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ART. I. — On the ruined city of Bījapūr, its Persian inscriptions, and translations of the latter into English. By James Bird, Esq..... 367

	PAGE
ART. II. — Continuation of Ehrenberg's Paper on the Coral Banks of the Red Sea, from page 341 .....	390
— III.— The History of the Kalhora family of Sindh, descended from Abbas, the uncle of Mahomed the prophet, and commonly called Abbasides. By the late Captain McMurdo. Presented by the Secretary .....	402
— IV.— Anatomy of the Common Musquitoe ( <i>Culex pipiens</i> ). By J. H. Carter, Esq., of the Bombay Medical Service.....	430
— V.— Note on the Iron Ore in the vicinity of Malwan. By Ball G. Shastree, Esq.....	435
— VI.— A brief account of the minor Bauddha Caves of Beira and Bajah, in the neighbourhood of Karli. Communicated in a letter, from Mr. Westergaard, to James Bird, Esq., with translations, by the latter, of inscriptions found at both .....	438
— VII.— Meteorological Observations. By Dr. Buist .....	443
— VIII.— Bibliothæcal notices of important collections, in India and the East, by the Secretary. No. 1. The Arabic and Persian library of Miyan Mahomed Panah, at Kach Bhuj.....	448
— IX.— Extracts from Proceedings of the Society.....	462

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MAY—1844.

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ART. I.—*On the ruined city of Bijapur, its Persian inscriptions, and translations of the latter into English.*—  
By JAMES BIRD, Esq.

PART II.

As the interesting ruins of Bijapur in the Dekhan, have afforded matter for two papers already published, \* it would be now unnecessary to revert to this subject, had there been nothing left to either add or correct. No sketches of the buildings, however, nor any copy of the Persian inscriptions to be met with, having accompanied the former accounts, the necessity for further detail still exists; whilst the Brahminical remains, within the citadel, which have almost escaped observation, and the Haly-Kanara inscriptions, until now undeciphered, being subjects of curiosity, naturally lead us to inquire into the condition of this part of the country, preceding the foundation of the Adil Shahy state: which, as the most powerful of the five Mahomedan kingdoms of the Dekhan, existed from about A. D. 1500 to 1685, and had its origin, in the distracted affairs of the prior Mahomedan dynasty of Bider, during the turbulent reign of Mahomed Shah Bhamany.

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\* The one is, by Captain Sydenham, in the 13th volume of the Asiatic Researches, p. 432, Quarto Edition; and the other is, by Captain Sykes, in the Bombay Literary Transactions. The latter professes to be only notes regarding the principal buildings, and a traditionary account of their origin.

The capital called Bijapur, or Vijayapur\* meaning the city of victory, was subsequently named Bidpur, or Vidyapur, the city of learning. It stands in the midst of an extensive arid plain, in Lat. 17°9' north, between the Bîma and Krishna rivers; and, though now containing but few inhabitants, is visited and admired by many, attracted there by curiosity to view its extensive ruins and stately mausoleums.

It is nearly south-east from Poona, at the distance of two hundred miles, and is about one hundred and thirty from Satara. The road from either leads through a very uninteresting country, offering little or nothing that is worthy the attention of a traveller, and fatiguing the eye with the continued succession of trap rocks and barren heaths; while here and there narrow valleys and patches of scanty cultivation, barely supply food for the inhabitants, if not plentifully watered by the rainy season. The Satara valley is the most rich and fertile in the whole tract, and presents a pleasant diversity of tree and verdure in the plain, to relieve the barrenness of the surrounding mountains. Soon after leaving this, the country expands into undulating heaths, covered by stunted grass; and on the banks of the numerous water courses, descending from the distant hilly ranges on the right and left, the appearance of walled villages occasionally relieves the dreary sameness of the landscape.

The traveller, in approaching Bijapur from the westward, makes his last halting place at the village of Tikota, which is thirteen miles distant from the Mekka or western gate of the city wall. There is a large Mahomedan building said to be the sepulchre of Malik Sandal; who was, as appears, an officer at the Courts of Ibrahim and Mahomed Adil Shah, the fifth and sixth kings of Bijapur.

About ten miles beyond Tikota the first appearance of ruins commences, in the form of a broken down wall, or out-work, which is all that at present is remaining of the defences belonging to the village of Torgha, now called Torwah; and which was constructed by Ibrahim Adil Shah the 2nd, when, about the twenty-fourth year of his reign, Hej. 1011, A. D. 1604, he removed the seat of Government from the citadel of Bijapur to this place. The astrologers having pronounced it would prove unlucky for him to remain longer at the former, he removed the Court at their suggestion to Torgha, and caused palaces and mosques to be built there, giving it the name Naorispur, or the novel

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\* I have adopted Sir William Jones's system of orthography.

city. This event is placed by others, somewhat earlier, being Hej. 1006, A. D. 1597,\* or the eighteenth year of his reign; but it seems probable that both dates are correct, and announce two different events; this referring to the commencement of the new city, and the other to the removal of the Court, on its completion. The new capital having been plundered, by Malik Amber of Ahmednagar, in Hej. 1031, † A. D. 1621, ‡ it was soon afterwards abandoned for the former residence of the Court; and when Aurungzeb took Bijapur, in A. D. 1686, it is described by the journalist of Aurungzeb's transactions in the Dekhan "as quite depopulated, its ruined palaces only remaining, with a thick wall surrounding it, whose stately gateways were falling to decay." §

In viewing Bijapur, from the neighbourhood of these ruins, and at a distance of three miles from the outer wall on the westward, we hail the first appearance of it as strikingly beautiful and magnificent. When I first saw it there happened to be a light haze overhanging the city; but as this gradually unrolled itself from the buildings, before the morning breeze, leaving the large dome of Súltan Mahomed's tomb partly exposed, at a time too when innumerable slender minarets, buildings, trees, and enclosures, burst into view, I here beheld a true picture of what the finest oriental cities have at all times been, and could scarcely persuade myself that this was not even then fully inhabited. Continuing to pass on, however, through heaps of mouldering ruins, the illusive idea of population soon vanishes; and though palaces, mosques, caravanserais, and streets of fallen houses, point out where it once existed, scarcely a single inhabitant is to be met with, until after having passed these remains of the suburbs, we terminate our journey of three miles, at the Mekka gate. Here, as in other parts of the East, the huts of slaves and traders were to be found in contact with the magnificent dwellings of the great and noble; but the extensive enclosures surrounding the palaces of the rich, diversified as they were by trees, gardens, and summer houses, with the numerous bazaars, now pointed out by the streets on either hand, and the

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\* In the Hindústani history of Bijapur, Hej. 1000 is the date given for this.

† In the Hindústani history the date of this is Hej. 1033.

‡ The words commemorative of this event are *وبران شد آن نورس باصلک*  
this new City was made a desert by Malik, giving the numerals Hej. 1031.

§ Scott's *Ferishta's Dekhan*. Vol. ii. p. 73.

public edifices of mosques and tombs, possessing all the magnitude and beauty of architecture that was in keeping with the spirit of the times, render this one of the most interesting of cities.

Arriving at the outer wall we enter the enclosed town, or *Petah*, by the *Mekka* gate ; and find that between this and the ditch of the citadel or inner fort, there is a wide space occupied by mosques, tombs, gardens, and tamarind trees ; leaving a sufficient open space, however, for a large encampment of horse and foot, when required in the event of a siege.

After this general description of a once celebrated city, it now remains for me to give some detailed account of the most remarkable of its edifices. I may here limit my observations to two heads ; the one illustrative of the buildings in the citadel and enclosed town, the other of those in the suburbs and city on the westward.

#### THE CITADEL AND ENCLOSED TOWN.

The wall of the enclosed town, which is many miles in circumference, is flanked by numerous semicircular towers ; and was, at one time, strengthened by a ditch and covert way, now in many parts destroyed and admitting cultivated fields to closely approach the curtain. It is strongly built of stone and lime with a parapet nine feet in height and three in thickness ; and was completed by *Ali Adil Shah the 1st*, in the era of the *Hej. 974*, A. D. 1566, or two years after he and his *Mahomedan* confederates had overturned the neighbouring *Hindú* principality of *Vijayanagar*, sometimes called *Bijauagar*.

The citadel, which is within this enclosure, and is placed more particularly to the west side of its irregular square, is defended by a rampart, round towers, and *fause bray*, having also a wet ditch about one hundred and twenty feet in breadth. The ditch, which was kept completely flooded in former times, is now nearly dry on the north side ; on the south, it is of considerable depth, and contains small fish ; but there are no alligators as mentioned by *Tavernier*. It would appear that the water of the ditch on the north side has been at all times deficient, there being a double wall and second wet ditch at that part. The only entrance to the fortification is on the east face, by two gateways ;\* the

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\* There is another gateway, on the north-west side, leading through the

inner one of which has a door made of wooden planks clamped by iron plates, which are rivetted on the other side, by strong pegs of the same metal.

Having here passed into the citadel we come immediately to four pillars of polished black basalt,\* three of which are situated on the right and one on the left hand side. They belonged to a Hindú temple, as would appear, and were made an offering, Captain Sydenham says, by the widow of Ráma Rája, to Súltan Ali Adil Shah the 1st, when the Bījānagar kingdom was ruined by the Mahomedan confederacy, at the battle of Telicotta, as before noticed. But in the absence of well authenticated information on this point, I may be permitted to doubt the truth of this report; and as similar pillars are to be met with among the Bráhmínical remains near by, it seems probable, that if not carried away from Bījānagar to be a vainglorious boast of victory and a triumph of the Mahomedan faith, they were formerly part of the Hindú temple now standing in ruins on either hand; and through which the present gateway was carried, on the first foundation of the citadel by Yúsaf Adil Shah, who according to Ferishta and others built the fort.†

Two other rows of pillars are to be seen a few paces further on to the right, and three similar ones to the left, which are the only remaining parts of the Hindú temple just alluded to. Though not uniform in shape, the pillars consist generally of a plain base, a rudely carved shaft with a square projection in the middle, and an overhanging capital. Many of them are inscribed at the base, to commemorate grants of land given to the temple by the Rajput families of Chalúkyā and

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inner wall on that quarter, to a Hindú temple, yet kept in repair, and which may have been dedicated in former times to the ladies of the Harem who were of that persuasion.

\* Not black marble, as stated by Captain Sydenham.

† The building of the Fort is placed by the author of the *Busatin-us-Sulatin* in Hej. 910, A. D. 1513; being three years after Yusaf Adil Shah's death—according to Ferishta, whose historical records bear, generally, every mark of fidelity and truth. The death of Yusaf Adil Shah, the first king of Bījapūr, is differently fixed in various histories. The *Tab-kati Akbary* places it in Hej. 913, A. D. 1507; the *Tarikhí Mir Ibrahim Asad Khany* in Hej. 927, A. D. 1519; and Ferishta in Hej. 916, A. D. 1510. The Chronogram given by the *Tharikhí Asad Khany* is *يوسف شاه جننے* and furnishes the numerals for its date; but as this history appears to be the same with the *Tharikhí Haft Kúrsy*, which was written in the reign of Ali Adil Shah

Yadava,\* who were the reigning Hindú princes, in this part of the country, previous to the first Mahomedan invasion of the Dekhan, about the beginning of the 14th century. The oldest of the grants, which is written in Sanscrit, and in the Haly Kanara character, announces the appropriation of a gift of land to this temple of the deity Narasinha,† by Chalúkya Mula Devara, in the Shalivahan period 1114, or A. D. 1192.‡ There is a similar gift to the same deity, written in the name of Shankrapa Danda Nayk, the military prime minister of Yadava Narayana, a Chakrawarty Raja, during the forty-sixth year of that prince's reign, or in the 1162 year of the Shalivahan period, A. D. 1240, being forty-eight years later than the former.

The whole style of sculpture is here very similar to that of the Ellora excavations; and if not told by the inscriptions that this temple was a Vishnava one, we might conjecture that such had been its dedication, by simply forming an opinion from the subjects that have been represented on the square projections of the pillars. Among the mythological devices there is one of a cross-legged figure sitting with the hands joined, as if employed in devotion, whilst on the right and left there are two standing figures in attendance. It is intended, probably, to represent an ascetic, in the act of worship; but a Bráhmín who was with me conjectured it to be a Jain deity. There is a representation also of Ganesha on another pillar, and of Krishna killing the serpent Kalya, as related in the Bhagavata. The image of the elephant is also sculptured; and though diminutive like all the others, it is so far interesting that it shows how here, as in the excavations of the Dekhan, it held a conspicuous place in the mythology of the people, who, some centuries back, professed the Hindú religion in these parts.

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the 2nd, it is not entitled to so much credit as Ferishta who wrote nearer the time, and with the best authorities before him.

\* The Chalúkya and Yadava tribes are two of the thirty-six races of Kshetryas, or Rajputs, enumerated in the Prithvi Rai Rayasa; which is a history of Prithvi Rai the last Hindú king of Delhi, and was written by the bard Chandra, about the date of these inscriptions. Some account of this work will be found in the September number of the Calcutta Oriental Magazine, where the origin of the mountain Abú, in Khatyawar, is detailed at length.

† Vishnú in his fourth avatar when he descended as a man-lion.

‡ This is the year in which Prithvi Rai, called Pithao Ray by the Mahomedans, fell in the battle at Tahnesar, fighting at the head of the whole assembled Rajput Princes of India to oppose the invasion of Mahomed Ghory.



Proceeding onwards from the temple we come to a yet more extensive Hindú building, which is situated to the left. This is an Agrahar, or Bráhmínical College, which the Mahomedans converted into a mosque, by placing therein a Mambar, or pulpit, and writing the confession of faith over the Mehráb, or arch of the altar, on the westward. It possesses a large enclosed space in front, which is entered by a vestibule; whose portico, being extended into wings, occupies the complete length of the Agrahar. On entering the area we find that the building consists of two stories, and that the lower presents a front of ten tall columns, each of a single stone, placed six or seven feet distant from the other, and deepening backwards at right angles in rows of six columns each. The style of the architecture is that which is common to the oldest Hindú buildings in the Dekhan, and exhibits massy pieces of quartz stone-rock,\* passing from one pillar to another, in order to form the roof; these being laid along each other, in a similar manner, for the walls, without having been originally joined together by lime or any other cementing substance.† There are also one or two pillars of black basalt, which do not appear to have belonged to the original building; as all the others are of the quartz rock, which must have been brought from some distance, there being no appearance of this mineralogical formation in the immediate neighbourhood.‡ A smaller, though in other respects similar Agra-

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\* It might be classed without much impropriety as a species of sandstone.

† This is the Cyclopean mode of building, and is very similar to the style of the temples in Kashmir as described by Ferishta.

‡ The author of a modern history of Bijapur quotes the authority of the Tarikhi Mulhakat to show that this building was originally a mosque, and constructed by the Mahomedans. According to his account Aiz-addin Abur Jah, one of the nobles of Ala-ad-din Khilji, king of Delhi, was governor of the place in Hej. 801; and in 807 A. D. 1307, he erected a wooden mosque at the request of the Hindú minister of Raja Ram Deo of Devagarh. His son Karim-ad-din Abur Jah, in Hej. 716 A. D. 1316, caused a stone mosque to be constructed, and his name is accordingly mentioned by the following inscription, in the Balbud character, on one of the pillars. A curious admixture of corrupt Arabic with Sanscrit occurs in the inscription, and is a remarkable specimen of what must be considered the Mahratta language at that time.

The account of the building given on the authority of the above history, appears apocryphal.

har is to be met with on the north-east of what is called the Adawlat Khanah ; and both would indicate that there must have been a considerable Hindú town here previous to the time it was fortified by the first king of Bijapur. In answer to the numerous inquiries I made on this subject, I could only receive the unsatisfactory information that they were founded by a Hindú raja, named Bijan Rai, whose capital was Mangalbira,\* and in whose time, it is said, a Búrj or round tower now standing was built. It is also traditionally related, that soon after this time, Pír Mabrit Khandayat,† the leader of a body of Mahomedan fakírs, having come here, expelled the Bráhmíns from the Agrahars, and propagated the faith of Islam, previous to any regular invasion of the Dekhan by an army :—and that when Yusaf Adil Shah founded Bijapur, this town was called Bijan Hully.‡ The tomb of the Pír's son

॥श्रीग.॥

स्वस्ति शके १२४२ रौद्रसंक्रमरे श्रियुद्धधुरोणनामविजयराज्योदयितततिर्पोनिमालिकू करीमदीनदक्षिणवाराणसीविजयापुरीवरीलमषितीकरविली. सालहौउटगेचासुतारुरैवैया णेमषितिकेलिमोलक्रेमासकरुन्धेविकरिशेतेवेतनचोवोसचावरचोवीसहातनिश्चितकरुनुदि- धली. मंगलमाहश्री.

In the fortunate year of the Shahn, or Shalivahan period 1242, and A. D. 1320 in the Raodra year of the Cycle, the hero and victorious ruler named Malik Karim-ad-din, who like the sun is all powerful, erected the upper part of the mosque. Revolya, a carpenter of the village of Saliódagé constructed the mosque ; and agreed to receive as the price of his labour a saleable freehold estate of twenty Charwar of land of twenty cubits, which was fixed and given. May it greatly prosper.

\* Mangalbira, or Mangalivira, is a hill-fort near the Maun river, which flows into the Bims, and is about fifteen miles S. S. E. of Panderpúr.

† The Kshetryas, or Rajpúts of Orissa, who are the feudal lords of the soil, and hold it on condition of service, are called Khandayats ; (see A. R. Vol. xv. p. 222,) and if any such occurrence, as above related, ever took place, it may have been caused by a body of converted Rajpúts, driven southward in the progress of the Mahomedan arms on the north.

‡ Meaning the village of Bijun, and I am disposed to think that this was inscribed by order of Malik Kafur, who was the general of Alla-ad-din Khiljy, the first Mahomedan conqueror of the Dekhan. The style of the architecture is more Hindú than Mahomedan, though this certainly might arise from the circumstance of a Hindú workman having constructed the building.

which is within the open area of the largest Agrahar, is built of lime and stone, and is covered with Arabic sentences from the Koran, now much defaced. His own burial place is to the eastward, at some distance, and his descendants who yet reside there, possess some rights in the village of Tinié Hally, not far from Bijapur.

The Mahomedan buildings in the citadel are completely in a state of ruin, if we except a small mosque called the Mekka Musjid, which was built by the 1st Ali Adil Shah. It is also named from having a representation of that celebrated place on its Kaba, and is a small chaste building, consisting of twelve arches, supported by an equal number of finely cut stone pillars, disposed in a square. Behind this, and to the north, stood the Adaolat Khanah, where the kings usually received the congratulations of the multitude and the petitions of the poor. It consisted of two stories, with wide verandas, elevated on large wooden pillars, and was standing when I first visited Bijapur; but, in consequence of the building falling quickly to decay, the Raja of Sattara has lately taken down the whole; and the only remaining parts now to be seen, are the ruined fountain in the garden, and the terrace where people were usually allowed to present themselves. This building was erected by the 1st Ali Adil Shah.

On the right of it, and adjoining, was the Sona Mahal, or gilded palace, which was burnt down. A little to the westward, and in front, we observe the Ananda Mahal, or Harem, which fronts the south. It consists of three stories, each story having a middle hall and smaller apartments, at either end, communicating with it through narrow arches, which may be shut up by curtains when necessary. It had formerly two wings, towards the north, similarly built; and all parts of the building communicated by means of narrow staircases. The whole is crowned by a board terrace, and a wall nine or ten feet in height, surmounted by many small minarets to give the buildings a finished appearance.

To the west of this place is the Dhobí Mahal; and to the south the Sejadah Mahal, or Sath Khandí.\* The walls were formerly covered with fresco paintings, and portraits of people belonging to the court, most of which are now defaced. I observed, however, an elegant por-

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\* It was named the Sejadah Mahal from being a place of retirement for the princesses to pay their devotions; and took the appellation of Sath Khandí from being seven stories high.

trait of a Mahomedan priest, whose features were Turkish, and complexion very fair. There is also a drawing of Mahomed,\* the sixth king, in company with his favourite dancing girl Rhamba. He is seated on a cushion, near which are laid his Sehtar, † a basket of flowers, and a Persian book. The expression of his countenance is that of good nature, and much kindness of disposition; virtues for which he is yet celebrated among the people, and has been frequently praised by historians.

The only other thing that formerly attracted notice, at the citadel, was the stone representation of Rama Raja's head. It was on the right of the gate at entering; but, having been removed from thence by the Raja of Sattara, was lately thrown into the ditch.

The Pettah, or enclosed city, was formerly divided into numerous quarters; each being distinguished by the appellation of the different bazars, or market places, in its immediate neighbourhood. Some of the divisions yet known are the Khizanah, Jamaa Masjid, Chauk, Karinja, and Padshapur bazars; there being many others of inferior note that have lost their title, or are little remembered.

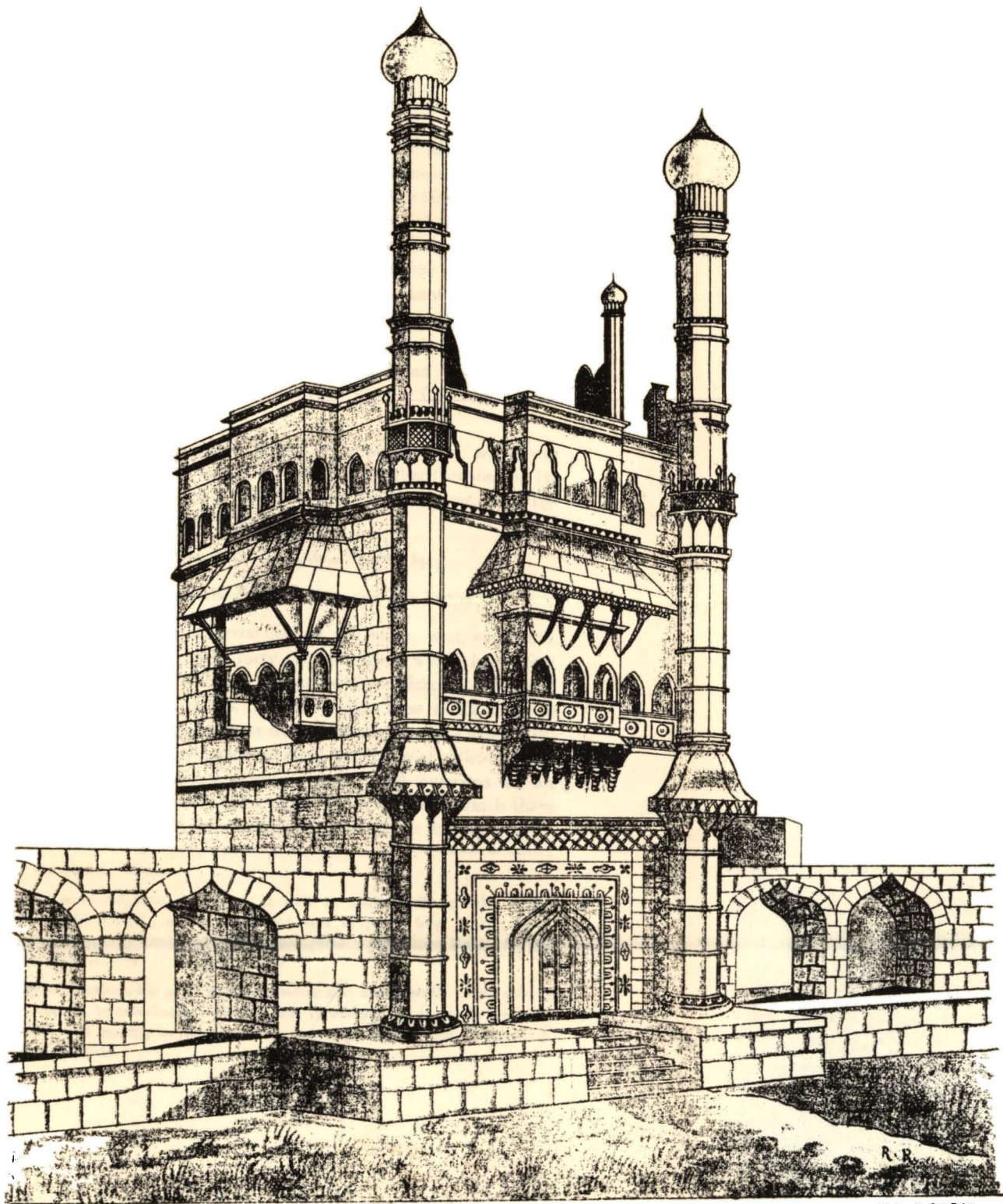
Proceeding directly eastward, along a broad and handsome street, leading from the entrance of the citadel, we come immediately to a row of small arches on the right. These were once used as shops; and from having then served for the foundations of a treasury, palace, state prison, and other buildings, were known by the name of the Khizanah bazar. ‡ Somewhat further on, and on the same side is the site of the Mehtry Mahal; § concerning which an absurd story is in circulation, among the vulgar, and has been retailed, without examination, by others, that it was built by a sweeper, or Halalkhor, who had become unexpectedly the possessor of considerable wealth, in consequence of being the identical person who met Ibrahim Adil Shah the 1st, when, in his sickness, he had made a vow, to present a certain sum of money to whomsoever he should first see on a certain morning, and which resolution was adopted, at the suggestion of a crafty astrologer who insured his recovery, and intended to profit by the remedy. This idle tale has no foundation but what the

\* Captain Sydenham says Ali Adil Shah.

† The three stringed gultar.

‡ The treasury market.

§ The princely palace.



B. E. S. PRESS.

THE MEHTRY MAHAL AT BIJAPUR.

ignorance of the vulgar has given it : for the difference of meaning in the Persian and Hindústaní word *Mehtar* not being known to them, they have affixed the appellation of a sweeper, in the latter language, to that which designated a lord, or chief, in the other, and which was the title too of this building from its original foundation. It is a small but elegant structure, of three stories high, having minarets at the corners and in front,\* with ornamental carving, in soft claystone, about its windows.

On the left, and almost opposite to this, four large Gothic looking arches draw our attention. They formed the gateway leading to the palaces of Mústafa Khan Ardistany,† and Ewaz Khan ; the former of whom was a distinguished nobleman at the Bijapur Court during the reign of its 4th king.

