut trees with which the tope is now surrounded. This Shaikh Amir was much respected for his supposed knowledge of alchemy and magic, and lived in a hut on the top of the plinth

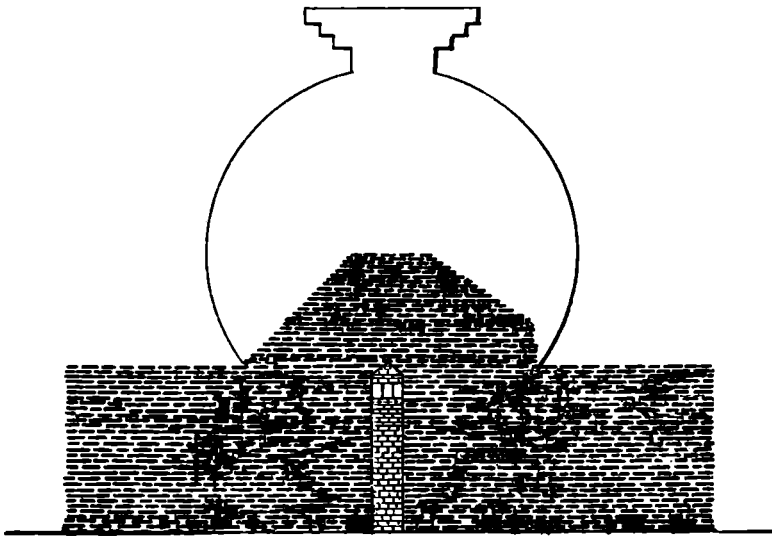
near where Ramjân Khân's grave now stands. He dug into the dome a pit about six feet deep, and large enough to hold four men whom he employed to rob for him at night, and whose plunder he kept in the pit. After a time the robbers were traced to the mound, the stolen property recovered, and Shaikh Amir transported. After him the place was occupied by his disciple, Ramjân Khân, whose grave now stands on the top of the plinth. The tope and the surrounding piece of land is at present in the possession of the Musalmân community of Sopârâ.

In opening the tope we fixed its centre and made a cutting as nearly east and west as Ramjân Khân's grave would allow. Digging was begun from the top. In the first six feet were found a pair of scissors, a two-anna piece of 1841, Şivrâi pice, fragments of glass bottles and porcelain, and bones of sheep, all of them traces of Shaikh Amir's plunder. About eight feet were dug on the first day and four more on the second. On the morning of the third day (9th April 1882), at about eight or nine o'clock, in the centre of the dome, a little below the level of its base, the beginning of a built brick chamber was found. The chamber looked like a hollow brick pillar, three feet square, with a pyramidal top, the direction of the walls corresponding with the cardinal points of the compass. Within the chamber, under about two feet of soft moist clay, was found a large circular stone coffer kept in its place by eight large bricks. On the top three large bricks were laid side by side, and below the coffer were some black spots as if the ground had been strewn with scented powder, before the coffer was laid in its place. Under the coffer were about four inches of soft clay, and then layer of bricks set in clay. These layers of bricks were dug out of the chamber to the depth of about thirteen feet, when the layers of loose bricks ceased. While taking out these bricks a frog was found in a small hollow in the clay about four feet below the coffer. It is of a different species from ordinary frogs. It is about an inch and a half long and has a reddish stripe down the back. The sides are dark green, the chest white, and the arms and legs are dark speckled with white spots. A brick coloured stripe passes over the eyes to the sides. The mouth was closed, and the seam of the closed part was of a sulphur colour. The throat throbbed violently. I believe it closely resembles a variety found in some of the old Kanheri cave cisterns.¹

¹ The frog is at present in the Victoria and Albert Museum at Byculla.



Ground Plan.



Section through centre.

About thirteen feet from the top, the base of the pillar was found to be laid with large baked bricks, which were fastened with cement to the bricks of the pillar walls. Further digging was stopped, as there was little time at our disposal, and because we were anxious not to spoil the relic chamber by removing its sides. It is possible that further digging may bring to light some more remains.

In Nepál the ordinary *Chaityas* made at the present day hold no relics. In these *Chaityas*, three stones, each with nine square holes containing the seven jewels and gold silver and other metals, are laid, one at the base of the mound, a second at the base of the dome, and a third under the top, which is generally called *chulti* or *ṣikhá*. Any relics which may have been kept in the top of the Sopârâ tope have disappeared. The relics that were found were near the level of the base of the dome. The relic chamber began about a foot below the base of the dome, and the coffer was two feet below the beginning of the chamber. It is possible that the seven jewels or some inscription may still be found at the foundation of the tope.

After securing the relic box, the east foundation of the tope was cleared to determine its exact form. The clay and bricks which had fallen from above were removed, but nothing particular was noticed. A brick roughly shaped like an elephant was found, which perhaps stood by the steps which led up the plinth. Some brick moulding was also found, but the short time at our disposal did not allow us to clear the entire face of the plinth. It is possible if the whole side was cleared that some traces of the original shape might be found.

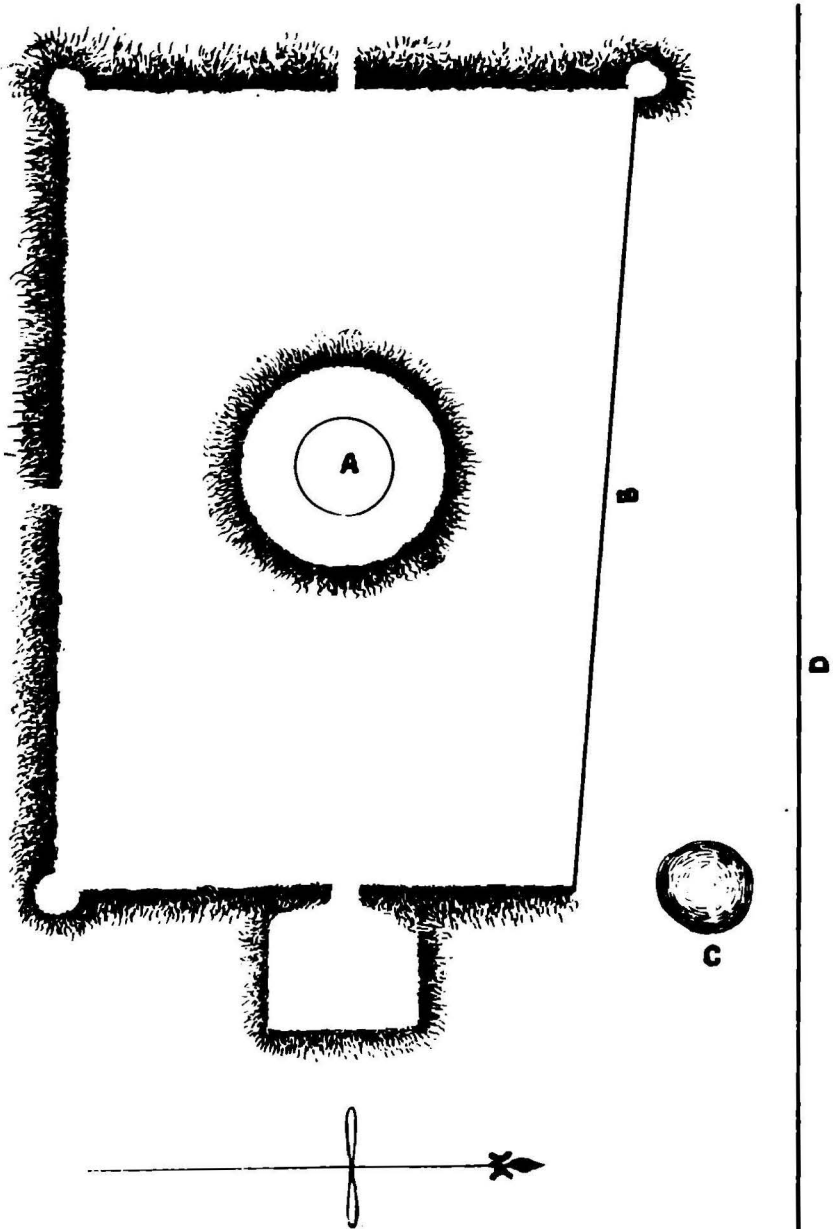
The plinth was about eighteen feet high, 268 feet in circumference, and its terrace was eighteen feet in breadth. The dome is in too ruinous a state to determine its original height. I believe it was about a semicircle of from fifteen to eighteen feet high, or it may be nearly a three-quarters globe, about thirty feet high. On the top of the dome there must have been a tee, perhaps about seven feet high. This would give a total height of about fifty-five feet from the base to the top of the tee. The tee would be crowned with umbrellas and flags. (See Plate III.)

As regards the masonry of the tope, the outermost coating was of smooth bricks well set in carefully-prepared clay. A trace of this outer coating appears in the part of the east wall which was cleared. Inside were layers of brick and clay, the proportion of bricks gra-

dually diminishing and the proportion of clay gradually increasing. Further in, close to the base of the dome, the proportion of bricks became greater, and bricks were again scarcer towards the middle of the dome, where the material was chiefly a soft sticky clay, mixed with stones. Exactly in the middle of the tope was the relic chamber, square and well built of very good bricks. The inner measurement was two feet nine inches square, with a depth of four feet two inches. The top of the chamber was about a foot below the base of the dome, or almost on a level with the surface of the plinth. The base of the chamber was cleared of bricks to a depth of thirteen feet.

The tope stands in a rectangular enclosure, which was once surrounded by a brick wall about four feet thick, of which only the foundations remain. A deep foundation at the south-west corner seems to show that there were towers at the corners. On the north, which is close to the road, there is no trace of the original wall; but there is a ruined modern wall, said to have been built by Shaikh Amir, which apparently runs a little inside of the original wall. The tope stands about ninety feet from the western wall, and about ninety-six from the eastern wall. Its entrance gate was from the east. As the space to the east is covered with thick brushwood, nothing certain can be said about the position of the gate. It probably stood at a spot where there is now a break in the eastern wall. In front of this break, outside of the wall, are traces of the foundations of a building about forty-eight feet square, and near it other foundations, probably of small rooms. A break in the middle of the south wall seems to show that the enclosure could also be entered from that side. (See Plate IV.)

The coffer is a circular stone box seventeen and a half inches high, with a diameter of twenty-four inches. It is in two equal parts, a body and a lid, which meet in the middle and fit tightly together. The stone is a yellow trachytic trap, like the trap found in the Nila hill, about a mile east of Sopârâ, and also near Kurlâ in Sâlsette. Their perfect smoothness and the sharp accuracy of the lines, seem to show that the two stones were turned on a lathe. On opening the coffer the lid was found to fit the body by a flange or inner rim about an inch thick and an inch higher than the outer rim. The body has an inner diameter of nineteen inches and a depth of six inches and a half. Its sides are upright, and the bottom is somewhat rounded.



- A. *Top.*
- B. *Modern Wall.*
- C. *Well.*
- D. *Road.*

The whole is smooth and without any coating. The lid is 24 inches in diameter and five inches deep. It has no groove for fitting into the flange of the body of the coffer, and is therefore about two and a half inches larger. Like the body of the coffer the sides of the lid are upright, and the top is somewhat rounded. On the outer surface of the coffer is a thin dark layer like the glaze with which the old Jaina and Brāhmanic images, called *lepya pratimās*, or varnished images, are darkened and smoothed. The old broken image of the Jaina saint Neminātha in Girnār is varnished in this way, and in the Brāhmanic temple of Bet, near Dwārakā, the coating of the old image of Ranchhodji sometimes falls in flakes, which under the name of *Karāla chandana*, are given to pilgrims as an object of worship. This coating is never used for modern images, but the Jainas still apply it to old images. It is made from the following seven materials; the resin of the *sāl* or *Shorea robusta*, sandalwood charcoal, powdered oxide of iron or sulphate of iron in small quantities, fine myrobalan powder in small quantities, antimony, lamp black, and clarified butter in small quantities. These ingredients are powdered for several days on a block of stone by an iron hammer. A thin coating of this powder is first laid on, and the image is smoothed by a trowel, *nailā*, with powdered silicate of magnesia or oxide of tin to prevent the trowel from sticking. Further layers are added till the coating is thick enough to form a smooth black shining surface. The coffer when new must have been of a bright shining black. (Plate XIII., fig 1.)

In the middle of the coffer stood an egg-shaped copper casket surrounded by a circle of eight small seated copper images. Both the casket and the images seem to have been sprinkled with what looks like scented powder. This powder formed a layer about an inch thick on the bottom of the coffer, and lay on the images in a thick crust of verdigris. It looks much like the mixture of aloe powder, *agara-chūrṇa*, sandal powder, *chandanachūrṇa*, saffron powder, *kesara-chūrṇa*, and cassia powder, *tamālapatrachūrṇa*, which the Nepālese Buddhist books frequently mention as thrown on Buddha by the gods. There are distinct traces of sandal and aloe; the saffron may have lost its yellow colour and so cannot be made out; and apparently no cassia powder was used.

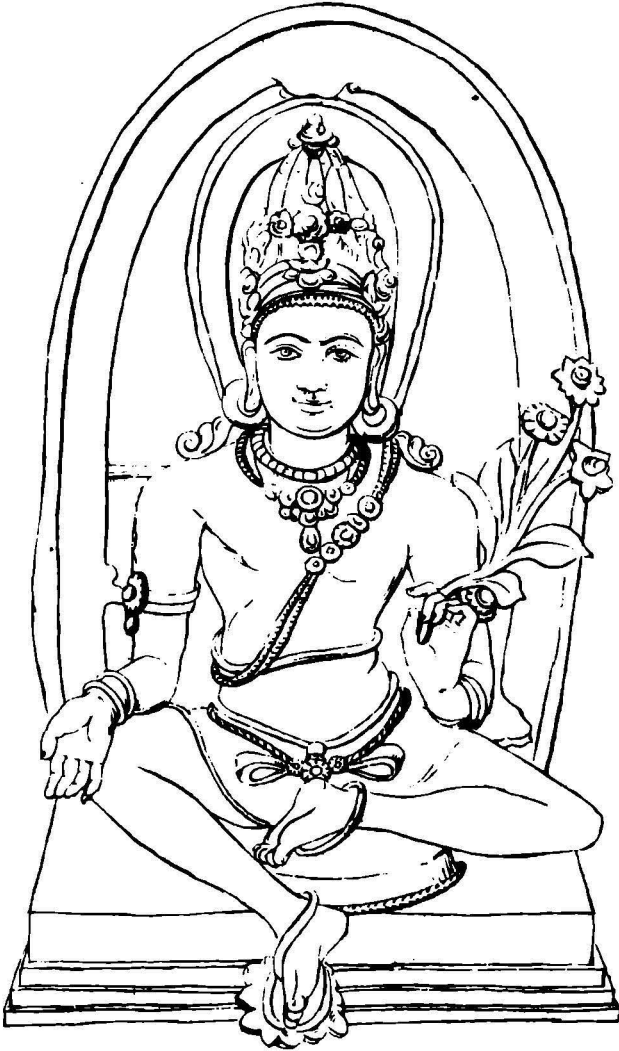
This powder, which is called Gandhadravya, Vāsachūrṇa, or Vāsakshēpa, is still used by Brāhmaṇas and Jainas. Its Brāhmanical

name is Abir. It is white in colour, and is mostly used in worship and for throwing about during the Holi holidays. Another almond-coloured scented powder is called Padi in Gujaràti and Ghisi in Hindi. It is laid in small cloth bags or paper covers to scent robes and rich clothes. The Deccan Abir, or Bukkâ, which is black in colour, is used in worship and in religious meetings, such as Bhajanas, Kirtanas, and Hardâs Kathâs, when it is applied to the foreheads of visitors.¹ The powder which the Jainas make is of a pale yellow colour. It is used for worship, for sprinkling on newly-consecrated images, and on disciples when first admitted to holy orders.²

Of the eight images, the chief, facing the west, is Maitreya or the Coming Buddha. His image is about five inches high by three and a half broad. This is larger than the rest, which, with slight variations, measure about three and a half inches by two and a half. All the figures are seated on flat raised platforms, and over each is a horse-shoe arch or canopy. The chief figure, or Maitreya Bodhisattva, differs greatly from the rest, whose general character is much alike. His pedestal is higher, and it is square instead of oval; his right foot hangs over the edge of the pedestal; he wears ornaments, and has a rich conical crown or tiara; his crown is surrounded by a horse-shoe aureole, and his canopy is plain. All the other figures are seated in the usual stiff cross-legged position, wearing a

¹ The white Abir is made from the following ingredients: the root of the *Andropogon muricatus*, *vâlo*, the tuber of the *Hedychium spicatum*, *kapurâkâchali*, the wood of the *Santalum album*, *chandâna*, and arrowroot or the flour of cleared *Sorghum vulgare*. Besides *vâlo*, *kapurâkâchali* and *chandana*, Padi or Ghisi is prepared from the seeds of the *Cerasus mahaleb*, *ghaunla*, the leaves and stem of the *Artemisia indica*, *davño*, the wood of the *Pinus deodora*, *devadâra*, the tuber of the *Curcuma zerrumbet*, *kachuro*, the dried flower bud of the *Caryophyllus aromaticus*, *laringa*, and the fruit of the *Elettaria cardamomum*, *elchi*. The Deccan variety of Abir is made of the following three ingredients in addition to those used in preparing Padi: the wood of the *Aloesylum galloclum*, *agara*, the root of the *Aucoklandia costus*, *kuth*, the root of the *Nardostachys Jatamansi*, *jatâmdsi*, the half liquid balsam of the *Liquidamber orientale*, *selârasa*, and charcoal.

² The Jain scented powder *Vâsakhepa*, or more properly *Vâsakshepa*, is made of sandalwood, saffron, musk, and *Dryobalanops aromatica*, *bhimseni barâsa*. The last two ingredients are taken in very small quantities and mixed with saffron and water. They are rubbed on a stone slab by a large piece of sandalwood, and a ball is prepared. This ball is dried, powdered, and kept in silk bags which are specially made for holding it.



Maitreya Bodhisattva.



Sákyamuni.

waistcloth, and with an upper robe drawn over the left shoulder. The expression of all is calm and unmoved, the hair looks as if close curled with a knob on the crown, and the ears are heavy and long. The hands are arranged in different positions, two of the positions being repeated. Each figure represents a different Buddha, the plume of leaves that crowns the canopy showing which of the Buddhas each image represents. All are copper castings, well-proportioned and clearly and gracefully formed. The ears, though large and heavy-lobed, are not so unshapen or ugly as those of later images. And the leaves of the different *bodhi* trees, which crown the canopies of the different Buddhas, are formed with extreme care and accuracy.

Maitreya Bodhisattva, or the Coming Buddha, the chief and largest image, is placed facing the west, because, on gaining Buddhahood, he will pass through the great eastern gateway, open the relic-chamber, and, from the gold casket, take out the fragments of Śākyamuni's bowl. Maitreya is represented as a Bodhisattva or Coming Buddha, not as a Buddha. He is seated on a high pedestal. His right leg is half-drawn across, the foot hanging down, the toe resting on a lotus. The left leg is doubled right across, the heel drawn back close to the body, and the sole half turned up. The right arm is stretched forward, the back of the open hand resting on the right knee in what is known as the Giving Position, or *Vara-mudrā*. The left hand, which is raised a little above the elbow, holds, with much grace, a branch which ends above in three flower heads. He wears a rich conical crown or tiara, and round the crown a detached aureole in shape like a horse-shoe. He wears earrings, two necklaces, a sacred thread, armlets, bracelets, and anklets. Round the waist is a band as if of thick string, and round the hips and hanging in front is a fringed belt. Over his head rises a horse-shoe arch or canopy, with about half-way up a cross-bar or back-rest. (Plate V.)

To the left, facing south-west, is Śākyamuni, the last or seventh Buddha. He sits, as he sat when he gained perfect knowledge; his left hand is laid in his lap with up-turned palm, his right arm stretched in front, the palm laid on the right knee, and the finger tips resting on the pedestal, in the Earth-Touching Position, or *Bhūsparśhamudrā*. From the centre of the arched canopy above him rise three sprigs of the peak-leaved *pipala*, *Ficus religiosa*, Śākyamuni's *Bodhi* Tree. (Plate VI.)

To the left, facing south, is Káśyapa, the sixth Buddha. His left hand is laid in his lap with up-turned palm like Śākyamuni, but the right hand is raised to the level of the shoulder, and the palm is open with a slight forward bend in the Blessing Position, or *Varamuḍrá*. The centre of his canopy is crowned with a tuft of banyan leaves, *Ficus indica*, Káśyapa's *Bodhi* Tree. (Plate VII.)

Next to the left, facing south-east, comes Kanaka, the fifth Buddha. Like the image of Śākyamuni he is seated in the Earth-Touching Position, the left hand laid open in the lap, and the palm of the right hand on the knee, the finger tips resting on the ground. The two twigs of the *udambara* fig, *Ficus glomerata*, which crown his canopy, show that he is Kanakamuni. (Plate VIII.)

Next to the left, facing east, comes Krakuchchanda, the fourth Buddha. He sits cross-legged with both hands laid in his lap, the back of the right hand placed in the palm of the left in the Meditation Position, or *Dhyānamuḍrá*, also known as the Lotus-seated or *Padmāsana* Position. The leaves that crown his canopy apparently belong to the *sirīsha*, *Acacia sirisa*, the *Bodhi* Tree of Krakuchchanda. (Plate IX.)

Next to the left, facing north-east, comes Viṣvabhū, the third Buddha. He is seated cross-legged, like Maitreya in the Giving Position, or *Varamuḍrá*, the left hand with up-turned palm laid in the lap, the right arm stretched in front, and the hand open, the back resting on the right knee. Unlike the other figures, he has an aureole which fills the space between the head and the arched canopy above. The canopy is crowned with a bunch of leaves, and there are pinnate leaves on each side of the head. According to the Ceylon books, Viṣvabhū's tree is the *sāla*, *Shorea rubusta*. But these are not *sāla* leaves, but apparently *pātali*, *Bignonia suaveolens*, leaves, which, according to Ceylon books, is the badge of Vipasyī, the first Buddha. (Plate X.)

The next image, facing north, is Śikhī, the second Buddha. He sits cross-legged in the Thinking or *Padmāsana* position, the hands with up-turned palms laid on the lap, the right hand resting on the left hand. The tuft that crowns his canopy is apparently a white lotus or *pundurīka*, which, according to the Ceylon books, is Śikhī's badge. (Plate XI.)

The last image, facing north-west, is Vipasyī, the first Buddha. He sits cross-legged in the Teaching or *Dharmachakra* Position, the



Kasyapa.



Kanaka.



Krakuchchhanda.



Viṣvabhū.



Śikhî.



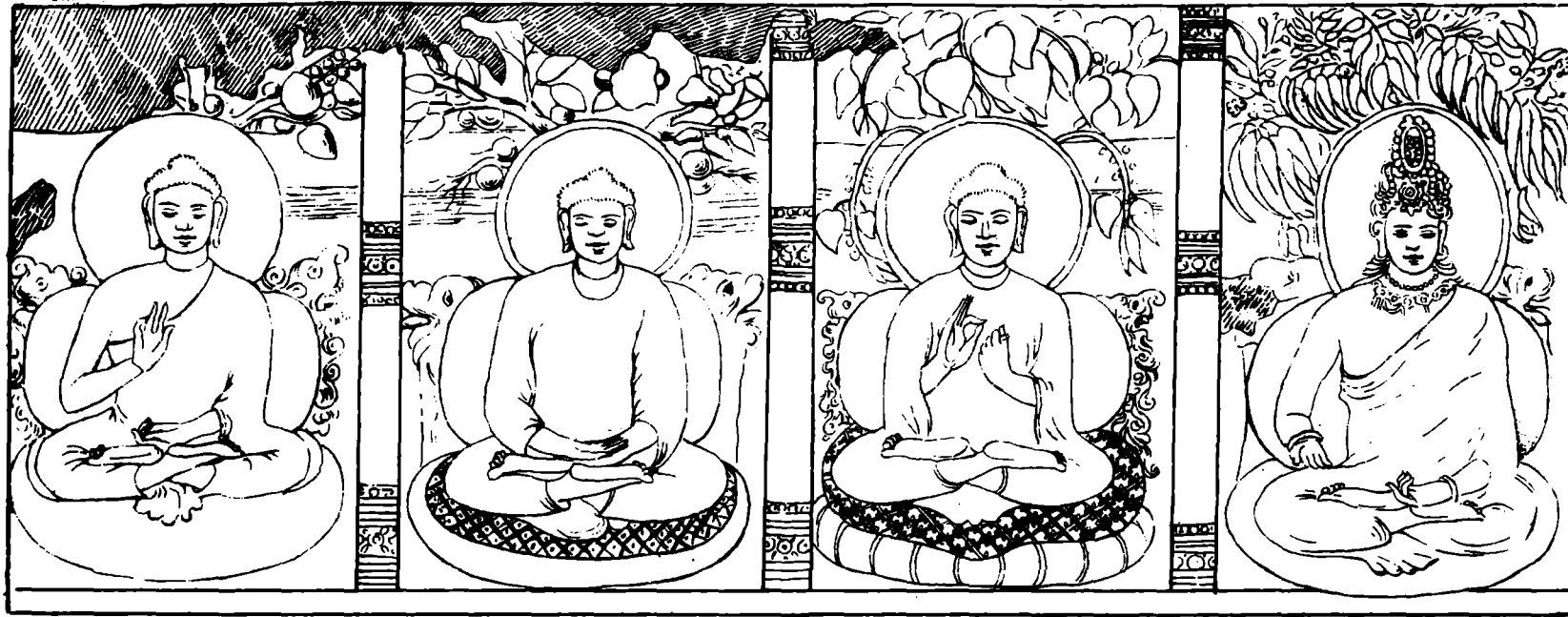
Vipaṣyī.

hands raised to the chest, the tips of the left little finger caught between the points of the right thumb and forefinger. His canopy is crowned by a central bunch, and two side plumes of leaves, much like the leaves of the *asoka* tree, *Jonesia asoka*. This agrees with the sculptures in the Bharhut stûpa (B. C. 200), but not with the Ceylon books, which make Vipasyi's badge the *pâtali* or *Bignonia suaveolens*. (Plate XII.)

With these eight Buddhas the row of eight Buddhas in a fifth century painting above the doorway of Ajanta Cave XVII., forms an interesting comparison. The eight Ajanta Buddhas are of one size, about twelve inches high, in panels eighteen inches by twelve inches. All are seated cross-legged on cushions, and all have cushions behind their backs. Except Maitreya, whose long tresses hang to his shoulders, all have close-cropped curly or woolly hair rising to a knob on the crown. All wear the ascetic's robe. In some of the figures the robe is drawn over the left shoulder, leaving the right shoulder bare; in others it covers both shoulders and is fastened round the neck like a coat. Round the head of each is a nimbus, and each sits under his *Bolli* tree. The eight figures form two sets of four. The four on the right vary in hue from wheat colour to umber brown; the four on the left are black, perhaps because the colour has faded. The black Buddhas have also a white brow mark which the others have not. The flower scroll and a belt of small figure groups under the four right hand Buddhas also differ from the flower scroll and the figure groups under the four left hand Buddhas. The figure most to the right is Maitreya, the Coming Buddha. He is painted in the act of passing from being a Bodhisattva to be a Buddha. His skin is wheat-coloured, and his hair falls in long tresses on his shoulders. He is dressed as an ascetic in a brick-coloured robe drawn over the left shoulder, leaving the right shoulder bare. He wears the ornaments of a Bodhisattva, a rich tiara, earrings, a necklace, armlets, and anklets. He sits in the *Varamudrâ*, or Giving Position, his right hand near or over his right thigh, with open upturned palm, his left hand, also with upturned palm, rests on his lap over his folded feet. He is seated under a long-leaved tree which is difficult to identify. On Maitreya's right is Śākyamuni or Gautama, wheat-coloured, in a salmon robe, which covers both shoulders to the neck like a coat. His hands are in the *Dharmachakra*-

mudrā, or Teaching Position, both raised to the chest, the tip of the left little finger caught between the points of the right thumb and first finger. Over his head hangs a bunch of *pipala*, *Ficus religiosa*, leaves representing the tree under which he is sitting. On Gautama's right is Kāśyapa, dusky yellow in hue, with a dark grey robe covering both shoulders like a coat. His hands are in the *Dhyānamudrā*, or Meditating Position, both laid in the lap, with upturned palms, the right hand above. His tree is an *ulambara*, *Ficus glomerata*, with faded fruit. On Kāśyapa's right is Kanaka, amber brown, with a white robe drawn over the left shoulder, leaving the right shoulder bare. His hands are in the *Abhāyamudrā*, or Blessing Position, the right hand raised to the right shoulder, the palm open and held slightly forward: the left hand in the lap open and with upturned palm. His tree looks like a banyan, but it has no air-roots, and may be a *pākhādi* or *pipri*, *Ficus infectoria*. On Kanaka's right is Krakuchchanda who, like Kāśyapa (No. 3), is shown in the Meditating Position. He is black with a white robe, which rises to the neck, covering both shoulders. His tree is the *pātali*, *Bignonia suaveolens*. On Krakuchchanda's right is Viṣvabhū, black in hue, with a white robe drawn over his left shoulder. He sits like Kanaka (No. 4) in the Blessing Position. Over his head is a bunch of long deep green leaves, perhaps of the *asoka*, *Jonesia asoka*, but they are difficult to identify. On Viṣvabhū's right is a damaged figure of Śikhī, black, with a light coloured robe that fastens round the neck, covering both shoulders. Like Kāśyapa (No. 3) and Krakuchchanda (No. 5) his hands are in the Meditating Position. His tree has disappeared. On Śikhī's right is Vipasyī, black, with a white robe drawn across the left shoulder. Like Śākyamuni (No. 2) his hands are in the Teaching Position. Above his head hangs a bunch of *sāla* leaves, *Shorea robusta*, representing a portion of the tree under which he is sitting. (Plates XVII.-XVIII.)

In the copper casket were enclosed, one within the other, four caskets, of silver, of stone, of crystal, and of gold. The copper casket is about six inches high, one-half of it body and the other half lid. The body is cup-shaped with a flat base. The lid is slightly conical, and has two circles of hollow moulding about an inch and a half apart. At the back and at the front of the lid is a copper ring, and at the back and at the front of the body is a pair of similar copper rings. When the lid is shut, the three rings in front and the three rings behind come into a straight line. At the back a copper

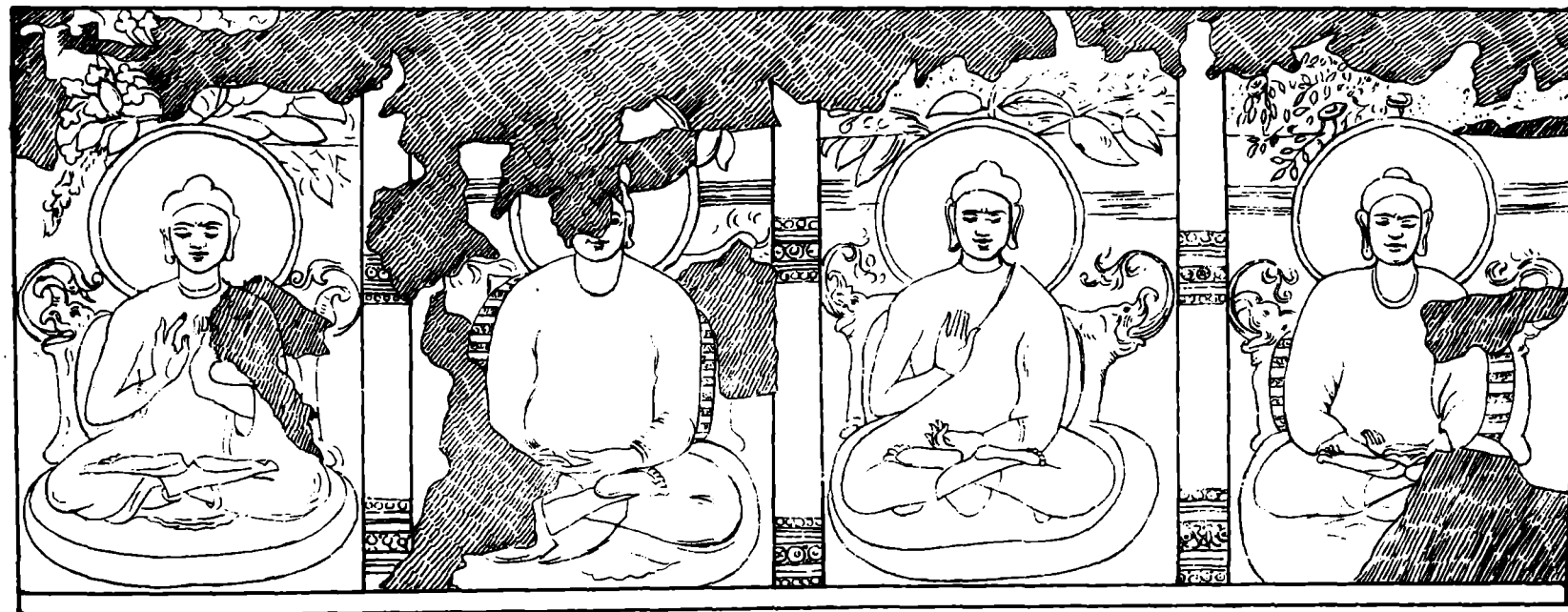


4

3

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6

5

staple has been passed through the rings, and the three rings are permanently fastened together to serve as a hinge. In front the casket was closed by a small movable bolt of copper like a rough nail passed through the three front rings. The front of the casket faced east. (Plate XIII., fig 2.) On opening the copper casket the silver casket was found sprinkled with powder which had dampened into small cakes. The powder seemed of a dull white, much like dirty sandal powder. Between the silver casket and the copper casket were gold flowers much tarnished and dimmed by damp and verdigris. The flowers were of seven varieties (Plate XVI.): 165 were eight-petalled lotus flowers, some with clearly marked veins, and 830 touch (fig. 1); 89 were *Mimusops elenghi*, *bakuli*, flowers (fig. 2); ten were four-petalled flowers (fig. 3); ten were jessamine flowers, one five-petalled and the other nine four-petalled (fig. 4); seven were thick eight-petalled flowers (fig. 5); of seven more one was fifteen-petalled, another nine-petalled, and the rest twelve-petalled (fig. 6); finally there were seven with eight alternate large and small petals. These six varieties are of 720 touch, and weigh in all 318 grains.¹ With the flowers there was a small image of Buddha ($1\frac{1}{2}'' \times \frac{2}{8}''$) pressed out from a thin plate of gold weighing 14 grains and of 620 touch, seated cross-legged on a lotus in the *Dharmachakramudrā* or Teaching Position. Round the head is an aureole. (Plate XIV., fig 4.) There was also a piece of silver wire about two inches long and nearly one sixty-fourth of an inch thick, and a little patch of thin gold leaf about three-quarters of an inch square.

Along with the gold flowers and the image of Buddha, were thirteen stones, apparently taking the place of the seven jewels, *saptaratnas*, which have been found in other stūpas. Three of them are beryls, all irregular in shape. The largest, which is very clear, measures $\frac{3}{4}''$ by $\frac{1}{8}''$. A second, which is six-sided and flat, measures $\frac{1}{8}''$ by $\frac{1}{8}''$. A third is a six-sided tube $\frac{1}{16}''$ by $\frac{3}{16}''$. Three are crystals, one a small broken half bead, the second long and rounded like the Indian drum, *mridanga*, about $\frac{1}{4}''$ by $\frac{1}{8}''$, and the third very clear and roughly heart-shaped, $\frac{1}{16}''$ by $\frac{1}{16}''$. One is a flat six-sided amethyst $\frac{3}{16}''$ by $\frac{1}{4}''$; another a small clearly-polished carbuncle, semi-circular in shape, and about $\frac{1}{16}''$ long. Besides these there were three fragments of rough green glass, and a fourth stone, $\frac{1}{16}''$ by

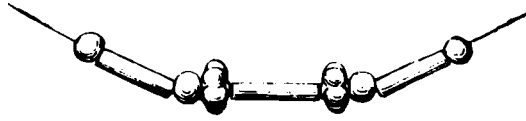
¹ The weight and touch of the gold flowers have been ascertained through the kindness of Col. White, R.E., the Master of the Bombay Mint.

less than $\frac{1}{4}$ " spoilt by verdigris. These stones are of seven kinds, and take the place of the seven jewels or *saptaratnas*. The correct seven jewels are the diamond or *vajra*, the ruby or *mānikya*, the pearl or *muktā*, coral or *prabāla*, lapis lazuli or *vaidūrya*, the agate or *gomedā*, and the emerald or *marakata*. From what has been found in other *stūpas*, great variety seems to have been allowed in the choice of the seven precious stones.¹ (Plate XIV., figs. 5 to 16.)