We next come to the *Jamaa Musjid*, or great mosque, which was built by Ali Adil Shah 1st, during the life of his father Ibrahim the 1st and the following Chronogram, which is near the altar piece, gives the date of the structure, Hej. 943, A. D. 1536.

‡ بيا بمسجد سلطان عاقبت محمود سنه ٩٤٣

“Enter the mosque of the Súlтан whose end was happy.”

It is an extensive edifice, surrounded on the north, west, and south sides by a high wall of nearly forty feet in height ; which concealing the dome gives the whole a clumsy appearance from without. The wall has a lower story of false arches, raised on a plain base of six or seven feet in height, and an upper one, or narrow arcade, opening externally, along which runs a passage, communicating with the roof of the mosque. We enter by a door on the north side, and find ourselves in an extensive court raised about six feet high ; in the midst of which there is a fountain, and on the right a raised pavement of two feet high, front-

\* See the drawing of this.

† He was murdered, about the year A. D. 1581, by Kishwar Khan ; who, on the death of Ali Adil Shah I., having seized the reins of power from Kamll Khan, (a nobleman frequently mentioned by the Portuguese writers, then Regent for the minor Ibrahim Adil Shah II.) ruled the State.

‡ Captain Sydenham has given a wrong reading and consequently wrong date of this Chronogram, by substituting *بنا* for *بيا* thus furnishing the numerals Hej. 991 A. D. 1583, and placing its foundation in the reign of Ibrahim II. instead of Hej. 943, A. D. 1536.

ing the mosque on the east. The body of the building consists of a magnificent arcade, two hundred and forty feet broad, by one hundred and thirty-eight. The pillars are all equi-distant, something more than twenty-six feet from centre to centre, and elevated twenty-five feet. From them spring arches, of the usual pointed shape, common to musjids, which support a flat dome resting between every four pillars. In the centre of the floor below, there is a clear space of 75 feet, over which rises the large external dome of an egg shape, and whose span of fifty-four feet is raised eighty feet from the pavement. On the north and south walls there are two handsome piazzas, that consist of seven large arches and run from the body of the mosque, to about one hundred and eighty-six feet.

The Mehrab, or altar on the west, is elegantly gilded, and displays above its centre the following inscription :—

الله محمد ابوبكر عمر عثمان حيدر

“Allah, Mahomed, Abúbikir, Omar, Osman, Hydar,”——\* which informs us that Mahomed the sixth king, by whose orders the ornaments were made, was of the Súnni sect† of Islam, though all the others, excepting Ibrahim the 1st, was of the Shía persuasion.

There are several other inscriptions among which are the following :—

این محراب سلطنت یاد دارم زینت یافتہ سلطان محمد عادلشاہ

“I remember that this royal altar was ornamented by orders of Mahomed Adil Shah.”

برقصر عمر تکیہ مکن استوار نیست در دار بیقرار کسی را قرار نیست

“Place not reliance on this life because it is not steadfast, and in this house of inquietude nothing is at rest for any one.”

خوش منزایست دنیا رونق بچشم ما خوش دولتیست عمر ولی پایدار نیست

“Pleasant is the stage of the world now sparkling in mine eye ; and happy is the lot of my life, but it is fleeting.”

\* The name of Ali, the son-in-law of the Prophet.

† The Turks are of this faith, acknowledging the three first Khalifs ; and the Persians are of the other, acknowledging Ali and the twelve Imams.

بنده در کاخ غلام سلطان محمد شاه خلدالله قله اعالي ياقوت دابولي  
سنه ۱۰۴۵

“Yakúti Dabeúly\* was the servant of the mosque and the slave of Mahomed Shah, whose shadow may God continue to support. Hej. 1045 A. D. 1635.”

The aggregate height of the dome, from the ground to its apex, may be about one hundred and twenty feet. The floor below, which is chúnamed,† is divided by black lines into numerous square portions, or *musallas*, made agreeably to the order of Aurangzeb, when he took Bijapur and carried away the velvet carpets, along with a large golden chain, and other valuables, belonging to the mosque.

After leaving the *Jamaa Musjid* and going northwards, we come to the *mausoleum* of Mahomed, the sixth king. It is chiefly remarkable for its dome being of equal extent to that of St. Paul's of London, but being composed of brick and lime, and built out of all proportion to the other parts of the edifice, it ceases to be an object of much wonder, and can bear no comparison in point of beauty with the other.

The tomb itself, a heavy looking building of a quadrangular form, has an octagonal minaret at each corner, ascending from below, and is built on a terrace of six hundred feet square and two high. Each face of it presents three elevated false arches, of a Gothic appearance, rising from the pavement, and supporting several feet of plain lime work and plaster above; whilst the whole is surmounted by an ornamental cornice of grey basalt, and a balustrade, six feet high, terminating in small cupolas. The base of the middle arch is of grey basalt, and the two others of stone-work and plaster. The minarets at the corners consist of eight octagonal rooms, or stories, twelve feet broad, which lead into each other by means of winding staircases, which are terminated above by cupolas, communicating with the terraced roof of the building. Each of these stories has seven small arched windows, opening outwardly and looking into the court below; while the eighth one admits a passage for the circular staircase. From this, also, we

\* The appellation for a tribe of Abyssinians known in India.

† This, except to those in India, requires explanation. The fine carbonate of lime, called chúná or chúnám in this country, is of such a nature as to take a polish little inferior to the smoothness of marble; and is generally used for the floor of buildings.



enter the large dome and arrive on a broad ledge surrounding its interior edge. It is large enough to admit of a carriage being wheeled round it, and rests on supports, that inclining inwards in curves, resemble half arches. The cupolas and dome communicate with each other by numerous niches; and the echo of the voice on the wall being thus broken, is rendered less distinctly audible than it otherwise would be. The whole height of the tomb may be a hundred and fifty feet. There is a commanding view of the town and surrounding country from its terraced roof, where may be seen the broad expanse of barren heath and falling ruin, stretching in melancholy grandeur before us.

We enter the body of the building by a lofty door-way on the south side where the first thing fixing our attention is the grave of the king. It is covered with cloth, and placed in the centre of the structure, under a wooden canopy on a terrace. To the left of it, facing the spectator, are the graves of his youngest wife and the son of Alí Adil Shah II. Those of his favourite dancing girl Rhamba, his daughter the Begam, and his eldest wife \* who performed the pilgrimage to Mekka, are situated in succession on the right. On the inner side of the door-way, where we enter, there are several inscriptions, written in Toghra letters, to commemorate the year of the Súltan's death. The first is,

سلطان محمد جنت آشیانی سنه ۱۰۶۷

"Súltan Mahomed a dweller in Paradise," which words give the numerals, Hej. 1067 A. D. 1656.

The second,

عاقبت محمد محمود شد سنه ۱۰۶۷

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\* This is the lady spoken of by the traveller Bernier, in his notice of Bijapur. Bernier, who was in India from A. D. 1655 to 1667, says "Visiapoor (Bijapur) however, is verging towards dissolution. The Moghal has made himself master of Parinda, the key of the kingdom Bider, a strong and handsome town, and other important places. The death of the king, (Mahomed Shah) without male issue, must operate unfavourably on the future concerns of the country. The throne is filled by a young man, ("Alí Adil Shah") educated and adopted as her son by the Queen, sister of the king of Golconda, who, by the by, has been ill requited for her kindness. She recently returned from Mekka, and experienced a cold and insulting reception; the young monarch pretending that her conduct on board the Dutch vessel, which conveyed her to Mekka, was unbecoming of her sex and rank.—*Brock's translation of Bernier, II., p. 221.*

“The end of Mahomed was commendable,” giving the numeral, Hej. 1067 A. D. 1656.

The third,

دارالسلام شه محمد شد سنه ۱۰۶۸

“King Mahomed was in the house of peace.” This gives the numerals, Hej. 1068, A. D. 1657, thus differing by one year from the other. Such an occurrence, however, is thought of little importance among the orientals when the words of a *chronogram* appear appropriate. The true year of his death was A. D. 1657.

Opposite the east and west sides of the *mausoleum*, there are two ruined fountains; and at the end of a platform, on the west, there is a small but handsome mosque which remains in tolerable repair. The wall of the extensive enclosure belonging to the tomb has become a mass of rubbish, and the *Nakar Khanah*, or gateway on the southern face, where the large drum was formerly beaten, is the only part of it now left entire. The dwellings in this neighbourhood were known by the name of *Padshapur bazar*.

Returning westerly we come again to the fort ditch, where stands the palace of the Asari Sharif, so named from its containing a few hairs of Mahomed's beard, called the relics of the Prophet. It is a large and heavy looking building of brick and lime; whose magnificent verandah, thirty-three feet broad and one hundred and twenty long, has an elevated roof supported by four massy wooden pillars. We enter by a door on the south; and on our left find a stone staircase leading to the upper part of the palace; and to a hall of the same dimensions as the verandah, where are two large folding doors at the south and north ends. Having passed the latter, we come to a small closet, on the right, where the relics of the Prophet are deposited; but which are only shown once a year for the gratification of the faithful. These were formerly exhibited to the multitude from a small balcony which extends along part of the upper story. The building is accommodated with a fine reservoir of water, twenty-five yards long, sixty broad, and six deep, supplied from a distance, by several of the square towers called *Garj*.

This palace, which was built by Mahomed Adil Shah, contains a library of Korans and religious books, copied in the best style of oriental

writing, but no works of history. \* It formerly communicated with the citadel by means of a bridge, of which nothing now remains excepting the pillars, † and succeeded to the honor of holding the precious relics of the Prophet, after another such building, within the citadel, had been burnt down.

Following the edge of the ditch, to the south-west, we come to a massy square tower called the Chatr Ganj; which is one of fourteen such that were built by the unfortunatè Afzal Khan, who met his death at the hands of Sivaji, the founder of the Mahratta empire. ‡ These, which are contrivances for giving impetus to the water of an aqueduct, were built, it would appear, in the time of Mahomed Shah for the purpose of supplying the city. The following inscription, on the one first mentioned, must be read, with some interest, by all who have curiosity to know the condition of one so intimately associated with the first Mahratta leader, as was Afzal Khan. The inscription on the original is written in Toghra character,

بر رای صنعت پیرای طراحان عجایب کارونادرد کاران نگارخانه روزگار هویدا  
 باد که باصر جلیل القدر بادشاه صلیمان بارگاه آفتاب اوج صرفرازی سلطان  
 محمد بادشاه غازی خن اقبال تومان سپه سالار دورن سرآمد نویان دهن  
 دیندار کفر شکن مهبط انوار الطاف الهی افضل خان محمد شاهي کز غرض سپهر  
 کنزاعلی فضل فضلا و فضل افضل از هر ماکی بجای تسبیح آواز آید که افضل  
 افضل این نقب آب که موسوم به محمد ندامت از بهر آسودگی خلق خدا  
 باهتلم تمام بظهور آورده ناتشنه لبان عالم ازین آب سیراب دل و آسوده  
 خاطر گشته بدعای دوام سلطنت ابد پیوند پادشاه گیتی پناه رطب اللسان  
 باشند سنه ۱۰۶۳

“Be it known to the executors of ornamental arts, the architects of important works, and to celebrated living workmen, that Afzal Khan Mahomed Shahy, a nobleman of good fortune, the present Comman-

\* At the request of Lieut. Col. Briggs, the late Resident at Sattara, Mír Kheirat Ali, commonly called Mùsthak, the learned Persian Secretary of the Residency, made out a catalogue of the whole; but no historical works were discovered.

† See the sketch of this for which, as for most of the others I am indebted to the kindness of Mr. Robertson, and Lieut. Ash of the Artillery.

‡ This happened in the month of October 1659.

der-in-Chief, the first in rank of Dekhan lords, the religious destroyer of infidelity, on whom descends God's favour, whom heaven pronounces to be the most accomplished and excellent, and whose name like God's praise, is resounded from every quarter, saying it is excellence, did after much labour, and by order of Mahomed Shah Ghazy, (the exalted in dignity, whose court is like Súlyman's, (Solomon's) and whose glory is as the sun,) render this aqueduct conspicuous, (calling it by the name of Mahomed Nidda,) for the convenience of God's people, so that whosoever should have a thirsty lip might have his heart filled and satisfied at this water, whilst his tongue would be moist in praying that this sovereignty of the king, the asylum of the universe, may abide for ever; Héj. 1063, A. D. 1652."

The unfinished tomb of Ali Adil Shah II. is to be seen westward of the Asari Sharíf, and on the north of the citadel. It is a noble ruin of seven large Gothic looking arches constructed on a terrace fifteen feet high and more than two hundred square. Had not the death of the Súltan put a stop to its progress, and prevented the addition of an upper story, in conformity with the original design, it would have surpassed every other building at Bijapur, both in magnificence and beauty.

There are several other tombs and buildings within the circuit of the enclosed town, none of which deserve more than a passing notice. Those most conspicuous are the two tombs standing together on the S. W. of the citadel. They are those of a celebrated Fakir, named Sídí Rehan, and of his pupil Khawas Khan; who after the death of Ali Adil Shah II. was appointed regent and guardian to his infant son Sekander. His tomb is to the southward of his preceptor's. In a direction S. E. from these, we come to the tombs of one of Aurangzeb's wives, and that of Kishwar Khan,\* whose father, Asad Khan, plays a conspicuous figure in the early Portuguese transactions, as related by themselves. The former of these buildings, which is within an extensive square enclosure, had formerly a terrace, paved with white marble and railed with panelled work done in red porphyry; but the whole of the former has been taken away, and only one small piece of the latter was remaining when I first visited the place. The mausolcum of Ali

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\* Kishwar Khan, who was taken and put to death by one of the Nizam Shahy kings, founded the fort of Dharrú in the time of the 1st Ali Adil Shah.

Adil Shah I. lies a little to the southward of these and near to the rampart of the outer wall. It is a low mean looking building, and, but for him who lies within, would not require a notice.

Besides these are also several round towers, which, according to the inscriptions on them, were built at different times by people belonging to the court. Of these the *Uperí*, or *Hydar Burj*, was built by Chanda Khan, Hej. 951, A. D. 1573, and is only remarkable for giving support to an extraordinary long gun that lies there.

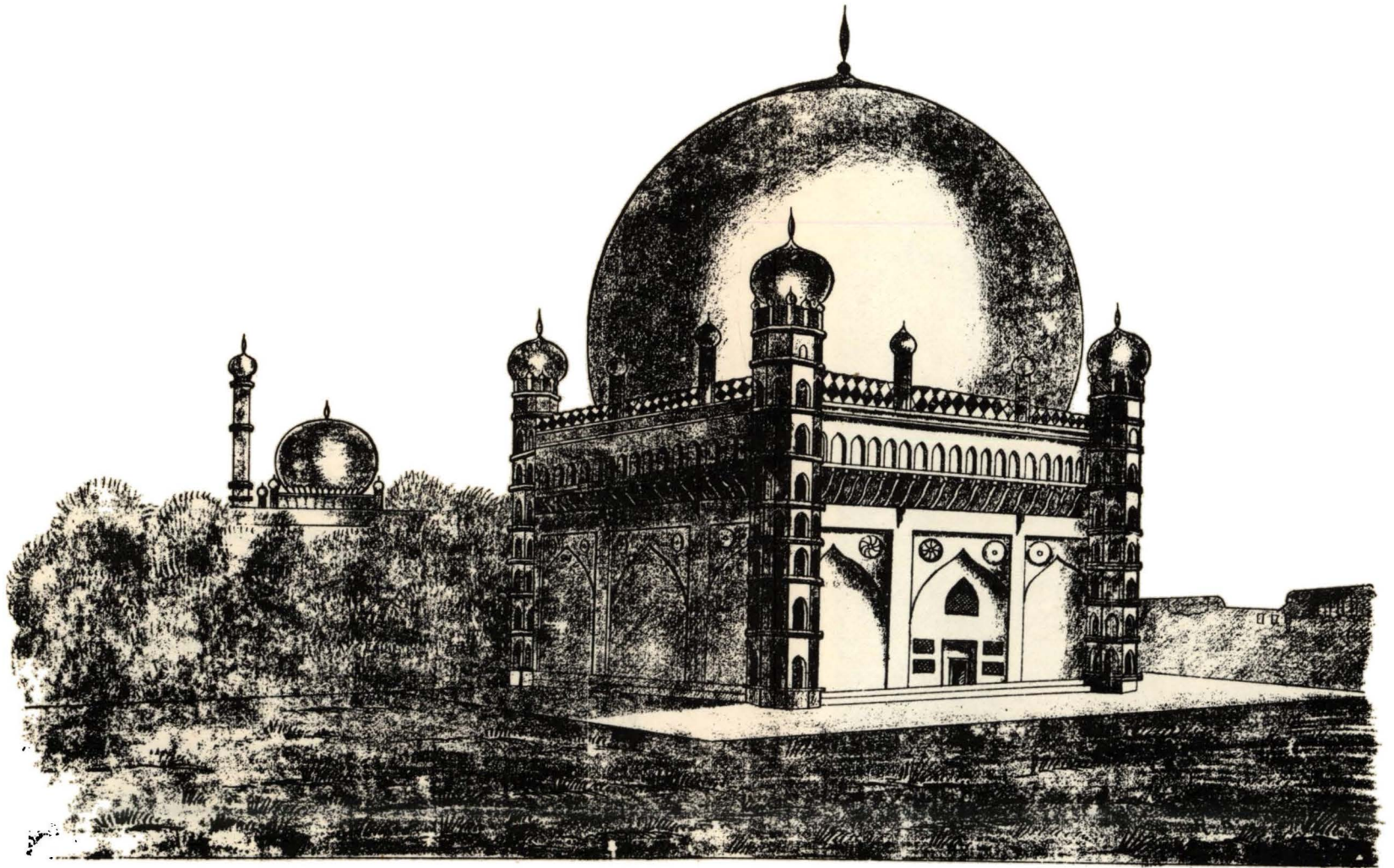
Besides the aqueducts, which supply the town with water brought from Torwah there are several large wells of which the Taj and Chanda Baorees are those best known. The former was the work of Senid-úl-múlk, the vizier of Súltan Mahomed; and the other was executed by Chand Bíbí, the heroic wife of Ali Adil Shah 1st, who has been deservedly immortalized by the Ferishta for her celebrated defence of Ahmednagar.

It only now remains for me, as connected with this part of my subject, to notice that the famed piece of ordnance, called the *Múktí Maidan*, is resting on a round tower of the outer wall on the westward, and that this bastion is known by the name of the *Búrjí Shírza*, or the lion bastion, from being ornamented with two lions' heads represented in stone. The following inscription, which is on the right hand side ascending the steps that lead to it, has recorded the date of this building:—

در زمان غازي خسرو علي عادل لقب آنکه داد داورز داد مرتضي فتح مبین  
 از جهاد سعد منجهلي شاه شد در پنج ماه  
 این چنین برجی قوی بنیاد چون کوه متین  
 هاتف غیب از کمال خرمی تاریخ سال بی بدل شد برج ثرزه گفت از چرخ برین  
 سنه ۱۰۷۹

“During the reign of the victorious king surnamed Ali Adil Shah, to whom by the favour of Múrtaza (Ali) God granted a distinguished victory, this bastion was, in the course of five months, made firm as the strong mountain through the fortunate endeavours of Mujly Shah; at which time an angel, in delight, gave the date of the year, saying that the Shirza bastion was without an equal.” The last words give Hej. 1079, A. D. 1668.

The large gun of this bastion has been often the subject of panegyric; but has been no less frequently than erroneously described. It is



D. E. S. PRESS

MAHOMED SHAH'S TOMB AT BIJAPÚR.

smooth and polished externally ; and on being struck emits a sound like that of a bell. It is composed apparently of the same kind of alloy as is employed in manufacturing gongs\* and hookah bottoms, but with some variation, probably in the proportion of the metals. The muzzle is wrought into a representation of the nose, eyes, ears, and extended jaws of some ravenous animal, probably that one called Shirza, † which appears to hold, in Mahomedan imagination, an equally fabulous existence as the *Húma*. The proportions of this piece of ordnance are as follows :—

Diameter at the breech, feet	4	10	inches.
Ditto..... muzzle.....	5	2	ditto.
Ditto..... bore.....	2	4½	ditto.
Length.....	14	3	ditto.
Diameter of the touch-hole.....	¾		nearly.

The horrors said to have followed the firing of this gun in the time of Aurangzeb, the traditionary tale of which kept possession of the imagination of the Bījapúrians for upwards of a century, were falsified by the test of sober experience on the 5th of January 1829, when this gun having been charged by the Raja of Sattara's orders, with eighty pounds of coarse powder, was fired without any remarkable event following.

The people, on learning the Raja's intentions to try the experiment, left the city in alarm ; but were soon relieved from their unnecessary terror by the report of the explosion, which though loud came not near their exaggerated ideas. Even had the powder been better than was used on this occasion, the effect would have been nothing wonderful.

It has been erroneously stated, by former writers, that Aurangzeb cast this piece of ordnance when he captured Bījapūr : and on the faith of the journalist of his transactions in the Dekhan, translated by Scott, ‡ it has been asserted, but without being authenticated by other native writers, that he caused an inscription, in the name of Mahomed Adil Shah to be erased, substituting another in its stead. The purport of the former

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\* This has been ascertained by Dr. Thomson (See 'Annals of Philosophy' for September 1813, p. 208) to be an alloy of 80·427 parts of copper to 19·573 parts of tin. The instrument which is of tamborin shape, is used to announce the divisions of time by being struck with a mallet.

† Shirza signifies a lion or any other ravenous creature.

‡ Scott's Dekhan, vol. II. p. 72.

was to say that he obtained it from *Nizam Shah* by conquest, but it would appear, from the *Búsatin-ús-súlatin*, that it was obtained through fraud and not by force; and that, on the 10th of Moharram, in the year one thousand and forty-two of the Hej.\* Agha Rizwan “delivered up the fort of Púrinda† to the king Mahomed Ghazy: at which time Morary Marah'ta, who had obtained command of that fort, brought the *Maidan* from thence to Bījapūr.” It had been cast by Rúmy Khan, a Turk in the service of the Nizam Shahy kings of Ahmednagar, and was obtained from them in the manner above related; which fact is rendered sufficiently evident by the inscriptions now on the gun.

These are:—

لا اله الا الله ولا مراد

“*There is no god but God, and none besides him.*”

ابوالغازي نظام شاه بادشاه خادم اهل بيت رسول الله وهي سنه ٩٥٦

*Abul-ghazi, Nizam Shah, king, servant of the race of the Apostle (Mohammed), and of the house of God. 956.*”

عمل محمد بن حسن رومي

“*Fecit Mohammed Ben Hasan Rumi.*”

شاه عالمگير غازي پادشاه دين پناه

انکه داد عدل داد و ملک شاهان را گرفت

فتح بیجاپور کرد و بهر تاریخ ظفر رونمود اقبال و گفتا ملک میدان را گرفت  
في سنه ٣٠ جلوس والا مطابق سنه هجري ١٠٩٧

\* This date corresponds with the 19th July, O. S. A. D. 1632. It has been placed by Grant Duff in A. D. 1636, but the complicated method of reckoning followed by Mahomedan historians, in dating their facts from the personal era of the prince, and then adapting them to the years of the Hejirah, has occasioned great confusion and inaccuracy in their details; and most of our English writers, yet further the reducing the dates to the years of the Christian era, and only specifying generally the beginning of the Hejirah years corresponding to ours, have perpetuated the evil of anachronisms which are but too apparent in our Indian histories. In a future note, under the head of Aurangzeb's transactions before Bījapūr, I will endeavour to clear up the history of this time.

† This is an old Fort, on the eastern bank of the river *Sena*, about 70 or 80 miles from Ahmednagar.



*Shah Alumgir Ghazy, the asylum of religion, who granted the claims of the just, took possession of a kingly country and conquered Bijapur. For the date of the conquest good fortune came and said "he subdued the master of the field." \**

*In the thirtieth year of his exalted reign, corresponding to the one thousand and ninety-seventh year of the Hejirah.*

The 30th year of his reign † corresponds to Hej. 1097, A. D. 1685.

The last words give the numerals Hej. 1096, A. D. 1684-5, being one year less than the true date of the capture. The inscription is written in Toghra character.

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#### BUILDINGS OF THE SUBURBS.

The ruins on the west of the city wall stretch from thence as far as the village of Torgha; and part of them was called *Naorispuc*, as already mentioned. The communication between these and the interior is chiefly through two entrances on that side; one named the Mekka, and the other the Shahpur gate. The latter, situated northwards from the

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\* Instead of reading ملك میدان (Maliki Maidan) it is sometimes read ملك میدان (Mulki Maidan) with the word کنند understood, which would materially change the sense of this passage. I prefer the former reading of the text.

† The 29th year of Aurangzeb's *Jalus*, or reign, reckoning from the victory over his brother Dara Sheko, and adapted to the years of the Hejirah, terminated the 17th November O. S. A. D. 1685; and Bijapur had submitted about three weeks before; so that the inscription, having been subsequently executed, is dated the 30th year, or Hej. 1097, which commenced on the 12th of November 1685. If it be assumed that Aurangzeb dated his personal era, without adapting it to the years of the Hejirah, and from the period of his victory over Dara and subsequent ascension to the throne at Metbora, events that happened on the 8th and 15th of June 1656, (see Catrou, who wrote from the evidence of an eye-witness M. Manouchi,) then indeed the 30th year of his reign had commenced when he took Bijapur, but may not be reconciled to be the year of the Hej. 1097, as such would fall within the year Hej. 1096, or the latter part of A. D. 1685. Nor may these contradictions be obviated by dating the commencement of the reign, from Hej. 1098, when he was again crowned at Delhi A. D. 1657, and the whole is an evident error arising from the loose mode of reckoning the year of the *Jalus* and those of the Hejirah.

other, leads through a still well inhabited bazar, which was first peopled by the orders of Ali Adil Shah 1st, when in Hej. 965, A. D. 1556, he was crowned there. The other principal ones, leading from within, are the Bahmany, Alawal, and Fattah Darwazeh. The last, which is on the south side, and on the road to the village of Monguly, is that by which Aurangzeb entered Bijapur. It therefore received its present name, the gate of conquest.