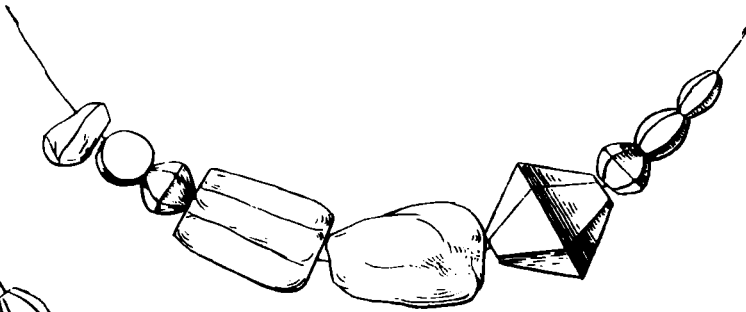
Besides the representatives of the seven jewels, there were thirty-one drilled stones of various shapes, four gold drops, two button-shaped and two round, and three gold tubes. All the thirty-one stones were loose, but appear to have probably been intended to serve as a necklace presented to the relics. It is difficult to arrange them, as several of the stones are not in pairs as they ought to be in a necklace. I have therefore arranged them in four strings, so as to make them appear to the best advantage. (Plate XV.) The first string consists of three gold tubes and six gold drops, four round and two button-shaped. They are of such thin gold plate, and were so injured by damp that one of the gold drops broke while being cleaned. The second string has in the middle an irregular triangular beryl $\frac{11}{16}$ " \times $\frac{1}{8}$ ", clear and of a fine colour; on either side of the beryl is a block of crystal, one $\frac{1}{8}$ " \times $\frac{11}{16}$ ", a double six-sided block like two pyramids set base to base, the other oblong and six-sided with three broad sides and three narrow sides $\frac{3}{4}$ " long; next comes on either side a small six-sided carbuncle bead; then on the left, a round flat crystal and on the right a similarly shaped beryl. Last comes on either side a small irregular beryl bead. In the third string, in the middle, comes a six-sided block of deep blue glass. It is undrilled, and was probably held by gold catches at either end like the middle jewels in the Bharhut *stūpa* ornaments. On either side of it is an irregular long beryl bead. Next, on the right, come a pair of beryl fishes, an auspicious Buddhist symbol, and corresponding to the fishes on the left is a broken beryl shaft, which was probably shaped like an elephant goad. Next comes on either side a beryl tube. Next comes on the right a small pale beryl bead, and on the left a six-sided block of malachite. Next on the right comes a six-sided bead of carbuncle, and on the left a similarly shaped beryl. Last comes on either side a beryl bead.

¹ Cunningham's *Bhilsā Topes*, 298.

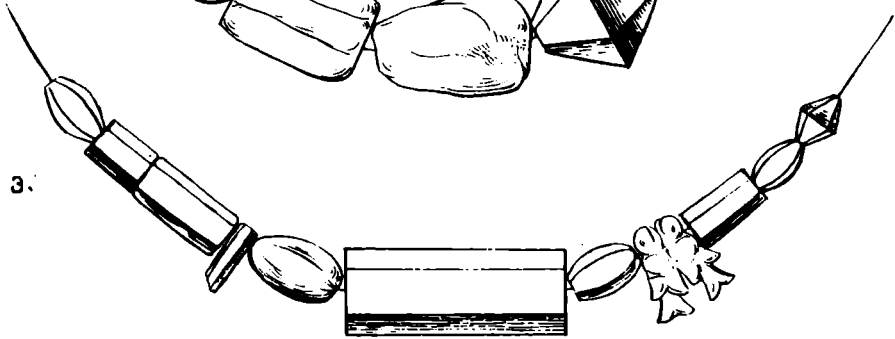
Nº 1.



Nº 2.



Nº 3.



Nº 4.

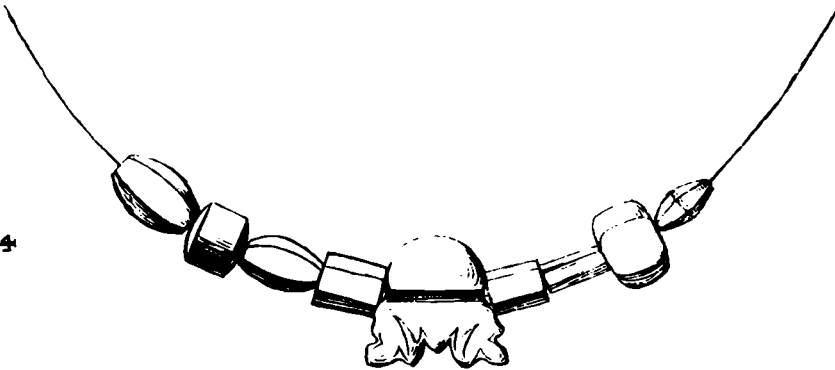


Fig. 2.

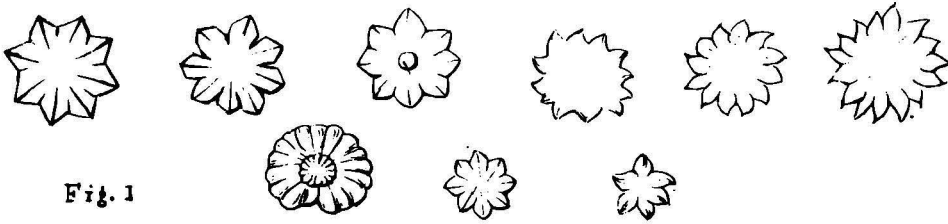
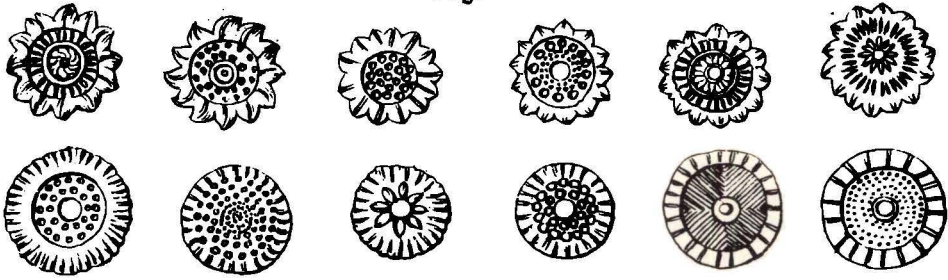


Fig. 1

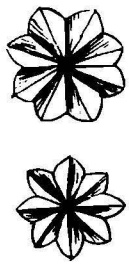


Fig. 1



Fig. 1

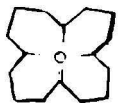


Fig. 3

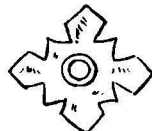
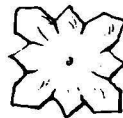
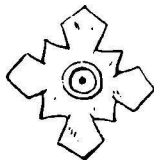
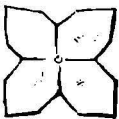


Fig. 5



In the middle of the fourth string comes a white and purple amethyst cut in the form of a Buddhist trident, about $\frac{1}{4}$ " broad by a little more in length. On either side of the trident come two pairs of six-sided beryl beads. Next on the left comes a carbuncle, and on the right a small bead of dark red glass. Last comes on the right an irregular six-sided amethyst and on the left a flat round crystal.

In the copper casket, among the stones, gold flowers, and scented powder, was a well-preserved unworn silver coin. It weighs thirty-four grains. On the obverse is a well made-male head looking to the right. The head-dress consists of a strap with a bunch of pearls on the forehead; and from the temple locks of combed hair fall over the strap. Behind the head hangs a string knotted at the end, probably a braided lock of hair; from the ear hangs a three-ringed ornament, one ring below another, falling to the neck. The beard and moustache are shaved, and the face looks about forty years of age. Round the face is a legend in ancient Nágari characters, much like the character used in Násik and Kanheri Cave inscriptions of the first and second centuries after Christ. The legend reads:—

सिरियञ्जसातकणिस रञ्जो गौतमिपुत्रस

Sanskrit.

भीयञ्जज्ञातकर्णे राज्ञो गौतमीपुत्रस्य

Translation.

‘Of the illustrious Yajna Śátakarᅇi, the king Gotamiputra.’

Yajnaśrī’s title, as given in the Násik and Kanheri cave inscriptions, is रञ्जो गौतमिपुत्रस सिरि यञ्जसातकणिस, that is, ‘Of king Gotamiputra, the illustrious Yajna Śátakarᅇi.’ The legend should, therefore, be read first from above the head down as far as the mouth, and again from the back of the neck to the middle of the head. This would read as in Plate II., fig. 6. The reverse has, in the middle, a pyramidal symbol with three tiers of circles, the lowest tier of three circles, the middle of two, and the highest of one, with a larger circle on the top. To the left is the usual Śátakarᅇi and Ujjain coin-symbol, of four circles joined by two cross lines. Above these two symbols are the sun with rays and a crescent moon, and below them is a waving serpent-like line. Round the symbols is the legend in characters exactly the same as on the obverse, and round the legend is a dot-

ted circle. The impression on this side is imperfect, as the coin seems to have slipped while it was being stamped. Six letters of the legend are only partly shown. The letters that appear entire are गौतमिपुत्रकुमार यज्ञसातकनि. Of these the मा of कुमार and सा of सातकनि look like ण; both of these, I believe, are mistakes due to the engraver's ignorance of the character. Of the six letters, of which only the lower parts appear, the sixth is evidently स and from their lower parts I believe that the other letters are च, त्र, र, प, न, together forming the word चतुरपन. (Plate II., fig. 7.)

In the absence of another specimen of this coin with the legend entire, the legend on the reverse may be read:—

चतुरपनस गौतमिपुत्रकुमार यज्ञसातकनि

Note.—The lower part of च appears; then there is a long stroke, probably त्र; then another stroke, probably र; the lower parts of प and न are fairly distinct.

Translation.

Yajna Śātakarṇi, son of Gotamī, prince of Chaturapana.

Note.—Chaturapana is, I believe, the name of Yajnasri's father. As the coin is struck in imitation of the Kshatrapa coins, which give the name of the father, and as the Śātakarṇis were always called after their mothers, care has been taken to give the names both of Yajnasri's father and of his mother.

The workmanship of the coin is good. The style is copied from the coins of the Kshatrapas, the difference being in the bare head, the side locks, the bunch of pearls, and the hanging braid of hair of the Śātakarṇi king.

The silver casket, which was inside of the copper casket, is about six inches high, with a diameter in the middle of $4\frac{1}{4}$ inches. It is in two parts, body and lid, the body $2\frac{5}{8}$ and the lid three inches in height. The body stands on a rim about half an inch high, and rises bowl-like till, near the lip, it is cut into a round groove about a quarter of an inch deep. The lid fits in this groove, and is shaped like an inverted bowl. It rises in three tiers. The top of the third tier, which is flat and about an inch and a half across, ends in the middle in a pointed boss about one and a quarter inches high. The casket is made of pure silver, and weighs 7 oz. 29 grains. (Plate XIII., fig. 3.)

In the space between the silver casket and the stone casket, were eighty-six gold flowers of 900 touch and weighing 188 grains. They are of eight different kinds, thirty-seven are plain round

Fig. 1.

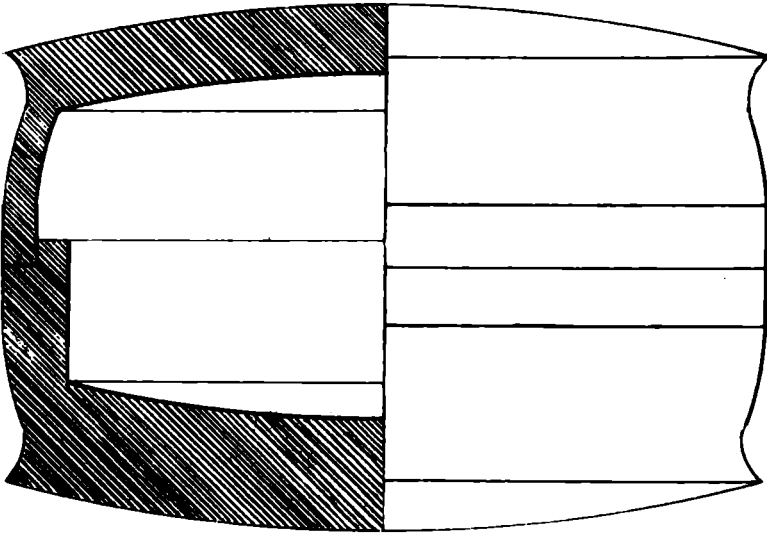


Fig. 2.

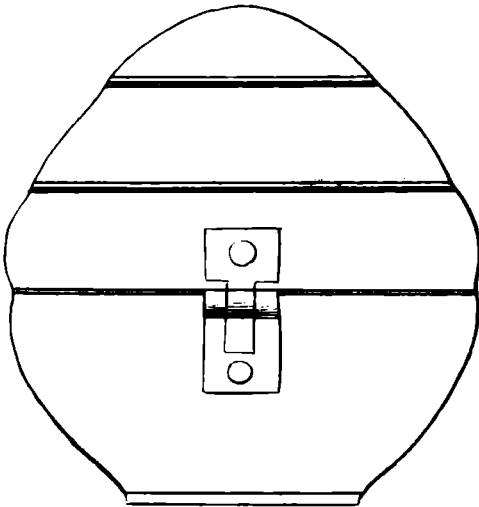


Fig. 3.

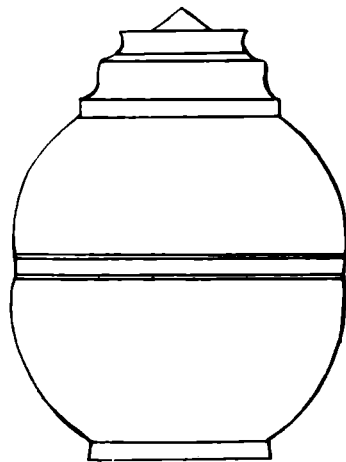


Fig. 1.

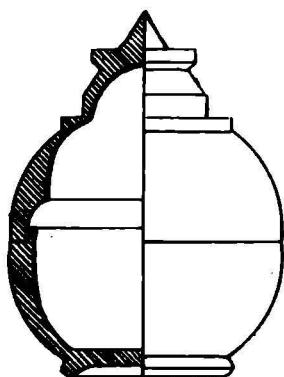


Fig. 2.

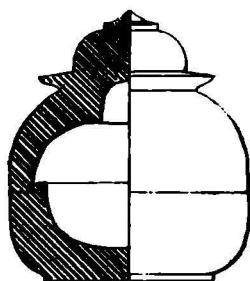


Fig. 3.



Fig. 4.



Fig. 5



Fig. 6.

discs covered with dots, twenty-six are *bakuli* or *Mimusops elenghi* flowers, nine are different kinds of discs, five are small stars, two are sun flowers, one is a twelve-petalled flower, and one is a flower with four large and four small petals placed alternately. Nine of the flowers were spoilt.

The stone casket is of brown sandstone, and appears to have been turned on a lathe. It is four and a half inches high, with a diameter in the middle of four inches; it consists of a body and a lid, the body two inches and the lid two and a half inches high. The body rests on a rim about three-eighths of an inch deep. The lid is in shape like the body inverted, except that it has a top much like the top of the silver casket. This stone casket closely resembles the sixth casket of the Bhilsâ topes. (Plate XIV., fig. 1.)

Fitting tightly into the stone casket was a crystal casket, about three and a half inches high and three inches in diameter. It is in two parts, a body and a lid. The body is one and a quarter inches high and deep, and the lid two and a quarter inches high and deep. Except that it has a flat base the crystal casket is much like the stone casket. (Plate XIV., fig. 2.)

In the crystal casket was a gold casket, and in the top of the lid of the crystal casket a hole was cut into which the point of the gold casket fitted. Round the gold casket were nineteen gold flowers, seven with four petals, three with eight even petals, three with eight alternately large and small petals, and one a round disc covered with little knobs. The gold casket is about one and three-quarter inches high, with a diameter in the middle of one and a quarter inches. It is made of thin gold and weighs 159 grains. It is covered with waving lines of raised tracery in the scroll pattern, and in the hollows are rows of minute pushed out beads. The cup of the casket, which has somewhat lost its shape, stands on a thin base, and bends outwards in the form of a broad bowl. The lid rises in a semicircular dome about nine-sixteenths of an inch high. On the dome, separated by a thin round rim, stands a smooth water-pot or *kalasa*, about three-eighths of an inch high, from the mouth of which rises a pointed lid or stopper about a quarter of an inch high. (Plate XIV., fig. 3.)

In the gold cup were thirteen tiny pieces of earthenware, varying from one inch to a quarter of an inch in length. Two of them are thick, one is of middle size, and ten are thin. The thick fragments are about five-sixths of an inch thick. One of them is three-eighths

of an inch long, and another about three-fourths of the first. In colour all are light brown. The fragment of middle thickness is about an eighth of an inch thick and about a fifth of an inch long. In colour it is dark brown inside and light brown outside. The largest of the thin fragments is seven-eighths of an inch long and one-eighth of an inch thick, the breadth is a little less than the thickness. It seems to belong to a circle five inches in diameter. The thin fragments are all brown in colour and smooth on the outside. The other thin fragments are very small, the smallest $\frac{1}{16}$ of an inch thick and $\frac{1}{4}$ th of an inch long. Covering the earthen pieces were ten gold flowers as bright as the day they were put in. Three of them are twelve-petalled, three have eight even and three eight alternately large and small petals, and one is four petalled. There was also a bit of green glass, *pách*, $\frac{3}{8}$ " \times $\frac{2}{8}$ ", and a little spark of diamond which has been lost. (Plate XIV., fig. 5.)

This completes the description of the articles found in the Sopârâ *stúpa*. Before considering the origin of the earthenware relics and the age of the *stúpa*, the questions arise, Why were these articles placed in the *stúpa*? And what guided the builders of the *stúpa* in the choice of the articles and of the materials of which the articles were made? First as to the number and the materials of the caskets. The idea of the builders of the *stúpa* seems to have been to enclose the relics in seven envelopes. Seven is a holy number. The envelopes should be more and more valuable the nearer they come to the central object which they enclose. So in the Sopârâ *stúpa* there is the clay and brick of the mound, the stone of the coffer, and the material of the five caskets, copper, silver, stone, crystal and gold, each more valuable than the covering in which it is enclosed. The stone casket seems to break the rule, and it is difficult to suggest an explanation. It seems to be plain sandstone, but it may stand for marble or some other precious material.

Again, what is the meaning of the gold flowers found in all the caskets, except in the stone casket? (Plate XVI.) In India the throwing of flowers is a sign of welcome and of worship. When Buddhas or Tirthankars gained perfect knowledge, when some great personage is born or dies, on the field of victory, or when a king enters his capital in triumph, gods and men cover them with flowers. The custom is referred to in the Mahábhárat and Rámáyan, and in Buddhist and Jain sacred books. Another and a very early form of the practice was to mix gold flowers with real flowers, or to use

nothing but gold flowers, for gold is the richest and most meritorious offering. While the images of the gods are carried in procession, or while the wealthy or saintly dead are borne to the burning ground, it is still the practice to scatter gold flowers mixed with real flowers, and to leave the gold flowers to be picked up by the poor. Again, on festive, religious, and other great occasions, when a ruler seated on an elephant passes in state through his capital, persons sit behind him and throw over his head gold or silver flowers to be scrambled for by the people. So also when a vow has been made to present a god with a particular kind of flower for a certain number of days, on the last day of the vow, instead of real flowers, flowers of gold are presented, as gold is the richest of offerings. The flowers in the Sopârâ caskets were placed there as offerings to the relics. How did it come that flowers were laid in all the caskets except in the stone casket? The ceremonial observed in laying the relics in their place seems to have been this. Flowers were dropped over the pieces of earthenware and the golden casket was closed; flowers were dropped over the golden casket and the crystal casket was closed. When the crystal casket was closed flowers were strewn over it, but they had to be taken out as it was found that the stone casket fits the crystal casket too tightly to leave room for flowers. Again, when the stone casket was closed flowers were dropped into the silver casket, and when the silver casket was laid in the copper casket gold flowers were again strewn. The number in the copper casket was specially large, as it included the flowers for which there was no room in the stone casket. In the copper casket besides the gold flowers there were the thirteen undrilled and thirty-one drilled stones, the sweet-scented powder, the gold image of Buddha, the inch or two of silver wire, and the patch of gold leaf and the coin. All of these were offerings to the pieces of earthenware. The seven kinds of undrilled stones represented, as has been noticed, an offering of seven jewels, and the drilled-stones probably represented the offering of a necklace; the sweet-scented powder was an offering of incense; the silver wire and the gold leaf were offerings of metal; and the coin was an offering of money.

Remarks.

The objects of worship in whose honour the *stûpa* was raised are beyond doubt the tiny pieces of earthenware. That so large

a structure should have been raised to preserve so tiny and so few fragments of clay seems to me to prove that the builders of the relic mound believed them to be pieces of the begging bowl of the world-honoured Gautama Buddha.

That the builders of the *stūpa* believed these pieces of earthenware to be fragments of Gautama's begging bowl is further proved by the circle of Buddhas that surround the copper casket. The meaning of the circle of Buddhas is that Maitreya, the Coming Buddha, has come, has entered the relic mound, and asks from Gautama his begging bowl in token that Gautama admits his claim to be Buddha. The other Buddhas are present because it is the belief that Gautama's bowl had been passed from one Buddha to another as a symbol of the office of Buddha.

The past and the future history of Gautama's bowl were told by an Indian Buddhist to the Chinese pilgrim Fah-Hian in the beginning of the fifth century. The Indian's account was that Buddha's bowl was first at Vaiṣālī, the modern Vashāda or Besārḥ, about twenty-five miles north-east of Patnā. In Fah-Hian's time (A. D. 410) it was on the borders of Gāndhāra in the Peshāwara relic mound. In about a hundred years the bowl would go beyond the Oxus to the country of the western Yuechi. After a hundred years with the Yuechi it would pass (600) to Khoten east of Yarkanda. The eighth century would find it at Koutche to the north of Khoten. In the ninth century it would be in China. In the tenth century it would pass to Ceylon, and in the eleventh century to Mid-India. It would then go to the paradise of Maitreya or the Coming Buddha in Tusita. Maitreya would say, with a sigh, 'Gautama's bowl is come.' After seven days' worship the bowl would go back to India, and a sea dragon would take it to his palace and keep it till Maitreya was about to become Buddha. It would then divide into four and return to the four rulers of the Air from whom it originally came. When Maitreya became Buddha the four kings of the Air would present him with the bowl. All future Buddhas would use it, and when the bowl disappeared the law of Buddha would perish.¹

It is well known that Gautama's bowl was held in great reverence by Buddhists. The bowl is the first object of worship in Nepāla on the four gift days, *yugādītithis*. The Khatmandu bowl is of silver and shaped like a somewhat rounded U.

¹ Beal's Fah Hian, 36—38, 161—163.

It is about a foot in diameter and seven inches deep. Several sitting images of Buddha at Buddha Gayâ hold short round bowls, narrow at the mouth, much like the copper bowls given to Nepâla Bhikshus at the time of initiation, *dkshâ*. In Ajanta Cave XVII. (scene 32), a painting of the fifth or sixth century, represents Gautama holding a bowl, and his wife Yaśodharâ pushing forward their son Râhula to give Gautama alms.¹ Fah Hian found a stone bowl held in great respect in Peshâwara, and there are four other famous bowls in Ceylon, in China, in Kandahar, and in Ladak. All of these, except the Ladak bowl, are of stone, and most of them are whole bowls and of a very large size. The proper begging bowl of the Buddhist monk was either of iron or of clay. This and the fact that, as early as the second century after Christ, so few and such small fragments were deemed worthy of so grand a resting place, give the Sopârâ relics a better claim than any of their rivals to represent the begging bowl of Gautama Buddha.

As no inscription accompanied the relics, nothing can be said as to the builder of the *stûpa*. As to the date when the *stûpa* was built its shape is too ruined to let us say anything positive about it. What appears is a high circular plinth, from which rises part of a dome, a shape which might resemble *stûpas* of the Sânci period (a. c. 250-150), which consist of a circular plinth surmounted by a semi-circular dome; but the quantity of brick and earth which covers the sides of the plinth leads me to think that the dome was larger, probably a three-quarter circle, akin in shape to the *dûghobâs* found in Western India caves of Yajnaśrî's time, the difference being in the greater breadth of terrace in the Sopârâ *stûpa*, a feature which seems to have been narrowed in the cave *dûghobâs* from want of space. If no relics had been found, the form of the structure and the large bricks used in the building would have led me to assign the *stûpa* to an earlier period. But the fact that no coins except one of Yajnaśrî's, was found among the relics, makes it probable that the *stûpa* belongs to his time. The coin is so fresh and well-preserved that it seems to be an unused specimen which was placed in the relic box as an example of the current coin of the time. Yajnaśrî's date has not been fixed. Three inscriptions belonging to Yajnaśrî's reign occur in Western India caves, one at Nâsik and two at Kanheri. The Nâsik

¹ See Frontispiece. Compare the bowls in Fergusson and Burgess' *Cave Temples*, woodcuts Nos. 54 and 59.

inscription No. 4 in Cave VIII. is dated the 7th year of Yajñaśrī. It reads :—

रजो गोतामिपुत्रस सामिसिरियजसातकणिस सबछरे
सातमे ७ हेमताण पखे ततिये ३ दिवसे पञ्चमे

Translation.

On the first day of the third fortnight of the winter months, in the seventh year of the illustrious King, Lord Yajñaśātakarṇi, son of Gotami.

In a second inscription in the great Cathedral Cave III. at Kanheri, the year is lost. The inscription reads :—

रजो गोतमि - - - - -
सातकणिसस स - - - - - [गि]
इ पखे पञ्चमे

Translation.

Of King Gotami - - - - -
Of Śātakani, year - - - - -
Fifth fortnight of summer.

The third inscription in Kanheri Cave LXXXI. is dated in the sixteenth year of Yajñaśrī. It reads :—

रजो गोतामिपुत्रस सामिसिरियजसातकणिस सबछरे १६ गिम्हान पखे १ दिवस ५

Translation.

On the fifth day of the first fortnight of summer in the sixteenth year of the illustrious king lord Yañaśātakani, son of Gotami.

The form of the letters and the architecture of the caves in which these inscriptions occur leave no doubt that Yajñaśrī is a later king than Pulumāyi Vāsishthīputra. As to Pulumāyi's date, it is now becoming admitted by scholars that the Tiastanos of Ozene and the Siri Polemaios of Bathana, mentioned by Ptolemy in his Geography, are Chashtana of Ujjain, the founder of the Ujjain Kshatrapa dynasty and Śrī Pulumāyi Vāsishthīputra of Paithan of the Śātakarṇi dynasty, and that, therefore, these were two contemporary or nearly contemporary kings. Admitting that Ptolemy took many years to collect the materials for his great work, the date of these two kings cannot well be placed at more than twenty-five years before Ptolemy. Ptolemy made astronomical observations in Alexandria in A. D. 139, and he survived Antoninus, that is, he was alive in A. D. 161. Taking the date of Ptolemy's manhood at between A. D. 139 and A. D. 160, the two Indian kings whom he mentions may be placed some years earlier. The dates on Kshatrapa

coins, which continue through a term of 300 years, almost certainly belong to one of the two eras, Saṁvat or Śaka. Assuming the Kshatrapa era to be Saṁvat, that is B.C. 56, Chashtana's date, whose year is about fifty, would be about B. C. 6, that is, 144 years before Ptolēmy, taking Ptolemy at about A.D. 150. This is improbable, as Ptolemy would not have named, as the ruler of Ujjain, a king who had been dead nearly a hundred and fifty years. On the other hand, as was accepted by the late Dr. Bhāu Dāji and Mr. Justice Newton, take the Śaka era of A. D. 78 as the Kshatrapa era. This brings Chashtana with his fifty years to A.D. 128, from eleven to thirty-two years before Ptolemy, a very reasonable interval. This, then, is Pulumāyi's date, and, as I have said above, there is no doubt that Yajñaśrī comes a little later than Pulumāyi. Though it is not settled how many years passed between Pulumāyi and Yajñaśrī, the form of the letters used in the inscriptions bearing Yajñaśrī's date, seems to show that Yajñaśrī was not much later. I incline to think that there was only one king between Pulumāyi and Yajñaśrī, and that very probably this king is the Chatarapana who is mentioned in the legend on the reverse of the Sopārā coin as Yajñaśrī's father. A new inscription, which I have found above a cistern in the Nānāghāt, mentions a king Chaturapana Sātakani, son of Vāsithi. The inscription reads : —

Transcript.

- (1) सिधं रणो वसतिपुतस चतरपनसतकनिस
- (2) सवडर तर १३ हेमतपख पचमे दिवसे १०
- (3) कमवनस गहपतस दमघसस देयधम
- (4) पनियपुवा देयधम सतगरपवते एथ *

* L. 1 वसति is evidently a mistake of the engraver for वासिति. As the upper stroke of प in चतरपन is a little curved, the name may be also read चतरफन. Anyhow it is a corruption of the Sanskrit name Chatusparṇa or Chitraparṇa.

L. 2 तर is an abbreviation for तेरसे. For हेमतपख read हेमंतपखे.

L. 3 For कमवनस read कामवनस. For गहपतस read गहपतिस. For दमघसस read दमघोसस.

The fourth line has सतगरपवतेएथ, which would seem to show that the name of the Nānāghāt mountain was Satagara (Sk. Saptagiri). But there can be another reading of the fourth line पनियपुवा देयधम ऽ स तगरपवते एथ. According to the Sandhi rules in Prakṛit an अ is often dropped without making any change in the previous letter, thus the Sanskrit of this line would be पानीयप्रपा देयधमांस्य तगरपवते अत्र that is, a water cistern here in the Tagara mountain, a meritorious gift of his (Danaughoshu). This would support my previous identification of Tagara with Junnar (Journal B. B. R. A. S., XIII.), as the Nānāghāt is the direct pass between Junnar (Tagara) and the coast.

Sanskrit.

- (1) सिद्धं राज्ञो वासिष्ठीपुत्रस्य चतुष्पर्णज्ञातकर्णेः
- (2) संवत्सरस्त्रयोदशः १३ हैर्मतपक्षे पंचमे दिवसे १०
- (3) कामवनस्य श्रपतेर्देमघोषस्य देयधर्मः
- (4) पानीयप्रपा देयधर्मः सप्तगिरि[° घर्मोस्य तगर?] पर्वते अत्र

Translation.

To the perfect one. A water cistern the meritorious gift here in Satagara (Sk. Saptagiri or Tagara ?) mountain. The meritorious gift of the householder Damaghosha of Kāmavana on the tenth day of the fifth fortnight of winter (in) the thirteenth (13th) year of king Chatarapana Sātakani (Sk. Śātakarṇi), son of Vasathi (Sk. Vāsishthî).

I believe that the Chatarapana or Chatarphana of this inscription is very probably the Chatarapana of the Sopârâ coin. My reasons for this opinion are: (1) the king in the Nânâghât inscription is called Sātakani; (2) his maternal name is Vasathiputa; (3) and the letters of the inscription resemble the letters of the times of Yajñaśrî. The first two points prove him to be a king of the Śātakarṇi dynasty of Paithan; the third point and the words चतरपनकुमारु on the Sopârâ coin show him to be the father of Yajñaśrî. Chatarapana's maternal name of Vāsishthiputra, that is Vāsishthî's son, probably shows him to be the younger brother and successor of Pulumâyî Vāsishthiputra. Again, a comparison of the Sopârâ coin, with Kshatrapa coins brings out more clearly that Yajñaśrî was a contemporary of the Kshatrapas. As in Kshatrapa coins the head on the obverse of the Sopârâ coin looks to the right; while except the peculiar Śātakarṇi symbol of four circles joined by a cross, the reverse shows all the usual Kshatrapa symbols, the dotted circle, the pyramidal symbol with the rayed sun and crescent moon, and the waving line below. I have little doubt that the Sopârâ coin was struck on the model of Kshatrapa coins of a type later than Chashtana. Of the later Kshatrapas, Rudradâman's coins are those which the Sopârâ coin most resembles in style and workmanship. I think Yajñaśrî was a contemporary of Rudradâman, and believe that he is the very Śātakarṇi mentioned in Rudradâman's Girnâr inscription as having been twice really conquered.¹ Probably Yajñaśrî made a successful inroad into Kâthiawâr from Aparânta by sea, but after a time was

¹ Ind. Ant. VII., 262.

forced to withdraw. Anyhow, Rudradāman's boast suggests that Rudradāman's conquests over Śātakarṇi involved a previous conquest of his territory by Śātakarṇi. Another coin of Yajñaśrī which I have obtained from Amreli in Kāthiawār supports this view (Plate II., fig. 7a). In the Amreli coin the head is a little worn, but the legend रजो गौतमिपुत्रस यज्ञसातकर्णिस is fairly clear, though unfortunately the reverse has lost more of its legend than the Sopārā coin. It is true that the finding of a coin does not prove that the place where the coin was found formed part of the territory of the king to whom the coin belongs. It is possible that for a time, however short, Yajñaśrī did hold that part of Kāthiawār, and that his coins were current there. From coins and inscriptions I have fixed Rudradāman's reign as lasting from 70 to 100 of the Kshatrpa era.¹ Taking, as suggested above, the Kshatrpa era to be the Śaka era, Rudradāman's date would be A.D. 148-178. The date of his contemporary Yajñaśrī would therefore be somewhere about the middle of Rudradāman's reign, or A. D. 160, which approximately is the date of the *stūpa*.

I have still one difficulty to solve before fixing the middle of the second century after Christ as the age of the *stūpa*. It is caused by the images which were found encircling the copper casket. As the images of the seven Buddhas are in a style of dress which did not vary, nothing can be said against their belonging to the time of Yajñaśrī. With the image of Maitreya the case is different. We have no good specimens of the richer dress and ornaments in use during the second century after Christ. But comparing Maitreya's dress and ornaments with the specimens of Yajñaśrī's time, of which there are many examples in the Nāsik and Kanheri caves, the pyramidal crown, the sacred thread, the waist band and Maitreya's other ornaments differ greatly from the royal crown and corresponding details of dress and ornament in Yajñaśrī's time ; and closely resemble the dress and ornamentation of images of about the seventh or eighth century. I can explain this only by supposing that about the seventh or eighth century the *tope* was opened for repairs, when new images and probably new copper and silver caskets were put in instead of the old ones, which had been spoiled by damp and verdigris.

¹ Ind. Ant. VII. 257, 258.

IV. **Sculptures near Chakreṣvara Temple.**—About half a mile north of modern Sopârâ, and about 500 yards north-east of the Buddhist *stûpa*, is a lake called the Chakreṣvara or Chakâlâ Talâv. About the middle of its west bank is a modern temple of Chakreṣvara Mahâdeva, to which a collection of sculptured stones, varying in age from the tenth to the twelfth century, gives a special interest. The chief of the sculptured stones is a well carved statue of Brahmâ, which leans against a large banyan tree facing the temple. The people say that this statue was found about thirty years ago in a field in Sonârbhât, about half a mile south-west of Sopârâ.¹ It measures six feet four inches long by two feet broad, and stands erect with three heads and four arms. The three heads, a front and two side faces, have richly carved tiaras. The fourth head is not shown, as it looks back. The middle face has a long pointed beard, the side faces are hairless. Of his four hands the right upper hand holds the sacrificial ladle or *sruk*, and the lower right hand a rosary; in the left upper hand is a book roll, the Veda manuscript, and the left lower hand holds either a water jug, *kamandalu*, or a *ghi* flask, *ûjyasthûli*. There are necklaces round the neck, armlets on the arms, bracelets on the wrists, and rings on the fingers. The *dhotar* or waistcloth is fastened by a girdle round the waist. On the shoulder is a deer skin, the head of the deer appearing on the chest below the right shoulder. The sacred thread hangs like a thick strap in a waving line to the thigh. On each side below the knee is a female figure, probably Sâvitri and Sarasvatî. The figure on the visitor's right holds sacrificial fuel, *samûdh*, and the figure on the left holds a *ghi* pot in the left hand and a ladle, *sruk*, in the right. Below this left hand figure is another figure with a sword in the right hand, and below the right-hand figure is a swan, the carrier and symbol of Brahmâ. The image is well executed, but is not complete. The earrings and the minute carving of the armlets and bracelets have been left unfinished.

¹ Near where the image of Brahmâ was found are the ruins of a temple which, from a fallen image which looks like the Jain Devî Ambikâ, appears to have been a Jain temple. This spot is held sacred and visited by Jains. At a little distance from the site of this Jain temple a headless Nandi was found, which with other remains in the Sonârbhât, leads to the inference that there were several Brâhmanical temples in this neighbourhood. The Nandi is now placed in front of Chakreṣvara temple.

Under the banyan tree, close to Brahmâ's statue, are several other sculptured stones. One of them is a standing cobra-hooded image of Pârᅇvanâtha, of the Digambara sect of the Jains. It is not later than the tenth century, perhaps older. About five feet to the south of the banyan tree is a modern shrine of Hanumân, with verandahs on the four sides. On the verandahs are placed several old images. One of these, on the east verandah, facing the pond, is Haragaurî or ᅇiva and Pârvatî (1' 10" × 1' 9"). ᅇiva has four hands, a tiara, and an aureole. By the side of Pârvatî, on the right, is Ganesh, and below Ganesh is Kârtikeya on a peacock. Near Haragaurî, on the first stone facing the south, is an image of the Sun (2' 6'' × 2') standing on the heads of seven horses. The two hands are raised above the elbows and hold lotuses. Round the neck are rich necklaces, and a chaplet of beads falls below the knees. The end of the waist cloth hangs in heavy folds between the legs, and a well carved cloth is shown round the thighs. He wears large and rich shoes, the peculiar symbol of the Sun god. Near the sun image is a small well-carved figure of Chandraprabha, the eighth Tirthankara. Besides these there are two *satî* memorial stones, and other broken sculptures.

PART II.

Ancient Inscriptions and Symbols on Padaᅇa Hill.