The suburbs were divided formerly into different *Púrah*s, or quarters. Those now known are the Shah Púrah, near the gate of that name; the Yakut Púrah close by, and the Zohrah to the southward of both, sometimes named Ibrahim Púrah, from being in the neighbourhood of the Ibrahim Roza, or mausoleum of Ibrahim Adil Shah II. This tomb is decidedly the most chaste in design, and classical in execution of all the works which the Bijapur sovereigns have left behind them; and is distant about three hundred yards from the Mekka gate. On the north side, where we enter by an elevated gateway, the exterior of the inclosure presents a handsome front of eleven small hollow arches, and in its interior side there are numerous small cells intended as a caravanserai or place of lodging for travellers.

The building itself is situated on an elevated platform, on the west of which there is a mosque. It has a tasteful colonnade of seven arches, on each of its four sides, forming a verandah of 15 feet broad round the whole interior; to this there is a slightly elevated pavement and second verandah, the roof of which is beautifully carved, and the work displayed to advantage by being finished with a handsome cornice. The dome rising above the whole, surmounted by a brass crescent, is in much better taste and proportion to the rest of the building, than in any of the others before described; and is in keeping with the four slender minarets at the corners, which consist of four stories including the cupola. The whole body of the mausoleum is elaborately carved in Toghra letters, embodying extracts from the Koran; and which were formerly gilded and enamelled, as were all the other inscriptions in the city. Ibrahim Adil Shah II. and fifth of the dynasty, lies interred here, along with his wife *Taji Sultan*, otherwise named Taj Jehan Begam, who was the daughter of Saiyad Abd-ur Rehman, and mother of Mahomed Adil Shah, the sixth of his race. It would appear from the following inscription, written in Toghra character, over the northern door, that it was originally intended for the mausoleum of this lady.

در عجب ماند آسمان از ارتفاع این بنا سربر آوراز زمین شدگو مگر چرخي جدا  
 روضه فردوس زين روضه طراوت برده وام  
 هر ستونش در لطافت سروي از باغ صفا  
 بهر تاريخش صلا داده ملك زواج فلک یاد گارتاج سلطان اين بناي دلفزا

*Heaven stood astonished at the elevation of this building, and it might be said that when its head rose from the earth, another heaven was produced. The garden of Paradise has borrowed its beauty from this garden, and every pillar here is graceful as the cypress tree in the garden of purity. An angel from heaven above announced the date of the structure by saying, "This building, which makes the heart glad, is the memorial of Taji Sultan." The last words give the numerals Hej. 1036, A. D. 1626.*

The next inscription, which is over the southern door, is her eulogium :—

ازو زيبا سربر و تاج عفت	زيبده حشمت و بالقيس رفعت
بدار الملک جنت کرد رحلت	چو زين منزلگه خاكي غبرا
بگفتا تاج سلطان اهل جنت	چو پرسيدم ز پير عقل تاريخ

*In pomp like Zobaida,\* and in magnificence like Bilkis, † she was the ornament of the throne and crown of chastity, and when she passed to the capital of Paradise from this terrestrial abode, which is but dust, when I asked an old man the date thereof, he answered me saying, "Taji Sultan is among the people of Paradise." The words give Hej. 1043, A. D. 1633.*

The following is on the same door :—

ملك صندل رسانيده بپايان	به حسن اهتمام اين کار روضه
که خلد اندر صفائش ماند حيران	بنا فرموده روضه تاج سلطان
ولي نهصد و گر ضم گشته با آن	نموده خرچ ان يکديم لک هون

*Malik Sandal, by expending one hundred and fifty thousand huns, ‡ with nine hundred more, caused this tomb to be finished after*

\* The wife of the famous Khaliff Harun-oor-Rashid.

† The eastern name for the queen of Sheba.

‡ A hun is equal to three and half rupees.

*great exertion. It was erected, according to order, for Tiji Sultan, at whose purity even Eden was astonished.*

The mosque, which is on the same terrace with the tomb, is about one hundred and five feet long and sixty-six deep; presenting a front, on the east, of seven tasteful arches. In the open space between it and the tomb, there is a ruined fountain and reservoir.

In former times the *mambar*, or pulpit, was surmounted by an ornamental representation of a mosque, regarding which an anecdote of Aurangzeb, is mentioned, very characteristic of his extreme punctilio in matters of religion. The ornament was not thought orthodox; and having been removed by his order accordingly, part of it is now laid near the steps as you ascend from the area, or court, to the platform of the mosque.

The only remaining building in the suburbs to be noticed is the Idgah. It was built by Aurangzeb.

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## ART II.—*Continuation of Ehrenberg's Paper on the Coral Banks of the Red Sea, from page 341.*

### *Summary of our discoveries respecting Coral Animals as masses of rock.*

(1.) The coral banks of the Red Sea are always found in shallow water: there, especially in the neighbourhood of land, and in proportion as they approach land both their number and extent increase. We met them in deep water only where evident signs of volcanic activity were seen in their neighbourhood.

(2.) These coral reefs are never shaped like rings or funnels; they are always tabular, often elongated like tape, or in rows running parallel with the coast, with which they are evidently connected in a geological point of view.

(3.) The coasts of the Red Sea consist, on the Arabian side, sometimes of marl and gypsum, as near Hamam Firaun in the north, and near El Gisan in the south; sometimes of sandstone, as near Nakhus; or of the sandstone conglomerate of quartz and felspar with dolomite-cement as near Ras Mohammed; seldom of lava as near El Wassem, in the south of

Gunfude ; they often also consist of a tertier modern white and soft limestone ; in horizontal strata, with diminutive, scarcely visible, fragments of fossil shells ; which as inclined plains, often 15 to 20 miles broad, of considerable elevation, form the declivity, towards the sea, of the lofty porphyry, sienite, and silicious schistus mountains, that run through the length of Arabia, and very rarely approach the sea itself. The greater number of the flat islands, as well as of those which rise 300 feet above the surface of the sea, consist of a tertier modern very white limestone, which often resembles baked sand. Others again have high mountains, which consist of the abovementioned dolomitish conglomerate and of gypsum—not of marl and bergmehl (Tiran) or of lava (Ketumbul), and correspond with the mineral of the neighbouring coast, as is clearly proved by specimens I have brought with me. \*

(4) All coral banks, which could be examined, had for their basis a modern limestone in horizontal strata, which nowhere owes its existence to the sticking together and hardening of corals, or distinct fragments of them ; for nothing of the kind is seen in them, but it consists almost wholly of nearly microscopic, small, much dissolved organized fragments, or cemented sand, and sometimes appears to be evidently formed at an earlier period than the colonization of corals took place. This limestone may stand sometimes in the same relation to the corals as mould to the forest ; but where it forms rocks, rising 100 to 300 feet, above the surface of the sea, without containing a single vestige of corals, either enclosed or lying upon it, there it is probable that it is older than the formation of corals.

(5.) Living as well as dead coral stocks form nowhere, in the Red Sea, high layers and rising one upon another ; they give only the simple coating of most submarine rocks. The height of the coral stocks was often only 1 to 2 feet ; nowhere, as far as could be ascertained, more than  $1\frac{1}{2}$  fathom according to the magnitude of the several masses of rock. Thus it appears that the magnitude, generally ascribed to coral stocks, by Ruoy and Gaimard, of 25 to 30 feet exceeds those of the Red Sea by double.

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\* The grains of the dolomitish conglomerate, of which, together with gypsum, consists the elevated island Tiran, which forms also mountains on the neighbouring coast, near Sherm el Sheik, not far from Ras Mohammed, are in the latter place covered with a thin black coating of manganese, wherefore the colour of the mountain near Ras Mohammed is black. Is this the spot which Burkhard considered volcanic ? Moreover the mineral contains iron ore.

According to Forster there are a few coral stocks in the South Sea which rise 3 fathoms above the surface of the water ; this may serve as a scale for the possible height of such layers in the Southern Ocean.

Just as one forest does not continue to grow upon the other, even when the first trees die, and are left to themselves, or disappear in sand as is the case with primeval forests, and as the vegetable earth is little when compared to the forest, just so appeared to me the natural relations of corals and their soil.

(6.) Only rocky soil was covered with a thick coating of corals, and we found no corals in sand, except a few paltry ones which were washed upon it by the waves. Magazines of live corals, which I had established on the sandy coast near Tor, died in a couple of days.

It is true we often found thin layers of a white sand, upon the coral reefs, between the several coral blocks ; but the corals which were lying upon them loose were not many. It is likely they were broken off, either by the decay of their basis, or by the motion of the waves, or they were developed upon dead fragments. This sand is not stirred by the waves, and appears to be a slight precipitate of the sea water, after much agitation of great storms : it is perfectly harmless, because it is inconsiderable, and cannot easily be stirred up by the waves on account of the surrounding corals. Many *fungi*, *Holothuri*, and sea-fishes, are found in these places.

(7.) We noticed 110 different species of coral animals in the Red Sea ; the number of all the various species, which are hitherto discovered there, amounts to 120, consequently nearly a third of all living coral animals of the earth which are accurately known.\*

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\* (a) Respecting these various forms I have given, in a former treatise, on the coral animals, more accurate communications, and there I have endeavoured to elicit, and to confirm, by the most particular examinations, the more general results communicated in the present paper. The whole family of the proper coral animals (with one mouth,) which were gradually divided into 158 different species, and had been mixed up with totally heterogeneous animals and plants, I reduced to 80 species, after a minute examination and comparison of their structure and development ; they might perhaps be reduced to less, if some species were made sub-species. Still I thought it more important to distinguish the families, where they represented a distinctly developed whole, than to endeavour to prove and show thoroughly the oneness of the principle of division. In a historical point of view, everywhere nature is not developed by the reason of man, but human reason is enlarged and unfolded by nature, whose foundation is deeper and stronger than all its systems. Thus it

(8.) Accurate observation of the peculiar structure of the several forms of coral animals, makes it evident that all those, that principally

appeared to me more correct, and more advantageous, for science, not to sketch a logical scheme, and arrange under it the natural objects, whose groups in that case would fall asunder without any bond, in a later necessary alteration of that scheme, and would offer no firm basis for future investigation; but to form small groups of families, according to logical principles, which were arranged from several minutely examined forms, and which might afford a firmer basis for future systematic experiments. Thus the systematic view, which is given by me in their individual parts, is most accurate and to be depended upon; and the above divisions are mere characters taken a *potiori* of gradually larger and more comprehensive groups. They might be altered, in the progress of science, without the material, which they contain in themselves, falling to the ground being unsupported, as is the case if the Actinia are placed near the Echinoderma, and the Tethya, Spongi, &c. near the corals, or the Cellepora and Millepora are united.

(b.) The segregation of limestone from coral animals is, where it forms something like regular leaves, small sticks, &c; a support of the muscular system with its sinews, and a separation of its vessels, just as in all other animals. Thus are the bones of men and mammalia, the broad shells of the multimuscular Bivalva and the Columella, together with the spiral shell of the unimuscular univalve, which is connected with it. Sometimes, but very rarely, it is a secretion of the system of the skin, as the scales of fish, without having any direct connection with muscles and sinews. The inner Lamella, which, in the cross-cut of the Actinia, form the rays, are evident long muscles with long fibres, which, in their position and relation to the body, perfectly correspond to the *stone lamella* of the stone corals, which are covered with thin fibrous skins, and consequently appear to give the supports of such musculous skins. The axis of the Teidea and Gorgonina stands in the same relation with the cover of the univalve snails, which, as Oken already observed, seems to contain the germs of the other half of the bivalve shells. In bivalves I am inclined to consider every simple thorough going muscle as two directly opposed to each other, which meet on account of their common vessels in the centre of the animal. I shall not further enter upon this field of speculation, which must be more cultivated, by farther direct observations of the particulars of the vessels; but I thought that, by placing together these resemblances, I could lead to some causal relations of the phenomena in the segregation of limestone, which it would be desirable still more accurately to examine and correct. Of course I cannot presume to predict, whether a more intimate knowledge of the process of the separation of limestone, may be more easily obtained by a more minute observation of it in mammalia, or whether the coral animals might not be preferable for this purpose. But as the greatest success may be expected, where necessarily the most intense attention is directed towards the minutest parts, I am inclined to believe that the coral animals, or shells, will solve the riddle sooner than the larger mammalia, which bewilder the observer.

form masses of stone, are quite incapable of erecting strong walls, in order to defend themselves against the breakers, as Forster imagined. The coral animals do not live in stone pipes, and do not build like termitæ[?] or wasps, a common house, or nest, \* in order to protect themselves.

They are also not like oysters defended by stone covers ; all genuine and influential stone corals have outwardly the soft animal body, and the dendritical or spherical stone-scaffold forms the inner bones, or the lower foot. In order, therefore, to erect walls for coral basins, a few species of the coral animals would be obliged to expose their homogeneous naked body to the whole force of the breakers ; and, as it were, to sacrifice themselves for the rest. The homogeneous soft quality of the body leads us rather to infer, that the pernicious influences will also produce, in all, homogeneous effects. It is true the organ corals, on account of their stone-epidermis, live as it were in stone cases ; but even these are not fond of great breakers, and are also more delicate and brittle than many others of inconsiderable size.

(9.) Conflicting opinions are found among travellers, that according to some, coral animals shun the breakers, according to others delight in them, or that certain forms are fond of them ; and it is according to our observations that in general, living coral animals do not shun but love the breakers. In very calm basins we found more Tange, (sea weed,) than coral, but less beautiful and in less numerous forms than on lofty rocks and reefs ; in protected sandy places we met with more sea weed : (their forms were similar to the *Zostera* and *Thucagrostis* of the European seas, but often peculiar, viz. the species of *Barkania*, not unlike the *Halophila* of the South Sea, and *Schizotheca Hemprichi*, a form quite peculiar to the Red Sea, with a large case divided into many parts containing generally four seeds ; and with leaves resembling those of the *Thucagrostis*. Delile's singular *Loatera brillata* of the Red Sea is included in the *Barkania*.)

We saw the largest and most beautiful corals always on the outer edge of the coral reefs, but they were rarely branchy, mostly *Daedalina*.

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\* It is true, Ellis, the first accurate observer, defends himself against Baster, by asserting that he has not imagined nests but skins ; but the one comparison, as well as the other, does not apply to coral animals in general. It appears, in fact, that Ellis imagined the coral stock to be a Convolut of Serpula pipes, an arbitrary aggregate of many individual animals, among which also oyster banks are to be reckoned. But the coral stock is something altogether different from these things.



Close to the perpendicular outer edge, which is quite flooded by breakers, we found branchy forms in greatest perfection ; at a short distance from the outer edge, the specimens were much smaller.

Rocks that rise perpendicular, from the bottom, above the surface of the sea, on which the surge beats violently, have no coating of corals ; but, however perpendicular they may rise from a great depth, all those that do not reach the surface of the water, and consequently allow the waves to break over them, are covered with corals. This latter circumstance no doubt must much diminish the intensity of the agitated water ; but this appears by no means to inconvenience the coral animals, which seem on the contrary to like it, as it prevents the stagnation of decayed matter.

(10.) The coral animals are by no means soft, while in the water, or when young, and grow hard as they get older, or when exposed to the air ; though there are some forms which are always soft, and never grow hard, and there are others which, on account of a certain inner formation of bone, are always hard and have never been soft, except in embryo. These two classes of coral animals resemble each other very much in their outward form, so that inexperienced people continually confound them. Still all hard corals, with the exception of the organ-coral, (a single genus of 86 genera containing 3 of the whole 386 species) have a soft coating, which alone properly speaking constitutes the animal itself, or at least its essential part. This soft, very thin, and jelly like animal body, which forms the coating of the stone corals, often extends itself to a great length, and shows feelers like threads and fringes, capable of withdrawing themselves, though sometimes these are wanting altogether. Further, this soft animal, which is variously organized, is capable of withdrawing itself into the starlike cavities of its inner scaffolding of bones, and may outwardly lie so close as to appear like a very thin, scarcely perceptible, slimy coating of the stone. Other forms are altogether without any stone kernel, but possess still greater capability of contracting and expanding themselves, so as often to excite admiration ; and may, in regard to this strange and wonderful phenomenon, be called metamorphosis, although not in the strict sense of this word ; consequently all accounts of the metamorphoses of corals are only erroneous or fabulous.

(11) Living corals of the Red Sea do not exist at great depth. Already, in a depth of 6 fathoms, we found often not a single coral, though the less deep border of the island, or reefs close by, contained a great many. Also the pearl fishers of Yemen and Massava assured me, that

in a depth of 9 fathoms, there were no corals, in fact nothing but sand. We could not enter into more particular inquiries. It is true Ellis tells us that the *Greenlandish Umbellularia Encrinus* was caught in a depth of 236 fathoms, and where it is probable that it did not live alone. Repeated observations must show whether these whale-fishing accounts of Captain Adrian were not somewhat inaccurate.

(12.) The opinion of a natural dying off of whole generations of coral animals, at certain periods, in order to serve as a basis for fresh-developing generations, agrees no less with their physiological condition, and our experience, than the belief that they continue to grow when covered with sand, and that their growing one upon another is without the death of those that lie below. The latter is sometimes the case, but only with moss animals, and *Sertularina*.

(13.) It is evident that, perhaps with the exception of a few sands, the surface of the islands of the Red Sea is rather in a state of decay than of growth. We found nowhere, in the Red Sea, coral walls accumulated by the surge and resembling the sands in their existence, as said to be so common in the Indian Ocean.

(14.) The coral animals, which encircle, like a garland, the submarine foot of the islands, appear to spread over them where wind and waves gradually diminish the smaller islands; and thus hinder their further decay, where such has taken place a little below the surface of the water. Thus the coral banks of the Red Sea rise not from the bottom till a little below the surface of the water, as generally believed of the coral reefs of the Indian Ocean; and all coral banks appear to have been small flat islands; whose upper parts were partly decayed, partly blown away, and at last flooded, till on account of corals gradually covering them in a single layer, like plants in sands, they preserved an almost equal height. If the foundation of these islands had been a hard *granite* or *gneiss*, in place of a soft modern limestone, which may often be called nothing else but sand cemented, and raised by volcanic agency, I have no doubt but that, in similar formations, they would, instead of forming submarine coral banks, have continued lofty rocks, which the farther such extend into the sea become more isolated, (as I had a short time ago an opportunity of observing to my surprise in the Norwegian rocks, which in their appearance wonderfully resemble those coral banks). Add to this the tabular shape of the coral banks of the Red Sea evidently appears to be the result of the horizontal stratification of their soft foundation (the Norwegian rocks, which are not stra-

tified, but hard and indented, are merely rounded) ; on the other hand the numerous small funnel-like volcanoes of the South Sea appear, according to many existing observations, which agree in the main, to be the foundation of those coral rocks, and to have contributed to their circular shape.

If every gale of wind filled with sand the middle part of the circular coral reefs of the South Sea, most favourable to corals, the coral animals would die, like a forest overwhelmed with sand ; but, from what I have observed, it does not appear consistent with the nature of coral animals to suppose that these middle parts are filled up by more than one layer of corals.

The corals never seemed to like places where sea water has been rendered muddy by loose sand ; they always preferred places where the water was clear and transparent. And as far as I am aware there are no direct observations made, proving the existence of evidently preserved strata of corals being cemented and standing one on another, which, in undisturbed growth, at a former period have covered either a plain, or filled up a hollow place, and afterwards become accessible, by being raised through volcanic activity.

Thus it appears that the corals do not produce new islands but preserve them in a wonderful manner ; and that they are ornaments to those already in existence, exhorting to caution, exciting admiration, affording instruction, and giving proof of much life and activity in the sea.

The sea may collect, in immense heaps, at its bottom, the earthy remains of sea animals, shells, pricks of sea urchins, serpula-pipes, coral stones, and small fragments of them, forming out of them sand and masses of rock, which are raised here and there by volcanic activity ; while live corals may also, comparatively speaking, occupy the first rank among animals which secrete limestone, and, in regard to this process, may be worthy of very particular attention, as they no doubt exercise to a very high degree, by indirect operation, that influence on the surface of the earth which excites our wonder and admiration in the formation of limestone. But according to what laws it is possible, that such small organized bodies, containing but very little limestone-earth, (according to Vogel about 0.02 per cent.) should secrete such immense masses of carbonate of lime is a question not yet solved by the efforts which have been hitherto made.

Repeated researches in those regions may develop whether the low edges of craters, formerly higher than the numerous groups of small vol-

canoes in the South Sea, would not, without the covering of live corals, have been long ago entirely swept away by the sea; and whether the proper activity volcanoes would occasionally not have filled up the middle basins, and, by after decay, rendered them fit for vegetative and animal life, but oftener left them, for ages, unfilled up, and quite at the disposal of corals to build upon.

*On the additional knowledge of great organic life in the smallest space obtained by the improvement of the Microscope.*

Already, in former lectures, I have endeavoured to illustrate the organization of *Infusoria* as the smallest animals, and have expressed my conviction that these small moveable bodies, scarcely visible to the naked eye or quite invisible, and which, up to the present time, people were inclined to consider as gradually decreasing in structure, though capable of organization, are in themselves nothing but matter either organized in the most simple manner, or altogether exempt from organization. These small bodies, I say are distinctly and without any exception, very much complicated and organized.

These relations of organic life, proved to exist not only in *Rotatoria*, but also in all the principal forms of those that are designated, by Otto Frederic Mueller, *Animalcula Infusoria*, made it even necessary to divide these *Infusoria*, by thorough going physiological characters, into two distinct and separate classes, and in quite a different manner from what has been attempted by some Naturalists. I did not like to place a class of *Infusoria* in juxtaposition of a class of *Rotatoria*, but rather preferred to retain the term *Infusoria* in both lists of forms, distinguished by me on account of the similarity of their manner of living, both being observed in infusions. It is true the term *Infusoria* does not now appear to be suitable for either, but it is no doubt a convenient term for the whole, as Mueller found it, and nature pointed out.

The characters by which both classes of animals, formed of Mueller's *Infusoria*, have been organically distinguished, consisted according to my former observations, of the following relations to each other:—

*Rotatoria.*

*Polygastrica.*

(Mueller's *Trichoda*, *Vorticella*, *Brachiona*, &c.)

(Mueller's *Trichoda*, *Vorticella*, *Kolpoda*, *Monada*, &c.)

1. Particular whirl organs, with-
1. No particular whirl organs,

out the whirl faculty in the rest of and altogether exempt from the whirl the body, or the simple rim of the faculty of the whole body, or of a mouth.

few not farther distinguished spots, or of the simple rim of the mouth.

2. Simple gut with, or without, a stomach ; always with a mouth and a peculiar backside, sometimes with false guts, mostly with evident chewing apparatus, and teeth.

2. A gut divided into many stomach-like cells, without a peculiar backside, (*i. e.* many stomachs in the mouth without a gut,) or a gut covered with many stomachs, in the shape of bunches of grapes, with a mouth, and a peculiar backside, without any chewing apparatus.

3. One to four red points on the forepart rather more or less.

3. Points rare, often wanting altogether.

4. Propagation only by distinctly large but not numerous eggs, with shells without self-division.

4. Propagation by inner, very small, and numerous grains (eggs?), and (sometimes threefold) self-division : *viz.* spontaneous length and cross division, and formation of blossoms.

5. A complete, according to organic nature, possible and most probable, Gynandrisms.

5. No distinct Gynandrisms, still evident periodical formation of grains, in the inner part of all individuals (eggs?), and their secretion (bringing forth) Anandrisms.

The above mentioned observations have made it, undoubtedly, most probable, that the organization of animal bodies, and in the direction of the smallest space, within the limits of human comprehensiveness, dwindles by no means quickly down to inorganic matter, as it has been hitherto generally thought ; but demonstrates a very clear and distinct character, even in such small animal forms, which, on account of their diminutiveness, are perfectly invisible to the naked eye. I indulge the hope that a more recent observation, in which I have been eminently successful, will be particularly interesting at the present time, as it opens up a new circle of organs in the smallest animal forms, while it confirms the results which have been formerly come to.

Mr. Chevallier's microscope, which is very excellent, and which I have hitherto used, afforded me, at 8 inches visual range, and without inconvenience, only a magnitude 245 times in diameter, which might be increased by elongation of the tube however ; but it is inconvenient and renders observation fatiguing at an equal visual range of 380 times, or in measuring the objects in their true horizontal situation, *i. e.* at a longer visual range to the linear magnitude of 800 times. It then occurred to me that still stronger and more convenient magnitudes would lead to a more accurate knowledge of the physiology of the smallest organic bodies. I tried whether I could use, for these observations, the microscope of Mr. Ploessle of Vienna, which was lately purchased here by the Academy, and which is somewhat clearer than that of Chevallier's, and far excels it in magnifying power ; but I found an invincible difficulty in the minute, almost evanescent, focal distance of the *lens* of the objects in its greatest magnitude, and in which I was particularly interested. Neither by small pieces of glass, nor of mica, could I make an imprint of very small objects ; and it was quite impossible to observe through it *Infusoria* in water ; because the *lens*, which touched the water drop, necessarily a little convex, attracted the water to the rim of its enclosure, and too flat uncovered small surfaces of water evaporated too rapidly. In consequence I made no fresh discoveries with the improved microscope of Ploessle, which proved very useful in observing other objects.

At last on my repeatedly expressed desire of making such observations, and probably also at the request of other friends of this cause, the mechanic work-shop here of Mr. Pistor, well known by its scientific accuracy, offered under the personal direction of its head, to make *achromatic microscopes*, on Selligie's principle of combining several object lenses, which is the same upon which the microscopes of Chevallier and Ploessle are made ; and Mr. Shick, by his highly distinguished technical skill, succeeded, after accurate and attentive experiments, in producing a microscope, the first of its kind, according to certain rules of combining lenses calculated upon the refractory power of glass. I found this microscope of such excellence, that I was obliged to confess that among all with which I was acquainted, this was the most suitable for the purpose of examining the smallest organic parts. In it regard was paid to a suggestion of mine that it would be necessary to make it of a convenient size, neither too small nor too large, with a focal distance of at least near  $\frac{1}{2}$  line, in its greatest magnifying power, (in order to be able to apply both pres-

sure and water upon the smallest bodies). The construction of the instrument being convenient and light, and for this reason not very expensive, several oculars, without an extension of the *tubus*, allowed a magnitude of little less than 1000 times in diameter at a visual distance of 8 inches; which by the application of a still more powerful ocular glass, or *tubus*, or both together, might be more than doubled and extended so far, that the light, verging to obscurity, might still permit one to distinguish the adumbrations of small bodies. The terminus of twilight, in optic appearances, with the present apparatus, does not appear to exceed by much a linear magnitude of 3000 times, at least not to reach the double, whilst the terminus of light lies between 1000—2000 linear magnitude.