About eleven miles north of Bombay, eighteen miles south of Sopârâ, and three miles north-east of Goregaon station on the Baroda railway, is a small range of hills whose northern extremity, jutting out towards the deserted village of Âkurli, goes by the name of Padaᅇa. The Marâthi word Padaᅇa corresponds to the Gujarâti Padâᅇa and to the Hindi Padâva, and means a place of encampment. The name Padaᅇa has been given to this hill because during the rainy months the cattle from the neighbouring villages are taken to its dry flat top to save them from the mud and slime of the rice lands below.¹ Many similar places are called Padaᅇa.

¹ When I was on the hill top in February, there was much dry cowdung which boys were collecting to take to the fields for manure.

Padana hill is from 180 to 200 feet above the level of the surrounding rice lands. It rises with an easy slope from the west, but on the east ends in a sheer cliff. To the south it is connected with a range of small hills, and on the north falls gradually into the plain. The top measures about 350 feet from north to south. It is somewhat broader in the south, narrowing northwards with a gradual downward slope. On the west much of the hill top is on a slightly higher level, like a raised platform. The hill lies six miles west of Kanheri, and the black cleft in which the Kanheri caves are cut can be clearly seen.

There is no building on the top of the hill. On the south appears something like the foundation of a wall, and on the north is a circle of undressed stones. Neither of these are old foundations; they are the sites of temporary huts erected during the rainy months by cattle keepers. At the base of the hill to the west is a pond with a broken dam which is almost dry in the fair season.¹

The hill top contains the following objects of interest:—

- (1) A natural cave.
- (2) Symbols cut on the surface of the rock.
- (3) Inscriptions cut on the surface of the rock.

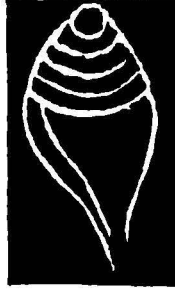
CAVE.—The natural cave is almost in the middle of the hill top, near the western edge. Over it grows a stunted tamarind, and at the foot of the tree are some signs of stone work. The cave faces north. Its entrance is almost choked with earth, and it looks like the hole of some small animal. I learnt from the people of the neighbourhood that Káthodis in search of porcupine quills sometimes make their way into the cave, and they say there is space inside for sitting. The outside of the cave favours the truth of this statement of the Káthodis. If the mouth were opened the cave might be found to contain some objects of interest.

SYMBOLS.—There are eleven symbols carved in different parts of the hill top. (No. 1.) The footmarks of a cow and a calf are sixty feet east of the tamarind tree. The four feet of the cow with the hoofs marked are well cut in the rock, the cow facing north. The distance between the front and hind legs is two feet six inches. The forelegs are rather far apart, the distance between them being

¹ The dam of this pond is said to have been made by Bhán Rasul, once the proprietor of Malád village. But as the pond seems to have been old, Bhán Rasul probably repaired an older dam.



2



6



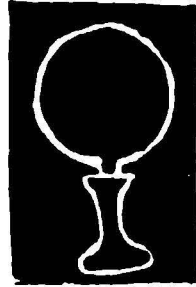
4



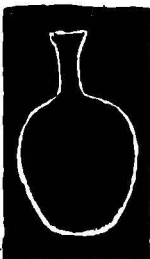
3



1



11



9



5



10

Scale $\frac{1}{12}$ 1 2 4 5

Scale $\frac{1}{14}$ 3 6 9 10 11

eight inches; the hind legs are closer together, only two inches apart. Each hoof is about three inches long and about the same in breadth. The calf faces the south, and from the position of its feet seems to be sucking the cow. The distance between its front and hind feet is one foot six inches. Each hoof measures an inch and a half long, and about the same in breadth. The distance between the two fore feet and between the two hind feet is about an inch. (See Plate I., fig. 1.)

(2) The *chakra* or Buddhist wheel is cut about fifteen feet south of the cow's feet. It has fifteen spokes and a double circle. The diameter of the wheel is $9\frac{1}{2}$ inches. (Pl. I., fig. 2.)

(3) Seventeen feet east of the *chakra* or Buddhist wheel, and on the east edge of the hill are two pairs of human feet facing each other, one pair smaller than the other. These feet are not cut in the way feet are usually carved; they are either cut with shoes, *champals*, or perhaps the work is rough and unfinished. The larger pair faces west, each foot ten inches long by four inches broad. Facing it about two inches to the west is a smaller pair, each foot $8\frac{1}{2}$ inches long by three inches broad. The people call these the footmarks of a husband and wife, *navard-navariche phyé*. (Plate I., fig. 3.)

(4) About three feet south of the two pairs of footmarks is a small conch shell, nine inches long and six inches broad in the middle. (Plate I., fig. 4.)

(5) About fifty feet south of the small conch shell is a pair of child's feet going from south to north. The left foot is in front, and the right behind, as if the child was crossing a slit in the rock. The two feet are ten inches apart; each foot is four inches long, with a breadth at the toes of $2\frac{1}{2}$ inches. These feet are very well carved. (Plate I., fig. 5.)

(6) Three feet west of the right or hind foot of the child is a large conch shell, one foot seven inches long and nine inches broad in the middle. (Plate I., fig. 6.)

(7) a & b. About fourteen feet south of the large conch shell is a pair of large human footmarks, each mark being one foot long by five inches broad. They are on the eastern edge of the hill, and are the marks of some one leaping out towards the east. The right foot is five feet and five inches in front of the left. They are both well carved. In front of the hind footmark is Inscription E in letters

of the first century after Christ. By the side of the same footmark is Inscription F in letters of the second or third century after Christ. To the left of the front footmark is Inscription G in letters of about the second or the third century after Christ, and to the right is Inscription K, the well known Buddhist formula in letters of about the fifth or sixth century after Christ. (Plate III., figs. 7a and 7b.)

(8) THE BUDDHIST TRIDENT.—This symbol is about eight feet south of the large footmarks. To the (visitor's) right is Inscription H in letters of the first century after Christ, and below the symbol is Inscription I in letters of the second or third century after Christ. To the (visitor's) left is Inscription J in letters of about the second or third century after Christ. Except for the two ox-hoof marks this symbol much resembles what is generally known as the Buddhist trident, an emblem found in old Buddhist sculptures and coins. In dignity the so-called Buddhist trident comes next to the Dharmachakra and to the pentagonal symbol below both of which it is generally found. In one place in the Bhilsâ sculptures the trident is carved on the throne of Buddha as the principal object of worship. In other sculptures it appears in flags, in ornaments, and as an auspicious mark on the sole of Buddha's foot. Its meaning has not yet been settled. General Cunningham believes it to be a Dharma symbol, a monogram formed from the letters य, र, ल, व, ष, which the later Tântrikas use to represent the five elements.¹ To me the symbol seems to be derived from the face of an ox, much resembling the Greek sign for the constellation Taurus. The inscription by the side of this Padaṇa symbol नदिपदं, Sk. नदिपदं, that is 'The symbol of the bull,' seems to tell in favour of the Bull Theory. The two ox-hoof marks in the symbol are perplexing. I can suggest only one explanation. The symbol was originally intended to represent a bull's head, and was known as नदिपदं, that is, the bull symbol. In later times the word *pada* was supposed to mean foot not symbol, and ox-hoof marks were carved to explain the phrase *nandi padam*. (Plate III., fig. 8.)

(9) Seven feet south-east of the trident are two jugs, one large the other small. The large jug is fourteen inches long, nine inches across, and five inches long in the neck. It much resembles the jugs found in old sculptures in the hands of monks and

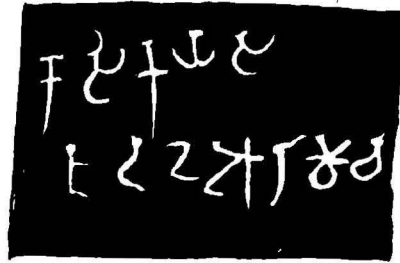
¹ Bhilsâ Topes, 356; compare Tree and Serpent Worship, 106, 192; Jour. R. A. S. (N. S.) III. 160-162.

PADAN HILL INSCRIPTIONS.

Plate II.



A



B



D

Scale $\frac{1}{12}$ A B C
 Scale $\frac{1}{14}$ D



C

Bhāgvānlāl Indrajī.

Bodhisattvas. The small jug is eight and a half inches long and five inches across. It has a neck two and half inches long and a side spout two inches long. Both jugs appear to be made on the model of clay pots. (Plate I., fig. 9.)

(10) Eighty-six feet north-west of the trident, on a higher level, is a jar eleven inches long, eight and a half inches across in the middle, and three inches long in the neck. In the middle of the jar is a square pattern with a point in the middle, probably for ornament. A bit on the side is lost. (Plate I., fig. 10.)

(11) 190 feet south-west of the last jar, on a detached rock to the south, is a mirror with a round disc and a handle. The disc of the mirror is ten and a half inches across, and the handle seven inches long. It is like the metal mirrors used in Nepâl at the present day, the disc being fitted into the handle in the same way. They are made of bell metal or of brass, with a specially large proportion of zinc. In Nepâl metal mirrors are considered more suitable for religious purposes than looking glasses. There the mirrors which are held in front of a god after his worship is over are still made of metal, mostly of silver, and so is the mirror held up to the bridegroom when dressed in his marriage robes, a glass mirror being considered unlucky. Several old Nepâl barbers even now use metal mirrors, a little different in shape from this Padana mirror. Among the eight auspicious things shown in the Khandagiri and Girnâr sculptures are mirrors resembling this mirror in shape.

Inscriptions.

There are in all eleven inscriptions, which I have marked in letters A—K, to distinguish them from the symbols, which are marked in numbers. The inscriptions range from the first to the sixth century after Christ. All except two are carved in the old Prâkṛit used in Western India cave inscriptions.

Inscription A.

Inscription A is well cut in large well-preserved characters of about the first century after Christ. It is in one line, six feet long, and begins with the *svastika* mark.

Transcript.

पवनस यासाअस आरामो अवरिल्लो

Sanskrit.

पर्वतस्य वासाकस्याराम अपरास्थः

Translation.

The western seat of the Vāsūka mountain.

Note.—वासाक may be a corruption of वर्षक, that is, for the rainy season ; but I think वासाक is the original name of Padana hill. आराम properly means a pleasure seat or garden. Here I think it is used in the sense of a pleasure seat, as having been a favourite seat of some ascetic who used to sit on the hill top enjoying the view across to the sea. If आराम meant a garden, something would have been added to say whether it was a gift, and if so by whom it was given. Again there is a mention in another inscription of an eastern आराम.

Inscription B.

Inscription B is about thirty feet south-east of inscription A. It is one foot ten inches long, and is written in two lines. The letters are well cut and well preserved of about the first century after Christ.

Transcript.

कौशिकेयस उदओ आरामो च

Sanskrit.

कौशिकेयस्य उदय आरामश्च

Translation.

And the eastern pleasure seat of Kosikaya.

Note.—Kosikaya is Sanskrit Kauṣikeya, that is son of Kauṣiki.

This inscription tells us that the eastern आराम is of one Kosikaya. In Inscription A, a western आराम is mentioned, as also the mountain where it is, but not the person to whom it belongs. Here the name of the person is also mentioned, while the च 'and' at the end leaves no doubt that both आराम's are of Kosikaya.

Inscription C.

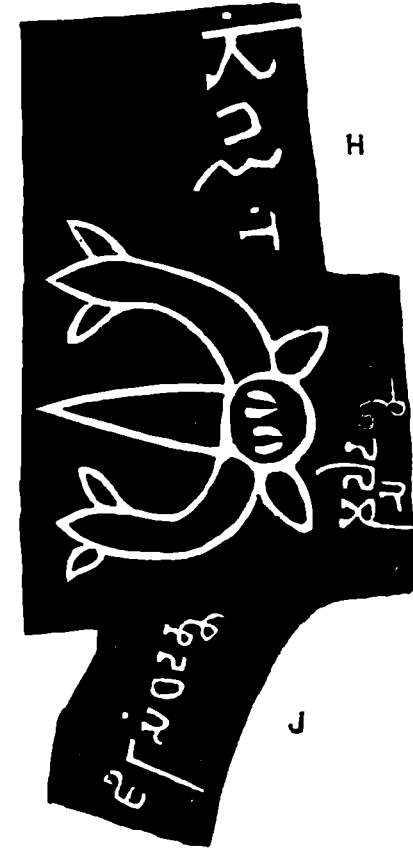
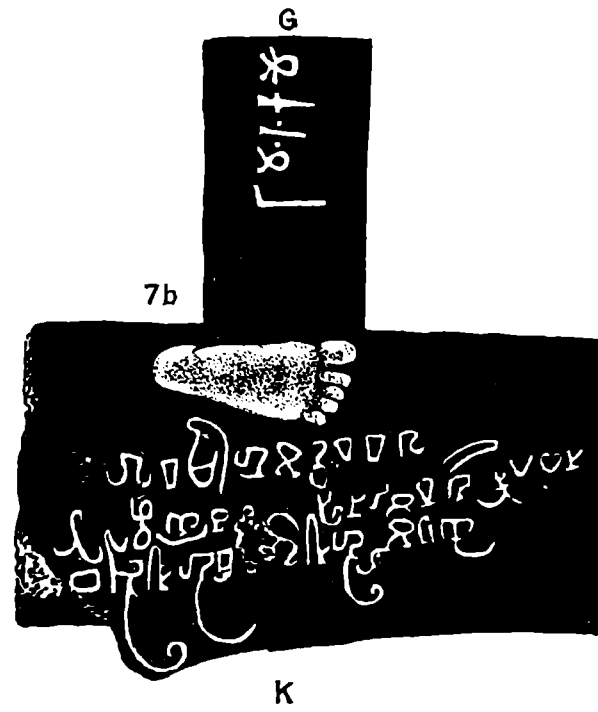
Inscription C, about twenty feet south of Inscription B, is of one line three feet four inches long. The letters are large, deeply cut and well preserved. From their form they appear to belong to the first century after Christ.

Transcript.

पर्वतो अभुंतो सिधवस्तति

PADAN HILL INSCRIPTIONS AND SYMBOLS.

Plate III.



Scale $\frac{1}{12}$

Bhagvānlāl Indrajī.

Sanskrit

पर्वतो-यन्तः सिद्धवसतिः

Translation.

The mountain, the residence of Siddhas (monks) all about.

Inscription D.

Inscription D, about fifteen feet west of Inscription C, is written in one short and one long crooked line, three feet long. The letters are very large but shallow, and appear from their form to be of about the first century after Christ. The ninth letter of line two is lost, and the tenth is doubtful. This makes it difficult to get any sense out of the inscription.

Transcript.

बम्हचारि
विकराहि कुडबीका [णति?] कातो

Sanskrit.

ब्रह्मचारि

विकरैः कुटुम्बिकासतिः कृता?

Translation.

A body of Brahmacháris gave an order to the husbandmen ?

Note.—I can offer no suggestion as to the meaning of this inscription. विकराहि may be also read मकराहि.

Inscription E.

Inscription E is to the south of inscription D, in front of symbol 7a. It is a short writing of five large letters, which seem from their form to be of about the first century after Christ.

Transcript.

सधमुसल

Note.—सध is, I believe, a mistake for सिध. The inscription should therefore be read सिधमुसल.

Sanskrit.

सिद्धमुसलः

Translation.

The sage Musala.

Note.—Musala seems to be the name of the sage near whose footmark the letters are carved.

Inscription F.

Inscription F is on the (visitor's) left of 7a. It is in Sanskrit and records the same name as E, in well-cut letters of about the second or third century after Christ.

Transcript.

मुसलदत्त.

Musaladatta.

This is the same name as in Inscription E, omitting his title of सिद्ध and adding the nominal affix दत्त.

Inscription G.

Inscription G is about nine inches to the (visitor's) right of symbol 7b. It is well-cut and well-preserved, and from the form of the letters appears to be of about the second or third century after Christ.

Transcript.

रामइकमो

Sanskrit.

रामविक्रमः

Translation.

Step of Râma.

Note.—Ikamo is probably for Sanskrit Vikramah, which means a footstep. Even to the present day, the Mahârâshtris interchange व for अ as एळ for वेळ (time), एडा for वेडा (mad).

Inscription H.

Inscription H is to the right of the Buddhist trident No. 8. It is carved in well-cut, well-preserved letters of the first century after Christ.

Transcript.

नंदिपअं.

Sanskrit.

नंदिपदं

Translation.

The symbol (or residence) of Nandi.

Inscription I.

Inscription I is below the trident. It is well-cut and well-preserved in letters of the second or third century after Christ.

Transcript.

मुसलदत्त

Musaladatta.

Note.—The writer seems at first to have left out स, and added it below between मु and ल.

Inscription J.

Inscription J is to the (visitor's) left of the trident. It is well-cut in letters of the second or third century after Christ, and is well-preserved.

Transcript.

जिरासंधदत्त

Jirāsandhadatta.

Inscription K.

Inscription K is to the (visitor's) left of 7b. It is in three lines. The letters are small and not deeply cut. They are of about the fifth or sixth century after Christ. The inscription is the well-known Buddhist formula, Ye Dharma Hetu, &c.

Transcript.

ये धर्मा हेतुप्रभवा हेतुस्तेषां

तथागतो ह्यवदन् तेषां च यो निरो[ध]

एवं वादी महाभ्रमणः

Note.—In the formula as found on the pedestals of several images of Buddha at Buddha Gayā, the reading is धर्म for धर्मा, हेतुं तेषां for हेतुस्तेषां and महाभ्रमणः for महाभ्रमणः. The formula is differently interpreted by scholars. I translate it: The Tathāgata (or similarly come, that is any of the Buddhas) showed the object of those (that is the previous Buddhas) who took birth for the sake of religion, he (that is any of the Buddhas) also told what they forbade. So spake (literally A thus-speaker is) the Great Sramāṇa (Gautama). Almost all the seal impressions in dried clay found by Mr. West in Kanheri Cave XIII. (Jour. B. B. R. A. S. VI. 157, Plate VII., figs. 1—21) had this formula, with the reading धर्मा as at Padana. According to this reading, which is also found at the end of several Nepālese Buddhist manuscripts, the sense would be: 'The Tathāgata (or similarly come, that is any of the Buddhas) has shown the cause of those merits which are the result of some cause; he has also shown what prevents merit (from accruing). So spake (literally A thus-speaker is) the Great Sramāṇa (Gautama). Compare Ariana Antiqua, 51; Jour. Beng. A. S. IV., 132.

Remarks.

The origin of these symbols and inscriptions on the Padana hill is its natural cavern, whose solitude and the beautiful view

it commands, probably recommended it to some ascetic. People may have tried to preserve the memory of this ascetic by carving symbols and inscriptions, or some ascetic living on the hill may have tried to confer holiness upon it by connecting it with stories of some former sage. The sage who lived on the hill, or, according to the second supposition, the imaginary sage for whom the story was got up, was probably Musala or Musaladatta, whose name is twice carved near footmark 7a (Inscriptions E and F). This and the other footmark, 7b, are carved as if they were the feet of some one leaping off the east cliff towards Kanheri. These are I believe the chief symbols connected with the story. In the legend of the Sopârâ merchant Punna (Sk. Pûrṇa), translated from Buddhist manuscripts by the late M. Burnouf, it is said that when, at the request of Punna (Sk. Pûrṇa), Gautama came to Sopârâ, he visited several places in the neighbourhood. One of these places was the hill of Musalaka, on which lived a sage called Vakkali (Sk. Valkalin, or the bark-dress wearer). According to the story, the sage saw Buddha from afar, when he was coming from a hermitage of 500 Rishis, and on seeing Gautama the thought arose in his heart, 'Why should I not throw myself from the top of the hill?' He threw himself down, and Gautama caught him by his supernatural power and converted him.¹ I have little doubt that the Musalaka hill of this story is our Padaṇa hill, and that the footmarks (symbols 7a and 7b) are those of the Vakkali who leapt over the cliff. Vâsâka, the name given in Inscription A, is probably the old name of the hill. The legend calls it the hill of Musalaka, from the sage who lived on it, and whose name is carved on the top. Vakkali, the name given in the legend to the sage who lived on the hill, is a common noun, meaning the wearer of a dress made of bark. The question arises whether this Vakkali was Musala, or whether Musala was the sage, who, to confer holiness on the hill, had the symbols connected with the story of Vakkali carved on its top. The legend does not explain this point. I incline to believe that Musala is the Vakkali, as his name 'the sage Musala' is carved near footmark 7a in one (E) of the oldest inscriptions, not as a donor, but as though he were the person whose footmark it is. Inscriptions F, G, and I, which are all of the same time and more than a century later than E, seem to show that an attempt was made to give a different colour to the story. Inscriptions F and I read 'Mu-

¹ Burnouf's Introduction A l' Histoire du Bouddhisme Indien, 167.

saladatta,' which may either mean 'given by Musala,' or may be an attempt to make मुसल a purely Brāhmanical name by adding दत्त. Inscription G, near footmark 7b, seems to imply an attempt to connect the mark with the story of Rāma, the hero of the Rāmāyana. Inscription J, near the trident, which is of the same period, records the name of some one who does not seem to have any connection with Musala's story. Inscription K is very late, of about the fifth or sixth century. It is the well-known Buddhist formula, and was probably carved by some late Buddhist visitor of the Mahāyana school. It seems to have no connection with the other symbols.

B, one of the two early inscriptions (1st century) runs, 'And the eastern pleasure seat of Kosikaya.' Kosikaya may be a family name meaning 'one of the Kauṣikī dynasty,' but it is more probably a maternal name, meaning the son of Kauṣikī. It is possible that it may be Musala's own name, or the name of some sage connected with Musala. Inscription C 'The mountain the residence of sages all about,' is a mere exaggeration, an attempt to confer greatness on the hill. This practice is common. The Jainas say that thousands of their sages obtained absolution, *mukti*, on the Girnār and Ṣatrunjaya hills.

How the various symbols are connected with the story of Musalaka we have no means of knowing. Burnouf's legend gives us only the name of Musalaka, and allows us to draw an inference about the footmarks. To the other symbols it gives no clue. In the absence of materials I do not like to build on conjecture, but leave the matter to future research. This much seems pretty certain; (1) that the old name of the Padaṇa hill was Vāsāka; (2) that it was also called the hill of Musalaka, because a sage of that name lived on its top; (3) that the Buddhists probably regarded it as holy, believing it to be the scene of the story of Musalaka, whom Gautama came to see and converted; and (4) that as it was believed to have been the residence of many sages, people of the Brāhmanical religion probably regarded it as holy.

From the inscriptions, the symbols and the legend of Punna (Sk. Pūrṇa) the history of the Padaṇa antiquities may be thus summarised. As the legend of Pūrṇa mentions a Brāhmanical sage, and as there is a natural cave on the hill top fit for the residence of an ascetic, it may be inferred that the hill was once the residence of a Brāhmanical sage; that some time later, about the first century after Christ, the footmarks and other symbols and the six inscriptions, A.

B, C, D, E and H were carved to connect the story of the sage with Buddha; that about a century later an attempt was made to connect the hill and its symbols with the Brâhmanical story of Râma; and that in the sixth century Buddhists probably regarded the hill as holy, as some Buddhist of the Mahâyana school carved on it the well-known Buddhist formula.

NOTE.—The special honour shown to Maitreya the Coming Buddha in the Sopârâ *stûpa* suggests that Pârṇa, the son of Maitrâyaṇî, the glory of Sopârâ and the apostle of Buddhism in the Konkaṇa (see above, p. 275, Burnouf's Introduction, 235—274,) may be, or may locally have been claimed to be, Maitreya or the Coming Buddha. Maitreya is not an admissible form of Maitrâyaṇîputra, or son of Maitrâyaṇî; but the similarity of the name favours the suggestion that Pârṇa was locally believed to be the Coming Buddha. This belief finds support from the details of Pârṇa's life preserved in M. Burnouf's Introduction to Buddhism. This story of his life shows that Pârṇa, the son of Maitrâyaṇî, rose to the highest rank. He became a Bodhisattva or potential Buddha, and is one of the first of Gautama's followers who will hold the office of Buddha (Le Lotus de la Bonne Loi, 122, 123). The high honour in which he was held is shown by the fact that Hiwen Tshang found a *stûpa* of Pârṇamaitrâyaṇî at Mathurâ, which was said to have been built by Aṣoka (Julien's Memoirs I. 208). At the same time there are several difficulties in the way of the suggestion that the honour done to Maitreya in the Sopârâ *stûpa* is connected with a desire to show respect to Pârṇa. Pârṇa's title as Buddha is Dharmaprabhâsa (Le Lotus, 123), not Maitreya. It is stated (Burnouf's Introduction, 55, 102,) that the former name of Maitreya was Ajita, or the Unconquered, and that he was a Brâhmana, not like Pârṇa, the son of a merchant. Further in the introduction to the Lotus of the Good Law (Burnouf II. 1, 2) among the beings who gather to hear Gautama's teaching, Pârṇamaitrâyaṇîputra appears as an Arhat and Maitreya appears as a Bodhisattva Mahâsattva.

Since the above was written, Dr. Burgess has stated in the *Indian Antiquary* for August 1882 (Vol. XI., p. 236,) that Maitreya is often confounded with Dharmaprabhâsa. Dr. Burgess does not give the authority for this statement. If it is correct it greatly increases the probability that the prominent position given to Maitreya among the images that surround the relics was due to the belief that Pârṇa, the apostle of Sopârâ, is the Coming Buddha.—(J. M. Campbell.)

ART. XI.—*Manusúradhammasattham, the only one existing Buddhist Law Book, compared with the Brahminical Mánavadharmasútram.*
By REV. DR. A. FUEHBER.

[Read 27th June 1882.]

I.

THE word "Manu," derived from the root "man," to understand, and signifying "intelligent," is the name applied with various modifications to all the ancient law-givers of the Eastern world, from the banks of the Nile to those of the Menam. Manu, according to the Brahmanic legend, was the son or grandson of Brahma, the first of created beings. Manu governed the world, and became the progenitor of all mankind. Turning from the Ganges to the Nile, it will be found that the description given by Diodorus of the Egyptian Mneves, answers exactly to the account given in Burmese and Siamese mythology of the ascetic Manu. Mneves was the first law-giver; he lived after the gods and heroes, when a chango was made in the manner of life among men. He was a man of exalted soul, and a great promoter of civil society, which he benefited by his laws. Those laws were unwritten and received by him from the deity Hermes.

So also according to the Burmese and Siamese legend, the original inhabitants of the world lived in a state of perfect innocence and bliss. They gradually degenerated, until, for the repression of crime, it became necessary to establish a government among them. In the days of their first king arose Manu. Originally a cowherd, he was promoted to the Chief Justiceship, but discovering after a time his own fallibility, he retired from the society of men, and on the boundary walls of the world he discovered "the Dhammasattham" inscribed in letters as large as elephants. This he copied and presented to the king. Such is the mythical Burmese account of the origin of "the Dhammasattham," or "Laws of Manu." Although mainly of Indian origin, none of the Burmese Páli works which bear this name corresponds with the Sanscrit Mánavadharmasútram, or "Institutes of Manu."

Concerning the time when, and the means by which the Pâli Dhammasatṭham, which forms the basis of the greatest part of the still existing Burmese law books was first introduced into the valley of Irrawaddy, much remains to be discovered. Burman historians ascribe the introduction of the Dhammasatṭham "to their progenitors," who, they believe, migrated from the plains of Hindûstân some five or six centuries before the Christian era. This is a pure myth, destitute probably of any foundation of truth, and invented in later days to support the pretensions of Burman monarchs to be the descendants of the solar kings of Oudh.

As the Burmans received their religious literature originally through the Talaings from Ceylon about the fifth century A. D., it seems to be not improbable that some of their secular literature may have reached them from the same source. But inquiries which I have made through the Buddhist high-priest, Mr. Subhûti, in Colombo, as to whether there are now extant in that island any Pâli works corresponding to the Burmese account of the Manusâradhammasatṭham, have failed to elicit information on the subject. If any of the Burmese Dhammasats really possess such claims to antiquity as is asserted for them by Burman writers, it is clear that they must have been received through a Talaing medium, but the national vanity of the Burmans, of course, prevents them from acknowledging their indebtedness in this respect to the conquered race.

Another hypothesis is that the *Burmese* dammasats date chiefly from the reign of the great king Anaw-ra-hta, whose capital was at Pagahm in the beginning of the eleventh century A. D. Under this monarch there was a great revival of religion, literature, and architecture in Burma, and communication with India and Ceylon appears to have been frequent. The fact that nearly all *Burmese* Dhammasats are more Brahminical than Buddhist, favours the supposition that the Brahminical originals were introduced from Manipur at this later period, when Brahmanism had regained the ascendancy over Buddhism in India. Thus the division of the people into castes is everywhere recognised by the Burmese dhammasats, whilst the equality of all men is one of the leading tenets of pure Buddhism.

On the first annexation, 1826, to the British Indian Empire of provinces inhabited by a Burman population, the Courts of Justice,

established in such provinces, took as their guide, in cases where the parties were Buddhists, and the matter in dispute related to inheritance, partition, marriage, or religious usages, "the law of the country." In recent legislative enactments, this "law of the country" has been inaccurately described as the "Buddhist law." By section IV. of the Burma Courts Act, 1875, it is enacted, that "where in any suit or proceeding, it is necessary for any Court under this Act to decide any question regarding succession, inheritance, marriage, or caste, or any religious usage, or institution, the Buddhist law in cases where the parties are Buddhist shall form the rule of decision, except in so far as such law has by legislative enactment been altered or abolished, or is opposed to any custom having the force of law in British Burma."

The Buddhist law, properly so called, is contained in the Tipitaka, or the three baskets, divided into the Suttapitaka, or discourses and maxims of Śākyamuni; Vinayapitaka, or books on morals and discipline; and Abhidhammapitaka, or on metaphysics. Of these, the Vinayapitaka contains many passages that are law with regard to the religious usages of the people, but the rules that govern inheritance, partition, marriage, divorce, &c., among the laity, are contained in totally distinct works known generally as "the Dhammasaṅgīham," or "the Dhammasaṅgīham of Manu," which form no portion of the Buddhist law. These works in fact, as stated before, are more Brahminical than Buddhist, and the term "Buddhist law" when applied to them is a misnomer. Of these *Burmese* dhammasats there are various versions with various titles. They profess generally to be based on the Pāli text of the Manusāradhammasaṅgīham, the only one existing Buddhist law book, but contain also passages which have evidently been interpolated in later days to suit the changing forms of society. One of their prominent characteristics is a total want of systematic arrangement. Various and often inconsistent provisions on cognate subjects are scattered here and there throughout their pages, and topics the most incongruous are jumbled up together, forming a strange *indigesta moles* of law and custom, ancient and modern, Hindu and Buddhist, Indian and Burman.

Up to 1847 such books existed only on palm-leaf manuscripts. In that year Dr. Richardson published at Maulmain an edition in Burmese with translation into English of the Manu-Kyam-Dham-

masat, and from that time until now this edition—second edition, Rangoon, 1874—has been the sole book of reference consulted by judges, both European and native, in matters relating to Burman law. This edition possesses much the same defects as other Burman works of the same nature. It is destitute of all attempt at arrangement. The provisions relating to adoption for example are found in four or five different parts of the work. Those on divorce in a dozen different places, in juxtaposition with some other uncongenial subjects, such as debts or bailments, as if the book were simply a collection of *placita* of different judgments, given in chronological sequence, and not according to the subject matter of the judgment.

Burman libraries contain many Dhammasats or treatises on law, written on palm-leaves, which treatises are looked upon as works of authority by native lawyers. Whilst such treatises exist only in this form, it need hardly be said that they are practically unavailable for the use either of the public or the courts. The number of copies is limited, and the tedium of poring over the hardly legible scratches on the palm-leaves is intolerable to a European. It was therefore a most valuable undertaking, wisely initiated by Mr. J. D. Sandford, Judicial Commissioner of British Burma, for collecting and rendering available all the sources of Burman law, so that they may ultimately be moulded into an intelligible and convenient shape. For he proposed to print a certain number of these treatises, and so to increase the general knowledge of the sources of Burman law, as well as to furnish materials for the ultimate compilation of an authoritative work of reference on Buddhist law, or on such branches of it as have been declared to form the rule of decision in Indian and Burman Courts. A sketch of the Burman text of the four best known Dhammasats, namely, of the Manu-Reng-Dhammasat, the Manu-Vañṇanā-Dhammasat, the Manusāra-Shwe-Myeen-Dhammasat and the Vinichchhayapakāsani-Dhammasat, with such particulars regarding their authorship and dates as can be gathered from the works themselves, and the most generally accepted Burman tradition with respect to them, was published by Mounḡ Tetto, Extra Assistant Commissioner, Thayetmyo, under the superintendence of Colonel Horace A. Browne, Commissioner of Pegu, in 1875-1877, at Rangoon. But it must be said that reliable information on these points is difficult to obtain. The palm-leaf manuscripts themselves are untrustworthy. Although the name of the tran-

scriber and the date of transcription is always carefully entered in each copy, such highly important facts as the name of the author and the date of compilation are generally omitted. These four law books, according to the preface to be based on the Pâli Manusâradhammasaṭṭham, are therefore very useful for preparing a critical edition of the standard authority of Bhuddist law; but these editions show the same defects in all that regards arrangement as the abovementioned editions of the Manu-Kyay-Dhammasat.

Dr. R. Rost, the well-known Chief Librarian of the India Office at London, has already called attention to the great value of the Pâli Manusâradhammasaṭṭham in an article published, in 1850, in Prof. Weber's "Indischen Studien," Vol. I., 315-320. But since then the most valuable Buddhist law book has been forgotten. During my stay in London in the winter of 1880-81, I copied in the British Museum and India Office six different Burmese palm-leaf manuscripts, containing the whole Pâli text of the Manusâradhammasaṭṭham in Burmese characters, with a Burmese commentary by Manurâjâ. This text compared with the above-mentioned Burmese law books gives a rather correct text. Whilst as far as I know the law books in Siam, Java, and Bali are based on the same standard authority of the Pâli Manusâradhammasaṭṭham it would be surely interesting to compare the different manuscripts with the Burmese in order to arrive at the correct text. But all my inquiries on this point through the English Ambassador, Mr. Palgrave, at Bangkok, and Dr. Van der Tuuk in Boeleleng, had no results. Therefore I have restored the Pâli text of the old Manusâradhammasaṭṭham according to the Burmese sources as correctly as it was possible; the text with an English translation I hope soon to publish.

The pre-eminent importance of the Manusâradhammasaṭṭham makes it necessary to treat its relation to the Brahmanical Code of Manu as fully as the limits of a short time would allow; therefore I shall give to-day as briefly as possible the contents of the only one existing Buddhist law book, and I shall try to show in a following paper how far the relation extends to the Mânavadharmaśâstram and to the Codes of Yajñavalkya, Nârada and Brihaspati, and more especially that Manusâra used a more ancient version of Manu than that we now possess.

The Code of Manusâra contains according to my text 1,134 ślokas, and is divided into ten chapters, which treat of everything

relating to inherited property, partition, donations, marriage, sons, divorce, and all other matters of Civil and Criminal law under the jurisdiction of the Courts.

The first chapter gives in 82 ślokas the mythical origin of the Dhammasaṭṭham, and certain rules to be observed by judges in the performance of their duties. The mythical origin of the work is thus related in the preface :—In the time of king Mahâsamadâ, the great original monarch of mankind, a Brâhmana named Brahmadeva passed away from the Brahma heaven, and became a nobleman at the Court of Mahâsamadâ. Perceiving at last that the world of men was desperately wicked, he abandoned his family and became a hermit, living in a cave in the Vasîra hill, near the Mandagîri lake. There he was visited by a female Kînnara, a fabulous winged semi-human being, whose blandishments ultimately overcame his asceticism, the result being that she bore him two sons, the elder of whom was named Sûbhadra, and the younger Manusâra. In course of time the Brâhmana communicated to his children his intention of returning to the Brahma heaven. Their mother also, he said, would go back to Gandhappa, but they, the children, were to remain living as recluses until they perfectly acquainted themselves with the original sources of all knowledge which would be found inscribed on the boundary wall of the world. They were then to proceed to the Court of king Mahâsamadâ, and to communicate the knowledge they had so acquired to him. These instructions were carried out by his sons, Sûbhadra devoting himself especially to the study of natural science, and Manusâra to law. The latter coming once to the great chain of the mountains Chakkavâlâ, found the Code of Laws here set down, carved in capital letters upon the rocks. He made a faithful copy of them, which upon his return he presented as an inestimable treasure to the great king Mahâsamadâ, who being informed of the wonderful way in which they had been discovered, commanded them to be observed by all his subjects, and the Code was called Manusâradhammasaṭṭham. After this mythical period the work is said to have been revised in the time of king Bÿumandhi—perhaps Vyomandhî instead of Vyomadhî (?)—the third king of the Pagahm dynasty, who reigned no less than 75 years at that capital in the end of the second and the beginning of the third centuries of our era. Burman history records of this king that he erected many religious buildings and caused books of law to be compiled for the benefit of his people. Finally this Code, which

was written in Pāli only, and kept in the island of Ceylon, always called Rāmaññadeśa—perhaps a blending of Rāmadeśa and Rāvaññadeśa (?)—was at length brought into the Burmese empire, and afterwards revised by Buddhaghōsa in the time of the Toungu monarch Tsheng-bhyu-mya-sheng, who commenced to reign about 1550 A.D. And such is the origin and history of the Dhammasaṭṭham.

It is not difficult to prove that also this last part of the legend is invented ; for the name of Buddhaghōsa should procure to this Civil and Penal Code the same authority as to the canonical books commented by him. The fact is that the original Code of Manusāra was compiled in the time of king Vyomadhi, at the end of the third century A.D., and since then several times revised : the first time under king Anaw-ra-hta in the tenth century, the second time under king Tsheng-bhyu-mya-sheng in the sixteenth century, the third time under king Pha-lwon-meng-dara-gyee, known also as Raza-manie-tsula-daraka, or the founder of the Raza-manie-tsula Pagoda, the third of the second dynasty of Ava kings, who commenced to reign in 1631 A.D. This last edition was prepared by a judge of some literary repute, who received the title of Manuraza, and is generally known by the name of Manuraza-kaingywa-tsa. During the hundred years and more which elapsed between the time of king Tha-lwon-meng-dara and Tsheng-bhyu-sheng of the Alompra dynasty, who reigned from 1763 until 1776 A.D., the text of the Manusāra is said to have become corrupted in consequence of errors accumulating by repeated transcriptions. At the request of three priests, Wonna-dhamma-kyaw-deng, the prime minister at Ava undertook, 1770 A.D., the task of revising it, for the benefit of judges and people.

After this there follow some admonitions and counsels to the judges for the regulation of their conduct ; such as not to yield to the movements of anger and hatred ; not to be blinded by the presents of clients, nor to propose in a judgment the hurt or ruin of any one, but only the fulfilling all the dispositions of the law ; to make themselves master of the statutes and laws contained in this Code before attempting to sit in judgment. To judges who act in this manner the esteem and praises of men are held out as a reward as well as happiness in future lives ; but if they do otherwise they will be hated by all, and after death will be condemned

to the abodes of the wicked. When judges are going to enter into the tribunal, they must raise up their eyes and hands to heaven. And when they are in the tribunal, they should not be ashamed to ask the opinions and advice of subordinate ministers as to the best and speediest means of satisfying the parties in a lawsuit. They must neither in their countenance nor speech show any regard to the wealth or dignity of either party, but must listen impartially to both; nor must they be offended, if sometimes harsh words are used by the litigants towards them; and with the greatest prudence and sagacity they must hear all that is said either by the persons themselves concerned in the cause, or their lawyers. The Code then goes on to speak of those who may act as judges. All persons, whether priests or prudent and pious men, may act in this capacity, provided they have those qualities which constitute a good judge, which are especially these: to be considerate, prudent, wise, eloquent and well versed in the laws and statutes contained in this book. It then proceeds to point out those who more commonly exercise the office of judge, and these are the governors of the cities, and the chiefs of the villages and their lieutenants, those who have made a study of the Dhammasattham, and arbitrators. After the chiefs of the villages or the governors of towns have given their judgment in any cause, they may have recourse to another judge, and if the judge has been chosen by consent of both parties they must abide by his award.

After this follows the enumeration of the eighteen original causes of suits according to Manu and Nârada: 1, recovery of a debt; 2, on deposits; 3, sale without ownership; 4, stipulations among partners; 5, recovery of a gift; 6, non-payment of wages; 7, breach of order; 8, rescission of purchase; 9, non-delivery of a thing sold; 10, breach of promised obedience; 11, contests regarding boundaries; 12, violence; 13, abuse; 14, assault; 15, duties of man and wife; 16, partition of inheritance; 17, gambling with dice and living creatures; and 18, miscellaneous disputes. But it must be said that Manusâra does not bind himself strictly to the order kept in enumerating these titles of law.

The second chapter speaks in 77 ślokas of the rules to be observed in giving donations and promises.

The third chapter contains 95 ślokas, and presents an account of heirships, and the seven ways of dividing them among the heirs.

The following are the cases provided for in this section. How property is to be divided : 1, after the death of the father among the mother, sons, and daughters ; 2, among the mother and daughters ; 3, after the death of the mother between the father and sons ; 4, between the father and daughters ; 5, after the death of both parents among the sons and daughters ; 6, what proportion the sons of a former husband, or 7, the sons of a former wife, must receive.

The fourth chapter treats in 150 ślokas of the rules to be regarded in performing the solemnization of marriage, of the duties of man and wife, of the different cases of divorce, fornication, violation, &c.

The fifth chapter speaks in 95 ślokas of the fines which those must pay who insult, assault, or strike, or wound persons in conditions superior to their own.

The sixth chapter contains in 136 ślokas the rules of recovering a debt, of interest on money, of deposits, including the rules of evidence by writing, by witnesses, and of ordeals by balance, water, fire, and poison.

The seventh chapter discusses in 113 ślokas the rules to be observed regarding theft, lying and deceit.

The eighth chapter deals in 111 ślokas with the rules in regard to the sale of slaves. There are seven kinds of slaves who are bound to render personal services to their masters : 1, those who are bought with money ; 2, the children of a female slave living in a family ; 3, slaves by birth, that is, those whose parents are slaves ; 4, slaves given as presents ; 5, those who make themselves slaves to deliver themselves from some trouble ; 6, those who in times of scarcity are dependent on others for their support ; and 7, those who hire themselves out for daily or monthly labour. Manu also knows this seven-fold division of bondage, whilst Nārada distinguishes between fifteen forms of slavery. There are two species of slavery, one temporary, the other perpetual ; a man may be sold in both these kinds of slavery.

The ninth chapter refers in 95 ślokas to the rules to be observed in laying wages and gambling with dice and living creatures.

The tenth chapter contains in 180 ślokas miscellaneous disputes or sundries, and gives rules of the different kinds of buying, selling, borrowing, &c. The introduction of such a title as this is

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a sign of expansion of the original limits of legislation, and proves as distinctly as possible the presumption that Manusâra used for the compilation of his work not only the Code of Manu, but also the more recent Codes of Yajñavalkya and Nârada.

This is a short account of the most valuable Digest of Buddhist Law, and in a following paper I shall compare it with the different codes of Brahminical Law.

ART. XII.—On a Hoard of Coins found at Broach. By Surgeon-Major O. CODRINGTON, M.D., M.R.A.S., Secretary.

[Read 10th October 1882.]

THIS treasure was found last March by labourers who were digging a tank in the compound of the Jamat Khana building of the Parsi Panchayet, near the Police Lines and the Borwád or street of the Borahs. A man's pick struck against an old brass pot, and the workmen suspecting it contained treasure, immediately covered the earth over it again, and leaving it began to work in another spot. In the evening they returned, removed the vessel and after taking out the contents, threw it into the river. It was therefore seen only by the workmen, but from their account it was an ordinary old brass *lota*. The hoard consisted of 448 entire and some pieces of gold coins, 4 small ingots of gold, and about 1,200 silver coins and pieces.

The collection includes coins of Genoa, Venice, Egypt, Armenia, Persia and Delhi; and all, with the exception of one Khalif coin of a previous century, are of dates comprised within the period between A. H. 658 and 782, or A.D. 1260 to 1380.

From all the coins being of so nearly the same age, although of such different countries, we may conclude that the deposit was made soon after the date of the most recent one—that is, towards the end of the fourteenth century; and from the description of the money, we may suppose that the owner was a merchant engaged in foreign trade with the West at Broach, then the great emporium for such traffic on this coast, his transactions being with Africa and Arabia on the one side and the interior of India on the other.

GOLD COINS.

MAMLUK SULTANS.—BAHREE DYNASTY.—367 gold coins belong to this group, comprising good and some very fine specimens of

the coinage of 13 out of the 25 Sultans of the dynasty—viz., 5th, 8th, 10th, 14th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd and 24th. Thus only 7 Sultans who reigned in the period A. H. 658 to 782 are unrepresented in the collection. Of these the 6th and 7th Sultans were on the throne about one year each, the 9th three years, the 11th two years, the 12th two years, the 13th one year, and the 15th but a few months—that is, altogether only about ten years.

In the British Museum collection, according to the Catalogue published in 1879, there are no coins of the 6th, 7th, 13th, 14th, 15th, and 16th Sultans, and but one gold and one silver of the 9th, one silver of the 11th, and one silver of the 12th, so no doubt the coinage of these Mamluks is very rare. We are fortunate in having in this collection gold coins of Seyf-ed-deen Kaláoon the 8th, Seyf-ed-deen Aboo Bekr the 14th, Násir Shiháb-ed-deen Ahmad the 16th, and El-Kámil Seyf-ed-deen Shaabán the 18th Sultan, of which there are none in the British Museum Catalogue, and several varieties of the coinage of some other Mamluk kings.

The following is the list:—

EDH-DHÁHIR RUKN-ED-DEEN BEYBARS, 5th Sultan.

No. 1. (Fig. I.)—No mint or year.

Obv.—Area, within double circle—

الامام
المستنصر بالله
ابو القاسم احمد بن
الاعوام الظاهر امير
المؤمنين

Margin illegible.

Size, .95 ; weight, 97.5.*

Obv.—Area, within double circle—

.....
السلطان الملك
الظاهر ركن الدنيا و الدين
بيرس قسيم امير المؤمنين

Beneath, Lion to left.

Margin illegible.

The legends on this coin are similar to those of a silver coin in Brit. Mus. Cat., No. 481.

* Sizes are given in inches and decimals ; weights in grains and decimals.

EL-MANŞOOR SEYF-ED-DEEN KALÁ-OON, 8th Sultan.

No. 2. (Fig. II.)—El-Káhirah ; year obliterated.

Obv.—Area, within double circle— *Rev.*—Within double circle—

ضرب بالقاهرة	المومنين
لا اله الا الله	السلطان الملك
محمد رسول الله	سيف
ارسله بالهدى	المنصور الدنيا و الدين
و دين الحق	قلاون الظاهر
Margin illegible.	Margin illegible.

This is similar to a silver coin in Brit. Mus. Catalogue, No. 492.

Size, '9 ; weight, 112.

No. 3.—Dimashk ; year obliterated.

Obv.—Within crenated circle— *Rev.*—Area within crenated circle—

بدمشق
As No. 2.	السلطان الملك
	سيف
	المنصور الدنيا و الدين
	قلاون الظاهر
	قسيم امير
Margin illegible.	Margin illegible.

Size, '9 ; weight, 91.5.

EN-NÁŞIR NÁŞIR-ED-DEEN MOĤAMMAD, 10th Sultan.

No. 4. (Fig. III.)—El-Káhirah ; year obliterated.

Obv.—Area, within double circle— *Rev.*—Area, within double circle—

ضرب بالقاهرة	قلاون
لا اله الا الله	السلطان الملك
محمد رسول الله	الناصر ناصر الدنيا و الدين
ارسله بالهدى	محمد بن الملك
و دين الحق	المنصور
Margin illegible.	Margin cut off.

Size, '9 ; weight, 86.

The legends are similar to those on a silver coin, No. 504, Brit. Mus. Catalogue. Four other coins, of the same type, all without date, two coined at Káhirah ; two doubtful.

No. 5. (Fig. IV.)—Dimashk; year 740.

Obv.—

الله
وما النصر الا من عند
لا اله الا الله محمد
رسول الله ارسله
بالحق بالهدى ودين الحق

Size, 1·05; weight, 116·5.

Rev.—Area, within circle—

ضرب بدمشق
السلطان الملك الناصر
ناصر الدنيا و الدين محمد
بن الملك المنصور سنة
اربعين و سبعماية

This is very similar to No. 500, Brit. Mus. Catalogue, of Káhirah mint.

Seventeen more of this type, 15 being of Káhirah, two dated 739, and one 741. One of Dimashk, date illegible, and one of doubtful mint of the year 741.

All these are probably of the 2nd and 3rd reigns of this Mamluk.

EL-MANŞOOR SEYF-ED-DEEN ABOO BEKR, 14th Sultan.

No. 6. (Fig. V.)—El-Káhirah; year 742.

Obv.—As No. 5.

Rev.—

ضرب بالقاهرة
السلطان الملك

سيف
المنصور الدنيا و الدين ابوبكر
الملك الناصر محمد سنة اثنين
و اربعين و سبعماية

Size, 1·05; weight, 114.

There are no coins of this Mamluk in Brit. Mus. Catalogue. Both legend and date are plain.

No. 7. (Fig. VI.)

EN-NÁSIR SHIHÁB-ED-DEEN AHMAD, 16th Sultan.

El-Káhirah; year 742.

Obv.—

الله
وما النصر الا من عند
لا اله الا الله محمد
رسول الله ارسله بالهدى
و دين الحق ليظهره علي
الدين

Size, 1; weight, 107·5.

Rev.—

ضرب بالقاهرة سنة اثنين
السلطان الملك الناصر
شهاب الدنيا و الدين احمد
بن الملك الناصر محمد
و اربعين و سبعماية

No coins of this Sultan are given in Brit. Mus. Catalogue.

This is a fine one with distinct legend and date.

EṢ-SALIḤ IMÁD-ED-DEEN ISMÁEEL, 17th Sultan.

No. 8. (Fig. VII.)—El-Káhirah; year 745.

Obv.—As No. 7

Rev.—

ضرب بالقاهرة
السلطان الملك الصالح
عماد الدنيا و الدين اسمعيل
بن الملك الناصر محمد خمس
و اربعين و سبعمائة

Size, 1·05; weight, 107·5.

Another similar, dated 7[4]3.

This seems quite the same as No. 529, Brit. Mus. Catalogue.

EL-KÁMIL SEYF-ED-DEEN SHAABÁN, 18th Sultan.

No. 9. (Fig. VIII.)—Dimashk; year 746.

Obv.—As No. 5.

Rev.—

ضرب بدمشق
السلطان الملك الكامل
سيف الدنيا و الدين شعبان
بن الملك الناصر محمد
سنة ست و اربعين
و سبعمائة

Size, 1; weight, 81·5.

One similar. El-Káhirah; year 747.

No. 10. No mint; year 7[4]6.

Obv.—As No. 9.

Rev.—As No. 9, but in addition—

المنصور قلاوون

No. 11. (Fig. IX.)—Dimashk; year 746.

Obv.—As No. 9, with in addition—

Rev.—As No. 10.

ليظهرة

Size, 1; weight, 149·5.

Three similar without dates; two of El-Káhirah mint.

No gold coin of this Mamluk is described in the Brit. Mus. Catalogue.

These three varieties are, as far as I know, new.

EL-MUDHAFAR SEYF-ED-DEEN HAJJEE, 19th Sultan.

No. 12. (Fig. X.)—Dimashk; year 747.

Obv.—As No. 7, with in addition—
Rev.—

كله

ضرب بدمشق
السلطان الملك المظفر
سيف الدنيا و الدين حاجي
بن الملك الناصر في شوال
سنة سبع و اربعين
[و سبعماية]

Size, .95; weight, 99.5.

This coin is similar to No. 546 of Brit. Mus. Catalogue, except that شوال is written instead of الحجج. This is the only instance in this coinage in which the month of the year is given.

Another of the same mint and year.

No. 13. (Fig. XI.)—No mint; no year.

Obv.—Area, in circle—

الله
وما النصر الا من عند
لا اله الا الله محمد
رسول الله ارسله بالهدى

Margin illegible.

Rev.—Area, in circle—

السلطان
الملك المظفر سيف
الدنيا و الدين حاجي
الملك الناصر محمد

Margin illegible.

Size, .95; weight, 138.5.

Six coins similar to this. Apparently a new variety, the name of the mint cannot be made out on any of them, but the general appearance of the coins leads me to think them of Dimashk.

EN-NĀSIR NĀSIR-ED-DEEN ḤASAN, 20th Sultan.

No. 14. (Fig. XII.)—El-Kāhirah; year 752.

Obv.—

الله
وما النصر الا من عند
لا اله الا الله محمد
رسول الله ارسله بالهدى
و دين الحق ليظهره علي
الدين كله

Size, 1.1; weight, 115.5.

Rev.—

ضرب بالقاهرة
السلطان الملك الناصر
ناصر الدنيا و الدين حسن بن
الملك الناصر محمد سنة اثنين
و خمسين و سبعماية

Nine similar to this, all of the same mint and dated 751, 7-2, 751, 752, 751, 752, 75-, -2, 7- -.

These coins are all of the first reign of Násir Hasan (A. H. 748—752). There are none of the kind in the Brit. Mus. Catalogue, nor any in gold which can be with certainty attributed to the first reign of the Sultan.

No. 15. (Fig. XIII.)—Dimashk; year 758.

Obv.—As No. 5.

Rev.—

ضرب بدمشق
السلطان الملك الناصر
ناصر الدنيا و الدين حسن
بن الملك الناصر سنة ثمان
و خمسين و سبعمائة

Size, .95; weight, 93.

This is similar to No. 560 of Brit. Mus. Catalogue, except in the position of the date on the reverse.

Twenty more coins similar to this, viz. :—

Of Dimashk mint; years 760, 760, 7- -, 760, - - -, 756, 75-, 757, 75-, 7- -, 7- -, 7- -, - - -, -57, 7- -.

Of Káhirah mint; years 7- -, -5-, - - -.

No mint legible; year 7- -.

No. 16. (Fig. XIV.)—El-Káhirah; year 756.

Obv.—As No. 14.

Rev.—

ضرب القاهرة سنة ست
السلطان الملك الناصر
ناصر الدنيا و الدين حسن بن الملك
الناصر محمد الملك المنصور
و خمسين و سبعمائة

Size, 1.5; weight, 121.

This corresponds to No. 558 of Brit. Mus. Catalogue. Forty-one more similar coins, viz. :—

Of Káhirah mint; years 758, 760, -5-, 75-, - -7, - - -, 75-, 75-, - - -, - - -, 762, 757, 7- -, 757, 76-, 756, 75-, - - -, - -8, 7- -, 75-, - -7, 757, 7-2, - - -, -58, 757, 7-9.

Of Dimashk mint; year 7- -, -2, 76-.

Of Iskendereyeh mint; years 7- -, 756, - - -, 76-, - - -.

No mint legible; years - - -, -56, - - -, 7- -, - - -.

No. 17. (Fig. XV.)—Dimashk; year 748.

Obv.—As No. 14.

Rev.—

ضرب بدمشق
السلطان الملك الناصر
ناصر الدنيا و الدين حسن بن
مولانا السلطان الشد
الملك الناصر سنة ثمان
و اربعين و سبعماية

Size, 1·05; weight, 159.

This fine coin, it will be seen, is of the first year of the first reign of the Sultan. It appears similar to No. 562 of Brit Mus. Catalogue.

Four others of the same type, viz. :—

Of Dimashk mint; year --7 and ---.

Of unknown mint; year -5-, ---.

No. 18.

Obv.—As No. 15.

Rev.—As No. 16.

Three of Dimashk; year 760.

One of Káhirah; year illegible.

No. 19. Mint unknown; year 756.

Obv.—As No. 15.

Rev.—

السلطان الملك الناصر
ناصر الدنيا و الدين حسن بن
الملك الناصر سنة ست
و خمسين و سبعماية

This is similar to No. 15, except in arrangements of lines.

ES-ŞĀLIH ŞALĀḤ-ED-DEEN ŞĀLIH, 21st Sultan.

No. 20. (Fig. XVI.)—El-Káhirah; year 753.

Obv.—As No. 14.

Rev.—

ضرب بالقاهرة
السلطان الملك الصالح
صلاح الدنيا و الدين صالح
بن الملك الناصر محمد سنة ثلاث
و خمسين و سبعماية

Size, 1·05; weight, 111.

This is quite the same as No. 555, Brit. Mus. Catalogue.

Eight others of the same mint of the years 754, 754, 752, 753, 753, 754, 753 754.

No. 21. (Fig. XVII.)—Dimashk; year cut off.

Obv.—As No. 14, without the *Rev.*—As No. 20, except date.

last line.

Size, .9; weight, 78.5.

EL-MANŞŪR ṢALĀH-ED-DEEN MOHAMMAD, 22nd Sultan.

No. 22. (Fig. XVIII.)—El-Kāhira; year 7[6]2.

Obv.—As No. 14.

Rev.—

ضرب بالقاهرة سنة اثنى
السلطان الملك المنصور
صلاح الدنيا والدين محمد بن الملك
المظفر حاجي الملك الناصر
وسبعماية

Size, 1.05; weight, 124.

Similar to No. 570, Brit. Mus. Catalogue.

Nine more of Kāhira mint; years 7-- , 7-3, 7-2, 76-, 764, 76-,
76-, 7-4, --4.

Two of Dimashk mint; years --3, 7-3.

Five of Iskendereyeh mint; years --4, 7-4, ---, --4, 7-2.

One of unknown mint and date.

No. 23. (Fig. XIX.)—Dimashk; no year.

Obv.—As No. 14.

Rev.—

ضرب بدمشق
السلطان الملك المنصور
صلاح الدنيا والدين محمد بن
الملك المظفر حاجي الملك
الناصر محمد بن قلاوون

Size, .95; weight, 88.

There is nothing like this coin in the Brit. Mus. Catalogue.

EL-ASHRAF NĀṢIR-ED-DEEN SHAABĀN, 23rd Sultan.

No. 24. (Fig. XX.)—El-Kāhira; year 766.

Obv.—As No. 14.

Rev.—

ضرب بالقاهرة سنة ست
السلطان الملك الأشرف
ناصر الدنيا والدين شعبان بن حسن [بن]
الملك الناصر محمد بن قلاوون
وستين وسبعماية

Size, 1.2; weight 101.

This is similar to No. 576 of Brit. Mus. Catalogue.

Forty-eight more of Káhirah mint; of years 77-, 7-3, -78, -71, 77-, 7-- , 766, 76-, 772, -- 3, 77-, 767, 77-, 77-, 765, 771, 766, 771, 7- -, 77[8], 77-, 77-, 767, 77-, 776, 7-2, --7, 778, 77[2], 7[66], 771, 776, 77[3], 7-7, 77-, 77-, 77-, 7-7, 776, 7-7, --3, 77[8], 7-7, 7-5, 77-, 7-7, and two without date.

Twenty more of Dimashk mint; of years --5, --7, --8, 7-4, 7-5, 7- -, --7, 7- -, 7- -, 771, -- 6, 7- -, 7-6, 7- -, 76-, and five without date.

Twenty more of Iskendereeyeh mint; of years 777 (Fig. XXI.), 7-6, 767, 76-, 777, (Fig. XXII), 7-5, 77-, 767, 777, 773, -- 5, 77[8], 775, 777, 777, and five without date.

Fig. XXI.: Size 1·1; weight 151·5. Fig. XXII.: Size, 1·1; weight, 124.

Thirteen more without legible mint; of years 77-, 77-, 7- -, 767, 76-, 77[5], 7- -, 7- -, 7- -, 7- -, and three without date.

No. 25. Mint obliterated; year 7- -.

Obv.—As No. 14, with in ad- *Rev.*—
dition—

ولوكرة المشركون	* * * السلطان الملك الأشرف ناصر الدنيا و الدين شعبان بن حسن بن الملك الناصر محمد بن الملك المنصور قلاوون و سبعاية
-----------------	--

One other of the same.

This corresponds to No. 579, Brit Mus. Catalogue.

No. 26. No mint or year.

Obv.—As No. 14.

Rev.—As No. 24, but that instead of the first line there is the beginning of the legend of the obverse.

الله
وما النصر الا من عند

One other of the same.

No. 27. (Fig. XXIV.)—No mint; year 77-.

Obv.—As No. 14, but below *Rev.*—As No. 26.

last line—

و سبعين و سبعاية

Size, 1; weight, 113.

EL-MANŞOOR 'ALÁ-ED-DEEN 'ALEE, 24th Sultan.
Dimashk; year 77-.

No. 28.

Obv.—As No. 25.

Rev.—

ضرب بدمشق
لسطان الملك المنصور
علا الدنيا و الدين علي
بن السلطان الملك الاشرف
شعبان بن حسن بن الملك الناصر محمد
سبعين و سبعماية

Size, .9; weight, 140.

Fourteen similar of Dimashk mint, of the years --8, --8, --8, --8, --80, 7-- , --8, 7-8, and six without date.

Twelve of illegible mint, of years 77- (Fig. XXIII.) 77-, 7-- , 7-- , 7-- , 77-, 77-, 77-, 77-, 7-- .

No. 29. Dimashk; year 780.

Obv.—As No. 28.

Rev.—As No. 28; but in
the first line—

سنة احد (sic.) و ثمانين

No. 30. (Fig. XXV.)—El-Káhirah; year 781.

Obv.—As No. 14.

Rev.—

ضرب بالقاهرة سنة احد
السلطان الملك المنصور
علا الدنيا و الدين علي بن الملك
الاشرف شعبان بن حسن محمد قلاون
و ثمانين و سبعماية

Size, 1.05; weight, 109.5.

This is the same as No. 609 of Brit. Mus. Catalogue.

Nineteen more of a like pattern, viz. :—

Of Káhirah; years 777, 77-, 7-8, 777, 777, 781, 78-, 77-, 781, 78-, 781, 778, 77-; one without date.

Of Dimashk, year 7-7.

Of Iskendereeyeh; years 781, 77-.

No mint legible; years 778, 77-,

Ayyoobees.

No. 31. A coin of En-Nasir Ṣalḥá-ed-deen Yoosuf ibn Ayyoob, 1st Sultan of the line of Ṣalḥá-ed-deen (A. H. 564-589). I could not make out the date, but it was similar in appearance to No. 243, Brit. Mus. Catalogue.

Size, .8; weight, 63.5.

No. 32.—A large very much worn coin of the last Khalif of Al-Abbas I think, but I could not read the legend.

Persian—Monguls.

ULJAITU, 8th Khan.

No. 33.

Mint and year doubtful.

Obv.—Area within ornamented six foil—

الله
لا اله الا
محمد
رسول الله
علي ولي الله

Rev.—Area, within ornamented seven foil—

ضرب
في دولة المولى السلطان
الاعظم ملكه رقاب
الاسم غياث الدنيا و الدين
اوجايتو سلطان محمد
خلد الله ملكه

Margin—

اللهم صلي علي محمد و علي و الحسن
والحسين و علي و محمد و جعفر و موسى
و علي و محمد و علي الحسن و محمد

Margin, in spaces between seven foil and outer circle.

ضرب | - - | - - | سنه | اربع (?) | | |

Size, .85; weight, 63.5.

This is similar to No. 128 of Brit. Mus. Cat. of the year 714.

ABOO-SA'EED, 9th Khan.

No. 34.

Tebreez; year 731.

Obv.—Within eight foil—

محمد
الله
لا اله الا
محمد
رسول الله
عثمان

Rev.—Area, within ornamented octagon—

ضرب
السلطان الاعظم
ابو سعيد بهادر خان
خلد الله ملكه
تبريز

Margin in space within outer circle.

ضرب | تبریز | فی | سنہ | احد و | ثلثین | وسبع | مایہ

Size, .9; weight, 128.

This is similar to No. 174, Brit. Mus. Catalogue.

Mudhaffaree.
SHÁH SHUJÁ.

No. 35. (Fig. XXVI.)—Sheeráz; year 777.

Obv.—In quartrefoil within circle— *Rev.*—Area, within ornamental quartrefoil and circle—

ابوبکر	ضرب
لا اله الا	امير المومنين
الله محمد	والسلطان المطاع
رسول الله	شاه شجاع خلد
	الله ملكه
	شيراز

Margin, in spaces within, circle—

--- | سبع و | سبعين | وسبعماية

Size, .9; weight, 66.5.

No gold coin of Sháh Shujá is given in the Brit. Mus. Cat., but the legend on this is similar to that on silver ones in the collection.

Jelair.
HOSEYN.

No. 36. (Fig. XXVII.)—Baghdád; year 7--.

Obv.—In circle and ring of dots— *Rev.*—Area, in six pointed star—

الله	السلطان
لا اله الا	الاعظم جلال الدين
بغداد	حسين بهادر
محمد	Margin, between points within
ضرب	a circle—
رسول الله	* * * * * * * * * * * *

* *

Size, .9; weight 159.

The word I read حيين is not very distinct, and there appears to be something above it, but the character of the coin and the words جلال الدين confirm the reading.

Doubtful.

No. 37. (Fig. XXVIII.)—Kerman; 781.

Obv.—Area in square within two circles—

لا اله الا
الله محمد
رسول الله

In spaces between square and circle—

ابوبكر | عمر | عثمان | علي

Margin between two circles, divided into four by dotted loops at corners of inner square—

ضرب ميمنه في صفر احد و ثمانين
و سبعمائة

Size .85; weight, 171.5.

The date is rather doubtful, but comparison of the six specimens in this collection confirms the reading 781.

No. 38. (Fig. XXIX.)—Kirman; year 768 (?)

Obv.—Area as No. 37.

Rev.—In circle and outer circle of dots—

Margin divided by four dotted circles—

ضرب كرمان في . * * ثمان
و سنين و سبعمائة

Size, .85; weight, 170.

Five others of this kind.

الملك
الاعظم عبد الحق
و الدين ضرب محمدية كرمان

I feel very uncertain about this date. The appearance of the coin and the character of the letters are so like the preceding one that no doubt they are of the same dynasty. From A. H. 746 to 795 the Mudhaffarces were the reigning princes at Kerman, but these coins not having the word مظفر on them, I think they cannot be

of Mohamed-ibn-El-Mudhaffar, the first prince of that line, and looking at No. 35 of this collection, they are more certainly not of Sháh Shujá. I do not know to whom to attribute them.

Note.—I am indebted to Dr. Dymock, for much help in deciphering these two coins, as well as many others in the silver series.

No. 39. Venetian Sequins.

2 of Bartolomeo Gradenigo, elected Doge A. D. 1339.

8 of Andrea Dandolo, elected Doge A. D. 1343.

3 of Giovanni Dolfin, elected Doge A. D. 1356

1 of Lorenzo Celsi, elected Doge A. D. 1361.

6 of Marco Cornaro, elected Doge A. D. 1365.

13 of Andrea Contarini, elected Doge A. D. 1368.

The sequins of the last named Doge show a very considerable falling off in workmanship. The name on some of them is Andr Otarno, and on others Andr Otareno in badly formed letters. Perhaps the imitation of the Venetian ducat had already begun then. It was for a very long time the chief European gold coin current in the East, and so no doubt was early imitated to meet the demands for it as currency in trade, as we find was the case with Athenian and other Greek money in a still earlier age. The sequin still holds its own as the favourite coin for ornaments in this part of India. A fine old one is much valued by the natives, and a greater proportion of the women, coolies and others, one sees in the streets of Bombay, have one or more rudely made and usually very thin imitations hung round the neck. They are still made in quantities in the city, a thin piece of gold being hammered between rudely cut iron dies of the shape of hammer heads.

The reasons of its extensive currency and popularity in India were no doubt at first the fineness of its metal, the touch being 99·7 of pure gold in 100 parts; its novelty, being the first modern European coin which came to India in any quantity; and to some extent its beauty. Its continuing in chief favour as an ornament, although now of debased form and poor metal, must be accounted for by the love of the people to adhere to the customs and traditions of their ancestors (and especially is this so with the women of all classes). That, as the particular turn of the turban and fold of the dhoti or sari is carefully preserved without change through generations, so is the neck ornament, without knowing or thinking why of such a shape, size, or kind.

Genoa.

No. 40. (Fig XXX.)

Five Quartardo.

Obverse—In centre the Griffio, or Castle of Genoa, with three towers surrounded by a wreath. Marginal legend—DVX IANVENSIVII QVARTV. C.

Reverse—In centre a cross with surrounding wreath. Marginal legend—CONRADV. REX ROMANORVM. P.

Note.—Conrad III., when king of the Romans, gave permission to the Republic to coin their own money in December 1138, when the first dinaro was struck. On the obverse is seen the Griffio or Castle of Genoa, with the three towers, and the king's name; on the reverse is the cross, the banner of Genoa, and the inscription "Janua."

The earliest appearance of the gold coinage of Genoa was in the first half of the thirteenth century, and was valued at eight soldi, and called the Genovino d'oro. It was sub-divided into two smaller gold coins, viz. a quartardo of two soldi and an ottavo of one. This latter coin was very small, and but little used. There was also a terzaroto or third of a Genovino d'or, coined by some of the Doges in gold, having only the inscription DVX IANVÆ, and no ordinal numbers.—(*Bent's Genoa.*)

Pathan Kings of Delhi.

ALA-UD-DIN MUHAMMAD SHAH.

No. 41.—Three coins similar to No. 130, Thomas' Pathan kings, and No. DCCI. of Marsden. Margin of each partly gone, but on one the date 704 can be read.

GHIAS-UD-DEEN TUGHLAQ SHAH.

No. 42.—Three coins similar to No. 159, Thomas' Pat. kings; of dates 721, 723 and 7- - .

No. 43. (Fig. XXXI.)

Obv.—Area within circle—

الموكل علي
الله ابوالمظفر
تغلق شاه

Rev.—

غياث الدنيا
و الدين ناصر
امير المومنين

The marginal legends are cut off.

Size, .95; weight, 168.5.

This is, I believe, a new variety of this king's coinage.

MUHAMMAD-BIN TUGHLAQ.

No. 44.—A very perfect coin, similar to No. 174 of Thomas. Deogir; year 727.

No. 45.—A coin similar to No. 176 of Thomas, and DCCXVI. of Marsden. Delhi; year 735.

No. 46.—A coin similar to No. 179 of Thomas; year 73[3].

Coins struck in the name of the Egyptian Khalif.

No. 47 (Fig. XXXII.)—Six coins similar to No. 212 of Thomas, bearing the name of Al Mustakfi Billah, Abú al rabi'a Sulaiman. One dated 741, the years of the others uncertain.

No. 48.—Twenty-five coins as No. 213 of Thomas, bearing the name Al Hákim b'amr illah, Abú al Abbás Ahmad.

No. 49 (Fig. XXXIII.)—One coin bearing the name of the same Khalif.

Obv.—

احمد
العباس
ابو

Rev.—

الله
الحاكم
بامر

Size, .75; weight, 167.

This appears to be a new variety of gold coin, the legend and arrangement of the name are the same as on a copper one, No. 218 of Thomas.

MAHMUD SHAH BIN MUHAMMAD SHAH BIN TUGHLAK SHAH.

Two coins similar to that described and figured by Mr. J. G. Delmerick, Beng. Asiat. Journ., Vol. XLIII., page 97, attributed by him to a child, the real or pretended son of Muhammad bin Tughlak, who was placed upon the throne at Delhi on the death of that king, but deposed and probably killed by Firuz Shah on his reaching the capital from the field. Mention is made of three specimens being known. I myself have another, which I got from a Bombay Marwari.

Obv.—

يعين
امير المومنين
غيث الدنيا و الدين
ابو المظفر

Rev.—

محمود شاه
بن محمد شاه بن
تغلقشاه السلطان
٧٥٤

Size, .8; weight, 170.

FIRUZ SHAH.

No. 51.—Two coins similar to No. 224 of Thomas.

Both without margins, and one of very inferior workmanship.

No. 52.—One coin similar to No. 225 of Thomas.

SILVER COINS.

The great majority of the silver are pieces of Mamluk coins, with them a good many Persian and some few Armenian. They were all much encrusted with verdigris from the brass vessel in which they had been, and some too were partly covered with a hard green coloured lac or wax which was very difficult to remove with turpentine or spirits; in some cases it had to be burnt off in a lamp. It is curious that there should be no Delhi coins amongst the silver when there was such a proportion of golden coinage of that sort in the hoard.

PERSIAN.

No name.

No. 1. (Fig. I.)—Samarkand (?); year 750.

Obv.—Centre within square—

لا اله الا
الله محمد
رسول الله

Margin within circle and circle of dots divided by ornamental work into four spaces corresponding to sides of square—

ربع الاخر | ضرب سمرقند [د] | سنة خمسين | و سبعمائة

Size, 1; weight, 61·5

The name of the mint is not distinct, but appears to be Samarkand.

No name.

No. 2. (Fig. II.)—No mint; year 770.

Obv.—Area circular—

بسم الله الرحمن الرحيم
لا اله الا الله
محمد رسول الله
ارسله بالهدى

Margin within a plain and dotted circle—

ابوبكر عمر عثمان علي رؤسا الاقا
والايمان رضي الله عنهم

Rev.—Within double circle with intervening one of dots—

السلطان
الاعظم العادل
تاج الدنيا و الدين
خلد الله ملكه

Rev.—Figure of a man sitting cross-legged in oval space at top of area.

Area circular except piece cut off at top—

السلطان الملك
الافضل ضرغلم
الدين العطا هلي

Margin as obverse.

الامام المعظم بالله امير المومنين
ضرب * * سبعين و سبعماية

Six of this kind. No other dates legible.

Size, .1; weight, 29.

No. 3. (Fig. III.)—No name; no mint; year 775.

Obv.—As No. 2.

Rev.—Figure of a pigeon
above area, otherwise as No. 2.

Six specimens; dates 773, 774, 775.

Size, .1; weight, 29.

No. 4. (Fig. IV.)—Bagdad (?); year 774.

Obv.—As No. 2.

Rev.—Figure of a fish above
area. Area as No. 2; pellet be-
low fish—

السلطان الملك
الافضل ضرغام
الدين العباس
بن علي

Margin within a plain and dotted circle—

المعظم بالله امير المومنين ضرب بغداد [1] د
سنة اربع و سبعين و سبعماية

Thirty-two specimens.

Other years 773, 775, 77[8].

Size, .1; weight, 29.

No. 5. (Fig. V.)

Obv.—As No. 2.

Rev.—Area, circle with piece
cut off at the bottom—

علي
السلطان الملك
الافضل ضرغام
الدين العباس

Lion, passant, to right with
pellet below.

Margin—

المعظم بالله امير المومنين ضرب [ميمون] د
سنة اربع و سبعين و سبعماية

Twenty-one specimens. Other years 775, 777, 778.

Size, .1; weight, 28.

No. 6.—One similar to No. 5, but the inscription on area of reverse upside down.

No. 7.—Two similar to No. 5, but the date in numerals ۷۷۵.