At the same time Mr. Shick made a more powerful ocular glass to fit my microscope of Chevallier; which, at the visual distance of 8 inches, and without extracting the *tubus*, increased its magnifying power to 525 times in diameter; but with extracted *tubus* and equal visual distance, 800 times; when measured in the level of the objects, the linear magnitude of the microscope exceeded a thousand times.

The result of several experiments, made with this new optic power, on the smallest organized bodies, was, as I have good reason to hope, quite astonishing. By looking through this improved microscope, I discovered immediately, in the *Infusoria* which happened to lie near me, distinct indented organs of mastication, as in the mouth of the *Kolpoda Cucullus* of Miller, which is one of the most common small *Polygastrica*. This discovery was the more interesting as it formerly appeared that the *Polygastrica* possessed a certain greater simplicity in their organic formation than the *Rotatoria*, and the power of the system of nourishment, indicated by evident warts and teeth, was not a small argument for the more intensive organic formation of the *Rotatoria*, than of the *Polygastrica*. This notion has not only been removed by the discovery of teeth in *Kolpoda*, but in this respect the case is quite reversed, as there are now *Polygastrica* which possess several teeth, and consequently in one respect more developed organs of mastication than the *Rotatoria*. While the greatest number of teeth, observed in the *Rotatoria* is only 12, *Kolpoda Cucullus* has evidently 16 teeth, which are placed in the form of a hollow cone, growing narrower invertedly, or like a net, and form the entrance of the mouth. It may also be compared to an open *Mossperistom*. Thus

in this respect, the above-mentioned character, which has been given also to the whole class of these animals, is to be altered.

At the same time I found another result which was in similar respects interesting. I clearly discovered, even in very small Monades, as I have already mentioned in former communications, regular red spots which are never wanting in the forepart of many *Infusoria*, which are, we have reason to believe eyes. The smallest Monades, which I have hitherto examined, had in their diameter a length of 1.92 of a Parisian-line. With the aid of the new discovery of magnifying power, I immediately discovered two species in a new class of *Polygastrica*, of which the larger is only 50½ lines in diameter, but the less not more than 1,500, and consequently belongs to the smallest of all Monades, which can be observed, but which still evidently show the mark of such eyes. (\*)

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ART. III.—*The History of the Kalthora family of Sindh, descended from Abbas, the uncle of Mahomed the Prophet, and commonly called Abbasides.* By the late Captain JAMES MCMURDO. *Presented by the Secretary.*

#### INTRODUCTORY NOTICE.

The posthumous papers of the late Captain McMurdo, hitherto published, will be found in the *Journal of the Royal Asiatic Society of*

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\* Other discoveries have been made quite recently. A large number of *Polygastrica Infusoria* have a mouth armed with 20 teeth. In *Paramecium Auralia* and also in many other species, I have discovered two large starlike and contractile organs in the inner part of the body, which again lead to a new circle of organs in *Polygastrica Infusoria* and in many *Rotatoria*; also in *Hydatina* I observe two inner rows of small finlike, tremulous organs, which were hitherto quite unknown; again I discovered, by stronger magnifying power, in *Euglena Viridis* and some other forms, a long proboscis (almost as long as the whole length of the body) which before I never could observe, because the magnifying power, which was then at my disposal, was not sufficient to make it appear. A more detailed account of these relations of organic life have been laid before the Academy, and forms a third paper, on the knowledge of organic life in the smallest space, with plates, which has been considered worthy by the Academy to be inserted in the next volume of their publications.

Thus it appears that these fresh discoveries confirm the opinion that the limit of the strongest organic life, in the direction of the smallest space, is both to be looked for, and to be admitted in much narrower spaces than could be hitherto observed by the human eye.



Great Britain and Ireland, and in the Bombay Geographical Transactions. Among the many subjects of interest, to which the energetic mind of this enterprising and intelligent officer was early directed, none appear to have occupied more of its attention than the ancient and modern history of Sindh, embracing the resources and productions of the country, with the state of the river Indus. About the year 1812, and soon after our author had been appointed Agent for Kach affairs, he began to collect all the Persian books procurable on the history of Sindh ; while several tracts, on the *parganahs* and towns of this province, and the different tribes of inhabitants, were expressly written for his information. Most of these Persian books and tracts, after Captain McMurdo's death, came into the possession of Mr. Norris, late Chief Secretary at Bombay, who presented them to the present Editor : and as no authentic information, on the state of ancient Sindh, beyond what these contain, seems to be now procurable, it may be useful to enumerate the several works from which may be collected the history of Sindh. Captain McMurdo was sanguine, in his anticipations, that if the libraries and records of the families at Bhakkar were open to research, a considerable addition might be thereby made to our stock of knowledge on this subject. No good reason, for such expectations being ever realized, seems to exist : for since the conquest of the country by the English, Captain Postans and others have vainly endeavoured to recover the lost authorities, if indeed such were ever in existence. Those which have come down to us were chiefly compiled in the reign of *Akbar* ; and among them, that most esteemed, is the *Tarikhi-Sindh* by *Mir Maasúm*, a native of *Bhakkar*, and the well known able associate of *Nizam-ad-din Ahmad Bakhshi* ; who compiled the excellent general history of India, called the *Tabkati-Akbari*. On the subject of the ancient history of the province, and its early conquest by the *Mahomedans*, (A. D. 712,) *Mir Maasúm* borrowed from a book called the *Chach Nama*, written by *Ali-bin-Hamid*, the son of *Abibikr* of *Kufa* in Arabia ; and those following him have imitated his example, without adding to our information. Besides this history, used by Captain McMurdo in compiling his account of Sindh, there was another, quoted frequently, to which it seems he had been much indebted, namely the history, called *Thofat-al-Ikram*. It was missing at his death and not found among his books ; but since the conquest of Sindh, and consequent plunder of *Hydrabad*, the Editor has been fortunate enough to obtain an excellent copy of this history, which appears to

have belonged to the library of the *Amirs*. Should leisure admit, he intends at no distant time to present, in the pages of this journal, the ancient history of the country, during the period it was connected with, or ruled by, Bactrians, Parthians, and Indo-Scythians, connecting such with the age of the first Mahomedan invasion ; where he will have recourse for information to the Persian works now mentioned, and to the papers of Captain McMurdo.

The portion of Sindhian history here given to the public is modern, and appears to have been in a great measure compiled from a book called *Wakeiati Sindh*, being an account of the family of Kalhora, who ruled the country previous to the rise of the *Amirs* of the Talpura family. It was written by a *Fakir* and relates the actions of *Miyan Mahomed Múrad Yab Khan*, otherwise entitled *Sirbúland Khan*, who and his other brothers, then struggling for power, were sons of the Kalhora, otherwise entitled *Khúda Yar Khan* II. Its narrative commences with the year of Hejirah 1166, and month of Zelhijah, being the end of September and beginning of October A. D. 1753, at which time Sindh was invaded by *Ahmad Shah Abdalli*, king of Afghanistan : an account of which will be found in Mr. Elphinstone's *Kabul*. Any information on the site of Mansúra or statistics of Sindh, by officers now in the province, will be gratefully acknowledged by the Asiatic Society.

JAMES BIRD, *Sec.*

Before pursuing the general history of Sindh, from the period when *Khúda-Yar-Khan* assumed the Government of the province, it becomes necessary to trace the annals of the family from its origin ; as it cannot but be interesting to know the events, which gradually led to the aggrandizement of the *Kalhoras*. It is to be regretted, that on this subject, the early *Mahomedan* writers have not left historical materials, sufficient to gratify curiosity ; but the following pages contain all the incidents connected with the founders of the family, that I have been able to discover.

A descendant of Abbas, named *Miyan-Odhanna*, appears to have resided in *Mekran*, where he was held in great estimation for his virtuous and religious life ; and in a manner not uncommon in the annals of the *Mahomedan* faith, attracted numerous followers ; some of whom from ignorance, and others perhaps from less innocent motives, represented

him in the light of a superior being. The adherents of the *Miyan* increasing, became in due time a distinct body of men under the appellation of *Odhanna*; and were perhaps proprietors of land in *Mekran*. The temporal authority of the *Miyan* was handed down from father to son as an inheritance, which, in proportion as the branches of the family increased, became less valuable, and more open to litigation. It is accordingly ascertained that in the fifth generation from *Miyan-Odhanna*, a descendant named *Gor Thall*, separating from the original stock, passed to the eastward, accompanied by a horde of followers, and established himself in *Kahi abela*, \* upon the ruins of the *Gufar* tribe, whom he expelled.

*Gor Thall* was succeeded in his rights and privileges, whatever they might have been, by his son *Bhill*, whose memory is still preserved in the fort of *Birlas*, and a celebrated mausoleum called the *Moti Makbiraah*; both of which are works of considerable extent, and from which we may presume that this chieftain was vested with the civil government of a tract of country adjoining *Kahirabela*. On the death of *Gor*, the succession was disputed by several brothers. *Jhunia*, who is connected with the subject of this memoir, having attached to his person a numerous train of followers, resigned his claim; and penetrating still further east fixed his abode at the village of *Kambatha*, where his holy descent and the celebrity of his ancestors procured him a reception among the *Odijah* † tribe. Here *Jhunia* married the daughter of a *Samma*, named *Dhera Pallah*, who was the independent chieftain of *Debil-Kangira*, a connexion which probably added to the influence of the holy man, and by which he had a son named *Mahomed*, from whom the sovereigns of the *Kalhora* dynasty derive their direct descent.

*Mahomed*, who succeeded to the fortunes of his father and family, A. H. 600. lived in the year 600 of the Hejirah, and the time when A. D. 1204 *Nasir-ad-din Kabachi* governed in the north of Sindh, and would seem to have acquired a greater degree of influence and repu-

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\* At present the capital of a *Mekran* chieftain styled *Jam*. *Gujar Rajputs* are still known in Kach and Sindh; and there is besides a description of *Gujar* among *Mahomedans* in Kach.

† This tribe is still known in Sindh. They resided in the *Sammawathee* Parganah.

tation, than had yet been enjoyed by his family. Several tributary chieftains, noticed in the history of this period as powerful zemindars of the country, give their daughters in marriage to *Mahomed*, who was thus introduced to the Court of *Multan*, where he was held in high respect, and received grants of land with other immunities in the *Bheralú* parganah, \* adjoining that of *Lahiri*. Here he fixed his *Jhunia* adherents in a town which he named *Jhunabela*, but ultimately died and was interred at *Kambutha*. *Mahomed* left eighteen sons by different wives, all of whom had numerous progeny; and from the branches named *Daud* and *Lashar*, the two powerful tribes of *Daud Putra* and *Lashar* have their origin.

From this period the members of the *Jhunia* family appear to have sunk into comparative obscurity, and it was not until the ninth generation that it was revived in the person of *Adam Shah* A. H. 965. about the year 965 † of the Hejirah, from which date the A. D. 1558. fortune of the *Kalhoras* rose by progressive steps, and in A. D. 1557. two hundred years elevated them from the prayer-carpet to the throne.

*Adam Shah* found himself by inheritance the leader of a numerous sect of holy mendicants, established by his ancestors, and Miyan Adam matured, in particular, by a religious fanatic named *Mi-Shah. ran Mahomed Mehdi*, ‡ to whose patriarchal chair the subject of these pages was heir by a maternal claim. This sect resided in the *Chandúka* parganah, where in *Adam Shah's* time they were joined West of Bhakkar. by the neighbouring tribes, who, enrolling themselves under the holy banners, surrendered, for the common benefit, a tract of land which they had before wrested from the *Chandoi* zemindars. In a few years the sect was so much extended that it became necessary to adopt some means of maintenance more adequate to their wants than the precarious and limited contributions of the charitable, or of the chiefs in the vicinity; and the first step to independence was the gift of the *Chan-*

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\* This occupies a tract of country to the east of the *Indus*, where the *Sutlej* and *Attock* unite.

† 1st *Miyan Mahomed*, 2d *Miyan Ibrahim*, 3d *Miyan Shah Mahomed*, 4th *Miyan Rana*, 5th *Miyan Tahir*, 6th *Miyan Khan*, 7th *Miyan Sahib*, 8th *Miyan Gogar*, 9th *Miyan Shah*.

‡ See account of the *Mehdivis*; *Bombay Transactions*, Vol. II., page 28.

*duka* parganah to these mendicants by the *Khan Khanan*,\* when he sought the *Shah's* blessing.

The Saints probably were sensible of the comforts attending worldly acquirements, and they devoted all their energies to extending their landed property. Whether with foresight of the future greatness of the family, or perhaps by a natural consequence of the effect of religion on uncultivated minds, the natives of Sindh, of all classes and descriptions, as if by common impulse, flocked to the beggars' standard, contributing their money, lands, or goods, to the wealth and importance of the general body. These advances to power were made at the expense of the surrounding Zemindars; who, naturally inimical to the further progress of such neighbours, excited the jealousy of the governor of *Multan*, and with the aid of his troops, the fakirs, as yet not hardened to warfare, were dispersed; and the venerable *Miyán Adam Shah* put to death.

The *Shah* appears to have been confined in *Multan* for some time, and his adherents, like a proscribed race, sought refuge in remote parts of the country where they were unknown. When the *Miyán* was executed, however, a friend in the capital conveyed his body to *Sakhar*,\*

where, agreeably to his last request, it was committed to the dust. The same friend, proceeding to the retirement of his family, drew them from privacy and established *Miyáns Ibrahim*

*Miyáns Ibrahim* and *Daúd*, the two sons of the deceased, in the chair and *Daúd*.

of their father, whilst the re-assured *fakirs* rapidly assembled in their former dwellings. It is highly probable that the renovation of the sect was allowed by the government of the country, because the principal agent in the transaction was a civil officer of *Multan*; the chieftain of which perhaps regretted the death of *Adam Shah*, although the peace of the province and the existence of the government might have been subverted, unless some such severe example had been made.

*Daud* was succeeded by his son *Miyán-al-Yas*, who died universally regretted; and his brother *Miyán Shah Ali*, commonly called *Sahib Mahomed*, ascended the temporal throne of the family. Under this leader the *fakirs* not only increased in numbers, but, by his prudence and judgment, their resources were multiplied in proportion. The *Miyán* encouraged his followers to cultivate the sur-

\* The Commander-in-chief of the *Delhi* army in the time of *Akbar Shah*.

rounding lands, and took a warm interest in every thing regarding this branch of government. He was aware that landed property would tend much to preserve the influence which his flock already possessed in the country ; whilst it would secure them the means of subsistence, under circumstances of adverse fortune. In pursuance of this policy a body of stout fakirs, having attacked the Zemindars of the *Abra* \* and *Song* † tribes, deprived them of their rights, and having driven them from the country, divided the land amongst themselves. The acquisition was followed by the cutting of the canal, known by the name of the *Larkhana Nalla*, a work executed by the industry of the sect who laid both banks under rich cultivation.

The *Abra* Chiefs, who were *Mahomedans*, having in vain endeavoured to recover their inheritance, had recourse to the *Moghal* governor of *Bhakkar*, who once more punished the fakirs and slew their leader. On this occasion, however, many actions were fought, in which the religious fanatics were sometimes successful ; and, although ultimately defeated, they were inured to war and hardships, the benefit of which they afterwards experienced.

*Miyún Shah Ali* was slain, and succeeded by his son *Nasir Mahomed*, in the year 1068 of the Hejirah, under whom the sect assumed the character of a military bevy ; and the famine and pestilence, which raged about this period in the province, perhaps facilitated the encroachments which they continued to make as opportunity offered. The Zemindars again appealed to the *Subahdar* of *Bhakkar*, who marching a force into the *Chanduka* district, compelled *Miyún Nasir* and his adherents to seek refuge in the sandy desert ; where, being in want of every necessary of life, he ventured from his retirement and dwelt on the borders of the inhabited country. The *Moghal* government continued to threaten and overawe the fakirs. As the territory subject to the mendicants yielded

\* A tribe originally inhabiting Sindh. It forms a member of the great *Samma* family. Some of the *Abras* became *Mahomedans*, whilst others adhered to the *Hindu* religion, and are met with in *Kach*. The district of *Abrasa* in the latter country derives its name from the chief *Abras*.

† This tribe I believe to be extinct. I have, however, met with individuals styling themselves *Song*. It was numerous before the *Mahomedan* conquest, and a tract of country took its name from them. The *Song* are perhaps the *Asangi* of the ancients.

no public revenue, the government was of course averse to their re-establishment, and this dislike being in unison with that of the *Bhúmiás* in general, a respectable army was detached to oppose the re-establishment of the fakirs.

A negociation was opened, and *Miyán Nasr* was induced to place his person in the power of the royal governor; who sent him prisoner to the Court of *Alamgir*, whilst the unfortunate fakirs, deprived of their Chief, were attacked, and after some resistance dispersed to places of concealment and security. In the meantime the *Kalhora* was a prisoner in *Hindustan*; in which state it is probable he would have spent the remainder of his life, had not fortune favoured his escape; and which having effected he reached the residence of his family in safety. *Nasr* again led his followers into Sindh, and succeeded in establishing them as before; but having placed the former capital *Tehri* at the disposal of one of his trusty men, he founded the town of *Khari* in a strong natural position, in the *Bhowar\** district, where he in person fixed his abode.

From this time, he successfully opposed the troops of *Bhakkar*, under the *Súbahdar* in person; but the ambitious and aspiring disposition of the *Miyán* brought upon him the jealousy of all his neighbours; whose intrigues for his overthrow were, however, generally defeated by his foresight and prudence. Whilst he continued, in this manner, by force to extend his territorial possessions, he farmed the parganah of *Lakhawat* from the governor of *Sehwan*, which being followed by other acquisitions of a similar nature, the patriarchal authority began to assume the appearance of an organized government.

*Miyán Nasr* enjoyed the satisfaction of having founded, on a firm basis, the fortunes of his family; and after five or six years departed this life at an advanced age.

*Miyán Dín Mahomed*, the son of *Nasr*, succeeded his father; but advantage of the change being taken by the *Zemindars* of *Mahomed*. *Bhowanir*, whose capital, *Fattahpúr*, had been occupied by the *Kalhoras*, the new chieftain found himself involved in a war before he was well seated in authority. The governor of *Sewí* led his troops to dislodge the fakirs, but after repeated defeat and disgrace, was superseded in command by an *Amír* named *Sheikh Jehan*, who was sent from India expressly to extirpate a sect, against which complaints

were constantly submitted, to the great annoyance of the royal Court. *Sheik Jehan*, though aided by the *Súbahdar* of *Bhakkar*, was still more unfortunate than his predecessor ; for having advanced indiscreetly, his camp was surprised in the night, and his troops being dispersed, were pursued by the *Kalhoras*, who slew the *Sheikh*, and harrassed the hasty retreat of *Allah Yar Khan*, the governor of *Bhakkar*. This action occurred at the village of *Kurela*.

Not long subsequent to the foregoing event, a sudden and unexpected irruption was made by the force of *Kabz Khan Barrohi*, who gaining considerable advantages over the *Kalhoras*, the latter sought and effected an accommodation, and the *Barrohis* retired to *Kelat*. The *Bhowanir* tribe, in whose country the *Kalhoras* were settled, always uneasy under the yoke, and encouraged by the late disaster, rose in arms but were suppressed. The relict of their independence was subverted, and their lands entirely occupied by *Dín Mahomed*, who was preparing to decide a quarrel with the *Afghan* governor of *Shikarpúr*, when he was arrested by intelligence of the approach of prince *Moaz-ad-dín* from *Múltan* to revenge the death and defeat of *Sheikh Jehan*.

The *Kalhora*, who was not wanting in foresight, deputed his brother with a respectable mission to make his peace with the prince. This embassy was completely successful, and *Moaz-ad-dín* commenced his retreat, when a headstrong and ignorant fakir, supposing the forbearance of the prince to proceed from fear, made an irruption into the *Mattilla* and *Ouch* districts, some villages of which he destroyed. This act, which was unauthorized by the *Miyún*, brought upon the whole sect the vengeance of the *Moghals* ; who, countermarching, passed without opposition into their territory, and laid the capital *Khari* and other principal towns in ruins. *Dín Mahomed* had retired with his followers before the prince's arrival ; and during the six months which the latter spent in the neighbourhood, found means to procure a pardon, and surrendered himself in the royal camp.

Although the *Kalhora* had submitted his person and cause to the mercy of *Moaz-ad-dín*, his followers, led by his brother *Miyún Yar Mahomed*, persisted in opposing the royal arms. A force was detached against them, which was defeated in a desperate and bloody conflict on the banks of the river *Roj*.\* The royalists on this occasion lost

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\* This is perhaps some obscure stream.



*Raja Gaj Sing*, by caste a *Bhattia*, and *Raja Surúj Mal*, of *Udhipúr*, two officers of high rank and estimation. The prince, probably contented with having laid waste the country, or perhaps unwilling to risk the reputation of his arms with so successful an enemy, retired with his court to *Múltan*, where he placed *Miyán Din Mahomed* in confinement, and ultimately put him to death.

*Yar Mahomed*, unable to regain the lost territories of his family, led his adherents towards *Kelat*: where the *Barrohis* at first received them as enemies, and a battle ensued, in which the flower of both armies were slain; but an accommodation having been at length effected, the two sons of the *Miyán* were given in pledge for the peaceable behaviour of the emigrants, who were in return afforded an asylum. This arrangement took place in the year of the  
 A. H. 1111. A. D. 1699. Hejirah 1111.

In A. H. 1113 *Miyán Yar Mahomed* was invited by the *Surye\** chieftains to attempt the re-establishment of the family, an offer which was accepted by the *Miyán*, who having persuaded the *Barrohis* to second his efforts, joined his friends in the *Bhowanir* districts, with a reinforcement of that tribe. A camp was formed at the town of *Kakhan*, where the *Kalhora* with the heavy part of the equipment remained, until the *Suryes* conquered *Murgpúr* and *Fatahpúr* from the *Afghans*, when *Yar Mahomed* advanced to that quarter, whence he dismissed his *Barrohi* adherents. It is said, that the rapidity with which the natives of *Sindh*, (who are in general disciples of the *Kalhoras*) assembled round his standard, was truly surprising. Successes followed each other with such rapidity, that the *Miyán*, in a few months, was in possession of *Shikarpúr*, (afterwards called *Khúdabad*,) the capital of a vast tract of country in which he fixed his residence.

In the meantime the *Suryes* dispersed throughout the northern districts, several of which they forced the *Afghans* to resign; and their successes soon attracted the attention of *Moaz-ad-dín* who still governed in *Múltan*. The governor of *Sewi*, in particular, represented the progress of the *Suryes* as extremely dangerous to that prince's authority and detrimental to the revenues of the province. The prince proposed

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\* *Surye* is the name of those *Sindhians* who resided in the district of *Sirra* and who were most fervent in their attachment to the *Kalhoras*, whose consequent misfortunes and banishment they shared.

to march by a route which led through the *Afghan* territory, but being opposed by that tribe, he turned his arms from the original object, and having slain the *Afghan* governor, established his authority in *Sewi*.

*Miyán Yar Mahomed*, sensible of the folly of resisting so powerful an opponent, prudently deputed officers to the prince, and thus having made known the submission of their master, and his desire to become attached to the imperial government, the latter, after some hesitation, resolved by a regular *Firmán* to confer on the *Kalhora* the *Súbahdari* of the districts which were known by the name of the *Deras*,\* and the capital of which was *Shikarpúr* alias *Khúda'ad*. In order to be invested, it was considered necessary that *Yar Mahomed* should proceed to court, and he had actually commenced his journey, when he was met by the royal officers, who presented the *Firmán* (with the distinguished title of *Khúda Yar Khan*) on the part of the *Moghal* government.

We have hitherto seen this family alternately rising and falling to the two extremes of fortune; one day possessing extensive territorial wealth and reputation, and the next reduced to the necessity of seeking the protection and aid of the neighbouring chieftains. Although *Miyún Nasir* and his successor had bravely struggled to secure independence and power, their views were constantly thwarted from the circumstances of their object not only being unauthorized by the supreme government of the country, but directly adverse to its interests. The period had, however, now arrived, when the *Kalhoras* were enrolled among the royal officers, and in virtue of that situation their authority became legitimate; and henceforward therefore they will be found to rise rapidly both in dignity and stability.

*Khúda Yar Khan*, uneasy at being surrounded by *Moghal* officers commanding in separate districts, privately revolved in his mind a plan to extend his authority. The *Dera* of *Sewi* was held by an officer named *Ghazi Khan* †, who was by no means a favourite of the supreme government, but which was perhaps not in a condition to enforce implicit obedience. The *Kalhora* deputed a *Balúchi* to *Múltan*, where he procured a *Firmán* for *Sewi*, which district he occupied after consider-

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\* This word I believe signifies a district, town, or even a house or tent in *Sindh*; it seems generally to mean a town or district. *Derah* or *Dera* is a word common all over *Afghanistan*.

† The capital of his district is sometimes named the *Dera* of *Ghazi Khan*.

able difficulty. The two young *Sahib Zadahs*, who had been left in hostage at Kelat, now joined their father at *Khúdadabad*, whence one of them was ordered to assume the management of *Sewá*.

The property of the government and the popularity of the *Kalhora* chiefs continued to increase. About the year of the Hejirah A. H. 1123. 1123, when *Nawab Shakar Khan* quitted the province of Sindh, *Khúda Yar Khan* farmed the parganah of *Rúpah*, and otherwise extended his rule by his success against the *Daúd Pútras*; a tribe, the origin and progress of which had been similar to that of the *Kalhoras*, to which it was at the time not inferior in any respect. A lapse of nine years now occurred without producing any event of importance in the annals of the family. The *Jagir* enjoyed a happy and beneficial tranquillity, which was only partially disturbed by a war with the *Jhokia* tribe of Zemindars, and which having been brought to a successful conclusion, *Khúda Yar Khan* departed this life after a reign of eighteen years, distinguished no less for activity and prudence than by the signal success with which those were ultimately crowned.

On the death of their father, his two sons, *Núr Mahomed* and *Daúd Khan*, struggled for the succession. In the life time of *Khúda Yar Khan* these *Sahib Zadahs* had imbibed a jealousy of each other, which was founded and matured by the imprudence of the parent evincing an affection for one of them in particular. This unnatural contest continued for three years, when *Daúd Khan* threw himself on the mercy of his brother, who secured to him an ample and honourable provision.

*Núr Mahomed* was not unmindful of the necessity of having his claim acknowledged by the Emperor, and succeeded so effectually, that, before the termination of the civil strife, he had procured from *Mahomed Shah* the title of *Khúda Yar Khan*, and renewal of all the sannads held by his father. Some lands and villages had been illegally occupied by the *Daúd Pútras*, and this tribe refusing to surrender the territory alluded to, the *Kalhora*, under the authority of *Mahomed Shah*, attacked and subdued them. The lands were divided into four parts, two of which went to the original *Jagirdar*, one to the *Daúd Pútras*, whilst the 4th and valuable division, bordering on his own districts, was retained by the *Kalhora*.

In the year 1139, *Khúda Yar Khan* detached a force once more against the *Daúd Pútras*, and succeeded in shutting up the families and proper-

ty of that tribe in *Derbela* ; to which place he laid siege and would finally have reduced the garrison to surrender, had not the *Saiyads* of the country interfered and concluded an adjustment of the dispute, by which the district of *Nhar*, which had before been occupied by the *Daúd Pútras*, was transferred to the *Kalhora*. The cession of the tract in question, opened a free passage into the province of *Múltan*, through many parganahs over which *Khúda Yar Khan*, in the two succeeding years, established his authority. *Sehwan* and its dependencies had about the same time been included in the *Jagir* through the kindness of the Emperor *Mahomed Shah*, who was peculiarly favourable to the interests of this enterprising family.

The western frontier was proportionally extended, and a variety of Chieftains and *Zemindars* reduced, the names of whom, and that of their possessions, as they are obscure and almost unknown in the general history of *Sindh*, I have considered it proper to omit. As sufficiently descriptive of the high place assumed by *Khúda Yar Khan*, it may be observed, that about the year now spoken of, with exception of *Bhakkar*, his control embraced the countries from the borders of *Múltan* to those of *Thatta*. In an eastern direction, it was bounded by the desert, whilst it extended over the *Balúchi* mountains westward, bordering on the dominion of the *Kelat Barrohis*, whose jealousy being excited, led to a war, in which much blood was shed.

Some acts of violence on the part of *Mir Abdullah Khan Barrohi*, (who according to a historian, entitled himself the eagle of the mountains,) probably committed in revenge for the attacks of the *Kalhoras* on *Balúchistan*, which was originally subject to *Kelat*, induced *Khúda Yar Khan* to take the field in person. The first fruit of the expedition was the conquest of *Kirta* ; a strong fort whence the *Kalhora* detached his troops into the *Kelat* territory, defeating those of that nation and slaying *Kakar Barrohi*, a relation of the chieftain. The same year peace was concluded, in which it was stipulated that the two *Sahib Zadahs*, sons of *Khúda Yar Khan*, should be allied to daughters of the *Barrohi* family, a circumstance which shows the ascendancy of the *Kalhoras*.

The ensuing year was distinguished by the bad faith of the *Barrohis*, who, unmindful of their recent engagements, made a sudden and destructive irruption into the neighbourhood of *Faridabad*. *Khúda Yar*

*Khan* moved to *Larkhana*, whence he detached a select body of Sindhi-ans under officers of reputation, to oppose *Abdúllah Khan*, who had encamped his forces at the village of *Chanderi*. An action was here fought, in which the *Barrohis* were utterly routed, and their chieftain slain. An adjustment was ultimately effected, and guaranteed by the marriages of the *Sahib Zadahs* with ladies of the *Barrohi* family.

In the year 1149 A. H. the fortress of *Bhakkar* and its dependencies were delivered over to *Khúda Yar Khan*, who the following year was regularly invested with the government of the *Súbah* of *Thatta*; which capital, as has already been related, was surrendered to the *Kalhora* by *Nawab Sadik Kúli Khan*.

The *Kalhora* dynasty has thus been traced from the prayer carpet A. H. 1151. and head of a sect of mendicant itinerants to the sove- A. D. 1738. reignty of Sindh. They were indebted for the rapid success which latterly marked their career, to the weakness of the Delhi government; which, under *Mahomed Shah*, was totally incapable of aiding, or supporting its officers in the distant provinces, of which perhaps Sindh was the most fickle. Rumours were at this time prevalent that *Nadir Shah* had in view the conquest of India; and it seems not improbable that, from the partiality expressed by *Mahomed Shah* for *Khúda Yar Khan*, he had in view the attachment to his person of a family, which, from the paramount influence it possessed throughout Sindh, was better calculated to consolidate and employ resources in his defence, than his Indian officers, to whom the people were strangers both in language and manners. Such were the chief springs of the *Kalhora* fortunes, although much must doubtless be attributed to the veneration in which the family was held on account of its holy descent. These religious opinions tending to awe the public mind, in conjunction with worldly power, produced a singular and evident effect on the government and general features of the province.

This new era of the Sindhian annals, as it may with propriety be styled, occurred at the moment when *Nadir Shah* threatened the eastern *Moghal* empire, about the time when the mighty storm, which, after lowering for two or three years, at length poured with resistless fury on the unfortunate throne of *Delhi*. The accession of the conqueror, to the throne of Persia, whose vast resources and ambitious mind had for some years been a subject of uneasiness to all the surrounding govern-

ments, having attracted from the first the attention of *Khúda Yar Khan*, he had assiduously courted the favour of *Nadir Shah* by regular and flattering correspondence. On the investing and subsequent reduction of *Kandahar*, it was reported that a body of Persian troops would enter Sindh, on the projected invasion of *Hindústan*; to meet any exigence that might occur, and for the security of his frontier, the *Kalhora* remained in *Larkhana*, whilst he intrusted the newly acquired *Súbah* of *Thatta* to the management of his son *Mahomed Múrad Yab Khan*, who assumed his charge late in this year.

In the Delta of the Indus, and near the sea shore, two Chieftains still enjoyed independence; namely, the *Jam* of *Kakralla*, a branch of the *Samma* family, and *Rana Ajmal* of *Dharaja*, by caste a *Najamra* and descendant of a family, which had preserved its inheritance through the many vicissitudes to which the province of Sindh had been subject for several centuries. These Chieftains had the command of the principal branches of the river Indus, in which their vessels exercised unlimited authority, and levied revenues arising from the trade passing up the streams. Whether the desire of adding to the revenue of the province, or, as is affirmed by some authors, to punish some acts of aggression which had been committed by the boats on the river, led to the attack of these Chieftains, is not very clear; but the *Sahib Zadahs* had hardly reached *Thatta* when they declared war with the *Kakralla* and *Dharaja* Chiefs.

The honour of his arms was at first tarnished by defeat; and the fleet of the enemy, sailing up the river, burnt and laid waste both shores as high as *Thatta* and *Nasirpúr*. On the Sindhian army preparing to penetrate into the Delta the expedition was suddenly postponed, and *Múrad Yar Khan* recalled to aid the arrangements of his father. *Nadir Shah* was now making rapid strides to conquest, while engaged in the expedition which placed the empire of India at his disposal. When *Khúda Yar Khan* heard of the cession by *Mahomed Shah* of all the countries to the west of the river *Attock*, including the *Deras* or division of *Shikarpúr*, *Bhakkar*, *Sewistan*, *Nasirpúr*, the *Súbah* of *Thatta*, and all which in fact composed the *Kalhoras'* dominion, he was overwhelmed with terror; and, having despatched his family and property to *Tehlar*, deserted his country, and took refuge in *Amerkot* (a fortress situ-

ated in the desert,) although the conqueror is said to have encouraged him to visit his presence by kind assurances of honour and protection.

*Nadir Shah* appeared before *Amerkot*, and compelled the fugitive to surrender his person. He was carried prisoner to *Larkhana*, where the *Shah* was pleased to reinstate him in his dominions, on consideration of his paying a fine of one crore of rupees. His Majesty, however, deprived the *Kalhoras* of *Shikarpúr* and *Sewí*, the former of which he restored to the *Daúd Pútras*, and the latter to the *Afghans*, whose possession it originally was; and having in this manner settled the affairs of Sindh, *Nadir Shah* commenced his return from *Larkhana* on the 11th Moharam 1153 A. H. carrying in his train the two *Sahib Zadahs*, *Mahomed Múrad Yab Khan*, and *Ghúlam Shah Khan*, as hostages for an annual tribute of twenty lakhs of rupees, which he imposed on the *Shah Kuli Khan* province; and in return for which acknowledgment, he bestowed on the *Kalhora* the title of *Shah Kuli Khan*.

During the stay of *Nadir Shah* on the frontier, the Persians had dispersed throughout the country; and, by their lawless and disorderly conduct, encouraged many of the mountainous tribes to commit excesses on the fertile and populous plains. To check this disposition and to punish the banditti, engaged the primary attention of *Shah Kuli Khan*; who, appointing *Sultan Samuttia* to the government of *Thatta*, instructed that officer to inflict a salutary chastisement, in the first place, on the *Shora* tribe of *Balúchis* of *Miyúní*, who had been foremost in the disturbances. Success attended the arms of *Sultan Samuttia*, who now directed them against the various troublesome tribes residing in the *Wangah* parganah,\* subject to *Kachgaum* situated east from the capital.

An army of *Thamas Kuli Khan* approached the borders of Sindh, A. H. 1156. ostensibly to punish the *Daúd Pútras*; but the *Kalhora* A. D. 1743. taking the alarm retired to a place of security, having previously recalled his officers from their respective districts. A considerable interval now elapsed, during which there existed no government in the province, so that a system of anarchy and confusion spread through the country to its utter ruin. *Shah Kuli Khan* was at length once more induced to confide in the royal officers; and proceeding to the camp, was permitted to resume his authority, on leaving his third son, *Attar Khan*, an hostage.

\* These tribes are *Tanachi*, *Togachi*, *Jhara*, *Sula*, *Kista*, and *Asow Sumrah*

The officer commanding in *Thatta* led a force to the southward, and

A. H. 1157. attacked *Jam Hothi*, the chief of *Kakralla*, who, being  
 A. D. 1744. slain, was succeeded by his relation *Jam Mohar* a protégé  
 of the *Kalhora* family. The following year *Shah Kuli Khan*, in per-  
 A. H. 1158. son, conquered the fort of *Sanchi*, which was situated in  
 A. D. 1745. the division called little *Kach*, and on the route to the  
 larger province of that name. The latter government, taking offence  
 A. H. 1159. at this attack, carried on a predatory warfare until it was  
 A. D. 1745. chastised in 1159 A. H.

The conduct of *Rana Ajmal of Dharaja*, during the confusion consequent to *Nadir Shah's* invasion, had been such as to draw upon him the wrath of the superior government, but the *Kalhora*, in person residing in the northern frontier, had hitherto been unable to detach a force

A. H. 1160. sufficient to call him to an account. In A. H. 1160,  
 A. D. 1747. however, the Rana, encouraged by the impunity which had hitherto attended his conduct, instigated some of the mountain banditti to join in an irruption which he made to the gates of *Thatta*, the government of which suffered a disgraceful defeat, under the walls of the capital. An act so bold and insolent called for immediate notice, and *Shah Kuli Khan*, having accordingly removed the authorities of *Thatta*, directed his son *Khuda Dad Khan* to proceed with a select force to subdue the *Dharaja* chieftains.

The *Sahib Zadhas* besieged *Dharaja*, which was naturally a place of some strength, and defended by skilful officers on the part of *Ajmal*, who had in person embarked with his fleet. The capital having at length been reduced, the Rana was persuaded to land for the purpose of negotiation, when he was treacherously slain by a *Jokia Baluchi*, employed for the purpose, and the *Kalhora* authority established throughout his districts.

The death of *Nadir Shah*, and the conquest of *Kandahar* by *Ahmad*

A. H. 1161. *Shah Saddozi* who founded the government of the *Dura-*  
 A. D. 1748. *nies*, rendered the province of Sindh tributary to *Kandahar*. *Ahmad Shah* bestowed on the *Kalhora* the new title of *Shah Nowas Khan* which superseded that given by *Nadir Shah*.

In 1162 Hej: the *Sahib Zadhas*, *Ghulam Shah Khan* and *Attar*

A. H. 1163. *Khan* returned from Persia; and the following year ves-  
 A. D. 1749. sels were dispatched to bring home the other son *Murad*



*Yab Khan*, who had proceeded from Persia to *Mekka*, where he embarked and joined his family in A. H. 1164. During the absence of the *Sahib Zadhas*, in Persia, a brother named *Khúda Dad Khan*, who had been the executive officer under his father *Khúda Yar Khan*, now, however, assumed an active part in the government, and was intrusted, by his parent, with the exclusive charge of the public business; which exciting the jealousy of the *Sahib Zadhas*, *Khúda Dad Khan* quitted *Sindh* and retired to India.

The king of *Kandahar*, who in Hej : 1167 had failed in an attempt to subdue the empire of Hindustan, advanced at the close of that expedition to *Sewistan*, for the purpose of enforcing the payment of the *Sindh* tribute, which had been but partially realized during the recent employment of his army. *Shah Nowaz Khan* fled, and found an asylum in *Jesilmír*, where he departed this life.

*Mahomed Múrad Yab Khan*, fearful that his father might pledge his person as an hostage, as he had before done, fled to *Amerkot*; where, on the demise of *Shah Nowaz Khan* he was declared, by the Chief of the *Suryes*, to be the legal successor to the government. Previous to this event, the *Kalhora* vakeels had been sent to the royal camp; and by unqualified submission, had satisfied his Majesty. This instance of disrespect, however, induced the King to retract what he had promised, and to send a force into *Sindh*, for the purpose of overturning the self-created sovereign *Múrad Yab Khan*, who, afraid to leave his asylum in the desert, saw the country occupied by *Kandahar* officers; and as the last and only resource deputed persons to the camp, where, having made known the submission of the *Kalhora* and his acknowledgment of dependence, His Majesty, happy perhaps to bring affairs to a conclusion, carried away *Sahib Zadha Attar Khan* in hostage, and confirmed *Múrad Yab Khan* in the rank and power of his father, with the title of *Sirbúland Khan*.

This Chieftain fixed a camp on a pleasant spot near *Nasirpúr*, where he founded the city of *Múradabad*. The first act of his government was to attack *Jam Hojaji*, the existing chieftain of *Kakralla*, who defended himself bravely; but, overcome by numbers, was compelled to cede the greater part of his possessions, a stronghold of which called *Kach* was fortified by *Sirbúland Khan* as a safe retreat in cases of danger.

*Sirbúland Khan* had now been upwards of three years chief of the *Kalhoras*, when he evinced a disposition to oppress his subjects, and slight the *Surye* officers. But perceiving at length that his conduct had lost him the affection of his people, and fearful, lest the King should send an army against him, he formed the resolution of quitting the country; as a primary step to which he embarked his treasure and valuables for *Muscat*, whither he prepared to follow, as soon as he should have completed the plunder of the country. In defiance of his recent engagements with the Jam of *Kakralla*, he attacked the territories which he had two years before guaranteed; a proceeding that drew upon him the ill will of the *Surye* chieftains, who had been agents in making the arrangements with the Jam. These officers induced *Miyán Ghulam Shah* to

13 Zilhija  
1170 A. H.  
29th August,  
1757.

dethrone his brother, who was accordingly seized, together with his family, and his authority assumed by the former.

*Ghulam Shah* was raised to the sovereignty whilst in the south of Sindh, and was compelled for some time to confine himself to that quarter, in consequence of the opposition of his brother *Ahmad Yar Khan*, who in *Khúdabad* refused to acknowledge his authority. In the meantime *Attar Khan*, a brother older than *Ghulam Shah*, who was then a hostage at *Kandahar*, hearing of the confinement of *Múrad Yab Khan*, applied for and procured a firmán from the King, appointing him to the government of Sindh; which province he entered with a body of *Afghan* allies, and was joined by some levies under his brother *Ahmed Yar Khan*. The officers and chieftain could not be induced to oppose the royal seal, and *Ghulam Shah* being deserted by them, retired to the desert, where the further de-

Miyan Ghulam Shah.

A. H. 1171.  
A. D. 1758.

fection of his adherents, and the escape of the dethroned *Múrad Yab Khan* compelled him to prosecute his journey to *Jhodpúr*.

*Attar Khan* now assumed the government, and, contrary to the expectations of the people, confined his brother *Múrad Yab Khan* in *Khúdabad*. In return for its support, the *Afghan* court had been largely promised by *Attar Khan*, and a system of plunder and extortion now ensued to satisfy their demands. A few months however had scarcely elapsed, before the province was suddenly invaded by *Ghulam Shah*, who advancing from India left his son *Sar-*

Mahomed Altar Khan.

*faraz Khan* and the heavy baggage in Debalpur, and attacked his brother's forces in the environs of *Lohri*. During his abode in India, he had solicited and obtained aid from the *Rajput Rajas*; and although his numbers were inconsiderable, his attack was so successful, that the two brothers fled to *Kandahar*, leaving him in full possession of Sindh without another struggle.

Early in the year 1172 Hej: *Attar Khan* and *Ahmad Yar Khan* having laid their complaint before the King succeeded in procuring a new firmán for the province, and *Ahmad Shah*, in order to insure proper respect to his authority, furnished the elder brother with a contingent of troops, with which he invaded Sindh, leaving *Ahmad Yar Khan* in *Kandahar*. *Ghúlam Shah*, dubious of the result of the contest, retired to the fort of *Kach*, in the *Kakralla* districts, from the Jam of which he met with a kind and hospitable reception. The fort of *Kach* has been already mentioned as a place of great strength, chiefly arising from the nature of the country. Hither the population of *Ounenga* bunder had been transported and a new seaport formed under the name of *Shahghar*. In this retreat the family of *Ghúlam Shah* remained under the protection of *Jam Hajaji*, whilst the former led his adherents to oppose the *Afghans*; who, under the command of his brother, had advanced to *Chachgaum*, plundering and devastating the province. The dispute was about to be decided by the sword, when a negociation was entered on, which placed *Ghúlam Shah* in possession of one-third of the country; the rest being secured to the other brother. *Shahghar* and *Thatta* to the borders of *Nasirpúr* fell to *Ghúlam Shah's* share, whilst *Attar Khan* occupied the rest of Sindh.

*Ahmad Yar Khan*, who had been left at *Kandahar*, perceiving the turn which affairs were taking, obtained by bribes and promises a firmán in his own name for the government of Sindh: and leaving his son at court marched against *Attar Khan*. The wary and politic *Ghúlam Shah* no sooner learnt the supersession of *Attar Khan*, than he proceeded to dislodge him. Thus threatened on both sides, *Attar Khan* fled to the *Daúd Pútra* tribe, whilst the force of *Ghúlam Shah*, by a decisive and bold advance to the capital, deterred *Ahmad Yar Khan* from further progress.

The country once more under the control of a chief, who was a fa-

avourite of the natives, found time to recover from the effects of the late intestine disturbances and civil war in its most hideous form, which had ravaged Sindh for two years. During this period, three competitors struggled for supremacy; and to aid their views, had recourse to the ruinous alternative of introducing lawless and powerful allies. From the Afghan troops, the natives of Sindh suffered every evil which an avaricious and disorderly army could inflict, and it is said that so far from acting like allies, they treated the province with more severity than would an enemy.

The *Kosha* tribes, who inhabited the division of *Sewistan*, had been very troublesome during the late contest; and from the position which they occupied, in the pass from *Kandahar*, had been of essential service to *Attar Khan*. *Ghulam Shah*, as the first act of his government, inflicted on them an exemplary punishment. Their villages were reduced to ashes, their strongholds carried by assault, and their garrisons, with the families of the tribe, put to the sword.

*Bahadur Khan*, the chief of the *Daud Pútras*, had hospitably received *Attar Khan Kalhora*, and as the former prided himself on his prowess in arms, and was highly esteemed by the tribe, for his military talents, it was not a difficult task to induce him to espouse the cause of his fugitive guest. The preparations of the *Daud Pútras* were however not as yet matured, when their territory was invaded by *Ghulam Shah*, who attacked and slew *Bahadur Khan*, in a desperate battle, in

A. H. 1173. which the troops of the latter being totally routed, *Attar*  
A. D. 1759. *Khan* fled the country, and this single action terminated  
the war.

In the year 1174 Hej: the Jam of *Kakralla* was dispossessed of his lands and authority, in consequence, as it is reported, of  
A. H. 1174. his conduct during the absence of *Ghulam Shah* in the  
A. D. 1760. north; and was accused of having attempted forcibly to re-occupy those parganahs which had been ceded to the *Kalhoras* on a former occasion. But there does not appear any sufficient grounds for such treatment of a family which had adhered to the interests of this *Kalhora*, when he was surrounded by enemies. The Jam fled to *Kach*, and his son *Hir-durjee* having been included among the officers of *Ghulam Shah*, the *Kakralla* lands henceforth became dependent on the *Kalhora* family.

*Miyán Ghulam Shah*, although actually in possession of the govern-

A. H. 1175. ment of Sindh, was sensible of the flaw by which his au-  
 A. D. 1761. thority was exposed to constant question and danger. He had been long intriguing at Kandahar to procure a firmán which would legitimize what he was conscious was as yet only an usurpation ; and the negociation of his ambassadors were this year crowned with success. The firmán, so anxiously expected, was transmitted to him with the honorary title of *Shahwardi Khan*, and accompanied by a present of an elephant.

This year was distinguished by a successful attack on the *Daúd*  
 A. H. 1177. *Pútras*, after which *Miyán Ghúlam Shah* invaded the  
 A. H. 1762. independent province of Kach. This expedition originated in the wanton spirit of plunder and rapine so common to Asiatic governments. *Rao Laka* (or *Lackpat*), who was at this time the chief *Jhareja* of the Kach aristocracy, had succeeded in releasing his person and authority from a disgraceful thralldom, in which they had been held by a rich and powerful civil officer named *Púnja*. On this dissolution of his power the latter fled to the court of *Ghúlam Shah* and was instigated by him to attack his sovereign.

The army of Sindh, which consisted of about 15,000 men, having conquered the frontier fort of Sindhri, crossed the salt run without difficulty, and entered the Kach territory. *Rao Lackpat* had directed his federal chieftains to assemble at the pass of *Jharra*,\* in the mountains of which the women and children of the country were secured.

A battle was fought at this spot and is spoken of with wonder at this present day. The Sindhians surprised and attacked the *Jharejas* early in the morning ; and a thick fog obscuring the light of day until noon† both armies were intermixed with each other fighting, sword in hand, for a period of six hours. The Kach soldiers, according to an ancient custom of the *Rajpúts* determined on death, murdered the whole of their families ; and rushing among their enemies commenced a promiscuous slaughter of friend and foe. When the fog dispersed, the contending parties withdrew from the field, but such was their consternation, at the events of the morning, that each made a precipitate retreat.

The Battle of *Jharra* is said to have cost the Kach nation 2,000

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\* Twenty miles N. E. of Lackpat.

† In February and March the fogs are often so thick as to involve the day in total darkness.

lives, including the families slain. Scarcely a soldier of the army returned unwounded, and it is a common saying, expressive of the immense slaughter, that stones a pound in weight were moved from the side of the hill by the streams of blood. In 1812 there were three men alive in Kach who had fought at *Jharra*, and I have conversed with an aged man who received seven sabre wounds in this action. His description of the confusion, in which the armies were placed by the fog, was truly terrible. The Sindhians lost 7,000 killed and wounded.

The following year *Miyán Ghulam Shah* again invaded Kach, and penetrated, without opposition, to within a few miles of the capital; when he compelled the Rao to resign his claim to the seaports of *Basta* and *Lackpat*, which are situated on a branch of the Indus and on the borders of Sindh.

*Miyán Múrad Yab Khan*, the elder *Kalhora*, who had been dethroned by *Ghulam Sháh*, had died shortly after the first expulsion of *Attar Khan*. He had left several sons who were, about this time, cruelly put to death by their uncle; in consequence, it is said, of the traits which they evinced of an aspiring disposition. The fact is not recorded in the history of the times, but it is well known and generally believed in the country. *Ghulam Shah* was however a favourite of fortune, and his undertakings were generally successful. He had already received the

A. H. 1179. title of *Shahwardi Khau*, to which that of *Samsam-ad-*  
 A. D. 1765. *dowlat* was now added. His mind was also at this time eased by a reconciliation with *Attar Khan*, who, failing in all his attempts on the government, threw himself on his brother's mercy, by whom he  
 A. H. 1181. was kindly received and provided with a suitable *Jagir*  
 A. D. 1767. under condition of remaining at all times in person at court.

The Government of the *Deras*, or villages, which had been conferred  
 A. H. 1183. by *Nadir Shah* on the Afghans, was transferred to *Ghulam Sháh*, and in 1183 re-transferred to a *Kandahar* officer. The *Kalhora*, who had been employed in the north, arranging his recent acquisitions, now returned and took up his abode in Hyderabad, the foundations of which he had laid the preceding year.

The Rao of Kach courted the friendship of *Ghulam Shah*, by offering the daughter of one of his *Bahiyad* in marriage. The *Jharejas* of Kach practice female infanticide, but daughters are occasionally preserv-

ed. The *Rajpúts* have a custom of giving their daughters in marriage to *Hindus* or *Mahomedans*, if by the connexion, their inheritance can be preserved from danger. This is the only cause for which it is lawful to form such an alliance. It is common to adopt daughters of any caste for the purpose of being so disposed of, but this is done privately, and the imposition though known is not notorious. The lady given to *Ghulam Shah* is said to have been of this description. The alliance was accepted, which as the proposal had been voluntary gave rise to many reciprocal attentions. *Lackpat* and *Basta Bander* which had before been conquered, were on this occasion restored to Kach. *Ghulam Shah* survived this connexion but a short time; he died at Hyderabad in the beginning of

A. H. 1186. 1186 H. after two days' illness, attributed, by *Mahome-*  
 A. D. 1772. *dan* superstition, to the wrath of the saints, whose graves had been disturbed, in founding the new capital.