No. 8.—(Fig. VI.)

Obv.—As No. 2.

Rev.—

علي
السلطان الملك
الافضل ضرغام الدين
العباس الملكة
المجاهد

Margin—

الامام المعظم بالله
اميرالمومنين ضرب (مهمونه)
سنة خمس و ستين و سبعماية

Forty-one specimens. Other years 764, 767, 7-8.

Size, .1; weight 31.

No. 9 (Fig. VII.)—

Obv.—Area in circle with four nipple-like points—

بسم الله الرحمن الرحيم
لا اله الا الله
محمد رسول الله
بالحدي و دين
الحق

Rev.—Area in circle as obverse—

يوسف
السلطان الملك
المؤيد مفرد الدين
داود بن الملك
المظفر

Margin—

الامام المعظم بالله اميرالمومنين
ضرب [بالمهه ۰۰۰] سنة سبع
سبعين سبعماية

Margin illegible.

Size, .1; weight 29.

Five specimens. Other year 775.

No. 10. (Fig. VIII.)

Obv.—Area in circle as No. 9.

Rev.—Area in circle—

عمر
السلطان الملك
المعظم (or المظفر) شمس الدين
يوسف بن الملك
المنصور

Margin—

ابوبكر عمر عثمان علي
* * * * *

الامام المعظم بالله اميرالمومنين
ضرب * * * * * احد خمسين سبعمائة

Size, .1 ; weight, 26.5.

Three specimens ; no other date.

No. 11. (Fig. IX.)

Obv.—Area as No. 9, but a
star in centre—

Rev.—Area in circle, star in
centre—

Margin, divided by 4 stars, as
No. 2.

داود
السلطان الملك
سنة [?]
الحجّاهد الاسلام
علي بن الملك
المؤيد

Margin— الامام المعظم بالله اميرالمومنين
ضرب بغداد سنة اربع تمنية سبعمائة

Size, 1' to 1.1 ; weight 24 to 26.

Eleven specimens ; no other dates visible.

The mint place of this coin seems very distinct, except about the fourth letter ; it looks as if the word were spelt بغداد without an a

No. 12. (Fig. X.)

Obv.—Area in crenated
circle—

Rev.—Area in crenated
circle—

As No. 9.

* * *
الحسين
السلطان الملك
المغال مفرد الدنيا
والدين محمد بن
* * *

Margin illegible.

Margin—

••• المنصور ضرب •••••
سنة ثلث (ثمانين) مبعماية

Size, .1; weight 24.

The name of the mint appears to be written *باصحمة*

No. 13. (Fig. XI.)

Obv.—Area, within ornament-
al circle—

As No. 9.

Rev.—Area, in ornamental
circle—

(?) ست
السلطان الملك
الاشرف محمد
الدين اسمعيل
بن [المغال]

Margin illegible.

Margin—

••• المعظم بالله •••
•••••

Four specimens; on one of them the date 783 can be made out.

No. 14. (Fig. XII.)

Obv.—Area within six foil—

الله
بسم
الرحمن الرحيم
لا اله الا
الله

Rev.—Centre in six foil a pair
of fishes head to tail.

Inner circle—

••• داود السلطان الملك •••

Inner circle within plain ring —

Outer circle—

محمد رسول الله ارسله بالهدى
ودين الحق

الامام المعظم بالله اميرالمؤمنين
ضرب بغداد ثمان ••• مبعماية

Outer circle within plain ring
and ring of dots, illegible.

Size, 1.3 to .95; weight, 32.

Eleven specimens.

No. 15. (Fig. XIII.)

Obv.—Area and inner circle as

Rev.—Area in eight foil ; lion rampant.

No. 14.

Outer circle—

Inner circle—

ابوبكر عمر عثمان علي ليظهرة علي
* * * * *

السلطان الملك المجاهد مفرد الدين
علي بن داود

Outer circle—

الاعمام المعظم بالله اميرالمؤمنين
ضرب * * * سنة ثمان ثمانين سبعمائة

The name of the mint place appears to be بالمهجة

Forty-seven specimens.

Size, 1·2 to 1; weight, 30 to 28.

Other dates 7-5, 7-3, 7-7.

No. 16. (Fig. XIV.)

Obv.—As No. 15.

Rev.—Centre in eight foil : a bird.

Inner and outer circles as No. 15.

Twenty-two specimens.

Size, 1·1 to 1; weight, 21 to 27.

Dates 7-7, 7[4]5, 7[4]0, 7[4]6.

On some the bird looks like a duck, on others a crane, on others a peacock.

No. 17.

Obv.—As No. 15.

Rev.—In centre in eight foil a squatting figure of a man. Legends illegible.

Four specimens.

I am unable to attribute these coins to their proper dynasty. Dr. Dymock, to whom I am indebted for reading the coins, considers them without doubt to be those of Sultans of Baghdad who enjoyed power after the decadence of the Caliphate. Shams, he says, is Shams-ud-daula Bakhtiyar, a Deilamite whose name frequently occurs in Arabic historical works. Tho name of Daood the Selju- kian is also well known. Meimuna, he adds, means Baghdad, which

has other such names; in full it is Bab-al-Maimuna, the gate of fortune. But the type of coinage is not like that of the Seljuks, nor is the title. The general appearance approaches to the Ayyoobes, and the title *السلطان الملك* is only found as far as I know on the Mamluk. The dates too are plainly between 750 and 788, that is a period just preceding the subjection of the country by Taimur, a period of petty dynasties which sprung up with the decadence of the Mongul Empire.

We cannot but be struck by the good workmanship of some of the coins, that with the single fish for instance.

Mudhaffarees.

SHAH SHUJA.

No. 18. Yezd; 777.

Obv.—Within curved border—

كهنه
لا اله الا
الله محمد
رسول الله
عثمان

Rev.—Within ornamental eight foil—

بالله
المعتمد و السلطان
ضرب
المطاع شاه شجاع
يزد
خلد الله ملكه
وسبعمايه

Two specimens.

Nearly similar to No. 672, Brit. Mus. Catalogue.

No. 19.

Obv.—As No. 18, but letters squarer.

Rev.—As No. 18.

Ornamented between lines with looped squares.

No. 20. (Fig. XV.)—Sheeraz; no year.

Obv.—In quarte foil and outer circle as No. 16.

Rev.—Within ornamental square within circle—

* ضرب *
* امير المؤمنين *
والسلطان المطاع
شاه شجاع خلد *
الله ملكه *
شيرااز *
سبعمايه

No. 21.—Eyde; no date.

Obv.—In eight foil with ornamental loops between lines—

* *
لا اله الا الله
ضرب
* محمد
* ايدج
رسول الله
عثمان

Rev.—In ornamental hexagram—

بالله
المعتضد و السلطان
ضرب
المطاع شاه شجاع
ايدج
خلد * * *

No. 22.—Sheeraz ; no date.

Obv.—In ornamental hexagram, within circle—

لا اله الا
الله محمد
رسول الله
In segments within circle—
* * * * عثمان علي * * *

Rev.—In eight foil within circle—

امير
المومنين و السلطان
ضرب
المطاع شاه شجاع
شيراز
خلد الله ملكه

In segments within circle—

في سبعة * * * * *

No. 23.

Obv.—In square within circle—
As No. 22.

In segments within circle.

عثمان علي * * * *

Rev.—As No. 22.

Jelairs.

SHEYK OWEYS.

No. 24. (Fig. XVI.)—Mint and year obliterated—

Obv.—Within eight foil—

* * * *
* محمد *
رسول الله
* عثمان *

Size, .7.

Rev.—Within square—

السلطان الاعظم
شيخ اويس بهادر
خان خلد ملكه

Doubtful.

No. 25. (Fig. XVII.)—Kerman; year 781.

Obv.—In circle—*Rev.*—As obverse.

لا اله الا الله	الامام الله
محمد رسول الله	* * * *
علي ولي الله ضرب	المومنين محمد
كرمان سنه احد	* * علي *
ثمانين سبعماية	ال رسول الله

This coin, the date of which seems pretty certain, although the writing is bad, is, I suppose, that of some chieftain reigning at Kerman at that time, but probably only for a short period as the Muḥafarees were then in power at that place.

Mamluks.

EDH-DHĀHIR RUKN-ED-DEEN BEYBARS, 5th Sultan.

No. 26. Kāhīrah; year 6-8.

Obv.—

ضرب بالقاهرة	الصالحى
لا اله الا الله	السلطان الملك
محمد * * *	الظاهر ركن الدنيا والدين
* * *	بيرس * * * *
سنه ثمانين	Lion to left.

Another (Fig. XVIII.) with end of reverse legend.

بيرس قديم امير

Size, ·85.

Another of smaller size with parts of the same legends.

No. 27.

Obv.—

Illegible.

Rev.— * * * *

* * * * ركن * * *

الملك الظاهر قديم

Lion to left, and in front of it a triangle with balls at the points.

No. 28.

Obv.—

Rev.—As No. 26.

* * [الا] صام اله [سننصر] * *
 ابو القسم احمد بن
 الامام الظاهر
 امير

This appears to be like No. 481 of Brit. Mus Catalogue, a coin of Kāhīrah. It bears the name of the contemporary Abbāsee Khalif of Egypt, El-Mustansir, whose date is 659—661.

No. 29.

Obv.—As No. 26, but mint obliterated.

Rev.—

الملك * * *
 ركن الدنيا و الدين
 قسيم امير المومنين
 Lion to left.

No. 30. (Fig. XIX.)—Kāhīrah; no year.

Obv.—

Rev.—

* * * *
 الا صام المستنصر با لله
 امير المومنين القا
 [قسيم احمد] * * * *
 الظاهر * * *

بالقاهرة
 السلطان الملك
 الظاهر * * * *
 بيرس قسيم امير اله * * *
 Lion to right.

The lion on this coin is of very inferior design, looking more like a hare. I do not know of any other coin of this Sultan with the lion to right.

EL MANṢŪR SEYF-ED-DEEN KĀLĀ-ŪN.

No. 31. (Fig. XX.)—Dimashk; no year.

Obv.—

Rev.—

ضرب بد [مسق]
 لا اله الا الله
 محمد رسول الله
 * * * *

* * * *
 السلطان الملك
 المنصور سيف الدين [نيا]
 قلاون الا * * * *

Size .9; weight 34.

Four specimens.

EL-NÁSIR NÁSIR-ED-DEEN MOHAMMAD, 10th Sultan.

No. 32. (Fig. XXI.)—Hamah ; no year.

Obv.—

ضرب حماة
لا اله الا الله
محمد رسول
* * * بال * *

Rev.—

قلاون
السلطان الملك
[النا]صر ناصر الدنيا
* * * محمد بن الملك
* * *

Eight specimens.

Size, 9 and 8.

This coin is similar to No. 510, Brit. Mus. Catalogue.

ES-ŞÁLIH-'IMÁD-ED-DEEN ISMÁEEL, 17th Sultan.

No. 33. (Fig. XXII.)—Dimashk ; year 744.

Obv.—

لا اله الا الله
محمد رسول الله
ارسله بالهدى و [دين]
الحق اربع و اربع[ين]
و سبعماية

Rev.—

السلطان الملك
الصالح عماد الد * *
الدين اسمعيل بن الملك
الناصر محمد [ضرب]
بدمشق

Size, 9 ; weight, 44.

Similar to No. 530, Brit. Mus. Catalogue,

Two others of this kind and mint, one dated [7]45.

One more with اسعن above reverse, as in No. 535 Brit. Mus. Catalogue.

EL KÁMIL SEYF-ED-DEEN SHAABÁN, 18th Sultan.

No. 34. (Fig. XXIII.)—Dimashk ; year [7]47.

Obv.—

* *
وما النصر
لا اله الا الله
محمد رسول الله
* * *

Rev.—

* * *
* * * * *
* * * سيف الدنيا و
الدين بن محمد ضرب بدمشق
شعبان سنة سبع اربعين

Size, 8 ; weight 27.

This is the same as No. 544 in Brit. Mus. Catalogue, in which سبعماية is at the top of the reverse inscription.

EN-NÁSIR NÁSIR-ED-DEEN ḤASAN, 20th Sultan.

No. 35. (Fig. XXIV.)—Tarabalus; no year.

Obv.—

ضرب بطرابلس
لا اله الا الله
يد رسول الله
* * بالهدى

Rev.—

* * * *
الناصر ناصر الدنيا
والدين حسن بن عمولا [نا] * *
ال * * * *

Size, .8; weight, 34.

Another has حسن above legend on reverse.

Another has ضرب نحماء above obverse.

ES-SÁLĪḤ ŠÁLĪḤ-ED-DEEN ŠÁLĪḤ, 21st Sultan.

No. 36. (Fig. XXV.)—Hamah.

Obv.—

ضرب حماة
لا اله الا الله
محمد رسول الله
* * سل * بال * *

Rev.—

* * * *
السلطان ال * *
الصالح صلاح * * *
والد * * * * *

Size, .7; weight, 33.

EL-ASḤRAF NÁSIR ED-DEEN SHAABAN, 23rd Sultan.

No. 37.—There are many coins and pieces of coins of this Sultan. The pieces are mostly roughly rounded, and looking as if cut so with a chisel. Most of them have شعبان بن حسن or part of these words on them. This size of the largest is .65; weight 34.5.

Armenian.

No. 38. (Fig. XXVI.)

Obv.—In centre—

Figure of king on horseback,
crown on head, sceptre in hand.
Annulet above horse's head,
tail, and behind forefeet.

Rev.—In centre.

A lion passant to right.
Cross above the lion.

Margin—In ill-formed old Armenian
letters—

LEVON TAKÁRAR, *i.e.*, King Leo.
Three specimens.

Marginal legend as on
obverso.

No. 39. (Fig. XXVII.)

Centre of obverse and reverse as No. 38.

Legend in old Armenian character, CONSTANTIN TAKÁBAR,
i.e., King Constantine.

Two specimens.

No. 40.

Centre of obverse and reverse the same as No. 38.

Legend—KARAK SIS, *i.e.*, Town of Cis.

No. 41.—Centres the same.

Legend—KARAK KAES, *i.e.*, Town of Kars.

No. 42.—Centre the same.

Legend—Chamal, *i. e.*, Newly-born, or Infant.

No. 43. (Fig. XXVIII.)

Eight coins similar to No. 38, which have been restruck with the die of a Mamluk Sultan. The character of the Mamluk letters on all is like that on the coins of about the 10th Sultan, and the one figured in the plate is undoubtedly from the die of that Sultan, No. 516, Brit. Mus. Catalogue.

Obv.—

• • ما النصر
لا اله الا الله
ول ال • • •
• •

Rev.—

الله
وما النصر
لسطان الملك
الد • • وال

which is peculiar in that the legend on both obverse and reverse begins with

الله وما النصر الا من عند

I was for some time puzzled by these coins; I thought they were Armenian, but could not make out the legends by the ordinary Armenian alphabet. My friend, Dr. da Cunha, then came to my help, and found a young Armenian staying with the Armenian priest in Bombay, who could read them, and the above are his readings, translated first into Konkani language by a Goanese servant, and then written in English by Dr. Da Cunha. It is strange that some of the coins should bear the name of the city only, whilst others

have that of the king on both sides. Perhaps the coins were struck during one of the interregna which were not uncommon during the period of the dynasty to which they seem to belong. The word 'ChamaI' only, meaning a newly-born infant, on one coin, is very curious. One supposes it refers to some posthumous child. The coins no doubt belong to the time of the Rhoupenian dynasty, which lasted from 1080 to A.D. 1393, reigning in Cilicia with their capital at Lis.

Note.—The following is a list of the kings of this race, taken from *Mémoires Historiques et Géographiques, sur l'Armenie, par M. J. Saint-Martin* :—

<p>A.D. 1080. Rhoupen I. (the Great). 1095. Constantin I. 1100. Thoros (Theodore) I. 1123. Levon (Leon) I. 1138. Interregnum. 1144. Thoros II. 1168. Thomas. 1169. Meleh. 1174. Rhoupen II. 1185. Leon II. (the Great). 1219. Zabel (Isabella). 1220. Zabel and Phillip. 1222. Interregnum. 1224. Haython (Aiton) I.</p>	<p>A.D. 1260. Leon III. 1289. Haython II. (1st reign.) 1293. Thoros III. 1295. Haython II. (2nd reign.) 1296. Sempad. 1298. Constantin II. 1300. Haython II. (3rd reign.) 1305. Leon IV. 1308. Oschin. 1320. Leon V. 1342. Constantin III. 1343. Guy. 1345. Constantin IV. 1363. Interregnum. 1365. Leon VI. Prisoner in Egypt 1375; died in Paris 1393.</p>
--	--

There were four kings named Constantin and six named Leo in this dynasty. To which did these coins belong? As I have said some of them are double struck; the die of a Mamluk Sultan being over that of the Armenian king, showing both that the latter is of earlier date than the former, and that in all probability the stamp of the conqueror is over that of the conquered.

History tells us that in A.D. 1267, during the reign of Aiton I., there was a fight with the Egyptians, and that during the reign of Leo V., A.D. 1320 to 1340, Cilicia was invaded by the army of the same country.

As I believe the Mamluk die to be that of En-Nâsir Mohammad, the Sultan who invaded Armenia during the reign of Leo V., I

attribute the coins bearing the name Leo to that king, and those marked Constantin to the 2nd king of that name, who reigned from A.D. 1298 to 1300.

It would have fitted in nicely to attribute them to Leo VI., who was carried off prisoner to Egypt in 1375, and his predecessor Constantin IV., the coins without a king's name fitting in well for the interregnum which occurred between their reigns, but the Mamluk die is not of Ashraf Shaaban, the Sultan of that time.

GOLD COINS



GOLD COINS



12



13



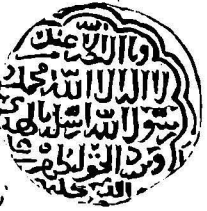
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15



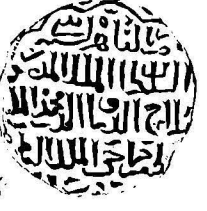
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17



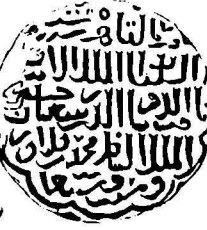
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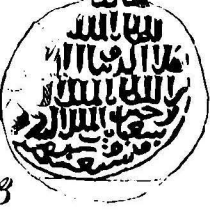
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22



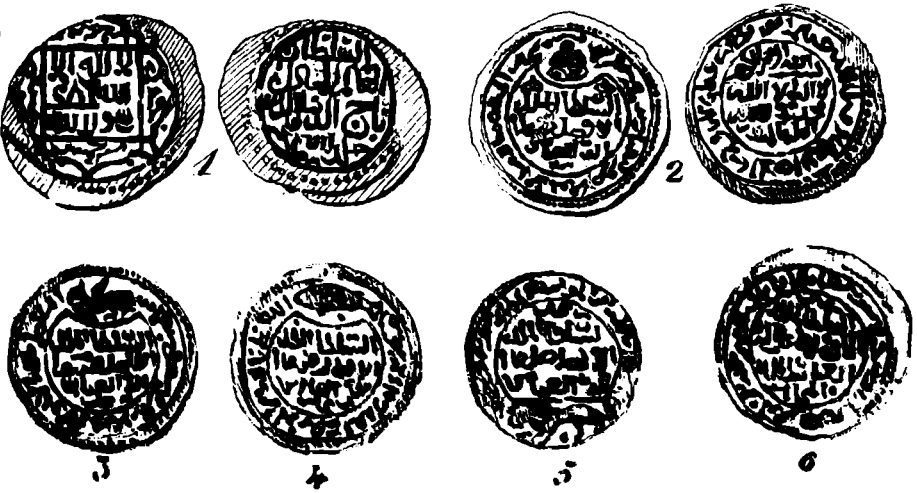
23



GOLD COINS



SILVER COINS.



SILVER COINS



ART. XIII.—*Manusāradhammasaṭṭham*, the only one existing Buddhist Law Book, compared with the Brahminical *Mānava-dharmaśūtram*. By REV. DR. A. FUEHREB.

II.

[Read 14th November 1882.]

FOR all students of Pāli Philology and Comparative Jurisprudence, Manusāra's Digest of Buddhist Law possesses a special interest beyond that attaching to other works of the same class, as I have shown in my first paper. The original elements of the Buddhist law as prevailing in Burma have undoubtedly an ancient origin, and are intimately allied to some Brahminical Codes. But laws, from whatever sources derived, must, in process of time, accommodate themselves to the genius, the habits, the propensities, and, in some measure, to the geographical position of the people who use them. Independent of that interest naturally attached by the reflecting portion of mankind to whatever contributes to elucidate the various degrees of mental energy possessed by different nations, and to the exposition of the many cases which may, at different periods, have increased or diminished it, there are, as in this instance, frequently local circumstances tending to connect practical utility with the subject. To the investigation before us some degree of local interest may be said to attach. There is a considerable population of Burmese Buddhists, who are placed under British rule, and who are consequently subject to an English Court of Judicature. In a political point of view, also, it is presumed that we ought not to be ignorant of the real character, prevailing ideas, and capacities of a people so circumstanced, or of the laws and institutions affecting them. It is likewise supposed that the principles of the Burmese law will prove to be pretty fair transcripts of the Codes prevalent in Hindūstān. It may be premised that the practice of following precedents has made it easy to evade the law in many instances; hence some customs will occasionally in Burma be found at variance with the law. It is plain that the largest portion of the Burmese laws is of Hindu origin, though we have yet no sure clue by which to trace all the steps of their progress from Hindūstān. These Codes are abundantly supplied

with Pâli ordinances for the regulation of moral conduct, and for the due performance of religious duties and rites. In order to see how far the Law Book of Manusâra relies upon the different Brahminical Codes, I shall give a short outline of the Civil and Criminal Law according to its statements.

As regards the individual right of landed property, it does not appear from the law book that the sovereign is the virtual proprietor of the soil. That he is perfectly despotic cannot be doubted. But Eastern despots generally encourage agriculture, and however the case may have stood originally, it is evident from law cases quoted in the digest and decisions that the occupiers of the land have a firm prescriptive if not an indefeasible proprietary right in it. Property in soil must be proved on occasion by examination of witnesses and inspection of written documents. It is admitted that he who first clears forest ground, and sows thereon, will be entitled to a written acknowledgment of his title to it, under the seals of certain officers. Perhaps no nation is more scrupulously exact than the Burmese are, in committing to paper an account of such events or transactions as are, in the remotest degree, liable to subsequent scrutiny. A cultivator who is desirous of clearing ground applies to the head man of the village: The latter shows his written application to the proper officer, who directs him to inspect the land, and measure it. The applicant having cleared it, receives a written title, but although he is *not* in it vested absolutely with a right in perpetuity, still the land forms thereafter a part of his *real* property, is alienable by deed of sale, or by gift, and descends to his heirs-at-law.

Proceeding to the law of inheritance we find that the property of an intestate person, should he leave no legal heirs, escheats to the king, who contrives generally to get a portion of the estate of every person deceased. Wills are written or made verbally in the presence of competent witnesses, and may not be confounded with alienation by gift. Real and personal property may be willed and gifted away to any one, and, as hereditaments, descend to, and are without distinction, divided amongst the heirs-at-law. The law of inheritance is considered as applying chiefly to heads of families. Under this view, the property of a man deceased is divided into three portions. One goes to the parents and grand-parents, one to the widow, and the third to the children and other relatives on the man's side, according

to priority. But should the man not have cohabited so long as three years with his wife, she will only receive one-third of a portion or part. A person claiming inheritance must personally appear, substitutes being inadmissible. Heirs to property must assist at, and bear their share of, the charges for obsequies, exceptions being made for those who cannot, from the nature of circumstances, be present. Before property is divided, the debts of the deceased are to be punctually paid, and competent witnesses must be present at the division. It does not appear from the text of the Law Book that any distinction is drawn betwixt property of which a female may be possessed, and that left by a man; both are divided on similar principles. The eldest child, whether male or female, gets the largest share. Should the individual have no parents, grand-parents, or great-grand-parents living, then the portion, or one-third of the real and personal property, which such persons would have otherwise taken, is divided equally, and added to the two remaining portions—the form of first separating the estate into three parts being always adhered to. The same principle regulates the division where there are no claimants to either of the other two shares. A son or daughter having received a marriage-portion from a parent during that parent's lifetime, will not be entitled to share in his estate, unless a paucity of near relatives gives a title thereto. In fact he or she will only, in either supposition, be entitled to such a part of the property as would by law fall to be shared by either, and if the marriage-portion should happen to be less than that part, the deficiency is made up at the division of the property.

A Burmese Buddhist is not restricted to one wife, polygamy being authorised by law. Concubinage is also common; hence it is enacted that one of a couple who have long cohabited without having been legally married, survives the other, he or she will only be entitled to claim a small part of the estate of the deceased depending on the generosity of surviving relatives. A man or woman marrying without the consent of parents will forfeit all right to inherit. This principle is extended to other branches. The paternal authority is enforced very strongly in Burma. A person going to a distant country without consent of parents cannot claim any portion of inheritance at their decease; unless it be proved either that he returned to minister to their wants during their illness, or at any rate that he attended the solemnization of funeral rites. It appears, however,

that under lawful and ordinary circumstances a person remaining ten years absent from his country without intelligence being obtained of him, cannot afterwards lay claim to property which if present he might have inherited.

Passing over to the state of widowhood and their property, we see that according to the Buddhist law it does not materially differ from that in England. Widows are not restricted from marrying again. In the event of separation, merely, betwixt husband and wife, the sons remain with the mother, the daughters with the father, on the principle that the man would otherwise be deprived of female assistance in his household. Although no legal restriction is imposed on the widow, yet by a fancied moral one applying indirectly, the more frequently she has been married, the less will her share be of the deceased husband's property. Should she have married a fourth husband, she cannot claim any part of his property at his decease. She is a *pretsiya*, and her alleged incontinence must thus be punished. But she is entitled to her personal property, and to what she had personally acquired during cohabitation—women carrying on petty traffic if they like—and also to the portion which she may have brought to her husband. When a husband dies before consummation, his widow does not take any portion of his estate, nor can either inherit the survivor's property if they have not cohabited for three years. The children, however, take according to law. The crime of adultery invalidates any claim to such property on the part of the wife. But the wife has no recourse against the husband for infidelity. The moral law on this point would seem to make some amends for the deficiency regarding it contained in the Civil Code. It will subsequently be noticed that a man may kill his wife and her paramour if he discovers them together. If a man has three or more wives they will, in the event of his death, share amongst them one-third of his property, the wife who was first married receiving the largest portion, and the remaining wives portions according to their seniority. They will also get one-half share amongst them when they have no father-in-law or mother-in-law alive. But this supposes the inferior wives to have been free, for if slave debtors they are not entitled. When a widow has been twice married, and has had a family by her first husband, should she have a family by her second marriage also, that family will take five shares more than the step-children in the event

of the death of the second husband ; but according to the commentary of Manurājā step-children are not allowed to share, since it is supposed that they receive a portion from their father's estate. If there are no children by the second marriage, the step-children are entitled only to one-sixth part of one of the three shares of the estate ; the reason for this rule is not given by the commentary. A widow who marries a widower and bears a family to him, takes the usual third. Should she have no children, she takes one-half of one of the portions. A widow may marry her deceased husband's brother, or the son of the brother, and the converse holds good in the case of a man marrying a deceased wife's sister. Such property as a widow may have personally acquired, or have brought as a portion to her husband, or have received from him as a gift, remains hers under every circumstance ; and will not be taken into account on the division of the deceased husband's property. Marriage is confined within the following degrees of affinity. A subject may not marry within the 7th degree. The forbidden degrees are from parents, included, down to the remotest lineal descendants, and upwards, so that cousins or any one of the same blood may not intermarry.

An absence such as to cause a husband to be considered dead in law, and which is decided on agreeably to particular facts, entitles the supposed widow to receive her portion of his estate and to marry again. But before she and the rest of his relatives can become vested in their right to their respective shares, it is necessary that certain ceremonies shall be performed, and funeral rites paid, as if the husband was dead in fact. When the death of an absentee has been fully ascertained, it is considered a duty imperative on his heir to scrupulously perform his obsequies.

Inheritance of property as regards the priesthood and officers of Government is stated thus. Were the ordinances of Buddha strictly enforced, a *thera* could not inherit property unless it happened to be solely of that description which might serve to supply his very limited wants and restricted indulgences. A priest can only be brought into a court of law as a witness. If he should commit a crime, he is conveyed, or goes before an ecclesiastical Court, where the consistorial chief judges him consonantly with the laws contained in the sacred Pāli Code. If he should be proved to have been guilty of a very serious offence, he is stripped of the yellow sacerdotal mantle, and delivered

over for punishment to the secular arm. An unordained priest may inherit property of any sort, and an ordained one may take real or personal property which may have been bequeathed to him, but he will not be entitled to take the same as inheritance, where no bequest has been made. The converse likewise holds good, since a priest may bequeath property to one, although his relatives and connections cannot inherit it, because in case of his dying intestate, his goods and chattels appertain to the monastery in which he lived and enjoyed the contributions of the pious worshippers. Indeed, should a priest strictly adhere to the rules of his order, his sole property and effects ought to consist chiefly of a few indispensable articles of daily use.

The estates of courtiers and other servants of Government of 10 to 400 fields are inherited by heirs in the same manner which has been described as applicable to the estates of subjects in general, viz., by the three-fold partition. But for civil and military officers of higher ranks bye-laws are in force.

An officer of the rank of minister cannot, it seems, will the whole of his property away. The Government acts here on the supposition that none of its servants are honest, and therefore reserves the right of controlling the distribution of the property of the higher ranks. When an officer of one of the above degrees dies, his estate is realised, and claims entered, in the manner described for estates in general. It is then separated into four portions, one is taken by the king, and the remaining three portions are divided agreeably to the laws relative to property in general, with exception in case of the deceased leaving a widow or widows bestowed on him by the king. A widow who was the gift of the king to the officer receives, at his death, one-half of a share above that taken by another wife. But if the officer received the wife at his special solicitation, she will receive one-half of a share less than the other. By this is meant one-half of the widow's portion. And the portion, so forfeited, will be divided amongst the other widows, or given to one, if there is only one remaining. A widow must have cohabited three years with a husband to give her a title to the portion fixed by law. A neglect on the part of the widow to assist in defraying the expenses attending obsequies creates a forfeiture of her claim. The widow of a public officer who was a gift from the king will receive a larger portion than above stated, in proportion as it may be made

to appear that she had assisted him in his official duties. If she was not a gift from the king, she receives one-fifth less than she would under the above clause; and if she was given by the king at the request of the officer, two-fifths less. The widow being, or having been, a slave debtor to the deceased, will not receive any portion of his estate; since by virtue of cohabitation with him, she has been emancipated: but her children inherit according to law. A husband, with the consent of his wife, may leave her in the house of any one as a pledge for the payment of a debt, thus constituting her a species of property.

Written as well as verbal testaments are legal, and the law does not interpose to reverse such acts, even should it appear the testator has in the apportioning and alienating of his property infringed the social obligations.

Traitors and rebels are not allowed to inherit property, and they are ejected from what they possess, their estates are forfeited to the king, and their families are reduced to slavery.

Gifts ought to be made in presence of a competent number of witnesses, and relatives have of course the power to protest against such, should they have reason to believe that the bestower is not in a sound state of mind. Under this belief the giver is subjected to three separate examinations. Should doubts exist they are removed according to the law.

As regards slavery we see that the master has all power over his slave excepting that of inflicting death. A Burmese Buddhist may be born or may become a slave. Captives in war, debtors, or persons who have been confiscated by justice can be enslaved. Children of a debtor born during his period of slavery remain slaves after he has purchased his liberty again. One is born a slave when born of a slave mother, and in slavery the children are divided as on a divorce, the master standing in the place of the father. The other children in the same rank belong to the father if he is free, or to his master if he is a slave. But if the intercourse with the female slave was without the consent of her master, the latter takes all the children. Slavery is caused by a failure in payment of debt, and by selling of personal service, which last is always for an unlimited time.

A contract is made either in writing or verbally, but in either case competent witnesses are required to give validity to the deed. A

written contract cannot be entered into for a sum less than four rupees. A creditor must not write out the deed with his own hand, but have it written by a person unconcerned in the transaction. The parties in a contract affix their marks to the bottom of the deed, and then touch them with their open hands before the witnesses. Deeds of sale of land are either committed to paper or made by delivery of the title deeds in presence of witnesses. The interest for money can never exceed the principal; when both are equal, the debt must be settled, or remain as it is, unless another agreement is written out, making the principal and interest a new debt. For pledges a written agreement is made out, which must be sealed in presence of witnesses, and it generally specifies what accidents will be considered as preventing restitution. Sales and transfers of landed property are made by written deeds, or by the delivery of the property and title deeds to the buyer or receiver in presence of witnesses. As regards deposits, however, unless an agreement has been made to the contrary, the owner can demand his property, and receive it from either depositary in absence of one of them.

It is not my intention to produce all the reports on Criminal Law to be met with in the Manusâra, but I shall only point out some of the specific crimes and their punishments.

A husband will stand excused in the eye of the Buddhist law should he kill his wife and her paramour, under circumstances sufficiently decisive of her guilt. But he may not do so, having once allowed the man to escape, and, it may be presumed, where the offender has power on his side, that the inferior will not venture on a step which must end on his ruin. As regards separation and divorce we find, if the parties mutually agree to a separation, the elders of the village or neighbourhood are assembled and a written deed is executed in their presence. A man who elopes with a virgin must afterwards endeavour to effect a reconciliation with her parents and relatives, and should such be effected, it is incumbent on him to perform all ceremonies which are preliminary to a regular and open marriage. A rape committed on a virgin is punished by corporal punishment and fine, if on a child by a severer fine and corporal infliction, and by death if the victim should die.

Before taking final leave of Manusâra's Law Book, I must notice a peculiar circumstance which deserves attention. Every student

of Hindu Law will see from the extracts given in this essay that Manusāra in compiling his dhammasaṭṭham used the Codes of Manu, Yājñavalkya, Nārada, Brihaspati, and Kātyāyana; exact references to each śloka I shall give in my edition of the work. In order to show that Manusāra used a more ancient version of the Mānavadharmasāstram than that we now possess in our editions, or better that he copied the Mānavadharmasūtram which is still missing, I quote only two remarkable instances which, treating on the same subject, differ widely in the expressions used, namely, firstly the chapter of competent and incompetent witnesses, Ms. iv. 11-16, corresponding exactly to M. viii. 62-67; Y. II., 69 72; N. I., 5, 34-47.

Manusāradh., Chapter IV. —

अलुब्धनं सद्दामोहं तयो सक्खिपुच्छेय्य ते ।
 असद्वेय्यं विक्रिण्येयं धनेन वाददासि वा ॥ ११ ॥
 जातिवादं भित्तवादं तथा च कलहवादम् ।
 बहुवादं अतिरोगं जरामहल्लकानि च ॥ १२ ॥
 कुमारदहराचेव रोपणदूसं नच्चकम् ।
 गीतकानुभावञ्चैव सुवण्णलोहलंकारम् ॥ १३ ॥
 कंसकरेय्यं पाटुकाकरेय्यञ्च आपकटम् ।
 वधञ्च दोसवेज्जञ्च नपुंसकञ्च वेत्तियम् ॥ १४ ॥
 चित्तविघातं उम्मत्तरोगं हीनञ्च दुब्बिक्खम् ।
 तथा अक्खविकीळञ्च महाकोधञ्च चोरकम् ॥ १५ ॥
 इत्थिगब्भन्तेकत्तिस न पुच्छेय्य तथा पन ।
 सचे पक्ख अनुजाटं पुच्छित्तन्नन्ति विहित्तम् ॥ १६ ॥

Mānavadh., Chapter VIII. —

गृहिणः पुत्रिणो मौलाः क्षत्रविट्शूद्रयोनयः ।
 अर्थ्युक्ताः साक्ष्यमर्हन्ति न ये केचिदनापादि ॥ ६२ ॥
 आप्ताः सर्वेषु वर्णेषु कार्याः कार्येषु साक्षिणः ।
 सर्वधर्मविदोलुब्धा त्रिपरीतास्तु वर्जयेत् ॥ ६३ ॥
 नार्थसम्बन्धिनो नाप्ता न सहाया न वैरिणः ।
 न दृष्टदोषाः कर्तव्या न व्याध्यार्ता न दूषिताः ॥ ६४ ॥

न साक्षी नृपतिः कार्यो न कारुककुशीलवौ ।
 न श्रोत्रियो न लिङ्गस्यो न सङ्ग्रेभ्यो विनिर्गतः ॥ ६५ ॥
 नाध्यधीनो न वक्तव्यो न दस्युर्न विकर्मकृत् ।
 न वृद्धो न शिशुर्नैको नान्यो न विकलेन्द्रियः ॥ ६६ ॥
 नार्तो न मत्तो नोन्मत्तो न क्षुत्तृष्णोपपीडितः ।
 न श्रमात्तो न कामात्तो न क्रुद्धो नापि तस्करः ॥ ६७ ॥

As competent witnesses on trials may be admitted only these three :—men free from covetousness, men devoted to religious observances, and men well versed in Pāli learning and skilled in sciences,—by which here are meant astrology and arithmetic. But the following 31 must be excluded :—(1) contemners of religion ; (2) debtors,—under the supposition that their poverty lays them open to bribery ; (3) slaves, and near relatives of parties interested in a suit ; (4) intimate friends of parties ; (5) inmates in the house of a party concerned ; (6) idiots, and persons mentally imbecile whether naturally so or from the effects of disease ; (7) those who do not abhor and refrain from the commission of the following cardinal sins, viz., murder, theft, adultery, lying, drunkenness, breaking of prescribed fasts, and lastly, the sin of reclining or reposing on the mat or couch of a priest, a parent, or a spiritual guide, or generally of treating these in a manner in any way disrespectful ; (8) gamesters ; (9) vagabonds, vagrants, persons having no fixed domicile ; (10) executioners, because hardhearted and fearless ; (11) empirics,—we may judge by this term of the degree of importance which the Burmese Buddhist faculty of medicine attach to themselves. The most skillful of the body cannot avoid the charge of arrant empiricism, although had the genius for the science of physics existed, the Buddhists in Burma might have used their text-books, which are of ancient origin, with more advantage to their patients than they have done. There were no schools for medicine in Burma ; and so long as superstition places more faith in astrological mummery than in physics, there is no temptation to lead the practitioner from his easy course, in which study and reflection have scarcely any share ; (12) performers in theatrical exhibitions, their profession being deemed rather disreputable ; (13) hermaphrodites,—I suppose as they cannot be sworn either as male or female ; (14) strolling musicians, and singers ; (15) strolling shampooing doctors ; (16) women

of bad fame ; (17) blacksmiths,—it is rather singular to find so important a class of handicraftsmen excluded from a right of this nature, but it would seem that the exclusion is founded on the belief that most of the blacksmiths are dishonest ; (18) persons labouring under any loathsome and incurable disease. Here superstition has overbalanced reason. For the Buddhist cannot otherwise account for this exclusion than by affirming that those labouring under a cruel malady are suffering just punishment due for offences committed in a prior state of existence ; (19) personal enemies to accused persons or to one or both parties in a suit ; (20) children under 7 years of age ; (21) persons whose age exceeds 70 years, probably from supposed imperfection of memory ; (22) traducers of the characters of others, same as liars ; (23) persons labouring under any sort of temporary derangement of mind—whether violent passions are included is not specified ; (24) shoemakers are excluded for the same reason that blacksmiths are, because of mean degree in society,—perhaps the prejudice came from Hindûstân, where it prevails in force ; (25) beggars, since open to corruption from their poverty ; (26) braziers ; (27) persons convicted of theft ; (28) obstetricians ; (29) those who use incantations and sorcery ; (30) persons who give medicine to create abortion ; and (31) pregnant women, because their minds are not at rest, and they are subject to sudden affections mental and bodily. But with the consent of both parties such persons must be admitted : this is a settled law.*

Finally I quote as a second instance Ms. ix. 69-71, giving the rules as regard boundary disputes, the content of which answers exactly to M. viii. 246-252, Y. II., 150-153 ; N. ii. 11, 3-6, but without having the same reading :—

पादपोचेव वेळुच कूपो पाक्खरणी नदी ।
 नेत्तकं सोम्भ रच्छाच पब्बंतो मरु सक्खरम् ॥ ६९ ॥
 वाळुकट्टलं अंकारं गोसीसं अट्ठि खाणुकम् ।
 दाहयम्भोति एतेन कत्वा सनञ्च दळ्ळकम् ॥ ७० ॥
 खेत्तञ्च मरियादन्तो एतं धापेय्य नो चे तम् ।
 गामजेट्टुकब्राह्मणभिवखूनं तं सञ्जानिय ।
 मरियादेय्य नो चेवं न तदन्तोगाधं भवे ॥ ७१ ॥

* The translation is according to the Burmese commentary of Manurâjâ.

Mānavadh., Chapter VIII.—

सीमावृक्षांश्च कुर्वीत न्ययोपाश्वत्थकिंशुकान् ।
 शाल्मलीन्सालतालांश्च क्षीरिणश्चैव पादपान् ॥ २४६ ॥
 गुल्मान्वेणुंश्च विविधाञ्छमीवल्लीस्थलानि च ।
 शरान्कुब्जकगुल्मांश्च तथा सीमा न नश्यति ॥ २४७ ॥
 तडागान्युदपानानि वाप्यः प्रस्रवणानि च ।
 सीमासन्धिषु कार्याणि देवतायतनानि च ॥ २४८ ॥
 उपच्छन्नानि चान्यानि सीमालिङ्गानि कारयेत् ।
 सीमाज्ञाने नृणां वीक्ष्य नित्यं लोके विपर्ययम् ॥ २४९ ॥
 अश्मनोस्थीनि गोबालांस्तुषान्भस्मकपालिकाः ।
 करीषमिष्टकाङ्गाराञ्छर्कराबालुकास्तथा ॥ २५० ॥
 यानि चैवं प्रकाराणि कालाद्भूमिर्न भक्षयेत् ।
 तानि सन्धिषु सीमायामप्रकाशानि कारयेत् ॥ २५१ ॥
 एतैर्लिङ्गैर्नयेत्सीमां राजा विवदमानयोः ।
 पूर्वभुक्त्या च सततमुदकस्यागमेन च ॥ २५२ ॥

"Trees, lakes, wells, pools, streams, mounds of earth, large pieces of stone, bones, tails of cows, bran, ashes, dried cowdung, bricks and tiles, charcoal, pebbles, sand : by such marks the judge may ascertain the limit between two parties in litigation. Should there be a doubt, even on the inspection of those marks, recourse must be had, for the decision of such a contest, to the declaration of priests and elders of towns who can give evidence on the limits. If the boundary cannot be ascertained by those, let the king, knowing what is just, make a boundary line between the lands in dispute : this is a settled law."

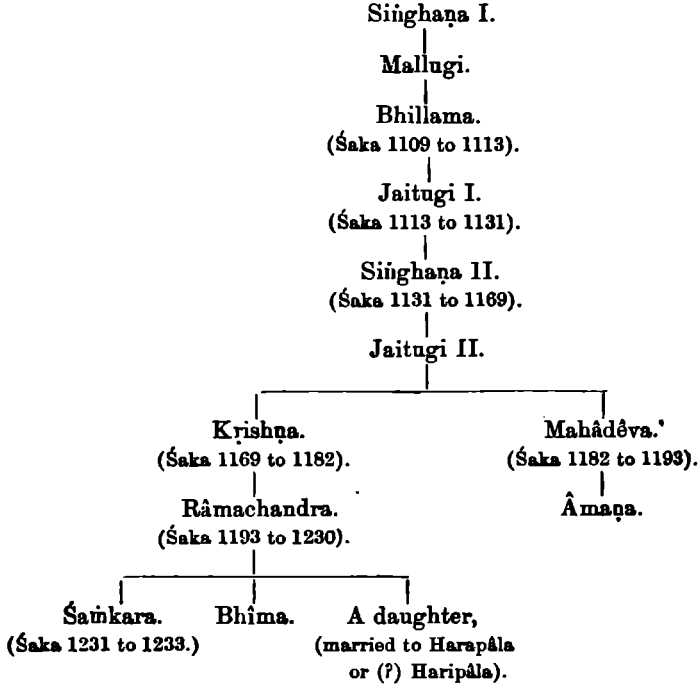
ART. XIV.—*A Copper-plate Grant of the Dévagiri-Yádava king Siṅghana II.* BY J. F. FLEET, Bo. C.S., M.R.A.S.

[Read 12th December 1882.]

THE accompanying inscription is from a copper-plate grant which was found, in 1880, buried in the ground at the back of the temple of the goddess Uḍachamma at Haralahalli, on the Tuṅgabhadrá, in the Karajgi Táluká of the Dhârwaḍ District. The original plates, from which the lithograph has been prepared, belong to the Bombay Branch of the Royal Asiatic Society.

The plates are three in number, each about $11\frac{1}{8}$ " high by $7\frac{1}{2}$ " broad. The edges of them were fashioned into rims, to protect the writing, and the inscription is fairly well preserved and legible, except in a few places where the surfaces of the plates have been badly corroded by rust. When the plates were first found, though the inscription itself was legible enough, nearly all the letters were filled up with rust; the excellence of the accompanying lithograph is due to the pains bestowed on clearing out the letters by Mr. H. Cousens, of the Archæological Survey. The ring on which the plates were strung is about $\frac{3}{8}$ " thick and $4\frac{2}{3}$ " in diameter; it had not been cut when the plates came into my hands. The seal on the ring is circular, about $2\frac{1}{2}$ " in diameter. When it first came into my hands, it was broken on the right side only; since then, and before the accompanying lithograph of it was made, it has received a fracture on the left side also. It has a beaded edge, which I have not met with in any other similar seals. And the emblems on it, in relief on the surface of the seal itself, are Garuḍa, kneeling in the usual attitude with his hands joined, and facing full front, with the sun over his right shoulder and the moon over his left shoulder. The three plates weigh $471\frac{5}{8}$ tolas, and the ring and seal $48\frac{1}{2}$ tolas; total, $519\frac{3}{4}$ tolas. The characters are Nâgarî. The language is Sanskrit from line 1 to 91 and in lines 99 and 100; the intermediate portion, describing the boundaries of the grant, is Old-Canarese.

The grant is one of the time of Siinghāna II. of the Yādava dynasty of Dēvagiri,—the modern Daulatābād near Aurangābād. The following is the complete genealogy of this dynasty, with dates, as established by the inscriptions now known and by the chronicle of Ferishta¹ :—



The present inscription is dated in Śaka 1160 for 1159 (A.D. 1237-8), the Hēmalambi *saṁvatsara*,² on the seventh day,—whether of the bright or of the dark fortnight, is not stated,—of the month Phālguna. The genealogical portion commences with Mallugi. His grandson, Jaitugi I., is said to have conquered the Andhra king. The next name is that of his son Siinghāna II., of whose prowess and conquests,—the latter including the Gaulas, Hammīras, and Chōlas,—the usual hyperbolic description is given. His viceroy, for the southern part of his kingdom, was Vīchaṇa, whose father

¹ Briggs' translation.

² By the Tables in Brown's *Carnatic Chronology*, Śaka 1160 was the Vilambi *saṁvatsara*, and the Hēmalambi or Hēvilambi *saṁvatsara* was Śaka 1159.

Chikka, elder brother Malla, and wife Amāṅganā or Āmāṅganā, are mentioned, and "who conquered with ease the Ṛattas, the Kādambas who were glorious in the Koṅkaṇas, the Pāṇḍyas who shone at Gutti, the turbulent Hoysaṇas, and other kings, and set up his pillars of victory in the neighbourhood of the river Kāvērī." The inscription then describes the rivers Vārāhī and Tuṅgabhadrā, to the banks of the former of which Vīchaṇa had come in order to free himself from his debt to the *manes* of his parents. It then mentions a shrine of the god Sōmanātha, on the banks of the Vārāhī, and two other *līṅga* shrines of the gods Chikkadēva and Mahādēva established, in rivalry of it, by the *Daṇḍēsa* or *Daṇḍanāyaka* Bīcha or Bīchidēva or Bīchirāya, who purchased land on the north of Sōmanātha for the purpose of establishing gods and Brāhmaṇs there. It then mentions a feudatory of Singhaṇa II, the *Daṇḍēsa* Chikkadēva, who established a colony of Brāhmaṇs; and then proceeds to record that, on the date specified above, with the consent of the village-headman Rāmagaṇḍa and of the *Mahāmaṇḍalēsvara* Jōyidēva of the Gutta family or lineage of Chandragupta,³ Chikkadēva presented to these Brāhmaṇs thirty shares, each measuring two *nivartanas* of land, at the village of Rittigrāma. The names and *gōtras* of the Brāhmaṇs are next given, and the share of each of them, and then the boundaries of the land bestowed. The mention, in the definition of the boundaries, of the river Varadā,—the modern Wardā, which flows into the Tuṅgabhadrā, about six miles to the north of Haralahalli,—shows that the Rittigrāma of the inscription is the modern Hale-Ritti, six miles to the east of Karajgi. The other names of villages mentioned among the boundaries,—Eleguttūr, Kariyakol, Ereyakol, and Kumbāragol,—cannot be traced on the map. Nor can I at present identify the river Vārāhī.

³ See *Dynasties of the Kanarese Districts*, p. 6. note 4.

Transcription.

First plate.

- [¹] Ōm Namaḥ Śivāya | (||) Rāgēṇ=ōddhṛitya Mēr-u(ū)nnata-kalaśa-yutaṁ su(stū)ra-
[²] sad-darpaṇ-āṁkka(ka)m̄ tārā-mukt-ākshat-aḍhyaṁ śāśi-chashaka-la-
[³] such-chihna-kastu(stū)rik-āḍhyaṁ | dhātri-pātraṁ dhṛi(dhru)vaṁ śrī-kara-
[⁴] kamala-talē nyastavān=yas=trilōki-nirmāṇē maṅgal-ārthaṁ
[⁵] sa jayati vibhav-ālaṁbana[h*] Śrī-Varāhaḥ | (||) Asti pṛithvital-ā-
[⁶] bhā(bhō)ga(gē) prathitē Yādav-āhvayaḥ | vaśesaḥ Kṛishṇa-lasan-muktāmaṇi-sūti-
[⁷] r=akamṭakah | (||) Abhūd=Amaragāṁgēyas=tasminn=amara-vikra-
[⁸] maḥ | yad-yaśō-mauktika-maṇē[h*] śva(su)bhra-dabhram=atū(bhū)n=nabhaḥ ||
[⁹] Udaṇādi kulē tasmin=Mallugir=vikram-ākaraḥ | karāla-karavāl-ā-
[¹⁰] hi(si)-vigi(ga)lad-rāja-maṁḍalah || Vīras=tasmād=ajani jagatām bhāgadhē-
[¹¹] y-aika-mūrtir=dēvaś=śaurya-tribhuvana-gurur=Bhillama-kshōṇipālah | yat-kō-
[¹²] p-āgni-prasṛimara-śikh-āliḍham=adyāpi dṛipyat-kshatr-āraṇyam jagati
[¹³] kalayā n=aiva rōhaty=akharbaṁ || Samajani Jaiti(tu)gidēvas=tasmin=bhu-
[¹⁴] ja-bhujaga-nihita-bhūchakraḥ | saṁgrāmē=Mdhra-nṛipāla-prakaḷita-vikra-
[¹⁵] ma-kṛipā-bhōgaḥ | (||) Kar-ākramṭta(ta)-dharah padm-ōllāsī dushprēkshya-maṁḍalah |
[¹⁶] bhūbhṛin-mauli-stha-pādō=bhūt=tasmāt=Siṁga(gla)ṇa-bhāskaraḥ | (||) Āśū-vēdamḍa-shaṁdai-
[¹⁷] r=jhagiti vijaghatē bhōgi-rājēna bhējē kampaḥ kūtair=vipētē patapa-
[¹⁸] titi naga-grāmaṇinām jughūrṇē | arṇōbhīr=vāridhīnām vadhirita-bhu-
[¹⁹] vanam bhūri-bhēri-virāvair=āśā-ramdhraḥ pupūrē katham=iva ripavō
[²⁰] yatra yātrā-dhurīṇē || Yad-dhāti-ghōta-dhūli-bhara-bhaya-chakita-dvi-
[²¹] pa-nātha-praṇītān=nāgā[n*] tvaṁ paśa(śya) Gaula tvam=avahaya(ra) chayaṁ vira-Haṁ-
[²²] mira tāvata(t) | Chōla tvam ratna-bhār-ānata-nara-nikaram paśya yāvat su-vē-

Yādava of Dévagiri.
Haralahalli Grant of Singhana II.
'Saka 1160 for 1159.

I.

... नमः ... यथापेणोद् ... कलरापुतं ...
 ... पणं कु ... कतादुरासिचषकं ...
 ... कस्यपिवादाध ... त्रीषात्रपवंशीकप ...
 ... कभवंतल ... कोति ...
 5 ... तलवृत्तिवित्तबालं वृत्त ...
 ... तयादवाह्यं ...
 ... अत्र स्मितं ...
 ... क्रियते ...
 10 ... वि ...
 ...
 ...
 15 ...
 ...
 ...
 20 ...
 ...
 ...
 25 ...
 ...

IIa.

... विष्णुस्यैव तत्र तत्र भिन्नं ... दुर्गासाधिनं च दुर्गाक
 ... तद्वा द वंशुजोन्नसत्तु ... दुर्गा प्रदोसं ग्रादि विष्णु
 ... ध्यात्वा लज्जु न डल ... दुर्गा द क क ती ना न य
 30 ... पा द नै क स वा त्रि विः का व पी तिक ट प त्रि ष्टि त त य त्त नो
 ... न त व दी च लः प द्म त्ति व क्क वा दि की प रि स ये ती वं त्रि दे व दु र्गा
 ... सु त्री वा प न तां ब र्ता त्ति स द्द सा चिं त म ग्नि मे ग यः त र्गा य
 ... प रि ग्ना म स न त प स त्ता ण्यु वे द्वा र्वा कु प स्त वै त्तुः स द्द सा चि
 ... ता त्ति त्रि य यो मं घ म त्ता ग्नि रा यं चि क्का त्ता म ल्ला नु त
 35 ... य म म ल्ला पा तः स प वे त्तु म्पि त्वा र्वा वा ती ती र मे क ता स्ता
 ... नां द्वा र्वा चि त्ता त्रि दि वं दि त्त तः पा न मा ता द्वा त्तु म्पि अ ग्नि दि
 ... त्तु ग्ना त्तु ग्ना त्तु द्वा चि त्ति द्वा य त्री पा नः क ल ल व त्तु पा त्तु क्क
 ... स त्तु म्पि त्वा र्वा चि त्तु वि द्वा रि त्तु पा सा क व क्क द्वा र्वा के
 ... म्पि क द्वा र्वा चि त्तु म्पि क द्वा र्वा चि त्तु प स त्तु ना क्क प
 40 ... प द्वा रि क ल म्पि क्क वा स क्क रा क्क स ती न क्क वा चि त्तु
 ... चि त्तु पा ल य च तां ग ल त्तु का चि त्तु क्क प्पु ग्ना त्तु र्वा ती व र
 ... स ल वि न स द्दु र्गा त्तु ड्वा य त्तु त्तु व र्गा द्वा दिः स द्द
 ... क्क रा चि त्तु र्वा चि त्तु म्पि द्वा स त्तु त्तु क्क ग्ना त्तु म्पि क्क रा म्पि ता य
 ... नि वं र्वा चि त्तु क्क क्क ग्ना त्तु वि दे वा त्तु द्वा त्तु म्पि क्क प्पु ष्टि क्का स त्तु
 45 ... य र्वा चि त्तु स द्दु र्गा त्तु र्वा चि त्तु वि ण्ण द्वा र्वा चि त्तु स क्क ल वि त्तु
 ... न म्पि स द्दु र्गा त्तु र्वा चि त्तु स म स त्तु प्पु ग्ना त्तु प्पु ड्वा र्वा
 ... स त्तु र्वा चि त्तु द्वा र्वा चि त्तु र्वा चि त्तु ग य र्वा म ता य त्तु र्वा चि त्तु स र्वा व क्क
 ... र्वा चि त्तु र्वा चि त्तु स द्दु र्गा त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु
 ... स द्दु र्गा त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु
 50 ... र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु
 ... र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु र्वा चि त्तु

Yādava of Dēvagiri.
Haralāhalli Grant of Singhana II.
'Saka 1160 for 1159.

IIIb.

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मत्तं राजा धिया सपत्तं स्वतपमत्त सपत्तं क्व द्वाप
 वशीचरवराधीश्वर ० योदकलकमलक ०
 द्यतिकोसनाससमा ० लवरायुम्वेनेविनेद
 प्रायतलायमोचोत्पुत्रापुत्रुं त्रिरीसिंपपायविक्रय
 कयतयादपद्मे पद्मे विदिने गयोः वरः पतिवार्थेप
 वरः नकल्लद्यीपत्रिचनेक देरा विपत्रिच च द डेरु च
 चये नालस्युरिक्के स्वपदवस्य बहुपत्रिचनेनशंगदसक
 नशयतदधी नषानपयणतविप्रात्तुस्वीकुत्तस्यपुव
 तेषागृह्णापिनिर्मिठारिनिगाभेतद्वराप्रतिदुद्वेनेपुत्रिच
 निवनेनद्वयमितायामगां ० त्तु त्तु त्रिरीद्विविदिने रसव
 कल्यधि वीशक वर्षादापनचप्र विकरतोत्रुशतयमित्त
 मणविरां वस्तपेणाहुतासासप्रम्यात्तद्वराजिसवन्न
 रायसिसमप्रप्रससि तैरी वक्रताम डत्तस्वंप ० त्तु
 मनीपुत्रवराधीश्वरचंड्याप्रावयपुत्रवग्त्रकुलजिल
 कुरीमहैठिदवान्मात्रेनवरासपराधेवतस्युक्ति
 द्वाणीयंसंतमायं कर्त्तुमिच्छामि दक पुत्रकतावाभ्यु
 श्रावाह पुत्र्याधिशाद्वीः पवनुत्रसंसातान्मया विव
 रगावसिसुंगोत्राणां नरायण न वपाधुयात्त
 वृत्रीतद्वेवागासपाणसहोपाद्यथात्त ० च न
 पाकायातां दपिद च त हैपाकायातां पेजनेहे
 पायात कसुदेवतुहापायाजान्मन्मन्मन्मन्मन्मन्म
 धीयात प्रत्येकने वि व दिनाकारुचगोत्राणां नि
 त्तुयापायाजात्रा वृत्री त्तुयापायात सप्तद्वेन मन्म
 पायातासुवसुविने ० त्तुयापायात सप्तद्वेन मन्म

80

85

90

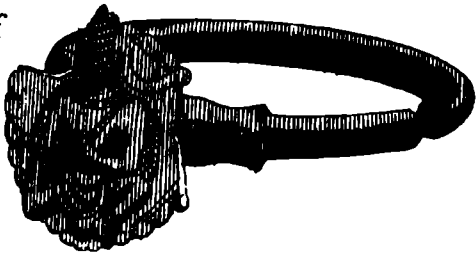
95

100

वनद्रावा वायात्राप क न क ता व वा सा व
 गो व मा सं प ष ष न हे वा था वा न द दे व
 न द्रे त्त णा के रा व न द्रे त्त वा या ना दे व
 न द्रे वा था या ना द वि न र क मि त्त ना प्र ता क सा
 का व ति वि य मि सु या न ण ल झी वे व न द्रे वा था या
 न मा व व न द्रे वा था या ना वि न ना घ न द्रे वा था या
 नं प्र ता क मे के का व त्ति वि य व दु गे न्ना म न वि
 व न द्रे वा था या न म् मे का व त्ति वि य य यो वा पा सी रा
 न न द्रे वा था या ना द दे व व्ती वा श्वा य न गे व णा न र
 सि त्त न द्रे वा था या न म् मे का व त्ति वि य को षि न्ना म् वा
 न् वि षु न द्रे वा था या न म् मे का व त्ति वि य व स गे वा य
 म् क व न द्रे वा था या न म् मे का व त्ति वि य व स गे वा य
 वि सु दे व न द्रे वा था या न म् मे का व त्ति वि य वि य मि त्त गे
 न्ना म् वा न न द्रे वा ना न म् वा व्ती वि य न्ना प वा न् गो व
 व ण न ना न व स गो वा पि ता सु दे व न द्रे वा ना रै का व त्ति वि य ए न् दे व
 म् वी के व सी म् वा य या व र दे यि प डु व लु रि व म् दे व म् व
 वा त्ति प डु व लु क ल्लु प ले गु त्तरं रा वि यि व डु गे न क ल्लु
 व्ति प डु व लु रि यि व डु गे लु क ल्लु क व र गे व यो
 व क ल्लु अ व्ति न्ने क लु म् दे वु आ ग्रे य त्त क ल्लु अ वि प डु
 ल क रि य को ल न अ व्ति प डु व लु रि य को ल न व णु दे व क ल्लु
 व्ति न द्रे वा लु प ले ग व र रा वि य व डु गे लु म् व दे व क ल्लु अ
 व लु कु वी न् गे लु न के ल गे वा म न न द्रे वा व ल्लु अ व्ति न द्रे वा
 व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ
 व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ
 व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ
 व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ व ल्लु अ

Plates full-size; seal reduced one-half.

Photoreproduced, Govt. Office, Poona, 1982



[²³] lō dēva-Srī-Siṅghaṇa[h*] syād=iti nṛipa-bhavanē vētahastā vadānti ||
 [²⁴] Viśvāsē hṛiday-ōpamaṁ para-bala-dhva[m*]sē kṛitānt-ākṛitīm buddhaṁ nūtana-
 [²⁵] Viśṇugupta-sadṛśaṁ vittē śya(su)bhāgy-ātmakam labdh[v*]ā bhṛitya-nibh-ātma-
 [²⁶] puṇya-nichayaṁ Śrī-Vichanaṁ dakṣiṇakṣhōṇi-rāya-pada[m*] nidhā-

Second plate; first side.

[²⁷] ya suchirāt=svasthō=bhavat=Siṅghaṇaḥ || Hēlā-sādhita-Rra⁴tṭa-Koṁkaṇa-ka-
 [²⁸] nat-Kādamba-Gutt[y*]-ō(u)llasat-Pāṁḍy-ōḍḍa(ḍḍā)marā-Hosa(ya)ṇ-ādi-vivi-
 [²⁹] dha-kṣhmāpāla-bhūmamḍalah | vidy-ānn-ōdaka-kam⁵nyak-ābhaya-dha-
 [³⁰] rā-dān-aika-sarv-ātithiḥ | Kāvēri-nikata-pratishṭhita-jayastambhō=
 [³¹] bhavad=Vichanaḥ || Yad-dān-ōdaka-vāhini-parisarē jivānti dēva-dṛi(dru)mā-
 [³²] s=tat-tīr-ōpalatām bra(vra)jānti sahasā chiṁtāmaṇi-sē(śrē)ṇayaḥ | tat-pāthaḥ-
 [³³] pariṇāma-sambhṛita-rasaṁ jagdhv=aiva dūrv-āmūkuram svar-dhēnuḥ sahaj-ābhi-
 [³⁴] jāty-aniyatām rōmantham=abhyaśya(sya)ti || Śō(sō)=yam Chikk-ātmaḥ Mall-ānuja-
 [³⁵] ś=ch=Āmāṅganā-patiḥ | apanētum=ṛiṇam pitrōr=Vārāhi-ttram=aikshata || Snā-
 [³⁶] nād=Ga[m*]gā vitarati dri(di)vam kiṁ tataḥ pāna-mātrād=dātu[m*] muktīm jhagiti
 [³⁷] jagatām Tuṅgabhadrā vinidrā | yat-tīr-āmbhaḥ-kaṇa-lava-jushāu tyakta⁶
 [³⁸] . . . imātāv=ēkibhūtō(tau) bhuvi Hari-Harau sā katham kathā(thya)tē kē(kai)ḥ ||
 [³⁹] Mākamdaiḥ pika-naṁdanaiḥ(r=) ma(=ma)dhu-kar-ōdbhitaiḥ prasūn-ākaraiḥ
 [⁴⁰] kēdāraiḥ kalam-āmūkur-ā(ō)tsuka-śukais=[t*]air=nālikēr-ādibhiḥ drā-
 [⁴¹] kṣh-ailā-phalapa(pū)ra-nāgalatikā-rambh-ēkṣhu-pūga-drumair=Va(vā)rāhi vara-

* The double r of the original, here and in ll. 93 and 97 below, is intended to represent the Drāviḍian *ṛ*, *r*.

⁵ This *Anuvāra* is superfluous.

⁶ One syllable at the end of this line, and the first syllable and the consonant of the second syllable at the beginning of the next line, are unintelligible.

- [⁴²] 7. âla-vilasad-bhû-svarga-khamîdâyatô || Tatra Gottagaḍiḥ sâkshâ-
 [⁴³] t-Kâsî-Viśvêśvarô mudâ || (|) abhût=trikôṇa-liṅg-âtmâ Sômanâth-â-
 [⁴⁴] bhidhaḥ svayam || Tasmai Kalyânîdêvô=bhûd=dâtum mañtr-âshta-pushpikâm | Acha-
 [⁴⁵] yas=taśya(sya) si(śi)shyô=bhût=Sarvêśa[h*] śri(śru)ti-vigrahaḥ || Patiḥ sakala-vidyâ-
 [⁴⁶] nâm gatiḥ sarva-manishîṇâm || (|) sthitiḥ samasta-bhûpânâm Rudrasakti-
 [⁴⁷] r=abhût=tataḥ | (||) Tad-bôdhitô Bîchirâya[h*] Sômanâth-ôttarâm bhuvam akharbam=a-
 [⁴⁸] grahîd=dêva-dvij-âvasatha-śi(si)dda(ddha)yê | (||) Chikkadêvat=purâ bhûtvâ puru-
 [⁴⁹] shas=taj-jigîshayâ [|] Bichidêvas=Chikkadêvam Mahâdêvam=achikara-
 [⁵⁰] t || Liṅga-traya-pratishthâm vidhâya bhakty=aiiva Bîcha-damḍêsam(h) râya-tra-
 [⁵¹] ya-pratishthâm sâñdrishṭikam=abhajad=âkal[p*]ya || Svasti Śri-prithvivallabha-

Second plute ; second side.

- [⁵²] mahârâjâdhirâja-paramêśvara-paramabhataṭṭârako-Dvârâ-
 [⁵³] vatîpuravarâdhîśvara-Yâdavaikulakamalakali-
 [⁵⁴] kâvikâsabhâskara-MâlavarâyamadanaTrinêtra-
 [⁵⁵] râyaNârâyana-prauḍa(dha)pratâpachakravartti-Śri-Siṅghaparâya-vijay-ô-
 [⁵⁶] dayê tat-pâdapadm-ôpajivi niyôga-yôgañdharah pati-kârya-dhuram-
 [⁵⁷] dharaḥ sakala-lakshmi-patir=anêka-dês-âdhipatir=âya-damḍ-êśvaraḥ
 [⁵⁸] Chi[kka*]dêvaḥ || Tasya Chikkêśvara-dêvasya Brahmapuri(rî)tvêna sâ(sâ)ṅga-vêda-saka-
 [⁵⁹] la-sâstra-tadarth-ânushthâna-parâyaṇân viprân svikṛitya tasya pûrvata-
 [⁶⁰] s=têshâm grihâni nirmâya Rittigrâmê tad-dêsa-prasiddha-damḍêna prati vṛittê-
 [⁶¹] r=nivarttana-dvaya-mitâm Râma-gauṁḍ-ânumatyâ triṁśad-vṛitti-siddhay=aicha(va) bhuvam
 [⁶²] kalpayitvâ Śakavarshâd=ârabhya shashty-adhika-śat-ôttara-śa(sa)hasra-mitê Hê-

⁷ Two syllables, and the consonant of the third, are illegible here.

[⁶⁸]	maṇa(lam)vi(bi)-śa(sa)m̐vatsarâ	Phālguna-mâsê	saptamyâm	tad-dêśa-nija-vallabha-
[⁶⁹]	śya(sya) Śva(sva)sti Samasta-prasâs[t*]i-sahitam*	śrīman-mahâmaṇḍalêśvê(śva)ram	Ujja-	
[⁷⁰]	yanlpuraba(va)r-âdhîśvaram	Cham̐da(dra)gupt-ânvaya-prabhaba(va)m	Guttakula-tila-	
[⁷¹]	ka[m*]	śrimaj-Jôyidêv-ânumatim	lavdhâ(bdhvâ)	râja-purushair=anamguli-prê-
[⁷²]	kshañiyâm	sarvanamasyâm	kṛitva(tvâ)	hiraṇy-ôdaka-pûrvakam
[⁷³]	bhyô	brâhmanêbhyaś=trimsad=vṛittih	prâdât	[*] Tatr=aishâ[m*] nâma-gôtra-viva-
[⁷⁴]	raṇâ		Vasishṭha-gôtrâṇâm	Nârâyānabhattôpâdhyâyânâm
[⁷⁵]	dvê	vṛittih	tad-gôtrâṇâm	Appanabhattôpâdhyâyânâm
[⁷⁶]	ttôpâdhyâyânâm		Hariharabhattôpâdhyâyânâm	Ramgabhattô-
[⁷⁷]	pâdhyâyâna(nâ)m̐		Vâsudêvabhattôpâdhyâyânâm	Sômanâthabhattôpâ-
[⁷⁸]	dhyâyânâm	pratyêkam=êk-aikâ	vṛittih	() Kâśyapa-gôtrâṇâm
[⁷⁹]	shnubhattôpâdhyâyânâm	dvê	vṛittih	tad-gôtrâṇâm
[⁸⁰]	pâdhyâyânâm		Sarasvati(tî)bhattôpâdhyâyânâm	Janârdanabhattô-
				Râmâdê-

Third plate.

[⁸¹]	vabhattôpâdhyâyânâm	pratyêkam=êk-aikâ	vṛittih		Bhâradvâ-
[⁸²]	ja-gôtra(trâ)ṇâm		Appanabhattôpâdhyâyânâm	dvê	vṛi-
[⁸³]	tti	tad-gôtrâṇâm		Kêśavabhattôpâdhyâyânâm	Dêva-
[⁸⁴]	nabhattôpâdhyâyânâm		Hariharakramitânâm		pratyêkam=êk-ai-
[⁸⁵]	kâ	vṛittih		Viśvâmitra-gôtra(trâ)ṇâm	Lakshmîdharabhattôpâdhyâyâ-
[⁸⁶]	nâm		Mâdhavabhattôpâdhyâyânâm		Vaijanâthabhattôpâdhyâyâ-
[⁸⁷]	nâm	pratyêkam=êk-aikâ	vṛittih		Vishṇuvṛiddha-gôtrâṇâm
					Narasim-

* The idiom, though not the language, is Canarese here, down to line 66.

[⁸⁸]	habhattôpâdhyâyânâm ⁹ m=êkâ	vṛittih	[*]	Ātrēya-gôtrānām	Śrīram-	
[⁸⁹]	gabhattôpâdhyâyânām	dvê	vṛitti		Sāmkhyâyana-gôtra(trā)ṇām	Nara-
[⁹⁰]	siṃhabhattôpâdhyâyânām ¹⁰ m=êkâ		vṛittih		Kau[m*]ḍinya-gôtrā-	
[⁹¹]	nām	Vishṇubhattôpâdhyâyânām ¹¹ m=êkâ		vṛittih		Vatsa-gôtrānām
[⁹²]	Sāmkarabhattôpâyâ(dhyâ)dhyâ(yâ)nām ¹² m=êkâ		vṛittih		Śrivatsa-gôtraṇām	
[⁹³]	Sivadēvabhattôpâdhyâyânām ¹³ m=êkâ		vṛittih		Vi ¹⁴ svāmītra-gô-	
[⁹⁴]	trāṇām	Māhārabhattānām=êkâ		vṛittih		Bhāradvāja-gôtrānām
[⁹⁵]	Bārabhattānām	Vatsa-gôtrānām	Vāsudēvabhattānām	ch=aikâ	vṛittih	Êtad-Brahma-
[⁹⁶]	puri(rī)-kshêtra-simâ	yathâ		Varadeyīm	paḍuvalu	Śiva-mudreya
[⁹⁷]	kallu	vottim	paḍuvalu	kallu	Eleguttûra	dâriyīm
[⁹⁸]	badagana	kallu	paḍuvalu	dâriyīm	badagalû	kallu
[⁹⁹]	Kumbârra ¹⁵ gerre ¹⁶ y-oja-					
[¹⁰⁰]	ge	kallu	allim	teṅkalu	mûḍalu	âgnēyadalû
[¹⁰¹]	kallu	allim	teṅkalu	mûḍalu	âgnēyadalû	kallu
[¹⁰²]	allim	paḍuvalu	dâriyīm	badagalû	mugguḍḍeya	kallu
[¹⁰³]	allim	badagalû	Eleguttûra	dâriyīm	badagalû	mugguḍḍeya
[¹⁰⁴]	kallu	allim	halla(ḷa)da			
[¹⁰⁵]	mûḍalu	Kumbârra ¹⁷ goḷana	keḷage	Vâmana-mudreya	kallu	allim
[¹⁰⁶]	halla(ḷa)da	va(ba)ḷiya	sâlu-kallu	Śāmkaradēvara	teṅkalû	Varadeyīm
[¹⁰⁷]	paḍuvalu	Vâmana-				
[¹⁰⁸]	mudreya	kallu	Sva-dattām	para-dattām	vâ yô	harêta
[¹⁰⁹]	vasuṃdharām		sha-			
[¹¹⁰]	shṭi-rva(va)rsha-sahasrâṇi	vishṭâyām	jâyatê	kṛimih	()	Śivâya
[¹¹¹]	na[maḥ					

⁹, ¹⁰, ¹¹, ¹², and ¹³. In each case, the *Anusvâra* is superfluous.

¹⁴ From here, down to the end of line 93 certainly, and perhaps further, the present inscription has been engraved over a cancelled passage.

¹⁵, ¹⁶, and ¹⁷. See note 4 above.

PROCEEDINGS OF THE BOMBAY BRANCH OF THE
ROYAL ASIATIC SOCIETY.

(JANUARY TO JULY 1881.)

The monthly meeting of the Society was held in the Library Room on Monday, the 24th January 1881; Col. J. H. White, R.E., *Vice-President*, in the Chair.

R. B. Sedgwick, Esq., H. Cleveland, Esq., Damodhar Thackersey Muljee, Esq., Col. C. S. Sturt, G. B. Spring, Esq., and Wilson Bell, Esq., were elected members of the Society.