*Sahib Zadah Sarafraz Khan* was placed in possession of his father's dignity by the universal voice of the country, and the selection was approved by the Kandahar government. The first year was employed in settling the affairs of the province and arranging the northern districts, which were at this time again transferred to the *Kalhora* authority. These measures having been concluded, the Sindhian army was led to Kach, through which it passed into Wagar on the borders of *Gújarat*. Having received the submission of the Chief *Jharejis*, *Sarafraz Khan* marched from Wagar through the *Chowan* territory, and thence crossing the desert by the route of *Parkur* returned to Sindh in the 1188 Hej.

The *Balúchi* tribe of *Talpúra* had long filled the most distinguished offices of the government, and they had, at different periods of the *Kalhora* fortunes, essentially aided in supporting them by their arms and counsel; and had acquired a degree of influence and power, which, under a chieftain of less vigour and talent than *Ghulam Shah*, would have been considered as extremely dangerous to the public peace. *Mír Byram Khan*, the leading person of the *Talpúras*, had possessed the confidence of *Ghulam Shah*, a circumstance which procured him many enemies, among such as fancied themselves better deserving of favour from an immediate connexion with, or from ancient attachment to the reigning family. On the accession of *Sarafraz Khan*, these were not wanting in their endeavours to excite in his mind a jealousy of the views of *Mír Byram*,

which feeling was, perhaps, sharpened by the respect in which the *Mir* was held by the province in general, and which combined with the devoted attachment of his tribe, placed him on a footing little beneath that of his sovereign.

*Sarafraz Khan*, on his return from the Kach expedition, caused the suspected nobleman and his son *Mir Sobhdar Khan* to be privately put to death. Whether this severity arose from the discovery of treasonable proceedings, on the part of the sufferers, or whether it was the result of an unfounded jealousy, is not well ascertained; but it is certain that the *Talpúras* had assumed a very high and alarming control in public affairs. This act of the government, although unattended at the moment by any extraordinary commotion in the country, nevertheless created a deep impression on the minds of the military tribes, (of which the *Talpúra* was among the most powerful) and led the way to those revolutions which, at no very distant period, placed the family of *Mir Byram* on the throne of Sindh, and sank that of *Kalhora* in poverty and distress.

So early as 1758 A. D. the East India Company had established factories at *Thatta* and *Shah Bander*, where their mercantile speculations were encouraged by *Miyán Ghúlam Shah*, with whom a friendly intimacy subsisted, productive of reciprocal advantage. The state of the society and government of Sindh, however, have constantly been unfavourable to the success of trade. The changes in the government have been so frequent that the merchant has never felt himself secure; a circumstance which, operating in conjunction with the hazard of transporting goods through various barbarous tribes, unrestricted by civilized control, has always obstructed this natural channel. *Sarafraz Khan* did not extend the same encouragement to the British factories as had been done by his father, and continued from time to time to obstruct their views and injure their interests, until it became necessary to withdraw them entirely.

Three years subsequent to this period, *Sarafraz Khan* was deposed by the *Balúchis*, who place his brother *Miyán Mahomed Khan* on the masnad. His incapacity rendered a further change necessary; and *Sadik Ali Khan*, a nephew of *Miyán Ghúlam Shah*, was selected. The object of their choice upon trial did not suit their views, and the *Ba-*



*lúchi* chiefs once more indulged their caprice by elevating *Miyán Ghulam Nabiy Khan*, a brother of the late *Ghulam Sháh*.

The period was, however, now arrived when the blood of *Mír Byram Talpúra* was to be revenged on the *Kalhora* family, A. H. 1187. A. D. 1773. The deceased had a son named *Mír Bejar*, who at the time of his father's death was absent on a pilgrimage to *Mekka*; and *Ghulam Nabiy* had been a short time seated in his authority when this officer landed in his native country, and assembling his tribe publicly announced his design of opposing the government. *Ghulam Nabiy* hoping, by a sudden and decisive battle, to check the spirit of defection which spread rapidly through the military tribes, attacked the *Talpúras*, but was slain in the action.

In the meanwhile *Miyán Abdúl Nabiy*, a brother of the deceased, shut himself up in the fort of *Hyderabad*, where he cruelly put to death *Attar Khan*, *Sarafraz Khan*, and *Mír Mohamed Khan Kalhoras*, who had at different times held the sovereign authority. His object in thus imbruing his hands in the blood of his nearest relatives, it is difficult to discover. It could hardly have been jealousy, because the victims were already prisoners; and as such, could not be dangerous to his projects. Indeed this atrocious conduct would appear to have been the effect of a naturally cruel and blood-thirsty disposition.

*Mír Bejar* laid siege to *Hyderabad*, but, finding his means inadequate to its reduction, he opened a negotiation which terminated in *Abdúl Nabiy* being elected sovereign of *Sindh*, whilst *Mír Bejar* was confirmed in the office of minister, which had been so long held by his family. This arrangement placed the active administration of affairs in the hands of the *Mír*, (with which his ambition was probably satisfied,) without incurring the odium and danger attending a total exclusion of the *Kalhora* dynasty, which was still an object of veneration among the people.

During the government of *Abdúl Nabiy* the province was invaded by an army from *Kandahar*, sent to enforce a sannad which A. H. 1195. A. D. 1781. had been issued by the king, placing *Izat Yar Khan*, a nephew of *Abdúl Nabiy*, on the throne. *Mír Bejar* defeated the *Afghans* in a battle near *Shikarpúr*, and the pretender having fled, the victor returned to the capital, where he continued successfully to guide the reins of authority.

The infatuated *Kalhora*, himself uneasy under the tutelage in which

he was held, notwithstanding the examples which had so recently passed before him, resolved to cut off his minister by assassination. Various attempts are said to have been made and failed; but he was at length successful, through the friendship of the *Raja* of *Jhodpur*. Two *Rajpúts* visited *Hyderabad*, and under a pretence of business were admitted by *Mír Bejar* to a private conference, when they stabbed him to the heart. The assassins were shot from the roof of the room, perforated for the purpose, none having courage to face them sword in hand. It is by no means uncommon for *Rajpúts* to devote themselves to death with a view of serving their master, and, among the *Rathores* of *Marwar*, in particular, there is little difficulty in finding agents of this description; but it must be remarked that it proceeds entirely from devotion to their chieftain, and the person who would assassinate at his simple command, would spurn any attempt to bribe him to the office. In 1814, there was an instance of two *Rathore Jemedars* thus sacrificing themselves at the request of the *Rao* of *Kach*.

*Abdúl Nabiy* attained his object, but, with a timidity characteristic of the abetter of such a deed, fled with precipitation to the court of *Kelat*, leaving his authority to be usurped by *Abdúllah Khan*, the son of the deceased; who, with his natural cousin *Mír Fattah Khan*, assumed the sovereign control of the province.

In the year of the *Hej.* 1196 the cause of the exiled *Abdúl Nabiy*  
 A. H. 1196. was espoused by *Nasir Khan Barrohi*, who appropriated  
 A. D. 1782. a select body of his troops under a relation named *Mír Zorak*, to reinstate the *Kalhora*. The attempt having failed, the *Talpúras* flocked to the standard of *Abdúlla*, and defeated the *Barrohis* in a bloody contest in which *Zorak* lost his life. *Abdúl Nabiy* despairing of further aid from *Kelat*, once more crossed the mountains of *Balúchistan* and fled to the court of *Jhodpúr*, where he met with a warm reception. The *Raja* retained the prince at court, whilst he detached an army to pave the way to the overthrow of the *Talpúras*. The *Rajpúts* were however defeated by the former, in a battle said to have been seldom equalled in the fury with which it was maintained; and the wretched *Kalhora* thus disappointed on all sides, repaired to the camp of the King of *Kandahar*.

Here he persuaded some of the courtiers to lay his prayer before His Majesty, who at length nominated *Maddad Khan*, a general of distinc-

tion, to command a formidable force on this service.\* On approaching the Sindhian frontier, the *Afghans* were reinforced by a detachment of *Barrohis* from Kelat, and *Abdúllah Khan*, having laid the country waste, sent the women and children into Kach, and took refuge in person in the great desert. The *Afghans* finding neither friend to greet nor foe to oppose them in Sindh, called upon the *Talpúras* to acknowledge *Abdúl Nabiy* and resume their respective ranks and situations at his court; a proposal which was readily acquiesced in by *Abdúllah*; and the original system of government was once more established.

The calm was momentary, for *Abdúl Nabiy* again raised the flame of civil discord by unjustly and cruelly putting to death *Abdúllah Khan Talpúra*, a few days after the latter had renewed his allegiance. *Mír Fattah Ali*, the son of *Mír Sobhdar*, and grandson of *Byram Khan*, was unanimously elected chief of the *Talpúras*, and by a series of gallant exertions drove the *Kalhóra* from the throne, which he himself occupied. Over anxious however to remove those who had a more legal claim to the masnad, his conduct alarmed his nephews, *Mír Sobhdar* and *Mír Jharra*, the sons of *Fattah Khan*. These princes privately fled from Hyderabad, the former to *Lohri* and the latter to *Badban*, where they both finally established chieftainships, and where they still remain powerful federals of the Sindhian government.

One more effort was made by the deposed *Kalhóra* to recover his lost kingdom.† Aided by a powerful army from *Kandahar* and *Kelat*, he entered the province, where he was joined by a considerable body of partizans. According to custom, the *Talpúras* having secured their families in Kach, laid waste the frontier and avoided an action until having succeeded in purchasing the neutrality of the auxiliaries, *Mír Fattah Ali* attacked the troops of *Abdúl Nabiy*, who being defeated with immense slaughter, fled to *Sewistan*.

About the same period *Zeman Shah* ascended the throne of *Kandahar*, and led an army towards Sindh to enforce payment of the tribute which had been irregularly discharged since the separation of *Jharra* and *Sohrab*. The advance of the King was checked by a deputation from the three *Talpúra* chiefs, (who had caused Sindh to be deserted

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\* This expedition is mentioned in Elphinstone's *Cabul* II. p. 359.

† This expedition is the one probably mentioned by Elphinstone; *Cabul* II. p. 369.

and taken refuge in the desert,) apologizing in the most humble terms for their past neglect, and promising more regularity in future. *Fattah Ali* had a warm friend in the Wazir, who persuaded his master to desist from the expedition, and afterwards procured a firmán for the government of the province in the name of the *Talpúras*, an event which finally put an end to the dynasty of the *Kalhora* sovereigns. The wretched *Abdúl Nabiy* wandered from place to place until he fixed his residence finally at *Jhodpur*, in Marwar, where his family still hold a distinguished rank.

It is only necessary to add, that, when no longer threatened from foreign war, the *Talpúras* became jealous of each other. A strong party supporting the cause of *Mir Ghúlam Hussain* the son of *Abdúllah Khan*, who was ultimately placed in the government under the protection of *Mir Fattah Ali*, who in concert with his brothers *Mir Ghúlam Ali*, *Karrim Ali* and *Múrad Ali* continued to manage the affairs, whilst the independence of *Jharra* and *Sohrab*, in their respective territories, was regularly guaranteed.

The preceding pages record one continued struggle for greatness during a period of three centuries, and the object so ardently desired had scarcely been attained, when the same powerful hand which raised the mendicant *Kalhóras* to the throne, in the short space of ten years hurled them headlong to their original obscurity; destined to stand a memorable proof of the changeable nature of worldly affairs and the futility of human exertion.

It is remarkable that the nation of Sikhs originated much in the same manner and struggled at the same period of time as the *Kalhóras*, but in the issue with better success.

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#### AET. IV.—*Anatomy of the Common Musquitoe (Culex Pipiens)*

By J. H. CARTER, Esq., of the Bombay Medical Service.

OF THE PROBOSCIS, ALIMENTARY, AND GENERATIVE ORGANS OF THE MUSQUITOE, CULEX PAPIENS.—*Linn.*

#### *Distinguishing marks of the two sexes.*

Before entering on the description of the internal organs of the musquitoe, it may be as well to notice the principal external points of differ-

ence that exist between the male and female of the species. These are the following :—

Body of the male much more slender than that of the female. Antennæ, though of the same length, much longer and more plumose than those of the female, and contain double the number of joints. Palpi in the male very largely developed, compared with those of the female, first joint extending nearly to the extremity of the proboscis. Two hook-like processes or claws inclined downwards from the upper part of the last segment in the male, which do not exist in the female, where they are replaced by two processes one on each side of the anus.

#### *Of the Proboscis.*

This is a most complicated organ, compounded of all the parts of the mouth except one pair of palpi. The following is the order in which the different parts are placed in relation to each other. Externally is the proboscidian sheath; within this, a transparent horny sheath, and again within the latter three setæ, one of which is spear-pointed, and the other two saw-pointed at their free extremities.

The proboscidian sheath, which encloses all the other parts, is a membranous, cylindrical tube, arising from the inferior part of the head; it is about half the length of the whole animal, is covered externally with hairs and scales, and is open superiorly, by a longitudinal fissure, which extends throughout its whole length. Towards its free extremity it becomes contracted, and terminates in a bilobate portion, consisting of two hollow pouches, round externally and covered with hairs, and smooth internally where they are in contact with each other.

The internal sheath is not quite so long as the last. It is formed of a stiff, horny, transparent, cylindrical tube; is in continuation posteriorly with the pharynx, and is firmly fixed above to a rostrated process which projects forward from the anterior part of the head, just below the tubercles of the antennæ. From this point also it is reinforced by two distinct portions, one on each side, which soon become incorporated with it. Its free extremity bears a great resemblance to the point of a pen, and is extremely sharp and delicate. Posteriorly it is continued back through the head to the pharynx, where it dilates into a horny hollow bulb, and then becomes contracted again to its original calibre before joining it. On its inferior aspect, it is also open longitudinally, by a

fissure, which extends from the pharynx to its free extremity. Within it are enclosed three setæ.

One of these is spear-pointed and is fixed posteriorly on the median line between the proboscis and internal sheath, which it immediately enters and is continued to its extremity.

Below it lie the two saw-pointed setæ in close approximation. They are fixed posteriorly, one on each side the spear-pointed setæ, close to the inner edge of the palpi, and soon approaching each other enter the horny sheath, and in like manner are continued to its extremity, when their serrated edges are turned towards each other.

The pair of palpi are placed immediately above the base of the proboscidian sheath, at the base, and on the outer side of the saw-pointed setæ.

The following appear to be the analogies of the different elements of the proboscis :—

The proboscidian sheath is a prolongation of the under lip or labium.\* The central spear-pointed setæ may be compared to the mandibles united, and the two saw-pointed setæ and the pair of palpi annexed to them to masellæ, and their palpi. The palpi of the labium may be considered to be incorporated with the proboscidian sheath.

During the act of puncturing the skin in search of food, the proboscidian sheath is retracted, and drawn towards the breast, so as to uncover the penetrating instruments. This takes place simultaneously with their insertion, and the juices are probably conveyed into the pharynx, and principally through the internal horny sheath.

In the male, the proboscis is very imperfectly developed, and from never having found any food in the stomach, it is probable that they bite less frequently, and are therefore far less troublesome than the female.

#### *Alimentary Organs.*

The pharynx, which is continued backwards from the horny sheath to the œsophagus, is short and narrow, and just before it joins the œsophagus, receives the ducts of three glandular bodies.

The œsophagus is large at its commencement, becomes gradually narrower towards the stomach, where it ends in a short, dilated portion, which after being slightly contracted, swells out again into a pear-shaped

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\* The internal sheath is an elongation of the upper lip or labium.

stomach with its large end posteriorly. The pylorus is contracted and narrow. The ileum short and straight, and ends in the colon, which is dilated at its cæcal extremity, and in its substance contains several cordiform glandular bodies attached to each other by small vessels having a cellular appearance internally. The colon is then continued straight to the rectum, where it becomes contracted again to form the anus.

#### Generative Organs.

*In the Female.* The ovaries consist of two delicate transparent sacs, one on each side the rectum, and contain round transparent ovaes. The oviducts are short, and both terminate together close to the anus.

*In the Male.* The generative organs consist of three pairs of glandular bodies; one pair of which are long and ovoid, and are placed close to the posterior end of the stomach; from each of them a delicate duct is continued back to two other glands, which contain a granular matter, placed side by side on the median line close to the anus. On each side of the latter are two other glands, containing a greenish yellow granular matter, they unite and terminate in the rectum close to the anus at the same point as the latter, to which they are attached.

#### Biliary Vessels.

The biliary vessels are six in number; they enter the duodenal end of the ileum close to the pylorus, and are convoluted round the large end of the stomach.

#### Explanation of the Plate.

*Fig. 1.* Musquitoe (*Culex pipiens*) magnified 3 times. Female.

2. Male.

*a* Antennæ.

*b* Palpi.

*c* Hook-like processes of the tail.

*Fig. 3.* Diagram of the elements of the proboscis magnified 16 times.

*a* Neck.

*b* Head.

*c* Antennæ.

*d* Œsophagus.

*e* Internal sheath or labium.

*f* Proboscidian sheath or labium.

*g* Spear-pointed setæ.

*h* Saw-pointed setæ.

*c* Palpi.

*k* Dilated portion of internal sheath.

*Fig. 4.* Magnified view of the extremity of the proboscis.

*a* Bilobate portion.

*b* Longitudinal fissure.

*Fig. 5.* Magnified view of the extremity of the internal sheath.

- a* Pen-pointed extremity.
- b* Longitudinal fissure.

*Fig. 6.* Alimentary canal.

- a* Internal sheath.
- b* Dilated portion.
- c* Longitudinal fissure.
- d* Pharynx.
- e e e* Œsophagus.
- f f f* Salivary glands.
- g* Stomach.
- h h h* Biliary Cæca.
- i* Ileum.
- k* Colon and rectum.
- l* Anus.
- m m* Processes at the oval extremity of the female.
- n n* Ovaries and their ducts.

*Fig. 7.* Glandular bodies found in the cœcal end of the colon.

*Fig. 8.* Male organs of generation.

- a a* Testicles.
- b b* Their ducts leading to vesiculæ seminales.
- c c* Vesiculæ seminales.
- d d* Two glandular vesicles containing a greenish yellow granular secretion.

*Fig. 9.* Magnified view of the free extremities of the elements of the proboscis exposed.

- a* Superior surface.
- b* Inferior surface.

I also send the Society a drawing of a species of musquitoe, which is very common in Lower Sindh, and is generally termed by the Europeans a sand-fly. Its bite is equally poisonous with that of the common musquitoe, though the swelling that follows it is not so extensive.

It differs from the common musquitoe in not being more than one third of its size, and is almost colourless, bordering upon white. The body and wings are covered with tufts of hair. The proboscis larger at its extremity than at its base, but not suddenly dilated, as in the common musquitoe, and the external or horny sheath is formed of four separate portions of equal size and length, concave externally and pointed in an obtuse angle at their extremities, and within them is enclosed a single stylette. The palpi, like those of the common musquitoe, are longer than the proboscis, and bent downwards at their extremities.



Fig. 1.

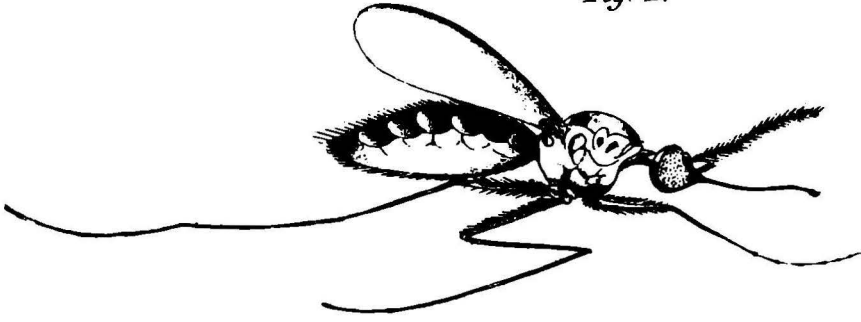


Fig. 2.

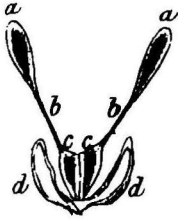


Fig. 8.

Fig. 3.

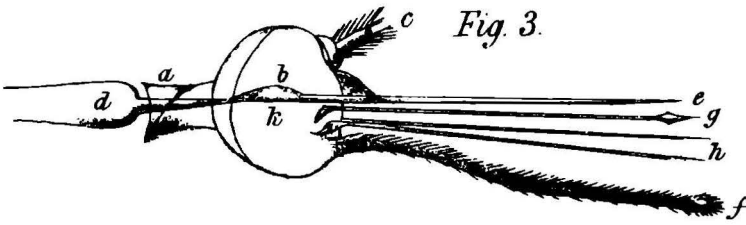


Fig. 4.



Fig. 6.

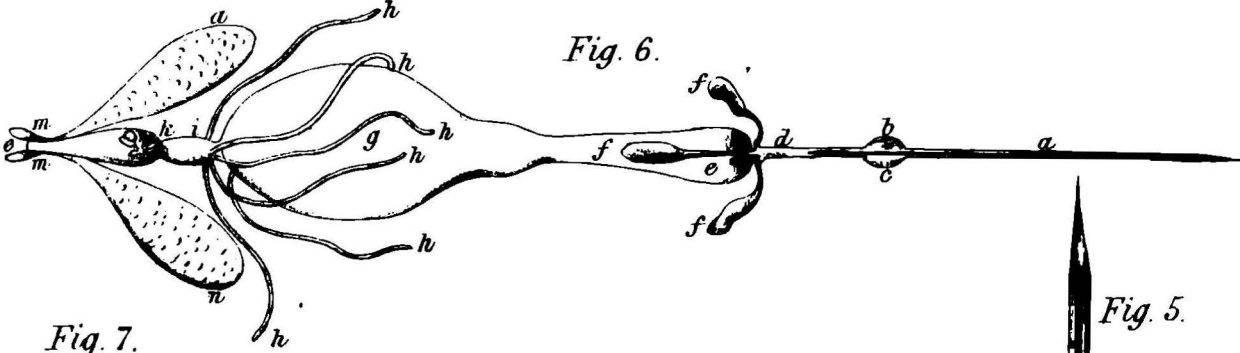


Fig. 7.



Fig. 5.



Fig. 9.



Sindh Mosquitoe. — *Culec pipicus*. Linn.  
Fig. 1. Female, 8 times natural size.  
Fig. 2. Magnified 16 times natural size.

ART. V.—*Note on a Specimen of Iron Ore from the vicinity of Malwan.* By BALL G. SHASTREE, Esq.

The accompanying is a specimen of the ore from which iron is extracted in the vicinity of Malwan. Though the laterite, in which this ore occurs, almost everywhere overlaps the basalt and other rocks, in the Southern Conkan the ore is generally found only in detached masses, on the tops of hills, not far from ground, its presence being indicated by the appearance of small ferruginous fragments on the surface. The following description of its mineralogical and chemical properties has been supplied to me by Bhaú Dají, the assistant to the Chemical Professor in the Elphinstone Native Education Institution, who examined it at my request.

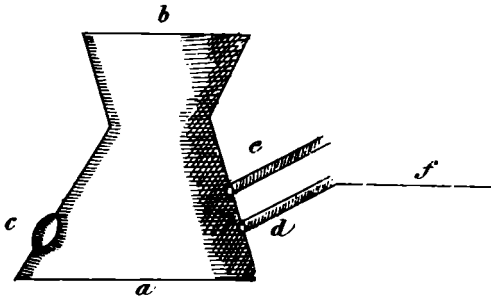
“It is massive, compact, externally brown or reddish brown, internally steel-grey, glimmering. Brittle, streak yellowish brown, fragments splintery, sharp, fracture flat conchoidal. Spec. gra. 3.32. Before the blowpipe, it yields a dark blue shining enamel, attracted by the magnet. Its constituents have been found to be water, the *black oxide* and *peroxide* of iron, *alumina*, *silica*, a *trace of manganese* and *magnesia*.

“A considerable portion of this mineral contains a shining steel grey lamellar powder, which is most difficult of solution both in nitric and muriatic acids. It is supposed to be the black oxide, which is regarded by many chemists as a distinct oxide—a mixture of the oxide and peroxide of iron in various proportions.”

Though the process employed at Malwan, for extracting the metal from the ore, is nearly the same as that adopted elsewhere in India, and described in Mr. Prinsep's *Gleanings of Science* (vol. 1st, p. 230, and vol. 3rd, p. 328, 330), the following details on the subject, literally translated from the letter of a friend residing on the spot, may be interesting for the sake of comparison.

“Equal measures of this ore and that of charcoal, reduced to fine powder, are intimately mixed by means of water, and smelted in a furnace which is represented in the following diagram.

“It is round and about three feet in height ; its diameter at the bottom is nearly a foot and a half, and at the top,



about a foot. *c* is a circular opening three inches from the bottom and about 9 inches in diameter, through which the half melted mass of iron is taken out. *d* and *e* are two apertures for the insertion of the pipe of the bellows. *f* the

place where the bellowsman sits, about two feet from the ground.

“The furnace is loaded with about 10 *paylies*, or about 80 lbs. of charcoal. A *seer*, or about 2 lbs. in weight, of the mixed powder is now thrown in together with charcoal sufficient to reduce the ore. The opening *c* is closed up by a stone and clay, and the materials in the furnace ignited. The bellows consist of single skins of goats worked by the hands.

“When the powder is formed into a mass (which may be seen from above), the furnace is again loaded with about 2 lbs. of the powder. The half melted mass is taken out, through the openings, by means of a paori or shovel, and is beaten by heavy hammers on an anvil. The iron is then ready for sale. If a large quantity of iron is to be prepared, fresh quantities of powdered ore are successively added to the melted mass, and allowed to be incorporated with it, until a mass of about 20 lbs. in weight is obtained.”

A process somewhat different from the preceding is more frequently employed. It is as follows :—

“The ore is exposed to sunshine for a week or two to deprive it of moisture. It is then carried to the place of manufacture and roasted, which renders it brittle and capable of being easily reduced to powder, in which no pieces larger than a pea are allowed to remain.

“The next operation is to put in about 2 *paylies* or 16 lbs. of fine charcoal powder, at the bottom of the oven described above. Upon this

are put cinders, and wood charcoal is thrown in up to the brim. The bellowsman begins his task, and when the ignited mass, in the inside of the furnace, subsides a little, about half a seer by measure, or 1 lb. in weight, of the powdered ore is thrown in with about two paylies or 16 lbs. of charcoal. When again the fire has subsided about 9 inches, the same quantity of ore and charcoal is thrown in. This is continued from 6 to 9 o'clock in the morning. No more powder is now employed, but the bellowsmen continue blowing for about 3 hours more. By this time a mass of iron is formed at the bottom of the oven, from which it is taken out through a hole made for this purpose, by means of a large pair of pincers, and placed on an anvil, on which it is beaten by heavy hammers.