Read a letter No. 238, dated 20th January 1881, from the Under-Secretary to Government, General Department, stating that the Collector of Ahmedabad has reported to Government that there is lying in his office a white marble slab bearing a Persian inscription, and said to have been taken from the gate of a building called "Dasturkhan's Sarai," at its demolition several years ago, and inquiring if the Society would like to have the slab for its Museum; also forwarding copy of the Persian inscription, together with its translation in English.

The Secretary intimated that it is arranged to get the slab for the Museum.

Mr. Rehatsek then read a paper on the "Alexander Myth of the Persians."

On the motion of the President, a vote of thanks was passed to Mr. Rehatsek for his paper.

Several reports and other works presented to the Society were laid on the table.

The monthly meeting of the Society was held in the Library Room on Thursday, the 17th March 1881, Surgeon-Major J. Pinkerton, M.D., *Vice-President*, in the chair.

J. F. Muir, Esq., C.S., and W. J. Best, Esq., were elected members of the Society.

The Secretary showed Indo-Sassanian or Balustrade copper coins received from the Deputy Commissioner of Rohtak. These coins were found in the ruins of Khokrakot, an old town near Rohtak, N.W.P.,

also silver coins from Basti in N. W. P. These coins are figured in Mr. Thomas's Prinsep Plate XXXIV., Figs. 12 and 13.

A letter from the Mineralogical Museum at Vienna, forwarding two specimen plates of meteorites, was read, and it was resolved to convey the Society's best thanks to the Museum.

Mr. Rehatsek then read a paper, "Specimens of pre-Islamitic Poetry, selected and translated from the *Hamasak*."

On the motion of Rev. A. Bourquin, seconded by Mr. K. R. Kama, a vote of thanks was passed to Mr. Rehatsek for his paper.

Several books and pamphlets presented to the Society were laid on the table, and thanks voted to the donors.

The monthly meeting of the Society was held in the Library Room on Friday, the 8th April 1881, F. Mathew, Esq., in the chair.

The Secretary read the following letter from Mr. E. Leggett, forwarding Notes on Tatta and Tombs on the Muklee Hills, by the late Col. Southey; also six photographs of the tombs near Tatta.

"Dear Sir,—In 1866 I took a series of photographs of the tombs on the Muklee Hills near Tatta, from which in 1868 the accompanying six views were selected by the Government of Bombay, to whom I presented the negatives. These views were intended for publication with others of Architectural Structure in India, and are, I believe, still lying at the India Office.

"Being unable to obtain any authentic accounts of these tombs, and the neighbouring town of Tatta, I applied to the late Lieutenant-Colonel Southey, who was then Collector of Jerruck, and intimately acquainted with the locality, and was kindly favoured by him with the notes, which he had with considerable difficulty and research collected.

"I am not aware that these have ever been made public, and so far as I understand are the only reliable accounts there are of the tombs in Sind, and, as such, will no doubt be of interest and value.

"Yours truly,

"E. L."

It was resolved, on the motion of the Chairman, to convey the Society's best thanks to Mr. Leggett, and that it be left to the Committee to decide how the notes are to be disposed of.

Dr. da Cunha then read a paper on Contributions to the Study of Indo-Portuguese Numismatics, Third Part.

On the motion of Mr. E. Rehatsek, seconded by Rev. A. Bourquin, a vote of thanks was passed to Dr. da Cunha for his paper.

Several books, pamphlets, &c., presented to the Society, were placed on the table, and thanks voted to the donors.

As being *apropos* of the above, Surgeon-Major O. Codrington showed a large number of *larin* coins recently forwarded to the Society by the Collector of Tanna. Dr. Codrington said with regard to *larins* all that are now found on this side of India are of Indian make, and are, he believed, of the Adil Shahi dynasty of Bijapur. There appeared to be three varieties. I. Such as those now shown by Dr. da Cunha, short and stumpy. II. Nearly twice as long as No. I., and of thinner wire. III. Intermediate in length and thickness. A box containing 47 of these coins (of 2nd and 3rd variety) had lately been received from the Collector of Tanna. On these are found various portions of a legend, not yet made out in entirety, of Adil kings. On one of them is the date 992, which would be of the time of Ibrahim Adil Shahi II. On another is the Devanagri letter τ . Mr. Thomas gives as the average weight of *larins* 74.50 grains, and assay touch 96.5. Mr. Hynes of the Mint had examined these 47, and found the average weight to be 85.36 grains, and touch 97.9. Dr. Codrington had never seen a Persian *larin*, nor the half *larins* mentioned by Tavernier. The shape of the coins rendered them easy of carriage about the person, on the waist string or in pugri, and this, together with the simplicity of their make, was, he supposed, the object in making them of that shape. Dr. Codrington then showed a copy of a Chinese book on Numismatics, lately presented to him, in which were drawings of Chinese coins of various shapes and sizes, some being, according to the account of them, thousands of years old.

The monthly meeting of the Society was held in the Library Room on Thursday, the 26th May 1881, the Honorable Mr. Justice R. West, M.A., *President*, in the chair.

Gilmore McCorkell, Esq., C.S., Tapidas Varajdas, Esq., J. A. da Gama, Esq., Dr. J. S. da Fonseca Torrie, Surgeon-Major O. Codrington, M.D., and E. T. Atkinson, Esq., were elected members of the Society.

The President moved that the best thanks of the Society be conveyed to Mr. W. M. Wood for his services during the four years he filled the office of Honorary Secretary.

The motion was carried by acclamation.

Mr. Rehatsek then read a paper entitled "Emporia, chiefly ports of Arab and Indian International Commerce before the Christian era."

On the motion of the President, a vote of thanks was passed to Mr. Rehatsek for his paper.

The monthly meeting of the Society was held in the Library Room on Friday, the 15th July 1881, the Honorable Rao Saheb V. N. Mandlik, C.S.I., *Vice-President*, in the chair.

Rastamjee N. Byramjee Jejeebhoy, Esq., and M. Macmillan, Esq., were elected members of the Society.

Read a letter from the Custos, Imperial Mineralogical Museum of Vienna, acknowledging receipt of the piece of the Dhoolia meteorite, and sending in exchange portion of one which fell at Tieschitz, Moravia, in 1878, and a piece of meteoric iron from Arva, Hungary, found in 1840; also asking information as to one said to have fallen at Rutnagherry in 1874.

The Rev. A. Bourquin read a paper entitled "Peculiarities of Hindu Rites and of their Times. Translation. With Notes of Chaps. 4—13 of Dharma Sindhu."

On the proposition of Honorable Rao Saheb V. N. Mandlik, C.S.I., seconded by Dr. J. Gerson da Cunha, a vote of thanks was passed to the Rev. Mr. Bourquin for his paper.

Dr. Codrington showed two coins kindly lent by the Collector of Bombay, which were found some weeks ago in Kalbadevi when the ground was opened for the Municipal drainage works. A large quantity were found but at once stolen.

The coins are similar to those described by Dr. Bhau Daji in the Society's Journal, page 214, Vol. XII., and later by General Cunningham in Vol. IX., Archæological Survey Reports of India, and ascribed by General Cunningham to Krishna Raja Rastrakuta, whose date he fixes at A. D. 375-400. The coins being found deep in the ground in the centre of Bombay is a point of interest. Dr. da Cunha mentioned that just at the place in question was the oldest village in Bombay Island as far as was known. When the Portuguese took the island, the only native village on it was there.

Several books presented to the Society were laid on the table, and thanks voted to the donors.

(AUGUST TO DECEMBER.)

The monthly meeting of the Society was held in the Library Room on Saturday, the 6th August 1881, the Hon'ble Mr. Justice R. West, M.A., *President*, in the chair.

W. C. Holmes, Esq., C.S., and Captain G. Martin, were elected members of the Society.

Dr. J. C. Lisboa read a paper, "A Contribution to the Botany of Mahableshwar, with list of Plants seen on the Hill at the end of last Hot Season."

Dr. Lisboa remarked that the catalogue of plants in the *Bombay Flora* is still incomplete, and that there is much yet to be done to perfect it, and to ascertain what species are relatively abundant or scarce in the plains and hilly districts, and how their growth is affected by their location, climate and elevation; that the proportionate commonness of many plants is undergoing great changes by the destruction of some and the increased and cultivated growth of others. The present list of one hundred and fifty species in sixty-one orders was made at the end of last hot season at Mahableshwar, and is no doubt very imperfect, as being especially defective in ferns and grasses, which it would be necessary to study at another time of the year. Dr. Lisboa also advocated the formation of an herbarium at Mahableshwar, which might with advantage be in union with the one at Poona.

The President said he hoped the paper would be followed by others of a like kind in Botany, and that it would be useful for the promotion of this science for students of Botany to meet together in the hill sanitarium and compare their notes. The formation of an herbarium would tend to the same effect. He proposed a vote of thanks to Dr. Lisboa, which was seconded by Dr. J. A. da Gama.

Dr. J. A. da Gama then presented to the Society, on behalf of Mr. Sidney St. Lawrence, a Nepalese man's saddle, a *Khiera*, and a *Kukri*, and gave a short description of their use.

Thanks were voted to Mr. Lawrence and Dr. da Gama.

Before the meeting separated the President, referring to the lamented death of Dr. Macpherson, said that had not the Meeting been specially fixed for this hour, it would have been adjourned as a token of affection and respect to his memory. He will be missed as an active member of this Society, of which he was a Vice-President, and the place he occupied on the committee will be looked upon with regret by the

members, who will cherish his memory both in that capacity and as a Christian minister whose place will not be easily filled.

Several books and pamphlets presented to the Society were placed on the table, and thanks voted to the donors.

A General Meeting of the Society was held in the Library on Wednesday, the 30th November 1881, the Honourable Mr. Justice R. West, M.A., *President*, in the Chair.

C. H. B. Forbes, Esq., and Surgeon J. Macgregor, were elected Members of the Society.

The following proposals made in reference to periodicals were placed before the Meeting.

(1) By E. Atkinson, Esq.—

That *All the Year Round*; *Good Words*; *Temple Bar*; *Le Tour du Monde*; *Portfolio*; *Vanity Fair*; *Monthly Journal of Science*; *Nautical Magazine*; *Quarterly Journal of Microscopic Science*; *British Quarterly Review*; *Quarterly Review*; *Architect*; *Army and Navy Gazette*; *Builder*; *Chemical News*; *Guardian*; *Oliver and Boyd's Edinburgh Almanac*; *Nouvelle Revue*; *Bombay Catholic Examiner*; *Bombay Guardian*; *Friend of India*; *Journal of the Anjuman-i-Punjab*; *Bombay Educational Record*; and *Argus* be stopped.—*Lost*.

(2) By P. Peterson, Esq.—

That *Vanity Fair* be discontinued.—*Lost*.

That one first class French and one first class German Political newspaper be taken.

With reference to this Mr. M. A. Rogay proposed that the *République Française* be taken.—*Lost*.

There was no proposal about the German paper.

(3) By E. B. Carroll, Esq.—

That the *Architect* be discontinued.—*Lost*.

That the *Builder* be discontinued.—*Lost*.

That *L'Illustration* be taken.—*Lost*.

That the *Illustrete Zeitung* be taken.—*Lost*.

8 copper and 3 silver coins, presented by Mr. Vajeshankar Gowrishankar of Bhownggur, were laid on the table.

A vote of thanks was passed to Mr. Vajeshankar for the present.

A Meeting of the Society was held on Monday, the 20th December 1881.

The Honourable Mr. Justice R. West, M.A., *President*; the Honourable Rao Saheb V. N. Mandlik, C.S.I., *Vice-President*, in the Chair at the beginning.

The Rev. Dr. Murray Mitchell read translations of select Abhangs from the Maratha Poet Tukârâm, and afterwards exhibited several Sanskrit MSS. brought by him from Japan.

On the proposition of Honourable Rao Saheb V. N. Mandlik, seconded by the President, a vote of thanks was passed to Dr. Murray Mitchell.

Several books and pamphlets presented to the Society were placed on the table, and thanks voted to the donors.

LIST OF PRESENTS TO THE LIBRARY.

(JANUARY TO AUGUST 1881.)

- A Catalogue of Sanskrit MSS. in the Library of H. H. the Maharaja of Bikaner. Compiled by Rajendralal Mitra. By the Government of India.
- Account of the British Settlement of Aden in Arabia. By F. M. Hunter. (Illustrated Edition.) By the Bombay Government.
- Administration Report of the Madras Presidency, 1879-80. By the Madras Government.
- Administration Report of the P. W. Department, Bombay Presidency, 1880-81. By the Bombay Government.
- A Imprensa em Goa. Por I. Gracias. By the Author.
- Annual Police Return, showing the state of Crime in the Town and Island of Bombay, 1880. By the Bombay Government.
- Annual Report of Dispensaries in the Punjab, 1879. By the Punjab Government.
- Annual Statement of the Trade and Navigation of British India for the year ending 31st March 1881. Vol. II.
- Archæological Survey of India Reports. Vols. X. and XI. By the Government of India.
- Archæological Survey of Western India. Cave-Temple Inscriptions. By J. Burgess and Pandit Bhagwanlal Indraji. By the Bombay Government.
- A Sketch of the Northern Baluchi Languages. By M. L. Dames. By the Bombay Government.
- Bombay Gazetteer. Vols. V. and VI., X., XII. By the Bombay Government.
- Bombay Magnetical and Meteorological Observations, 1871 to 1878. By the Bombay Government.
- Catalogue of newly-discovered Canarese and old Sanskrit MSS. in the Lahore Division. By the Punjab Government.
- Catalogue of Sanskrit MSS. in Oudh. Fas. XII., in the N. W. Provinces. By the Government N. W. P.

- Catechism of the History of India. By Jamshedji N. Petit, Esq.
- Classified Index to the Sanskrit MSS. in the Palace at Tanjore. By the Madras Government.
- Dom Ayres D'Ornellas da Vasconcellas. Por. I. A. Gracias. By the Author.
- Dinkard. Vol. III. By Jamshedji N. Petit, Esq.
- Eleventh Annual Report of the U. S. Geological and Geographical Surveys, 1877. By F. W. Hayden, Esq.
- Finance and Revenue Accounts of the Government of India, 1879-80. By the Government of India.
- Free Trade and English Commerce. By A. Mongredieu. By the Cobden Club, through Mr. Lal Mohun Ghose.
- General Report on the Operations of the Marine Survey of India, 1879-80. By the Superintendent, Marine Survey.
- General Report on the Operations of the Survey of India, 1879-80. By the Surveyor General of India.
- General Rules and Circular Orders of the High Court at Fort William in Bengal. By the Government of India.
- Glossary of the Multani Language. By the Punjaub Government.
- Grammar of the Classical Arabic Languages. By M. S. Howell. By the Government N. W. P.
- Grammar of the Guadian Languages. By Hoernle. By the Bombay Government.
- G. T. Survey of India. Synopsis of the Results of the Operations. Vol. VII.
- Account of the Operations of the. Vol. VI. By the Government of India.
- Greenwich Magnetical and Meteorological Observations, 1878. By the Board of Admiralty.
- Guide to the Persian Language. By Jamshedji N. Petit, Esq.
- Haratattva Didhitih (Bengalee). By Raja Sourindro Mohun Tagore.
- Hindu Tribes and Castes. By M. A. Sherring. Vol. III. By the Bombay Government.
- History of the Commonwealth of the Magian Monarchies. By Jamshedji Pallonji (Gujarathi). By Jamshedji N. Petit, Esq.
- History of the Medical Art. By Heeraji Edulji. By Jamshedji N. Petit, Esq.

Indian Meteorological Memoirs. Vol. I. Part V. By the Government of India

Kehavata Mula. (Gujarathi.) By Jamshedji N. Petit, Esq.

Khordeha Avastha. (Gujarathi.) By Jamshedji N. Petit, Esq.

Lecture on Wealth and the Silver Question. (Gujarathi.) By Jamshedji N. Petit, Esq.

List of Light Houses and Light Vessels in British India for 1881. By the Superintendent, Marine Survey.

Nirdōsh Zulia. (Gujarathi.) By Jamshedji N. Petit, Esq.

Notes on Afghanistan and part of Baluchistan. By Major H. G. Raverty. By the Government of India.

Notice sur une Collection de Monnais Orientales de M. le Comte S. Streigraff. By the Author.

Parliamentary Papers :—

Papers relating to the Advance of Ayub Khan on Kandahar.

Reports on Sanitary Measures in India, 1878-79.

Further Correspondence relating to affairs of Afghanistan.

Further Correspondence relating to the estimates for the War in Afghanistan.

Supplementary Report on Indian Wheat.

Army Indian (Home Charges).

Further Correspondence, Central Asia.

Further Correspondence and Papers about Afghanistan.

Papers respecting Medical Officers in India.

Return. East India. Finance and Revenue Accounts, 1879-80.

East India. (Net Revenue and Expenditure, 1869-70 to 1879-80.) By the Secretary of State for India.

Proceedings of the American Academy of Arts and Sciences, U.S. Vol. VII. By the Academy.

Progress Report of District and Canal Arboriculture in the Punjab, 1879-80. By the Punjab Government.

Punjab Administration Report, 1879-80. By the Punjab Government.

Punjab Civil Report, 1879.—Report on the Working of the Registration Department. By the Punjab Government.

Reciprocity. By Sir Louis Mallet. By the Cobden Club, through Mr. Lal Mohun Ghose.

- Relatorio do Servico de Saude do Estado da India Portuguesa. Por J. S. da Fonseca Terric.
- Report of the Bombay Chamber of Commerce, 1879-80. By the Secretary, Chamber of Commerce.
- Report of the Bombay Mill-owners' Association, 1880. By the Association.
- Report of the Madras Chamber of Commerce, 1877-1880. By the Madras Chamber of Commerce.
- Report of the Lahore Medical School, 1879-80. By the Punjab Government.
- Report on Municipal Taxation and Expenditure in the Bombay Presidency, including Sind, 1879-80. By the Bombay Government.
- Report on Popular Education, Punjab, 1879-80. By the Punjab Government.
- Report on Public Instruction in Mysore for 1879-80. By the Chief Commissioner, Mysore.
- Report on Publications issued and registered in the several Provinces of British India during 1879. By the Government of India.
- Report on the Administration of the Hyderabad Assigned Districts, 1879-80. By the Resident, Hyderabad.
- Report on the Administration of the Meteorological Department of Western India, 1880-81. By the Bombay Government.
- Report on the Administration of Mysore, 1879-80. By the Chief Commissioner, Mysore.
- Report on the Amravati Topc. By R. Sewell. By the Bombay Government.
- Report on the Internal Trade and Manufacture of the Punjab, 1879-80. By the Punjab Government.
- Report on the Irawaddy River. By the Chief Commissioner, British Burma.
- Report on the Revenue Administration of the Punjab and its Dependencies, 1879-80. By the Punjab Government.
- Report on the Search for Sanskrit MSS. in the Bombay Presidency during 1880-81. By Dr. F. Kielhorn.
- do. do. do. By Prof. R. G. Bhandarkar. By the Director of Public Instruction.

- Review of the External Land Trade of British India, 1879-80. By the Government of India.
- Sacred Books of the East. Vols. VI.—IX. By the Secretary of State, through the Bombay Government.
- Saddar Ketab (Gujarathi). By Jamshedji N. Petit, Esq.
- Smithsonian Report, 1879. By the Smithsonian Institution.
- Speeches of Richard Cobden. Edited by J. Bright and J. E. T. Rogers. By the Cobden Club, through Mr. Lal Mohun Ghose.
- Statistical Tables for British India. By the Government of India.
- The Cause of Color among Races. By Dr. W. Sharpe. By the Author.
- The Conqueror's Dream. By Dr. W. Sharpe. By the Author.
- The Norwegian North Atlantic Expedition, 1876-1878—
Zoology (Fishes).
Chemistry.
- The Plants and Drugs of Sind. By J. A. Murray. By the Kurrachee Municipal Museum Committee.
- The Wild Silks of India, principally Tassar. By the Bombay Government.
- Tide Tables for the Indian Port for 1881. } By the Bombay Govern-
————— for the Port of Karwar, 1881. } ment.
- U. S. Coast Survey Report, 1877. By the U. S. Coast Survey Department.
- United States Geographical Surveys. Vol. II.—VI. By Captain G. M. Wheeler.

(SEPTEMBER TO DECEMBER 1881.)

- Administration Report of the N. W. Provinces and Oudh for the year ending 31st March 1881. By the Government N. W. Provinces.
- Administration Report, Government Central Museum, Madras, 1880-81. By the Madras Government.
- A new English-Hindustani Dictionary. Part IV. By S. W. Fallon. By the Director of Public Instruction.
- Annual Report, Sassoon Mechanics' Institute, 1880-81. By the Institute.

- Annual Report on the Lunatic Asylums, Punjaub. 1880. By the Punjaub Government.
- Archæological Survey of India, Reports. Vols. X. and XI. By the Bombay Government.
- A Sketch of the Changars and of their Dialect. By G. W. Leitner. By the Punjaub Government.
- Astangahridayam. A Compendium of the Hindu System of Medicine. (Sanskrit.) By the Director of Public Instruction, Bombay.
- Catalogue of Oriental Coins in the British Museum. Vol. VI. By the Trustees of the Museum.
- Catalogue of Sanskrit MSS. in N. W. Provinces. Part VI.
 ———— Oudh. Fasc. XIII. By the Government N. W. Provinces.
- Charts of Insectivorous Birds and Dangerous Snakes of Victoria. By the Government of Victoria.
- Charts of the Marine Survey of India. By the Superintendent, Marine Survey.
- Civil Report, Punjaub. 1880. By the Punjaub Government.
- Complete Dictionary of the Terms used by Criminal Tribes, Punjaub. By the Punjaub Government.
- Cotton Cultivation in the Punjaub. Report for 1879-80. By the Punjaub Government.
- Descriptive Atlas of the Eucalypts of Australia. By Baron F. von Mueller. By the Government of Victoria.
- Detailed Analysis of Abdul Ghafur's Dictionary of the Terms used by the Criminals in the Punjaub. By G. W. Leitner. By the Punjaub Government.
- Education in India. By J. Murdoch. By the Author.
- England's Duty to India. By J. Murdoch. By the Author.
- Fictions connected with the Indian Outbreak of 1857. By E. Leckey. By Sudashivá Balwantrao, Esq.
- Finance and Revenue Accounts of British India. 1st April 1871 to 31st May 1879. By the Government of India.
- Fragmenta Phytographiæ Australiæ. By F. de Mueller. Vols. 6—10. By the Government of Victoria.
- Gedacht Misrede auf Leonhard von Spengel. By the Munich Academy.

- G. T. Survey of India, Synopsis of Operations.** Vols. X.—XIII. By the Government of India.
- Greenwich Magnetical and Meteorological Observations, 1879 (with Appendix).** By the Lords Commissioners of the Admiralty.
- Hatimatayi (Gujarathi).** By Jamshedji N. Petit, Esq.
- Indian Meteorological Memoirs, Vol. I., Part. IV.** By the Government of India.
- Indo-Aryans.** By Rajendra Lála Mitra. By the Author.
- Intebábe Vandidad (Gujarathi).** By Jamshedji N. Petit, Esq.
- Introduction to Botanic Teachings at the Schools of Victoria.** By Baron F. von Mueller. By the Government of Victoria.
- Journal, North China Branch, R. A. Society.** No. III. (1859) ; Vol. II. No. I. (1860) ; Nos. I. to IV., 1864-67 ; Nos. VI.—VIII., 1869-74 ; Nos. X. to XII., 1876-1878 ; and Catalogue of the Library. By the Society.
- Journal of the Ceylon Branch, R. A. Society, for 1845, 1846, 1855, 1865-6, 1871-74 and 1879.** By the Society.
- Khordeha Avesta (Gujarathi).** By the Sir Jamsetji Translation Fund Trustees.
- Manual of Persian Grammar.** By S. B. Baria. By Jamshedji N. Petit, Esq.
- Maps of the G. T. Survey of India.** By the Superintendent, G. T. Survey.
- of the Revenue Survey, Bombay Presidency. By the Bombay Government.
- Memorandum on Dyes of Indian Growth and Production.** By L. Leotard. By the Government of India.
- Memorial of Joseph Henry.** By the Smithsonian Institution.
- Native Plants of Victoria.** By Baron F. von Mueller. By the Government of Victoria.
- Norwegian North Atlantic Expedition, 1876-1878. Zoology. Gephyrea.** By the Norwegian North Atlantic Expedition Committee.
- Notes on Afghanistan and Parts of Baluchistan.** By G. Raverty. By the Government of India.
- Noushirwáné Samangán : (a Drama in 4 acts in Gujarathi).** By Jamshedji N. Petit, Esq.

On the Manufacture of Iron and the future of the Charcoal Iron Industry in India. By the Government of India.

Parliamentary Papers. By the Secretary of State for India :—

Military Services. (Special Rewards.)

Loans (India and England), 1857-58 to 1879-80.

Cooper's Hill College. (New Scheme of Management.)

East Indian Railway. (Redemption of Annuities Bill.)

Indian Loan of 1879 (Bill).

Afghanistan ; Further Correspondence.

East India Famine Commission Report, Appendix I.

Police Administration, Punjab. Report for 1880. By the Punjab Government.

Proceedings of the Literary and Philosophical Society, Liverpool. Vols. 33 and 34. By the Society.

Report of the Bengal Chamber of Commerce. From 1st November 1870 to 30th April 1881. By the Bengal Chamber of Commerce.

Report of the Commissioner of Agriculture, United States, 1878 and 79. By the Agricultural Department, U. S., through the Smithsonian Institution.

Report of the Meteorological Department of the Government of India, 1880-81. By the Government of India.

Report on the Administration of the Baroda State, 1879-80. By the Minister of Baroda.

Report on the External Land Trade of the Punjab, 1880-81. By the Punjab Government.

Report on the Jails of the Punjab, 1880. By the Punjab Government.

Report on the Meteorology of India, 1879. By the Government of India.

Review of the Forest Administration in the several Provinces under the Government of India, 1879-80. By the Government of India.

Select Plants readily eligible for Victorian Industrial Culture. By the Government of Victoria.

Seventeenth Annual Report of the Sanitary Commissioner for the Government of Bombay, 1880. By the Bombay Government.

- Smithsonian Contributions to Knowledge. Vol. 23. By the Smithsonian Institution.**
- Smithsonian Miscellaneous Collections. Vols. 18—21. By the Smithsonian Institution.**
- Suggestions regarding the Management of leased Forests of Busahir in the Sutlej Valley. By Dr. Brandis. By the Punjab Government.**
- Survey Operations of India, General Report, 1879-80. By the Government of India.**
- The Great Pyramid, Why and when Built. By the Author.**
- Thirteenth Annual Report of the Sanitary Commissioner, N. W. Provinces and Oudh, 1880. By the Government N. W. Provinces.**
- Tide Tables for the Indian Ports for 1882.**
—————Port of Bombay for 1882. By the Secretary of State for India through the Bombay Government.
- Trade of British India. Statement for 5 years, 1875-76 to 1879-80. By the Government of India.**
- Trade and Navigation Accounts of British India, Nos. 1 to 8. 1881-82. By the Government of India.**
- Vinayapitakam. Edited by H. Oldenberg. Vol. III. By the Bombay Government.**
- Wheat Production and Trade of India: Selection from the Records of the Government of India. By the Government of India.**
- Wrecks and Casualties in Indian Waters, for 1880. By the Superintendent, Marine Survey.**

PROCEEDINGS OF THE BOMBAY BRANCH OF THE
ROYAL ASIATIC SOCIETY.

(JANUARY TO DECEMBER 1882.)

A Meeting of the Society was held in the Library on Wednesday, the 1st February 1882 ; Honourable Mr. Justice R. West, *President*, in the Chair.

The Minutes of the last Meeting were read and confirmed. The following gentlemen were elected members :—George Moir, Esq., Thos. Forrest, Esq., Charles Lowell, Esq., Louis Penny, Esq., E. H. Moscardi, Esq., C.S., Captain W. W. Robinson, R. E., A. F. Beaufort, Esq., Surgeon K. R. Kirtikar.

Dr. Codrington read “Notes on Kutch and Kattywar Coins.” The series of Kutch coins, known in the bazar as Râsai Kori, extended from the time of Bharaji (A. D. 1500), to that of the late Rao Pragmalji II., and specimen coins and casts of coins of each Rao during that period were shown to the meeting. It was shown that the Kutch coins were made in imitation of those of the kings of Guzerat, the copper ones bearing, in addition to that of the reigning Rao, the name of Mahmud bin Latif, and the silver the name of Muzaffer Shah, the reason being that Rao Bharaji obtained permission to coin copper before he was allowed to coin silver, and Mahmud being king at the early part and Muzaffer at the later part of Bharaji’s reign. And that the same pattern with the same Guzerat king’s name and Hijra date 978 was continued on the Koris up to the time of Desalji II. (A. D. 1819) with but one exception, viz., that Lakhapatji for a time issued some, bearing the name of Ahmed Shah in addition to his own, but whether the Delhi Emperor or Durani king of that name was meant the author did not feel sure. The names and particulars of the different copper and silver coins with their value were then given, and the story told which is current in Kutch to account for the name Kori, viz., deriving it from Kamvari—a daughter. The author said he was not satisfied with it, but was not able to give another origin for the word, and looked for further information on this point as

well as on the origin of the size and weight of this coinage which, as far as he knew, was different to any other in India. The coinage of Kathiawad, very similar to the above, was then briefly described, including the Jam Sai of Navanaggar, the Divan Sai of Junagar, and the Rana Sai of Porebunder.

On the motion of Mr. Javerilal Umiashankar, seconded by the President, a vote of thanks was passed to Dr. Codrington for his paper.

Several books and pamphlets presented to the Society were placed on the table and thanks voted to the donors.

A Meeting of the Society was held in the Library on Friday, the 17th February 1882; Honourable Mr. Justice R. West, *President*, in the Chair.

The Minutes of the last Meeting were read and confirmed.

The following gentleman was elected member:—Venerable Arch-deacon Stead.

Mr. W. C. Holmes read a paper on Bi-Metallism, of which the following is an abstract:—"Bi-metallism is a system of currency under which gold and silver are jointly employed as money. The system will, it is claimed, afford three advantages:—first, it will prevent fluctuations in foreign exchanges; second, it will make money as a measure of value less liable to fluctuations than it would be under a gold and silver monometallic system; third, it will prevent contractions of the currency in the present gold-using countries. With regard to the first advantage, unless two countries have a common money (medium of exchange), there is no par of exchange, and the exchanges between them are liable to unlimited fluctuations. If they have a common money exchange, it cannot oscillate beyond the specie points. The second advantage is obtained owing to the irregularity in the supply of gold and silver; if both are used jointly as money, a more regular supply will be obtained. The third advantage is of a negative nature. If bi-metallism is not adopted, silver will be gradually demonetised in Europe and America, and its place will have to be taken by gold. This will cause a contraction in the currencies of gold-using countries, and such contractions are invariably followed by periods of 'stagnation

of trade and enforced idleness.' There is no danger to be apprehended from the introduction of bi-metallism. The advantages of the system will not be counteracted by any disadvantages as to India. If fluctuations in the Indian exchanges are to end, the Indian Government must either somehow induce Europe to become bi-metallic, or it must introduce gold money into India. It could do the latter only by declaring that some gold coin, such as the sovereign, shall be legal tender at some ratio which will induce people in India to import and keep gold circulating as money, that is, at some ratio that is a little above the market value of the gold coin. India should join France and the United States and do all she can to obtain the re-establishment of bi-metallism."

On the motion of the President, a vote of thanks was passed to Mr. Holmes for his paper.

Several books and pamphlets, presented to the Society, were laid on the table and thanks voted to the donors.

A Meeting of the Society was held on Wednesday, the 8th March 1882; the Honourable Mr. Justice R. West, *President*, in the Chair.

Mr. K. R. Cama was in the Chair at the commencement. The Minutes of the last Meeting were read and confirmed.

W. P. Symonds, Esq., C.S., was elected a member of the Society.

Rev. A. Bourquin read a paper entitled "Conclusion of the 1st part of Dharmasindhu. On fasts, oblations to deceased ancestors and bathing ceremonies, with illustrations of the intricacies of their times."

On the proposition of Prof. P. Peterson, seconded by Dr. J. C. Lisboa, a vote of thanks was passed to Rev. Bourquin for his paper.

Several books, pamphlets, &c., presented to the Society, were laid on the table, and thanks voted to the donors.

A Meeting of the Society was held on Thursday, the 25th May 1882; Brigade Surgeon J. Pinkerton, *Vice-President*, in the Chair.

The Minutes of the last Meeting were read and confirmed.

Rev. Dr. Fuehrer, Brigade Surgeon L. S. Bruce, Thomas Blissett, Esq., and Candido Xavier Cordeiro, Esq., were elected Members of the Society.

Mr. J. M. Campbell then read a paper by Pandit Bhagvánálál Indraji on antiquarian remains recently found on the west coast of the Thana District. The paper treated of two groups of remains : one belonging to Sopârâ, or Soparaka, the old capital of the Konkan, whose site is in the rich belt of garden land about five miles north of Bassein ; the other on the top of a hill called Padañ, a bare flat block of trap about three miles south-east of Goregaon station on the Baroda Railway. .

The Sopârâ remains come under three heads : I.—A fragment of rock on which are cut parts of the 8th of Aṣoka's edicts, and so belonging to about B. C. 250. The stone was lying near the Bhatêla tank in Sopârâ, but it appears that it was recently thrown there by a villager. No other pieces were found, but as the edict has in other places never been found separately, but always with twelve others, it is hoped some more of this or other edicts will eventually be discovered in the neighbourhood. It is a piece of basalt rock, which evidently had been broken off and used for some purpose. II.—Five inscriptions on smooth-topped basalt pillars on a hillock known as Brahma Tekri, near the village of Gâs, giving names in the genitive case. The letters are about a century later than the Aṣoka character (a) "of Ṣatrumardana" (somebody's name) ; (b) "of Datâ, the daughter of Bhîma ;" (c) "of Badhu ;" (d) "of Kaluvâda a Kotta," probably a man of the Koda or Kotta tribe ; (e) "of Ugradevâ," a woman's name. These were, the Pandit considers, tombstones. III.—The Buddhist stûpa standing in a garden about half a mile west of Sopârâ.

Sopârâ was the capital of Aparanta or the Konkan, from B. C. 250 to A. D. 1265, and it appears as a holy city in Buddhist, Brahman, and Jain books. It is known that Aṣoka sent one of his missionaries to Aparânta, and probably from Sopârâ, being the chief town, it was the centre whence Buddhism spread over Western India. It is honoured as being one of the birth-places of Gautama Buddha, and writers say that on his third journey to Ceylon, he visited Sapparaka. Brahmanical writers also speak of it as a holy place. The Mahâ-

bhârata mentions that Arjuna came to the very holy Śûrpâraka. Jain writers frequently mention Sopârâ as one of their holy places. The Western Indian cave inscriptions contain six references to Sopârâ. One at the Kârli cave of the beginning of the first century after Christ records gifts of money by Sâtimita, son of Nandâ, from Sopâraka. Ushavadâta, in the Nâsik cave inscription of the first century, records the gift of a house at Şorpârâga, and in another 32,000 cocoa-palms are given to some mendicants of the same place. The Nânâghât inscription records a gift by one Govindadâsa of Sopârâya. About a century later, in the Kanheri caves, is recorded a gift by a merchant of Sopâraka, and in another, in the same caves, mention is again made of the place. Ptolemy has Supara in his list of Ariake ports. The author of the Periplus (A. D. 247) notices Ouppara as a local mart between Barugaza (Broach) and Kalliena (Kalyan). A. D. 545, Kosmas Indikopleustes has a doubtful reference under the name Sibor near Kalliana. A. D. 915, Maçudi mentions Sopara with Thana and Saimur. A. D. 1030, Al Biruni names Supara as forty miles north of Thana. In a grant of Silhêra King Ananta (A. D. 1096) exemption from certain tolls at Surppâraka is granted. A. D. 1135-45, Sopârâ sent a delegate to a literary conference at Kashmir. A. D. 1153, Al Idrisi describes Subara as one of the emporiums of India. A. D. 1322, Jordanus went to Sopârâ and buried there his four companions, who had been killed at Thana.

Modern Sopârâ consists of about 600 houses, but there are signs of the old town having stretched over a much larger space than these occupy.

The stûpa is known by the name of Buruda Râjâcha Kota, and there are stories connected with this Burud or Bamboo-worker King. It was originally a round plinth with a semi-circular dome on it, but about 50 years ago it was taken possession of by a Pathan fakir, who made a hiding place on the top for stolen property and his accomplices in theft, so now it is somewhat out of shape; it is about 30 feet high and 70 feet in diameter. To open the tope a straight cutting was made to the centre, and about 12 feet from the top of the dome the chamber was come upon, seeming like a square hollow brick pillar of about 3 feet diameter with a pyramidal top. Within this, under a layer of about 2 feet of moist clay, a stone coffer was found carefully placed under 8 large bricks. Under the stone box was about four inches of clay, and then

the chamber was filled with bricks and clay, which were cleared out for several feet deep. In doing this, at a level of about 4 feet below the stone coffer, a frog leaped up. This frog the Pandit believes to be similar to some now found in the Kanheri cave cistern. Excavation to the base of the tope, where some more treasures may be buried, was not carried on. The Pandit then described the stone coffer and its contents, a general account of which, by Mr. Campbell, has already been given. Of the eight images seated round the copper vessel, that on the east is of the coming Buddha, the idea in so placing him being that on his attaining Buddha-hood he would come in by the principal gateway on the east, open the tope that side, and take out from the casket the bowl of the previous Buddha. The image is like that of a Bodhisattva, seated, the right leg hanging and resting on a lotus, the left half turned; the right hand in the "gift" position, the left raised above the elbow and holding a lotus branch with three flowers. A conical crown is on the head, and the figure wears the sacred thread, earrings, armlets, bracelets and anklets, and a waist-band. The next image to the right is one of Sákya-muni; the left hand, with palm open, is placed on the lap, while the right passes over the knee and touches the ground. On the pithika are branches of the pipal tree. To his right, again, is a figure with the right hand open in the lap, and the left touching the ground; the leaves above seem those of ficus glomerata, the Bodhi tree of Kanakamuni. The next is an image of Buddha in the blessing position, the left hand in the lap, the right raised with the open palm extended to the front; the leaves on this pithika are apparently those of a fig-tree, so the figure is probably that of Kásyapa. The next figure is in the position called "padma sana mudra;" the open palm of the right hand in that of the left. The leaves on his frame appear to be acacia sirisi; if so the figure would be that of Kukuchchanda. The next is Viṣvabhū, the left hand with open palm on the lap, the right hanging down in the "gift" position; the leaves are doubtful. The next is Śikhî in the "thinking" position, the open hands resting one on another in the lap; on his pithika are a lotus flower and leaves. The last is Vipasyî in the "teaching" position; on both sides behind him hang branches of leaves and a bunch of flowers of *Jonesia asoka*. The coin found in the copper box is very similar to a Kshatrapa coin; the legend is in old Nagari character, resembling that of Násik and Kanheri cave inscriptions. The Pandit reads it

“of the illustrious Yajna Śatakarni, son of Gotamī, Prince of Chaturapana,” and considers that Chaturapana was the king’s father’s name, being added in addition to that of his mother Gotamī (for the Śatakarni kings were known by the mothers’, not their fathers’ proper names), in order to be more like the Kshatrapa coins, on which the father’s name is given; the king being Gotami-putra II, whose date was A. D. 170 to 190. The relics contained in the gold casket were thirteen pieces of three kinds of earthen pots, from a quarter to one inch in length. The smallness of the pieces, carefully preserved with so much elaborate work in seven covers, from the gold casket to the large stupā, induces Pandit Bhagvánlál Indrajī to be confident that they are pieces of the bowl of Gantama Buddha himself, which is described in Buddhist books as made of earth of a red or black colour.

The inscriptions and figures found sculptured on the bald head of Padaṅ Rock were then briefly described and impressions of them shown.

On the motion of Mr. Javerilal Umiashankar and Dr. Codrington, the thanks of the meeting were conveyed to Pandit Bhagvánlál Indrajī and Mr. J. M. Campbell by the Chairman.

A Meeting of the Society was held on Tuesday, the 27th June 1882; Hon’ble Mr. Justice R. West in the Chair.

The Minutes of the last Meeting were read and confirmed.

The following gentlemen were elected Members:—Pandit Mohanlála Vishnulála Pandiá, Sámaldaan Kabi Rajá, Major H. S. Stock, E. McG. H. Fulton, Esq., C.S.

Rev. Dr. Fuehrer read a paper entitled “Manusáradhamma-satṭham, the only existing Buddhist Law Book, compared with the Brahminical Mánavadharmaśástram,” of which the following is an abstract:—

An authoritative work of reference on Buddhist law, or on such branches of it as have been declared by section four of the Burmah Courts Act (1875) to form the rule of decision of any question regarding succession, inheritance, marriage or caste, or any religious usage, or institution in cases where the parties are Buddhists, is still wanting. A part of this law is contained in the Pali Pipitaka, or

the Three Baskets, divided into the Vinayapīṭaka, Suttapīṭaka, and Abhidhammapīṭaka, or Discipline, Discourses, and Metaphysics. Of these, the Vinayapīṭaka contains many passages that are law with regard to the religious usages of the people, but the rules that govern the civil and criminal law among the laity are contained in totally distinct works, known generally as the Dhammasaṭṭham or Dhammasaṭṭham of "Manu." Of these Dhammasats there are in Burmah various versions with various titles. They profess generally to be based on the Pāli text of the Manusāradhammasaṭṭham, but contain also passages which have evidently been interpolated in later days to suit the changing forms of society. One of their most prominent characteristics is a total want of systematic arrangement. Various and often inconsistent provisions on cognate subjects are scattered here and there throughout these pages, and topics the most incongruous are jumbled up together, forming a strange *indigesta moles* of law and custom, ancient and modern, Hindu and Buddhist, Indian and Burman. Burman libraries contain many Dhammasats or treatises on law, written on palm-leaves, which treatises are looked upon as works of authority by native lawyers. Whilst such treatises exist only in this form, it need hardly be said that they are practically unavailable for the use either of the public or the courts. The number of copies is limited, and the tedium of poring over the hardly legible scratches on the palm-leaves is intolerable to a European. Burman historians ascribe the introduction of the Dhammasats to their progenitors, who, they believe, migrated from the plains of Hindustan some five or six centuries before the Christian era. This is a pure myth destitute of any foundation of truth, and invented in later days to support the pretensions of Burman monarchs to be the descendants of the solar kings of Oudh. Dr. Fuehrer states that the greatest part of the *Burmese* Dhammasats dates chiefly from the reign of the great king Anaw-ra-ha, whose capital was at Pagahm Myanh in the beginning of the eleventh century A. D. Under this monarch there was a great revival of religion, literature, and architecture, in Burmah, and communications with India and Ceylon appear to have been frequent.

The fact that nearly all *Burmese* Dhammasats are more Brahminical than Buddhist, favours the supposition that the original Brahminical law books were introduced from Manipur at this later

period, when Brahminism had regained the ascendancy over Buddhism in India. As the law books of Ceylon, Siam, Java and Bali are said to be based on the same standard authority of the Pāli Manusāradhammasatṭham, it would be surely interesting to compare the different versions with the Burmese in order to arrive at the correct test. But all inquiries of Dr. Fuehrer to get manuscripts from these places had no results. Therefore he restored the Pāli text of the Manusāradhammasatṭham according to indifferent Burmese palm-leaves manuscripts; a critical edition with an English translation he promises soon to publish. The Code of Manusāra contains, according to this text, 434 ślokas, and is divided into ten chapters, which treat of everything relating to inherited property, donations, marriage, sons, divorce, and all other matters under the jurisdiction of the courts. The first chapter gives the mythical origin of the Dhammasat. Dr. Fuehrer proves that the Pāli Code of Manusāra, which forms the standard authority of Buddhist Law, was compiled in the time of king Byūmandhi, the third of the Pagahm dynasty, who reigned no less than 75 years at that capital, in the end of the second and the beginning of the third century of our era. Burman history records of this king that he erected many religious buildings, and caused books of law to be compiled for the benefit of his people. In a second paper Dr. Führer will show that Manusāra used in compiling his code is a more ancient version of the Mānavadharmasāstram than that we now possess in our editions.

On the proposition of Professor Peterson, seconded by Dr. da Cunha, a vote of thanks was passed to Dr. Fuehrer for his paper.

A list of several books and pamphlets presented to the Society was read, and thanks voted to the donors.

The President observed that Dr. Fuehrer had found that the Burmese law book was derived from an earlier text of the Hindu law than that now commonly known. It is interesting that the procedure and constitution of courts take the most prominent position in the code, as is perhaps natural on the first establishment of law courts among a people. The division of substantive law was evidently copied from the Brahminical, as it is not on any scientific or logical system, but the arrangement is the same, in spite of this, in all Hindu Shastras.

A Meeting of the Society was held in the Library on Wednesday, the 19th July 1882; C. E. Fox, Esq., in the Chair.

The Minutes of the last Meeting were read and confirmed.

The following gentlemen were elected Members:—W. W. Loch, Esq., C.S., Surgeon-Major H. W. Graham, Rev. R. Scott, A. Abercrombie, Esq.

Dr. J. C. Lisboa read a paper "Herbs and Tubers used as Food in India, during Famine Times."

On the proposition of Dr. Atmaram Pandurang, seconded by Dr. J. Gerson da Cunha, a vote of thanks was passed to Dr. Lisboa for his paper.

A list of books, pamphlets, &c., presented to the Society was read and thanks voted to the donors.

A Meeting of the Society was held in the Library on Tuesday, the 10th October; the Hon'ble Mr. Justice R. West, *President*, in the Chair.

The Minutes of the last Meeting were read and confirmed.

The following gentlemen were elected Members:—Vajeshankar Gowrishankar, Esq., and J. A. Cassells, Esq.

Dr. Codrington read a paper on a hoard of gold and silver coins found at Broach last March by labourers working in the Jamatkhana compound of the Parsee Punchayet. The collection was in an old brass *lota*, and consisted of 448 entire and some pieces of gold coins, 4 small gold ingots, and about 1,200 silver coins and pieces, comprising coins from Genoa, Venice, Egypt, Armenia, Persia and Delhi, and all, with the exception of one coin of dates included within the period from A. D. 1260 to 1380, or A. H. 658 to 782. From the character and dates of the coins it is concluded that the deposit was made by some one engaged in trade with Africa and Arabia on the one side, and the interior of India on the other, and towards the end of the 14th century; 367 of the gold coins were of Mamluk Sultans of Egypt of the Bahree dynasty, 13 out of the 25 Sultans being represented by very fine specimens, amongst which were coins of Seyf-ed-deen Kaláoon, Seyf-ed-deen Aboo Bekr, Násir Shiháb-ed-deen Ahmed, and Kámil Seyf-ed-deen Shaaban, of whom the author believed no gold coinage had yet been described: and several new varieties of the already known coins of some

other Sultans. Amongst the Persian were fine gold coins of Shah Shuja, Muzaffer; Hosayn, Jelair; and some struck at Kerman with no name. And of Pathan kings of Delhi, new varieties of Ghiasud-din Tughlak, and of Muhammad bin Tughlak bearing the name of an Egyptian khalif; besides some fine specimens of others already described, including two of Mahmud bin Muhammad bin Tughlak, a child who was put upon the throne for a few weeks or days. The gold coins of Genoa were beautiful quartardos marked *Conrad Rex Romanorum*, and the Venetian sequins, of which there were 33, bore the names of six of the Doges reigning between A. D. 1339 and 1368. The majority of the silver coins were also of the Bahree Mamluks, bearing the names of nearly all the Sultans of whom there were specimens in gold. Many varieties of a Persian coin struck, it would appear, at Baghdad from A. H. 750 to 788, were then described. Some were marked with a figure of a lion, others a pigeon, a fish, two fishes, a crane, a peacock, a duck, and bore the names Ali, Al Abbas, Daood, Yoosuf, Hussan. There were also some varieties of Shah Shuja and Sheyk Oweys. The Armenian silver coins bore on one side a figure of a crowned king on horseback, and on the other a lion with a marginal legend in old Armenian characters, which had been read *King Leo, King Constantine, town of Sis, town of Kars*. Several of these had been again struck with the die of a Mamluk Sultan, Nasir Mahummad; and the author attributed them to Constantine II., who reigned in Cilicia from A. D. 1298 to 1300, and to Leo V., during whose reign, about the year 1332, the country was invaded by the Mamluk Sultan Nasir Mahummad.

A letter from Colonel Sturt, 17th N. I., was then read, describing the finding of some coins, pottery, glass, and shell ornaments in the ruins of the buried city of Nadir Shah, near Thul Chotiali. The coins were exhibited and described by the Secretary as Kufic of Amawee and Abbassee Khalifs, of Wasit mint, A. H. 85, 92, and 115, of Abra-Shahr A. H. 106, and of Samarkhand 201.

On the motion of Colonel White and Dr. Graham, a vote of thanks was passed to the authors.

The President then proposed a vote of thanks to Mr. J. M. Campbell, for the handsome cabinet, to contain the Sopârâ relics, presented by him to the Society.

A Meeting of the Society was held in the Library on Tuesday, the 14th November 1882; Honourable Mr. Justice R. West, *President*, in the Chair.

The Minutes of the last Meeting were read and confirmed.

The following gentlemen were elected members:—E. M. Slater, Esq., L. R. W. Forrest, Esq.

Dr. Fuehrer read a paper entitled “Manusâradhammasattham, the only one existing Buddhist law book, compared with the Brahminical Mânavadharmasâstram” (conclusion of a former paper), of which the following is a short extract:—For all students of Pali philology and comparative jurisprudence, Manusârâ’s Digest of Buddhist law possesses a special interest beyond that attaching to other works of the same class. The original elements of the Buddhist law, as prevailing in Burma, have undoubtedly an ancient origin, and are intimately allied to the Brahminical codes of Manu, Yajñavalkya, Nârada, Brihaspati, and Katyayana. But laws, from whatever sources derived, must, in process of time, accommodate themselves to the genius, the habits, the propensities, and, in some measure, to the geographical position of the people who use them. Independent of that interest naturally attached by the reflecting portion of mankind to whatever contributes to elucidate the various degrees of mental energy possessed by different nations, and to the exposition of the many cases which may, at different periods, have increased or diminished it, there are, as in this instance, frequently local circumstances tending to connect practical utility with the subject. In the investigation before us some degree of local interest may be said to attach. There is a considerable population of Burman Buddhists who are placed under British rule, and who are consequently subject to an English Court of Judicature. In a political point of view also, it is presumed, that we ought not to be ignorant of the real character, prevailing ideas, and capacities of a people so circumstanced, or of the laws and institutions affecting them. It is likewise supposed that the principles of the Burmese law will prove to be pretty fair transcripts of the codes prevalent in Hindustan. It may be premised that the practice of following precedents has made it easy to evade the law in many instances; hence some customs will occasionally in Burma be found at variance with the law. It is plain that the largest portion of the Burmese law is of Hindu origin, though we have yet

no sure clue by which to trace all the steps of its progress from Hindustan. These codes are abundantly supplied with Pali ordinances for the regulation of moral conduct, and for the due performance of religious duties and rites. In order to show how far the law-book of Manusâra relies upon the different Brahmanical codes, Dr. Fuehrer gave a complete outline of the civil and criminal law according to its statements, and compared it with that of the Hindu law. As regards the Buddhist law of inheritance, Manusâra says, that the property of an intestate person, should he leave no legal heirs, escheats to the king, who contrives generally to get a portion of the estate of every person deceased. Wills are written or made verbally in the presence of competent witnesses and may not be confounded with alienation to gift. Real and personal property may be willed and gifted away to any one, and as hereditaments, descend to, and are without distinction divided amongst the heirs-at-law. The law of inheritance is considered as applying chiefly to heads of families. Under this view, the property of a man deceased is divided into three portions, one goes to the parents and grandparents, one to the widow, and the third to the children and other relatives on the man's side, according to priority. Finally, Dr. Fuehrer proved by two remarkable instances that Manusâra in compiling his Dhammasaṭṭham used a more ancient version of the Manavadharmaśâstram than that we now possess in our editions.

On the proposition of the President, seconded by Dr. da Cunha, a vote of thanks was passed to Dr. Fuehrer for his paper.

The President remarked that he was glad to see amongst the members present, their former President, the Honourable James Gibbs, who always took great interest in the affairs of the Society.

A General Meeting of the Society was held on Wednesday, the 29th November 1882, the Hon'ble Mr. Justice R. West, *President*, in the Chair.

The following proposals were placed before the Meeting :—

(1) By the Venerable Archdeacon Stead—

That the "Journal des Debats" be added to the Society's list of periodicals.—*Carried.*

(2) By N. S. Symons, Esq.—

That "Baily's Magazine" be taken.—*Lost.*

(3) By Javerilal Umiashankar, Esq.—

That “St. James’ Budget,” “Indu Prakash,” and the
“Quarterly Journal of the Poona Sarvajanic Sabha” be
taken.—*Carried.*

(4) By Prof. P. Peterson—

That “Longman’s Magazine,” “Harper’s Magazine,” and
“Church Quarterly” be taken.—*Carried.*

It was resolved to discontinue the following:—

“Architect,” “Literary Journal,” “Friend of India,” “Over-
land Mail,” “Bombay Educational Record.”

A Meeting of the Society was held on Tuesday, the 12th Decem-
ber 1882, the Hon’ble Mr. Justice R. West, *President*, in the Chair.

The Minutes of the last Meeting were read and confirmed.

A paper by Mr. J. F. Fleet was read, describing the inscriptions
on a copper plate grant of the Dévagiri-Yádava King Siñghana
II. found in 1880 buried in the ground at the back of the temple of
the goddess Uḍachama at Haralahalli on the Tuñgabhadrá, in the
Karājgi Táluká of the Dhárwád district. The inscription is dated
Śaka 1160 for 1159 (A. D. 1237). The genealogical portion com-
mence with Mallugi. His grandson Jaitugi I. is said to have con-
quered the Andhra King, and his son Siñghana II. described as hav-
ing conquered the Gaulas, Hammíras and Chólas and others. It
then describes the rivers Váráhi and Tuñgabhadrá, mentions a shrine
of the god Sômanátha and two other Linga shrines of the gods
Chikkadêva and Mahádêva, and then records how a feudatory of
Siñghana II., the (Dañḍêśa) Chikkadêva established a colony of
Bráhmans and presented them with lands at the village of Ritti-
grâma, which the description shows to be the modern Hale-Ritti,
six miles east of Karajgi. Eleguthir, Kariyakol, Ereyakol, and
Kumbâragol villages mentioned in the boundaries, and the river
Váráhi cannot be traced on the map.

Dr. J. Gerson da Cunha then read Part IV. of his paper on Indo-
Portuguese Numismatics, embracing the period from 1730 to the
present time, preceded by a description of some inedited specimens
brought to light during the interval which has elapsed since pre-
sentation of the former parts of the paper. These coins were a

bazarucco of the time of D. João de Castro, the specimen of which in the cabinet of the King of Portugal was considered to be unique until a find of about a thousand at Vihar, in Salsette, was made as reported in the Archæological Report of Western India, No. 10. A xerafim, dated 1593, a very rare coin, and a double xerafim of 1671. A tanga struck for circulation at Malacca, about 1638, when pecuniary help from Goa was sent to that place then threatened by the Dutch. It bears on the obverse the effigy of St. Philip in honour of King Philip III. of Portugal and IV. of Spain, as it was then often the custom to impress the figure of the saint of the king's name instead of his own portrait. The history of Indo-Portuguese coinage from A. D. 1730 in chronological sequence, and illustrated with examples, was then given. Beginning with the Rupia of D. João V. and its sub-divisions, the author explained the origin of this word now so common in India. It came into use, according to the testimony of Abul Fazel, during the reign of Shir Shah. It is met with for the first time in an authentic official document of 1668, but as that of a foreign coin along with Persian abasis, sadis, &c. Two years before there was in circulation a silver coin called a double xerafim, and this later on was named rupia, a denomination that has been preserved up to the present time, the Mogul Emperors and the E. I. Company helping to make it still more familiar to us. The origin was traced to two Sanskrit sources, viz., rupyā used by Panini in the sense of "struck," derived from rupa "form," "shape," or rupayam "silver," the latter being the more probable, as the term was applied to silver coins only. The weight of the rupee was traced up to very early times in the Aryan sataraktika, the even 100 rati weight which formed the basis of the standard gold and silver tankas of the Pathans. Dr. da Cunha then described the gold, copper and tutenag coinages of the reign of the same monarch, giving in detail accounts of the *roda* and the *bazarucco*, and the imitation of the latter by the British in India to meet probably the facilities of commerce. The *roda*, which means "wheel," had the S. Catherine wheel impressed on one of its sides, symbolical of the conquest of Goa by the Portuguese on that saint's day, and which is also the emblem of the old senate, the municipal chambers, and of the Metropolitan Sec of Goa. The *bazarucco*, and the coin issued by the E. I. Company at Bombay, and called *budgroom*, is supposed to be derived from two Hindustani words, bazar and rok "ready-money," i.e. "market cash," this being the smallest

currency in use. The coinages of the successors of D. João V., viz., D. Joze I., E. Maria I., and D. Pedro III., of D. João VI., D. Pedro IV., D. Maria II., D. Pedro V. and the present reigning monarch D. Luis was then described, and lastly a short historical sketch of the eight mints which the Portuguese in the height of their prosperity had in the East, their vicissitudes and their gradual abolition ending in the adoption of the standard coinage of British India by the Monetary Convention of 1880, was given. It was a matter for reflection, the author said, that the Portuguese who were about 200 years ago so powerful in this part of India to the extent of the English imitating their coinage should now in their turn imitate the English coinage. Of the once vast Portuguese dominions, he said, most of the monuments are now rapidly disappearing, whether edifices or archives, but what still remains and doubtless will endure for many a century yet are the coins of which it may be said with Ovid, *Factum abiit—monumenta manent.*

A vote of thanks was passed to the authors of the papers on the motion of the President and Secretary.

LIST OF PRESENTS TO THE LIBRARY.

(FROM JANUARY TO DECEMBER 1882.)

- Administration Report on Railways in India, 1880-81. By the Government of India.
- Administration Report, Hyderabad Assigned Districts, 1880-81. By the Resident, Hyderabad.
- Administration Report of Bengal, 1880-81. By the Bengal Government.
- Administration Report of the Bombay Presidency for 1880-81. By the Bombay Government.
- Administration Report of the Madras Presidency, 1880-81. By the Madras Government.
- Administration Report of the P. W. Department, Bombay Presidency. By the Bombay Government.
- Agulha Fixa. J. A. Gracias. By the Author.
- Alcohol; a Factor in Human Progress. By W. Sharpe. By the Author.
- Ancient India as described by Ktesias the Knidian. By J. M. McCrindle. By the Author.
- Annales du Musée Guimet, 3 vols. By the Musée Guimet.
- Anniversary Memoirs of the Boston Society of Natural History, 1830-80. By the Society.
- Annual Police Returns showing the State of Crime in the Town and Island of Bombay, 1881. By the Bombay Government.
- Annual Report of Dispensaries in the Punjab, 1880. By the Punjab Government.
- Annual Report of the Bombay Jails, 1881. By the Bombay Government.
- Annual Statement of the Trade and Navigation, Bombay Presidency, Vols. 1 & 2, 1877-78; Vols. 1 & 11, 1878-79, 1879-80, and 1880-81.
- Annual Statement of Sind, 1878-79 to 1880-81. By the Bombay Government.

- Annual Statement of the Trade and Navigation of British India for the year ending 31st March 1881, Vol. II. By the Government of India.
- Annual Statement of the Trade and Navigation of British India for the year ending 31st March 1882, Vol. I. By the Government of India.
- Annual Report on the Lunatic Asylums in the Punjab, 1881. By the Punjab Government.
- Appendix to "Changars and "Linguistic Fragments." By G. W. Leitner. By the Punjab Government.
- Archæological Survey of India Report, Vol. XII.-XIX. By the Government of India.
- Archæological Survey of Southern India, No. 3. The Amravati Stûpa. By the Bombay Government.
- A Treatise on the Parsee New and Leap Years (Gujerathi). By Jamsetji N. Petit, Esq.
- Anoditch Prakash (Gujerathi). By the Author.
- Brief Sketch of the Meteorology of the Bombay Presidency in 1881. By the Meteorological Reporter, Western India.
- Catalogue of Sanskrit MSS. in Oudh, for 1881.
 _____in the N. W. Provinces, Part VII. By the Government of N. W. Provinces.
- Chronological Tables for Southern India from the 6th Century A. D. By R. Sewell. By the Madras Government.
- Commentaries on the Zoroastrian Religious Ceremonies. By Mobed Aspendiarji Burjorji. By Jamshedji N. Patel, Esq.
- Comte Rendu de la Troisième, Congrès Provincial des Orientalistes. Session 1878. By the Musée Guimet.
- Della Capacità delle Fosse Nasali. By Prof. P. Mantegazza. By the Author.
- Dynasties of the Kanarese Districts of the Bombay Presidency. By J. F. Fleet. By the Bombay Government.
- Explorateurs du Cambodge. Par le Marquis de Rozier. By the Musée Guimet.
- Finance and Revenue Accounts of the Government of India. By the Government of India.
- Finance and Revenue Accounts, British India. Part II., 1st April 1872 to 31st March 1880. By the Government of India.

- Genealogy of Modern Numerals.** Sir E. C. Bayley. By the Author.
- General Report, Marine Survey of India, 1880-81.** By the Superintendent Marine Survey of India.
- General Report on the Operations of the Survey of India, 1880-81**
By the Surveyor General of India.
- Hakluyt Society's Publications:—**
- Portuguese Embassy to Abyssinia.
- History of the Indies, Vol. II.
- Baffin's Voyages, 1612-22. By the Secretary of State,
through the Bombay Government.
- Handbook of the Collection illustrative of the Wild Silks of India.**
By Thos. Wardle. By the Bombay Government.
- Historia de la Geografia en Mexico.** Par M. O. Berra. By the Author.
- Il Terzo Molare nelle Razze Umane.** By Prof. P. Mantegazza. By the Author.
- Imperial Gazetteer, N. W. P.** By A. Tuppi, Esq.
- Indian Civil Service and the Competitive System.** By A. C. Tuppi.
By the Author.
- Indian Civil Service List, October 1880.** By A. C. Tuppi. By the Author.
- Indian Meteorological Memoirs, Vol. I.** By the Government of India.
- International Monetary Conference, 1878.** By A. Tuppi, Esq.
- International Monetary Conference lately sitting at Paris.** Copy of Correspondence. By A. Tuppi, Esq.
- Irrigation Revenue Report of the Bombay Presidency, 1880-81.**
By the Bombay Government.
- Lane's Arabic English Lexicon, Vols. 1 to 6, and Fasc. I. of Vol. VII.** By the Government of India.
- Latin and Greek Verse Translations.** By C. D. Maclean. By the Author.
- Le Mouvement Économique en Portugal et Le Vicomte de San Januari.** Par E. Gibert. By the Musée Guimet.
- Lettres Inédites de Malherbe.** By H. Carjel, Esq.
- License Tax Report, Punjab, 1880-81.** By the Punjab Government.
- Linguistic Fragments.** By G. W. Leitner. By the Punjab Government.

- List of Light-Houses and Light Vessels in British India, corrected up to 1st January 1882.** By the Superintendent, Marine Survey.
- Mackenzie Collection, a Descriptive Catalogue.** By the late H. H. Wilson. By the Madras Government, and the Director of Public Instruction, Bombay.
- Malaria, its Causes and Effects.** By E. G. Russell. By the Director of Public Instruction.
- Max Müller's Hibbert Lectures on the Origin and Growth of Religion.** Translated into Gujerathi. By Jamshedji N. Patel, Esq.
- Memorandum upon current Land Revenue Settlements in the temporarily settled parts of British India.** By the Government of India.
- Musée Guimet; Catalogue des objets exposés.** By the Musée Guimet.
- Newcastle-upon-Tyne Public Libraries, Catalogue and Annual Report, 1880-81.** By C. Angus, Esq., through Dr. J. Gerson da Cunha.
- New English-Hindustani Dictionary.** By S. W. Fallon. Parts 5-10. By the Director of Public Instruction.
- Note on an Indian Earthquake.** By P. Doyle. By the Author.
- Note on Local Self-Government in the Bombay Presidency.** By Javerilal Umiashanker. By the Author.
- Notes on Buddhist Law.** John Jardine. By the Author.
- Norwegian North Atlantic Expedition—**
- Part IV. 1. Historical Account.
2. The Apparatus and how used.
- Part V. 1. Astronomical Observations.
2. Magnetical Observations.
3. Geography and Natural History. By the Committee of the Expedition.
- Nuovi Studi Craniologici sulla Nuova Guinea.** By Prof. P. Mantegazza. By the Author.
- Oriental Biographical Dictionary.** By the late Thos. Beale. By the Asiatic Society of Bengal.
- Oriental Studies.** H. Nevill. Part II. By the Author.

Panini's Eight Books of Grammatical Sutras. Edited with English Translation. By W. Goonetilleke, Vol. I., Part. I. By the Ceylon Branch, R. A. S.

Paris Monetary Conference, 1881. By A. Tupp, Esq.

Parliamentary Papers :—

- Finance and Revenue Accounts, 1880-81.
- East India Financial Statement, 1882-83.
- Southern Maratha Railway.
- P. W. Expenditure, 1873-74 to 1882-83.
- Bombay Civil Fund.
- Army, Cost of Native Troops.
- Revised Retirement Regulations, 1881.
- Special retirement in consequence of the reduction in the Native Army.
- Rules for limitation of Tenure of Regimental Command.
- Petroleum Testing.
- Loans raised in India.
- Punishment of Whipping under sentences of the Criminal Courts of India.
- Home Charges Arrears Bill.
- Opium (Negotiations with China).
- Report on Railways in India, 1881-82.
- East India Report of Famine Commission. Appendix V. Irrigation as a protection against Famine.
- Report of Famine Commission. Appendix II. Proceedings of the Commission and Selected Evidence.
- Central Asia. Correspondence.
- Cooper's Hill College. New Scheme of Management.
- Afghanistan. Grants to the Ameers.
- Afghan War. Grant-in-aid.
- Army Indian. Home Charges. Appropriation Account.
- East India. Loans raised in India.
- Loans raised in England.
- Central Asia. Further Correspondence. By the Secretary of State for India.
- Statistical Abstract relating to British India, 1870-71 to 1879-80. By the Secretary of State for India.

Parliamentary Papers:—

- Report on Sanitary Measures in India in 1879-80. Vol. XIII.
 Return relating to Banks (East India and the Colonies).
 India. Prevention of Famine.
 East India. Progress and Condition, 1879-80.
 International Monetary Conference, 1881.
 East India. Home Accounts 1880, 1881-82. By the Secretary of State for India.
- Persian Grammar. By Pestonji Cooverji. By the Author.
- Police Report of the Bombay Presidency, 1880. By the Bombay Government.
- Proceedings of the Council of the Governor of Bombay, 1881. Vol. XX. By the Bombay Government.
- Progress Report of District and Canal Arboriculture in the Punjab, 1880-81. By the Punjab Government.
- Progress Report of Forest Administration in the Punjab, 1881-82. By the Punjab Government.
- Report of the Bengal Chamber of Commerce, 1881. By the Chamber.
- Report of the Bombay Chamber of Commerce, 1880-81. By the Chamber of Commerce.
- Report of the Bombay Mill-Owners' Association, 1881. By the Association.
- Report of the Director of Public Instruction, Bombay Presidency, 1880-81. By the Director of Public Instruction.
- Report of the Jamnagar Post Office Robbery Case (Gujerathi). By Mathuradas Laoji, Esq.
- Report on Borings in India. (Selection from the Records of the Government of India.) By the Bombay Government.
- Report on Cotton Cultivation in the Punjab, 1880-81. By the Punjab Government.
- Report on Excise Administration in the Punjab, 1881-82. By the Punjab Government.
- Report on Municipal Taxation and Expenditure, Bombay Presidency, 1880-81. By the Bombay Government.

- Report on Popular Education, Punjab, 1880-81. By the Punjab Government.**
- Reports on Publications issued and registered in the several Provinces of British India during 1880. By the Government of India.**
- Report on Public Instruction in Mysore, 1880-81. By the Resident at Mysore.**
- Report on Sanskrit MSS. in the Bombay Presidency, 1881-82. By the Bombay Government.**
- Report on the Administration of Criminal Justice in the Punjab, 1881. By the Punjab Government.**
- Report on the Administration of Mysore, 1880-81. By the Resident at Mysore.**
- Report on the Administration of the Central Provinces, 1881-82. By the Chief Commissioner, C. P.**
- Report on the Administration of the Inland Customs Department, 1867-68 to 1874-75 and 1876-77 to 1880-81. By the Government of India, through the Commissioner, Inland Customs Department.**
- Report on the Administration of the Meteorological Department of the Government of India, 1881-82. By the Government of India.**
- Report on the Administration of the Northern India Salt Revenue, 1881-82. By the Government of India.**
- Report on the Administration of the Registration Department, Punjab, 1881-82. By the Punjab Government.**
- Report on the Administration of the Stamp Department, Punjab, 1881-82. By the Punjab Government.**
- Report on the Census of Berar, 1881. By the Chief Commissioner, C. P.**
- Report on the Census of British Burma taken on 17th February 1881. By the Bombay Government.**
- Report on the Coorg General Census, 1881. By the Bombay Government.**
- Report on the External Land Trade of the Punjab, 1881-82. By the Punjab Government.**

- Report on the Internal Trade and Manufacture of the Punjab, 1880-81.** By the Punjab Government.
- Report on the Jails of the Punjab, 1881.** By the Punjab Government.
- Report on the Meteorology of India in 1880.** By the Government of India.
- Report on the Police Administration in the Punjab, 1881.** By the Punjab Government.
- Report on the Revenue Administration, Punjab, 1880-81.** By the Punjab Government.
- Report on the Revised Land Revenue Settlement of the Rohtak District in the Punjab.** By the Punjab Government.
- Report on the Sanitary Administration of the Punjab, 1880-81.** By the Punjab Government.
- Report on the Working of the Registration Department, Punjab, 1880-81.** By the Punjab Government.
- Report upon the U. S. Geographical Surveys. Vol. VII.** By the Engineer Department, U. S. Army.
- Return of Wrecks and Casualties in Indian Waters for 1881.** By the Superintendent of Marine Survey.
- Review of the External Land Trade of British India, 1880-81 and 1881-82.** By the Government of India.
- Review of the Forest Administration in the several Provinces under the Government of India, 1880-81.** By the Government of India.
- Review of the Maritime Trade of British India, 1881-82.** By the Government of India.
- Review on the Municipal Administration, Punjab, 1880-81.** By the Punjab Government.
- Riforma Craniologica.** By Prof. P. Mantegazza. By the Author.
- Sacred Books of the East.** Edited by F. Max Müller, Vols. 8, 10, 11, 12, 13 and 16. By the Secretary of State for India.
- Saggio sulla Trasformazione delle Forze Psichiche.** Professor Paolo Mantegazza. By the Author.
- Smithsonian Report, 1880.** By the Smithsonian Institute.
- Statistical Account of Bengal. W. W. Hunter.** Vols. 1, 3, 4 and 6 to 10. By the Bombay Government.

- Statistical Account of Assam. W. W. Hunter. Vols. I and II. By the Bombay Government.
- Statistical Tables for British India, 1882. By the Government of India.
- Suggestions regarding Forest Administration in the N. W. Provinces and Oudh. By the Government of India.
- Supplément aux Dictionnaires Arabes. Par R. Dozy. By the Government of India.
- Tide Tables for the Port of Bombay, 1883. By the Government of India.
- Tin Mining in Larut. By P. Doyle. By the Author.
- Transactions, Medical and Physical Society of Bombay. New Series. No. I. By the Bombay Government.
- U. S. Coast and Geodetic Survey. Report 1878. By the U. S. Coast Survey.
- Verhandlungen des Orientalisten-Congresses. By Professor Weber.
- Vinayapitakam. By H. Oldenberg. Vol. IV. By the Secretary of State for India.
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LIST OF ADDITIONS TO THE MUSEUM.

FROM JANUARY 1880 TO DECEMBER 1882.

- 6 Gold Huns of Southern India, found in the Ahmednagar District. Purchased.
- 100 Lead Coins, Andhrabhritya. Presented by the Madras Government.
- 3 Gold Pathan Coins; two of Muhammed bin Tughlak, and one of Alla Uddin Muhammed Shah, found in the Budaun District. Purchased.
- 10 Gold Viraraya Fanams, found in the Chinglepat District. Presented by the Madras Government.
- 10 Silver Coins, Indo-Sassanian, found in the Basti District. Purchased.
- 12 Silver Larin Coins, found in the Thana District. Purchased.
- 2 Modern Indian Rupees, found in the Ahmednagar District. Purchased.
- 10 Copper Indo-Sassanian Coins, found in the Rohtak District. Presented by the Government of India.
- 20 Modern Indian Rupees, found in the Kulladgha District. Presented by the Bombay Government.
- 32 Copper Pathan Coins, Sikandar Lodi, found in the Bahraich District. Purchased.
- 2 Silver Coins of Krishna Raja Rashtrakuta, found in Cavel Street, near Kalbadevi Road, Bombay. Presented by the Collector of Bombay.
- 11 Copper Coins, Indo-Sassanian, found in the Nassick District. Purchased.
- 20 Goa Silver Coins. Purchased.
- 3 Copper Plates bearing a grant of King Singhana II., found in the village site of Harijahañji in Karajaji Taluka of the Dharwar District. Presented by the Bombay Government.
- 12 Whole and 8 half Goa Rupees. Purchased.
- 1 Goa Rupee, A. D. 1824. Purchased.

- 4 Silver Coins, found at Sawant Wari. Purchased.
 - 6 Silver Coins of Samanta Deva, King of Kabul, found in the Hoshiarpur District. Purchased.
 - 1 Double gulden piece, struck in celebration of the Silver Wedding of the Emperor and Empress of Austria, 24th April 1879. Purchased.
 - 4 Silver Coins, found in the Belgaum District. Purchased.
 - 1 Gold Hun, found in the Ahmednagar District. Purchased.
 - 10 Silver and 20 Copper Coins, Kshatrap and Modern Indian Presented by Vajeshankar Gowrishankar, Esq.
 - 10 Silver Kshatrap Coins, found at Karangui, Sattara District. Presented by the Pant Pratinidhi.
 - Buddhist Relics, found at Sopârâ, near Bassein. Presented by the Bombay Government.
 - 5 Kufic Coins and pottery, glass and shell ornaments, found in the ruins of the city of Nadir Shah, near Thal Chotiali. Presented by Col. Sturt.
 - 37 Gold and 286 Silver Coins (Mamluk, Pathan, Persian, Armenian, Genoa) found at Broach. Purchased.
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