“ Thus a piece of good iron about 10 seers in weight is obtained. It is called by the natives Madagé. A similar quantity is made in the afternoon. One piece is sold for about 8 annas, one half of which is given to the bellowsman.

“ The manufacture of iron is the exclusive trade of a class of natives called Dháwar. The agricultural classes are also acquainted with the process; but if they want to prepare any iron, they have recourse to a Dháwar. For if any person were to attempt to manufacture it at his house, he would be liable to be deprived of his caste.

“ The smelting of iron is carried on at Masará, Kholala, Vayangaon, and several other villages. There are generally 4 smelting furnaces in each village. As the operations of these require an immense expenditure of fuel, the principal men of the villages do not allow the Dháwars to settle in large numbers in their vicinity. No great quantity is therefore produced in any one of them. The charcoal used is from *soft* wood; that of Kháir (the Mimosa Catechu) is hard, and is said to produce no iron if employed. As iron bars and blocks have found their way here, the quantity of the metal now manufactured in this district cannot be worth more than about a thousand rupees annually; being one-half of what was produced under the former Government.

*5th February, 1844.*

ART. VI.—*A brief account of the minor Bauddha Caves of Beira and Bajah, in the neighbourhood of Karli.* Communicated in a letter, from Mr. N. L. WESTERGAARD, to JAMES BIRD, Esq., with translations, by the latter, of inscriptions found at both.

Some account of a cave at the village at Bajah, between Karli and Lohgarh, was sometime ago communicated by a member of this Society, Manockjee Cursetjee, Esq., and was accompanied by fac-similes of the inscription: but hitherto the more perfect excavations, at Beira, have not been noticed, and their existence seems scarcely known to Europeans. A rough sketch of the Beira cave, drawn from memory, accompanies this brief account of it, which I am enabled to give on the authority of Mr. Westergaard; but while, in the absence of more extended information, this may satisfy the curiosity of some in such matters, a fuller and more perfect account would still be of interest to the members of the Society.

Mr. Westergaard writes—I have just returned from a visit to the caves in the neighbourhood of Karli, and I am led to suppose that the minor caves, at Birsa and Bajah, might possibly have escaped your notice. I take the liberty to send you a short description, with copies of the few inscriptions there; hoping that you will not refuse this small contribution to your most important and interesting work on the Caves of Western India. The caves at Birsa, (or as it is called, in the map of the Poona Collectorate, Beira,) are situated about six miles S. W. from Wargam. The plan of the temple resembles Karli, but is neither of so great extent nor so well executed, and appears more modern. It contains a *Dehgop*; \* and its roof, which is ribbed, and supported by

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\* This is a stone spire, of an hemispherical form, placed at the extreme end of the arched Bauddha caves; and is a type of the corporeal frame of the five elements, or the *Dhyani Buddhas*, being the same as the *Anushthana Sarira* of Kapila's philosophy, or vehicle of the subtle person or spirit.

That, at the cave of Karli, is named, in the inscription on it, *Sansar-ratha*; or the worldly vehicle, and establishes a fact that it is meant as a type of a first cause, producing effects in the versatile world. It is in fact considered an aggregation of the elements, effected by the residence of spirit; and viewed as a type of elemental creation, presents an analogy to the mundane egg, from which, according to the doctrines of antiquity, sprung the first born of the world.

INSCRIPTIONS FROM THE CAVES OF BEIRA AND BAJAH,  
NEAR WARGAM ON THE POONA ROAD.

N<sup>o</sup>. I. Over a small Cell at Beira.

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N<sup>o</sup>. II. Over a Water Reservoir.

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N<sup>o</sup>. III. On the first of the nine Dehgopas  
outside a Cave at Bajah.

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N<sup>o</sup>. IV. Over two Wells at Bajah.

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DUPLICATE COPIES BY M<sup>s</sup> D' OCHOA.

TEMPLE DE BODJA près KARLI.

Inscription placée dans un encadrement audessus d'une citerne à gauche du Temple de Bodja.

1<sup>re</sup> Ligne:

ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ

2<sup>de</sup> Ligne:

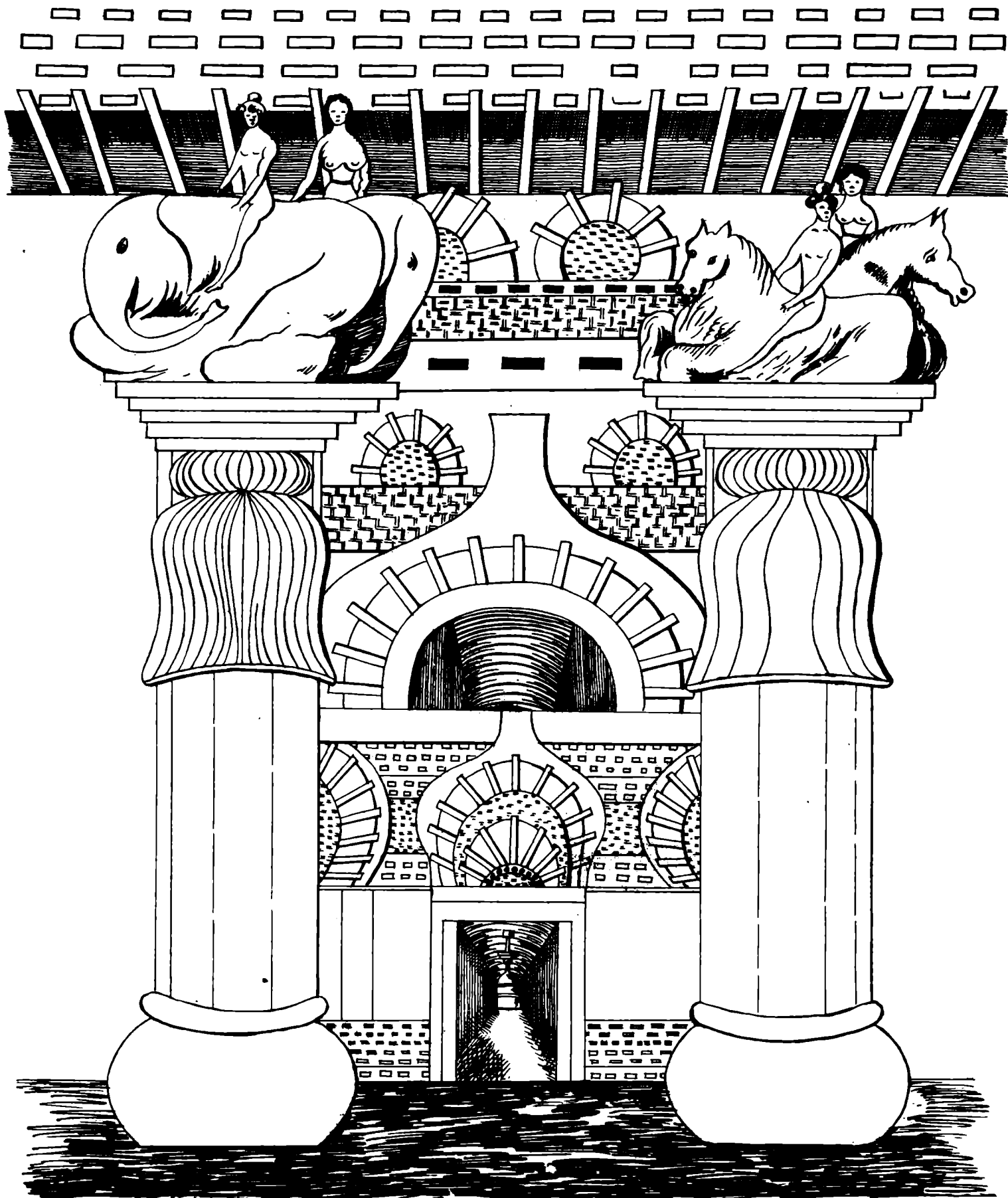
ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ ᱚᱛ

Inscription placée sur une porte latérale faisant partie d'origine ds Pretice dans  
le Temple de Bodja.

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Karli.  
Janvier 1844. Ch. d'Ochoa.



B. E. S. PRESS.

PART OF THE PRINCIPAL ENTRANCE TO CAVE AT BEIRA 24 MILES FROM KIRKEE.

twenty-six octagonal pillars, about ten feet high, seems to have been covered with paintings, which are now, however, so indistinct, that nothing can be made out of them. There are four pillars, about twenty-five feet high, in front, surmounted by a group of horses, bulls, and elephants. The first pillar supports a horse and a bull, with a male and female rider; the next three elephants and one horse, two of the elephants having a male and female rider; the third three horses and one elephant, a male and female rider being placed on two of the horses; and the fourth pillar is surmounted by two horses bearing a male and female rider. The hall of instruction, which is of an oval shape, has a vaulted roof, and is situated close to the temple. It contains eleven small cells; and over the door of one of them there is an indistinct and partly defaced inscription, which will be immediately noticed.

The caves of Bajah are situated three miles S. E. from the village of Karli. The principal temple contains a *Dehgop* but no sculptures, and has its roof supported by twenty-seven plain pillars. Outside there is a group, executed in *bas relief*, now much defaced. On both sides of the chapel the hill has been excavated into two stories, corresponding with the height of the temple, and containing the usual halls of instruction with cells. But the most curious of the sculptures is a collection of fourteen *Dehgops*, five of which are inside and the others outside the cave. On the first of the latter there is an inscription.

Mr. Westergaard, in his interesting correspondence with me, entered into an elaborate examination of the probably correct reading of the inscriptions at both caves; and while I felt myself under the necessity of dissenting, in part, from his observations, I was infinitely obliged to him, as they enabled me to give a more accurate reading and translation in my second letter. Mr. Westergaard's objections to the reading, first sent, applied chiefly to the vowel points employed, to the substitution of aspirated for unaspirated consonants, and to the use of cerebral for dental letters. To these I replied, that the *Prakrit* of the cave inscriptions, which contains a large admixture of *Pali* and *Sanskrit* words, is employed by the *Jainas* for the composition of their scriptures, and admits of the changes objected to, while its grammatical structure approaches nearer the *Magadhi* or *Pali* than the *Sanskrit*, and may be more correctly interpreted after the model of the former, than through a *Sanskritized* medium. I have since obtained a copy of the Bajah



inscription by Monsieur D'Ochoa, which enables me to correct some points doubtful in Mr. Westergaard's copies.

The cave inscriptions, generally embody, religious and historical information, and strongly confirm, what the general principles of the *Bauddha* religion in various countries teach us, that this widely diffused system had its origin in *physical* and *metaphysical* opinions, on the subject of a *first cause*, made applicable to explain the phenomena of the world and of human nature; and was intimately connected, at its rise with the worship of the heavenly bodies, and the *Sabean idolatry*. Hence it is that the inscription on the obelisk at Karli is declaratory of its dedication to the sun; while many of those from the caves of *Junir* are more fully declaratory of the different deifications, celestial and human, which were objects of worship among the *Bauddhas*; hence also the explanation of a fact, that the coins of the *Afghanistan* and *Panjab topes*, which have been accurately named *Mithraic*, present the same mystical symbols as precede the cave inscriptions, and are indicative of the respect paid to the planetary bodies, and to fire. The group of horses, bulls, and elephants, on the four pillars in front of the arched cave at Beira, (*Birsa*) resembles what we find on the Indo-Mithraic coins of the North; and is evidence, were no other proofs procurable, that such belongs to the worship of the sun: for as *Proclus de Sacrificiis* observes:—  
 “Animalia sunt Solaria velut leones;” and of the latter there are numerous sculptures in the *Bauddha* caves of Western India, accompanied by figures of the deer, tiger, &c.

The first inscription, from the Beira cave, described as executed over the door of a small cell, reads,

नासिकातपसिनोसासथपुतासपुवानाकमाह.

Nasika tapasino sa sathaputasa puvanaka maha :

and may be translated,

“By an ascetic of *Nasika* resembling the purified Saint (*Buddha*), the primeval heavenly great one.”

Here *Sattha*, the Pali name for *Buddha*, is spelt with the aspirated dental *tha*, and without the usual *ta*, which constitutes the correct modern spelling of *Sattha*; which is a *Prakrit* corruption of the *Sanskrit* word श्रेष्ठ *Shreshtha*, meaning preëminent, or most excellent, and the same

with *Seth*, an appellation given, by the Jainas and Parsees of Gujarat, to great and good men of rank and consideration.

The second inscription, from the same caves, said to be over a well, reads,

महत्पालकेयमनुवयमहारतनव्यसामिद्धिनकेयदयधमाउपादमनाकासशयकेय.

*Mahatya palakaya manavaya maharatanaya samidhinakaya dayadhama upada manakasa vatyaya kaya :*

and may be translated,

*“A righteous gift of a small offering to the moving power, (body) the intellectual principle, the cherishing material body, the offspring of Manu, the precious jewel, the supreme heavenly one here.”*

Mr. Westergaard proposed to read *Mahatuya palikaya*, which perhaps might be rendered, “for the preservation of a quantity of water,” but I prefer the original reading, as the cherishing principle of creation, alluded to in the inscription, is doubtless water; under which form, and which symbol the female divinity, *Adi Prajna*, or *Adi Dharma*, characterised by the *lotus* or *yonis*, is represented among the *Bauddhas*. The esoteric meaning of the inscription has reference to *Prajna*, who, as the active power of nature, is manifested, in Nepal, as *Jal-sarup*, or a form of water; and is represented, at the caves of Ajanta and Ellora, as a female, seated on the lotus, over whose head are descending streams of water.

Regarding the caves at Bajah, Mr. Westergaard observes, that the first of the inscriptions there, is on the first of the nine *Dehgopas*, outside the cave, and which have been already described. It reads—

पालन्न वसोभूचसाताना :

*palanna vasibhutasatana :*

and may be translated,

*“The resting places of the preserver dwelling in the elements.”*

Allusive, as would appear, to the influence of the sun, and his course amid the signs of the nine planets, of which *Rahu* and *Ketu*, or the nodes, form two; and are always inserted in *Bauddha* astrological diagrams, or systems of sidereal astrology, called in Ceylon *Baliah*;

which is the worship of the planetary powers, similar in many respects to the Syrian idolatry of worshipping and propitiating the *Balim*, or host of heaven, which protected and influenced mankind in health and sickness.\* This part of the Bauddha system is connected with a belief in the efficacy of amulets and charms for averting the evil influence of the stars: and it is usual for both *Bauddhas* and *Jainas* to address their prayers to the *Dasa-Dik-Pals*, or ten regents of the heavenly quarters. One of the Bauddha astrological diagrams, showing the mode of prognosticating from the signs of the planets, may be seen at page 114 of Sangermano's description of the Burmese Empire: and a similar diagram exists in the temple of Kargone, on the road to Malwa. In illustration of the above inscription, and its connexion with the Bauddha religion, I may briefly notice, that the late Dr. Bramley brought from Nepal two coins, on the obverse of which there is a seated image, accompanied by the inscription, *Sama gana*, the Supreme Quirister, and on the reverse the representation of a lion, or symbol of the sun, called *Siho nana*, the wise lion.

The next inscription from the Bajah caves is said to be over a well, and reads,

महरथशाकशाक पुनसातानदातसादप्यादमापादः

Maharatha sakasakaputasa tanamdatusa dayadhamapada :

and may be translated—

“The righteous gift of a symbol and vehicle of the purified Saka Saka, (Shakra or Indra†) the resting place of the giver.”

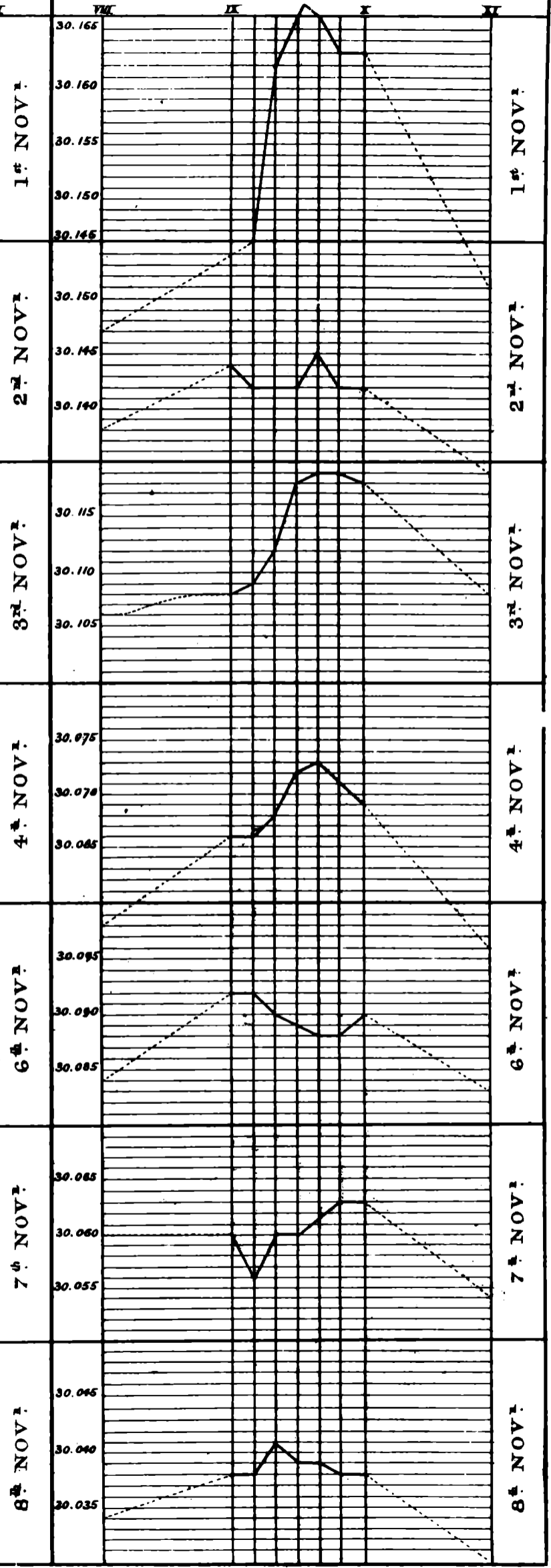
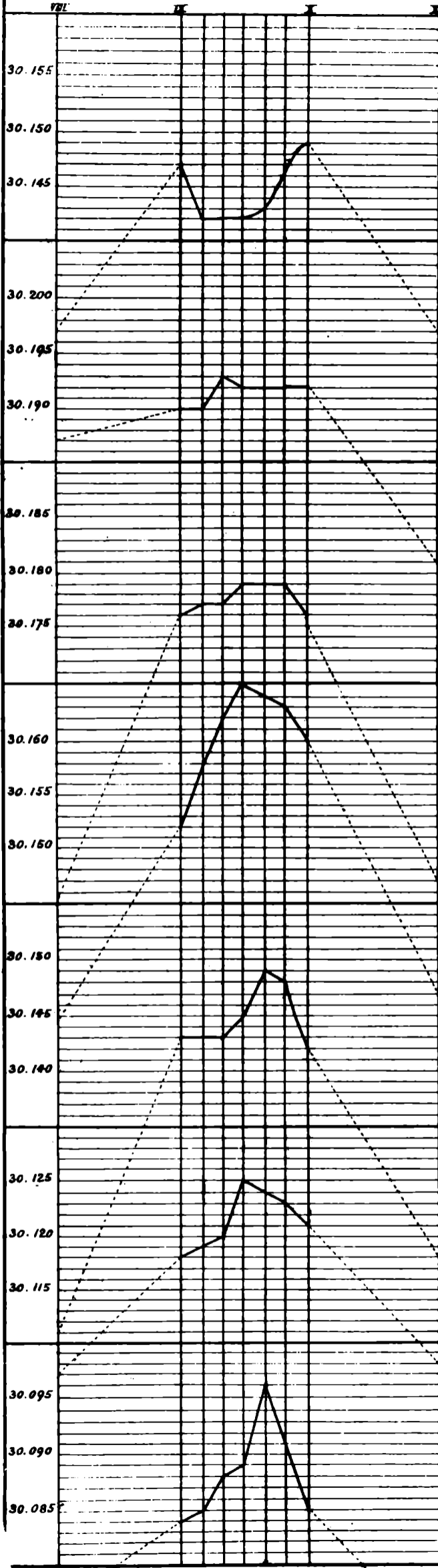
*Saka* in Sanskrit is the usual appellation for *Salivahana*, as *Sa.lya* is that for *Buddha*, being a title implying sovereignty: but in the present inscription *Saka-saka* is evidently intended for *Sakra*, the Sanskrit name for *Indra*, or the god of the firmament, who is named in Pali *Sakko*. Two copies of the above inscription are here given; and while Mr. Westergaard's would give the reading *Maha Raja*, I prefer that in Mr. D'Ochoa's—*Maha ratha* as being more consistent with the sense of the passage, and implying that water, over which it is inscribed, is the great vehicle of *Indra*: who, in the inscription from the Khandagiri

\* See Mr. Upham's account of the Bali in Ceylon, chap. x.

† शक्र Shakra, a name for Indra, the ruler of Swerga or Paradise.

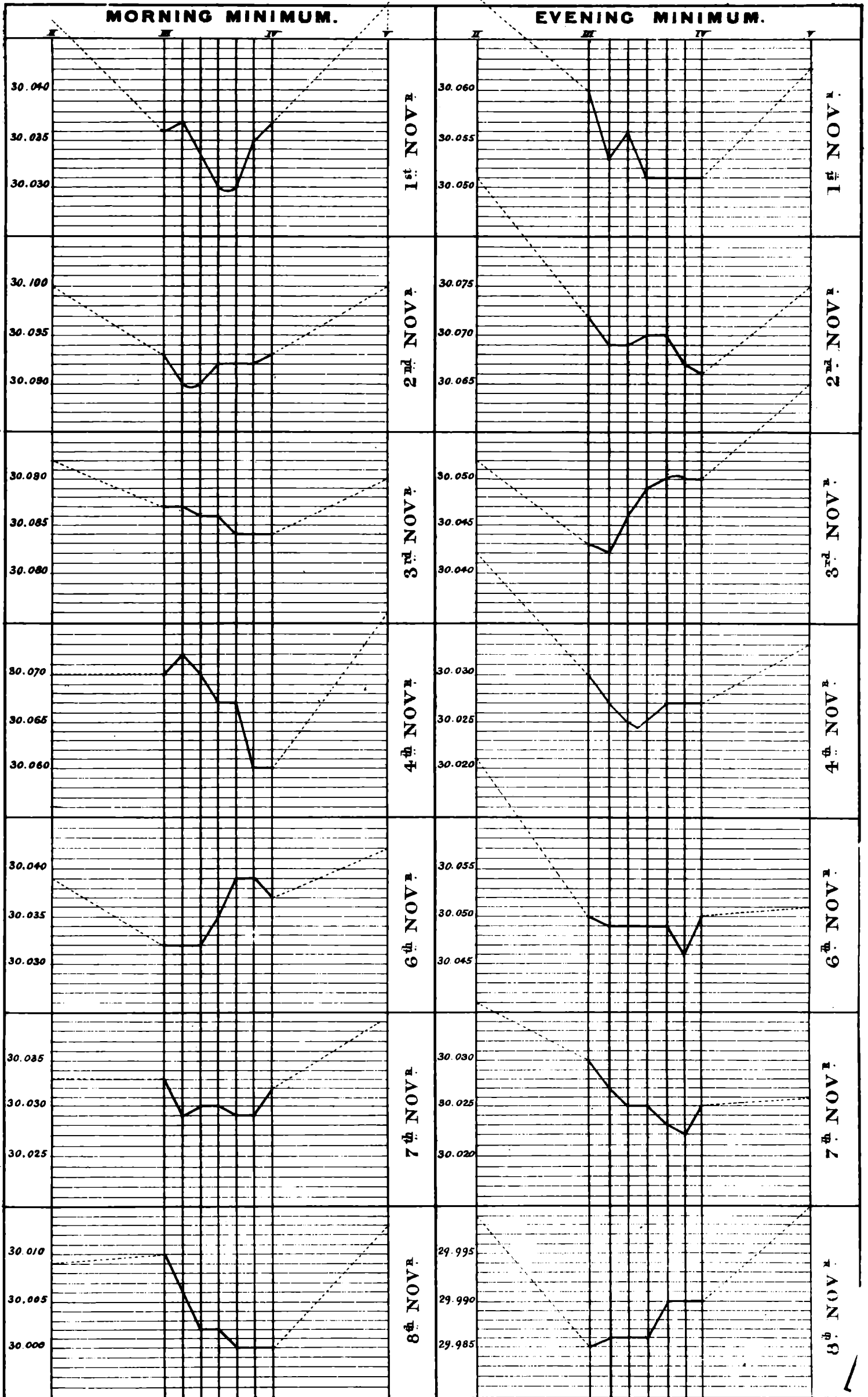
MORNING MAXIMUM.

EVENING MAXIMUM.



30.072

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rock (Prinsep's Journal 1837, page 1080,) is styled *Maha-meghavahna*, or the great one borne on the clouds. This last title, according to the *Trantra* portion of the *Kahgyur*, or Bauddha scriptures of Tibet, (Prinsep's Journal, vol. I. p. 389) is also given to a *Buddha*, in subjection to whom the *Nagas*, or serpents, are assigned the charge of the rains.

Not many years since surprise was expressed that figures common to the Bauddhas and Brahmans should have been found in the *Indra Sabha* at Ellora ; but with our present extended knowledge of the principles of both religions, and the testimony of Bauddha inscriptions, that the latter system, like that of the Brahmans, admitted the worship of *Indra* and the elements, we can easily account for the ultimate approximation (as exhibited in the caves of Ellora,) of systems originally distinct.

The last inscription which is given by Mr. D'Ochoa's plate, and not inserted in Mr. Westergaard's, is not quite so distinct as the others, and I am therefore doubtful of its real meaning. It may perhaps be read,

Raddhasavahanya sntasattamsugata danam :

and translated —

“ A gift to the vehicle of Raddha (the perfect one) the Sugata (Buddha) eternally gone.”

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ART. VII.—*Meteorological Observations.* By DR. BUIST.

Dr. MALCOLMSON, *Secretary to the Bombay Branch of the  
Royal Asiatic Society.*

SIR,—I have the honour to enclose a paper of miscellaneous remarks on observations, now in progress at the Observatory, which seem likely to establish several laws in reference to atmospheric pressure, which have hitherto been mistaken or overlooked.

The first of these erroneous impressions is, in reference to the period of extreme pressure ; which seems to be at least an hour earlier than is generally supposed. The second, that the Barometer does not, as usually imagined, attain its extreme point of maximum, and then, after a pause of definite duration, return on its path ; but oscillates to and fro

for the space of nearly an hour before it begins steadily to return from the point of maximum or minimum range.

It seems likely to be made out, by further observations that those oscillations follow a definite law, connected with the various seasons of the year.

The observations extend over much too limited a period to permit me to lay down any general law, established by them beyond controversy, and as yet they are to be esteemed provisional only, and are little calculated for publication : and I have taken the liberty of troubling you with them now, because the uncertainty of my tenure of office at the Observatory, may by and by preclude me from having access to its records.

I have the honour to be, Sir,

Your most obedient Servant,

GEO. BUIST.

There are few points on which the opinions of mariners are more conflicting than on the subject of the absolute value of indications, which Meteorological instruments give, relative to atmospheric changes in the more tranquil portions of the tropical ocean, rarely visited by storms more violent than the gales attending the change of the monsoon, and which are more or less prevalent throughout the rainy season. Amongst the navigators chiefly voyaging to the north of the line, and betwixt the coasts of Africa and India, the Barometer itself is very little heeded. The most striking illustration of indifference to this subject is to be found in the fact, that while the ships of the Royal Navy are provided with meteorological instruments almost as invariably as with anchor or cable, a compass or charts—and no really well found merchantman ever goes to sea without them,—the Indian Navy, mustering thirty armed vessels in all, of which one-half are steamers, are (unless in the case of those which have been built and fitted up at home) almost totally destitute of meteorological instruments of any description : and those which have been provided with Barometers from the Company's stores had, considering their quality, almost as well be without them.

The reasons assigned for the general disregard of the Marine Barometer in these seas are, that its indications are not trustworthy—that it hardly seems to stir on the approach of a storm, unless this amounts to an actual hurricane. The Sympiesometer is put aside for purely the opposite reasons, that it is too sensitive ;—that it keeps the

mariner in a constant state of alarm ;—and that when it sinks most rapidly no such result as that which was apprehended ever ensues. The neglect with which this valuable instrument has been treated by the Committee of the Royal Society, on Physics including Meteorology, and who have excluded it from the list of instruments directed to be kept at all Magnetic Observatories, has unhappily given countenance to the disregard with which the Sympiesometer is treated within the tropics ; but I shall, I trust, be able to show that there is a strong probability that by its use, the best established, striking, and inexplicable facts in Meteorology,—the hour of the occurrence of the maxima and minima of atmospheric pressure, indicated by the semi-diurnal fluctuations of the Barometer, will receive, as to matter of time, a very material modification.

It is stated by the Baron Humboldt,\* on the authority of Mr. Horsburgh,† that during the rains the indications of the atmospheric tides are occasionally interrupted altogether ; and, that, though manifest on the open sea, they vanish all along the coast. Our experience at the Observatory is so completely at variance with this, that throughout the monsoon during the past two years, when hourly observations have been most carefully conducted, we have found the atmospheric tides at all times as distinct and regular in their appearance, and nearly as considerable in their range, as during the steadiest weather in the fair season. At Poonah during the rains, I carried on a series of hourly observations for three weeks continually, during part of August and September 1841, and found the tides in a great measure independent of the weather.

The hours of maxima are betwixt 9 and 10 A.M. and P.M., and of minima betwixt 3 and 5 A.M. and P.M., and amongst the desiderata especially pointed to by Humboldt is the determination of the precise moment when the mercury reaches its maximum elevation, the length of time when it remains there, and the instant at which it begins to descend. In furtherance of this inquiry a series of observations, commencing 10 minutes before 9 and terminating 10 minutes after 10 A.M. and P.M., in like manner in reference to the hours of maxima and minima, has just been commenced, from which the unexpected fact has been elicited, that the Barometer, instead of attaining a definite point, and then, after a period of repose, returning on its path, oscillates for the space of nearly an

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\* Personal Narrative, vol. VI., Part II., p. 706—English Edition, 1826.

† Nicholson's Journal, Vol. XIII., p. 20.



hour backwards and forwards. These oscillations, in all likelihood, follow some definite law, which it will at all events require the observations of a twelve-month to demonstrate. The subjoined curves give the results of the last eight days' observations, corrected for temperature capillarity, &c., and read to thousandths of an inch. The remarkable fact to which I propose directing attention, refers to the indications of the Sympiesometer, which, in steady weather, invariably rates its maxima and minima at least an hour before the Barometer. To say that this arises from the superior sensitiveness of the instrument, is to conceal a most important fact under unmeaning commonplace. Of course it is from this the manifestation arises, but then the manifestation itself proves that the periods of greatest and least pressure, as assumed from Barometric observations only, have been set down an hour too late by meteorologists: that instead of the former being from two to three hours, they are from three to four hours before noon and midnight; and instead of the latter occurring from four to five hours, they happen within three or four hours after these periods respectively. Both of these statements are of course to be received with this much of caution—that as yet they are based on a very limited number of observations, though these, as far as they go, are in a great measure free from anomalies. I have now commenced a series of observations on the Sympiesometer, conducted with similar frequency to those on the Barometer; so that while throughout the day and night we shall have hourly observations without interruption, we shall for 8 hours out of the 24, have readings of both instruments taken with the utmost care every ten minutes.

Should the results of these be as hitherto, not only will an important fact be added to our stock of information on a subject which has of late been matter of special attention,—through the means of an instrument hitherto too little consulted on the more rigorous portions of research,—but the system of observation now commenced, may probably evolve in some definite and systematic form, the amount of interval generally intervening betwixt the pressure of the air as indicated by the mercurial column and the same thing as made manifest by the oil of the Sympiesometer.

To revert to the subject with which these observations opened:—the distrust, from opposite causes, manifested by mariners, in the eastern seas, in the two instruments under consideration, arises, in the first place,

from the extreme imperfection of the Barometers supplied on board of ships. Many seldom read, even by help of a vernier, lower than hundredths of an inch,—and that often so inaccurately that the vernier itself will hardly give precisely the same readings at any two points of the scale: they are destitute of all means of pointing out the neutral or zero point in the cistern, as well as for making corrections on account of expansion. Beyond the tropics these imperfections are comparatively little felt: there the casual range amounts to betwixt two and three inches, here it is seldom one-tenth of this; here, again, our daily range often exceeds a tenth, there, it rarely gets beyond a hundredth; here, our daylight range is about double, there, it is scarcely half that nearest the hours of darkness. The Barometer here, if properly constructed, may equally subserve the requirements of the mariner when its signs are understood, though these signs be different entirely from those which it elsewhere gives out. So with the Sympiesometer: it occasions alarm from the very circumstance of its sensitiveness, which ought to be considered its great recommendation. It is occasionally employed in place of the Barometer, and is always compared or contrasted with it—not with the view of attaining any sound result, but to show how little is to be got out of it, because the language it employs and the tones in which it speaks are different from those of its mercurial neighbour. When the Barometer whispers, the Sympiesometer shouts or screams; when the former is silent, the latter whispers: but what of that, if we know how to interpret them—if we avoid mistaking vivacity for folly, and take the indications in the shape they are given, and for as much as they are worth.

If these errors be avoided in coming to the conclusions desired to be attained, the two may form an invaluable combination, when a little careful observation shall have shown us the precise value of the indications of the one when converted into corresponding expression of the other.

With a view to assist in carrying out these latter ends to some practical available purpose amongst the shipping of our port, I some time since addressed one of the best of our meteorological instrument makers on the subject—Mr. Adie, of Edinburgh, by whom I have been very extensively supplied since my arrival here; and found that the very finest marine Barometers, free of all the defects above adverted to, with the means of obtaining all the requisite corrections for the most delicate ob-

servations, and with scales reading to thousandths of an inch, could be had in numbers betwixt five and six guineas—Sympiesometers of similar quality being procurable for like price.

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ART. VIII.—*Bibliothæcal notices of important book collections in India and the East.* By THE SECRETARY. NO. I. MIYAN MAHOMED PANAH'S ARABIC AND PERSIAN LIBRARY AT KACH-BHUJ.

While much has been done to illustrate the civil and natural history of this great and extensive country, much yet remains for individuals to effect in bringing into one well digested summary of information the scattered subjects of knowledge we now possess relative to the Antiquities, Geography, Palæography, Philology, religious and civil History of this and the neighbouring countries of Asia. We can scarcely indeed fail to observe that wherever in the East we may be located by circumstances, abundant subjects of interest present themselves for investigation; and that the traveller, least learned in antiquities or languages, can, by copying inscriptions or obtaining lists of book-collections, supply abundant materials for the exertions of others. It is generally believed, and not without foundation, that while large and important collections of books on Sanskrit, Arabic, and Persian literature, have been carried to Europe, many now existing collections, in India and the East, pass unheeded by resident Europeans or are barely known. A rare and valuable collection of Arabic authors, particularly those relating to the crusades, is said to be kept in the mosque of *Omar* at Jerusalem; extensive libraries of books, on the subject of the Jaina faith, have been described by Colonel Tod, as existing at Jessalmir and Anhalwara Pattan; and like important libraries, relative to the Bauddha religion, are to be found in Tibet, Ceylon, and China.

In devoting part of this Journal to the head of *Bibliothæcal notices*, we trust the Society may be favoured with as many communications on the subject of Indian book-collections in Sanskrit, Prakrit, and Persian, as may be in the power of gentlemen, variously distributed over the country, to give. Such will supply the Orientalists of Europe with *desiderata* long looked for, and may prove of utility to officers in the

service, who devote their leisure time to the illustration of yet obscure points in the religious opinions and history of India. Should we be supplied with descriptive catalogues from various parts of the country, we will be happy to make known the labours of our correspondents on such subjects; and in the absence of better information, we now insert a list of the books composing the Arabic and Persian library of the deceased Miyan Mahomed Panah, which was kindly supplied many years ago by Captain Postans, and is well worthy the attention of those wishing to have copies of such books.

### THEOLOGY.

#### A. Commentaries on the Kuran, chiefly Arabic.

##### No. 1 تفسیر کشاف — دو جلد

*Tafsir Kashaf*, in two volumes. Author's name is not mentioned, but this is a Persian translation and commentary on the most esteemed of Arabic commentaries on the *Kuran*, namely, the *Kashaf*, which was written at Mekka sometime about A. D. 1143, and the author of which was Imam Abul-Kasim, the son of Omar-al-Zamakhshary.

##### No. 2 حاشیه سید یمنی بر کشاف — ایک جلد

Marginal notes on the *Kashaf*, by Saiyad Yemani, in one volume.

##### No. 3 ایضا حاشیه کشاف — ایک جلد

Marginal notes as above; one volume.

##### No. 4 حاشیه سعد الدین تفتازانی بر کشاف — ایک جلد

*Hashiya Kashaf Saad-ad-din Tuftazani*, one volume.

The author of this well known commentary was Saad-ad-din, the son of Masaud-bin-Omar Tuftazani, who died A. D. 1389.

##### No. 5 تفسیر بیضاوی — چهار جلد

*Tafsir Baizawy*, four vols.—The light of revelation, being a Persian translation of, and commentary on the *Kuran*, according to the *Sunny* faith. The author of this work was Nasir-ad-din Abu Said Baizawy, Kazy of Shiraz, who died A. D. 1292.

##### No. 6 تفسیر مدارک — سر جلد

*Tufsir Mudarik*, in three vols. This is an esteemed Arabic commentary on the *Kuran*, by various authors.

No. 7 تفسیر معالم التنزیل — دو ربع

A commentary on the truths of the world above, as explained in the Kuran.

No. 8 تفسیر انوار التنزیل و اسرار الناول — ایک جلد

A commentary on the lights of revelation, and the secrets of dreams, in four vols., the author's name not mentionned.

No. 9 تفسیر جلال الدین کہنہ — ایک جلد

A commentary by Jalal-ad-din Kohnah; one vol. This, as would appear, is the commentary on the Kashaf, written in Egypt by the celebrated Shaikh Jalal-ad-din-as-Saiyuti.

No. 10 تفسیر و چیر — ایک جلد

Another commentary with additions on other subjects.

No. 11 تفسیر سعیدی ربع آخر — ایک جلد

Another commentary not described.

No. 12 تفسیر اصمعی بر سورۃ یوسف — ایک جلد

Another commentary, and not described.

No. 13 تفسیر نیشاپوری تمام — ایک جلد

*Tafsir Naishapuri*, one volume, not described.

No. 14 تفسیر نیشاپوری — ایک جلد

Another commentary as above.

No. 15 قرآن مجید خوش خط — پنج جلد

The Kuran of the mosque in fine writing; five volumes.

No. 16 ترجمہ قرآن مجید نصف اول فارسی

The translation of the above into Persian; the first half completed.

No. 17 تفسیر حسینی — چہار جلد

*Tafsir Hussiny*. A Persian translation of, and commentary on the Kuran, according to the Shiah copy.

There are other nineteen volumes of various commentaries, which being of no great note need not be described.

B.—On the science of reading the Kuran. قسم دویم در علم قرأت

In this division there are ten small volumes and treatises of various

kinds on the science of reading the Kuran, performing the necessary prostrations, and pronouncing the *Khutbah*, or oration and prayer delivered every Friday for the reigning king.

C.—*Traditions.* قسم صیوم علم حدیث

No. 18 صحیح بخاری — ایک تمام و ایک نصف جلد

*Sahih-al-Bokhary.* This book, next to the Koran, is considered an authority in spiritual and temporal matters; and embodies the traditions, relative to the relations, actions, and sayings of the prophet Mahomed. It also enumerates the miracles, and relates anecdotes of the ancient prophets. One volume is complete, and of the other there is only one half. The author of this celebrated work was Abi Abdallah-bin-Ismail-al-Bokhary, who died A. D. 869.

No. 19 نصف اول صحیح مسلم — دو جلد

*Sahih Muslim*, in two volumes, being the first half of the work. This is a collection of traditions, by Muslim-bin-Hijay Naishapury, who died A. D. 874.

No. 20 مشکوٰۃ شریف تمام کمال ایک

*Mushkat Sherif* complete. This is a commentary on the *Masabih*, of Abu Mahomed-ibn-Masaud-al-Baghavi who died A. D. 1122. Besides the traditions relative to the prophet Mahomed, it embodies portions of ancient history. The author was Shaikh Wali-ad-din Abdallah, the son of Abdal Hamid of Tabriz.

No. 21 مشکوٰۃ شریف نصف نصف — چار جلد

About one-half of the four volumes of the above work.

No. 22 مصابیح بخط جدید

The *Misabih* of Abu Mahomed-ibn-Masaud-al Baghavy.

No. 23 شمایل نبوی — دو جلد

*Shamail Nabuwi*, in two volumes. These contain the memoirs of Mahomed.

No. 24 کنوز الحقائق

*Kanz-al-Hakvik*, or the treasurers of truths. This may be probably the same work as the *Kanz-al-Amil* of Stewart's Oriental catalogue, and if so, contains anecdotes of the ancient Arab tribes, and the descrip-

tion of several places in Arabia. Moeller, in his oriental catalogue of the Duke of Sax-Gotha's library, at number 133, describes a book called *Mifatih-al-Kanus* or the *Keys of the Treasurers*, which appears to be a commentary on the work described under the present number.

No. 25 حصن الحصين — شش جلد

*Hisni Hussin*, or the impregnable fortress, in six volumes. This is rather a book of prayer than traditions.

No. 26 خلاصة السير و چهل حديث

The *Chehel Hadis*, or the forty proverbs and aphorisms of the Prophet Mahomed.

No. 27 اربعين حديث بترجمه فارسي — دو جلد

A Persian translation of the above work.

No. 28 چهل حديث نووي و برهان الغافلين — در ايک جلد

The *Chehel Hadis*, and *Burhan-al-Ghafilin*, or the forty traditions and guide to the thoughtless in one volume. The last is probably the same work as the *Tunbih-al-Ghafilin*, or warning to the thoughtless, of which the author is Abu Leis Samarkhandy.

No. 29 مفاتيح الجنان شرح مصابيح

The keys of the Genii, or a commentary on the *Masabih*; author's name not mentioned.

No. 30 سراج الطالبين و منهاج الراغبين

This is usually known by the name of *Minhaj Al Talabin*, a work on scholastic theology, relative to religious duties, written by Muhye-addin Al Nawawi, with explanation of the names of places and words occurring in the book, by his son and commentator called *Siraj-ad-din Omar*, who wrote between 743—758 Hej. or A. D. 1342—1356.

No. 31 شرح فارسي حصن الحصين — دو جلد

A Persian commentary on the *Hisni Hussin*, already described.

No. 32 ترجمه فارسي حصن الحصين

A Persian translation of the last work.

No. 33 غرائب الحكايات

*Gharaib-al-Hakuyiat*, or extraordinary stories, which appears to be the same work as that called *Majmaa-al-Gharaib*, or the collections of

wonders, which contains the traditionary history of *Balkh* and the *Sassanides*, with the first conquests of the Mahomedans in Khorasan.

No. 34 لبالب الاخبار بترجمه فارسي

*Lubab-al-Akhhar*, being a collection of traditions, containing moral and religious advice to kings.

No. 35 جامع الحكايات خلاصة الاحكام — در ايک جلد

The first work in this collection has been already described, being, as would appear, the same with the *Gharaib-al-Hakayat*. The author was Hussain-bin-Asad, who dedicated it to Mahomed Taher the IV. of the Taherites of Khorasan, who lost the throne about Hej. 259 A. D. 872: and at a period when the history of *Balkh* and the *Sassanides* must have been well known to the inhabitants of these countries.

In the above division there are fifty-two other works of the same kind which we need not now describe.

II. JURISPRUDENCE. قسم دويم در علم فقه

No. 36 آداب المتعلمين امام محمد غزالي

*Adab-al-Mutaalamin*, or the duties of the learned, known as the work of Mahomed Ghazzali, a celebrated Mahomedan doctor of law. This is the same work described by Moeller in folio, No. 171, in the Duke of Saxe-Gotha's library; and again, by De Lacy, in the national library of France, (see *Chrestoniathie Arabe*, Tome III. p. 133).

No. 37 هدايه تمام — ايک جلد

*Hedayah*, complete in one vol. This work, which is generally used in the English Mahomedan law courts of India, was written by Shaikh Burhan-ad-din Ali of Marghinan, in Transoxiana, about the year A. D. 1135. It is a digest of the most approved works on Mahomedan Jurisprudence.

No. 38 بحر الدقايق — جلد اول و سيوم

*Bahar-al-Dakaiyak*, the first and third volumes of the work. This is a well known commentary on the work of Hanifah, commonly called *Kanz-al-Dakaik*, or the treasure of subtleties.

No. 39 معدن الحقايق شرع كنز الدقايق

*Maadam-al-Hakrik*, or the mine of truths. This is another commentary on the *Kanz-al-Dakaik*, similar to the above.



No. 40 فتاوى عبد الله از اول ناقص

*Fatawah Abdallah*, wanting the beginning. This is the work of Mahomed Abu Abdallah Badr-ad-din-Zerkashi, written in Hej. 873, A. D. 1468.

No. 41 فتاوى عالمگيري

*Fatawah Alamgir*, the judicial ordinances of Aurangzeb.

No. 42 فتاوى خلاصة الفقه نصف اول

*Fatawah Khulasah-al-Fikh*, the ordinances, or an abridgment of law ; of which there is only the first half.

No. 43 مجمع البحرين شرح قدوري

*Majma-al-Bahrain*, or the junction of two seas, being the same as the *Kitab-al-Bahrain* No. 119 of Moeller's catalogue. It is a commentary on the work of Ahmad-bin-Mahomed Kaduri, who died A. D. 1049. The work of the latter is called *Adab-al-Kazi*, or the duties of a magistrate.

No. 44 بدرالنير شرح جامع صغير

A commentary on the smaller body of traditions contained in the work of *Jalal-ad-din As Saiyuti*. It is the same as No. 71 of Moeller's catalogue.

No. 45 كنزالدقايق

*Kanz-al-Dakaik*, a copious digest of the Mahomedan law, according to the doctrine of Imam Abu Hanifah, one of the great law doctors of Mekka, who died A. D. 767. The author of this work was Imam Abdal-Barkat Ata Allah-bin-Ahmad Hafiz-ad-din-Nessafy, who died A. D. 1310.

No. 46 مجموعه خانى — سر جلد

*Majmui Khani*, a treatise on the duties of prayer, purification, and alms, illustrated by quotations from the Kuran. The author was *Kamal*, who wrote during the reign of the Emperor Akbar.

No. 47 روضة الفايق

*Rauzat-al-Faik*. This is a law book, according to the doctrine of the Imam Shafai, written at Damascus by Kazi Zakaria about A. D. 1271.

No. 48 مقامات حريري

*Makamati Hariri*, a work containing oratorical and moral discourses

by Abu Mahomed Kasim, the son of Ali-bin-Osman Hariri of Bassorah, who died A. D. 1121.

No. 49 شرح كفايه

*Sharah Kufaiyah.*—This is a commentary on the *Hedayah*,—written by Imam-ad-din, the son of Amir Ali.

No. 50 شرح مرادب

*Sharah Muahib.*—This appears to be improperly included among the law books, as it is a commentary on a work which comprises a history of the first forty years of the prophet Mahomed's life, previous to his assuming the prophetic character.

No. 51 كتاب فقه در مذهب شافعي

A book of law agreeably to the doctrines of *Shafai*, one of the four learned doctors of Mekka.

No. 52 قدوري

*Kadury.*—This is the work called *Adab-al-Kasi* or the duties of a Magistrate, which has been mentioned under a former number.

No. 53 تحفة النصاب

*Tokfat-al-Nasayah.*—Another commentary on the work of *Kaduri*.

No. 54 شرح سراجه

*Sharah Sirajiah.*—This is a treatise on the law of succession and inheritance: by the author Sirraj-ad-din Sejawandi.

No. 55 مجموع فرايض

*Majmuai Farais*, or a compendium of law regarding inheritances.

No. 56 توضيح

*Tausih.*—This work is an illustration of the fundamental principles of the common law derived from the Kuran, and generally called *Asul*, or the roots.—Besides the books described in this class there are ninety-three other works on the subject of law.

III.—METAPHYSICS AND RHETORIC. . . كتاب علم معاني و بيان

No. 57 تلخيص

The *Talkhis.*—A celebrated work on Metaphysics and Rhetoric, by

*Jalal-ad-din Katib Damashki*, a native of Kazwin in Persia, who died A. D. 1338.—It is a commentary on the *Miftah-al-Alum*, or the key to the sciences, written about A. D. 1228.

No. 58 مطول

The *Matuwal*.—This is a diffuse commentary on the *Talkhis*, the work described under last number.

No. 59 حاشية مطول

*Hashiah Matuwal*.—Marginal notes on the above work.

No. 60 شرح تلخيص

*Sharah Talkhis*.—A commentary on the *Talkhis*.

No. 61 عبد الحكيم حاشية مطول

The marginal notes of Abdal Hakim on the *Matuwal*.

No. 62 هداية الحكمت

*Hidayah-al-Hikmat*; or the guide to Philosophy, by Ibn Asir, and containing essays on Logic, Metaphysics, and other branches of knowledge.

No. 63 حكمت العين

*Hikmat-al-Ain*, or the fountain of wisdom, an esteemed treatise on general Philosophy, written by Najam-ad-din Kazwini, who was the friend of the celebrated Nasir-ad-din Tusy, who lived about A. D. 1277.

No. 64 شرح حكمت العين

*Sharah Hikmat-al-Ain*, a commentary on the above work: author's name not given.

#### IV. MEDICINE, AND NATURAL PHILOSOPHY. كتابهاي علم طب و حکمت

No. 65 ميزان طب

*Mizani Tib*, or the balance of nature, containing treatises on heat, cold, drought, moisture, and pregnancy.

No. 66 مخدع الطب

*Mukhtasir-al-Tib*.—This is not described, but is probably an abridgment of the work of *Jalinus* or *Galen*.

## No. 67 تحفة المومنين

*Tohfah-al-Mominin*, the complete science of medicine, compiled from Arabic and Sanskrit, by Mahomed Momin of Delim.

## No. 68 قرابادين

*Korabidin*, or a dispensatory; author's name not mentioned.

## No. 69 جامع الفوائد

*Jamaa-al-Fawaid*, or a compendium of Physic.

## No. 70 كفاية منصورى

*Kifaiyat Mansuri*: being an exposition of the disorders to which the human frame, and particularly that of females is liable, with an essay on the management and care of children: by the author, Mahomed Mansur of Delhi; written about A. D. 1300.

## No. 71 قرابادين و زخيرة خوارزم شاهى

*Korabadia wa Zakhirah Khwarism Shahi*.—A dispensatory and the Royal Treasury of Khwarism.—This is an esteemed general treatise on medicine, embracing the means of preserving health, and acquiring a knowledge of diseases. — It treats of fevers, local complaints, surgical operations, eruptions of the skin, poisons, and medicine.—The author was Ismail the son of Hussain, the son of Mahomed Jurjani, who wrote A. D. 1110.

## No. 72 قانونچم عربى

*Kanunchah Arabi*; the canons of medicine.—This work is undescribed in the list sent me by Captain Postans; but it is probably the same as the *Kanun-fi-al-Tib*, or the canons of medicine, by Abu Ali Hussain, the son of Abdallah-bin-Sina, generally called Avicenna, who was born at Bokhara A. D. 980, and died at Hamadan A. D. 1037.

## No. 73 راحت الانسان

*Rahat-al-Insan*.—A general treatise on medicine, containing prayers and charms for averting sickness.

## No. 74 اختيارات بديع

*Ikhtiarati Badia*.—This work contains a list of medicines, simple and compound, and describes their various uses.—It was written by Ali-bin-Hussain of Baghdad.

No. 75 **مجموعہ الصنائع**

*Majmua-h-al-Senaye*, or the repository of arts; describing the manner of making artificial gems, colours, fireworks, dyeing cloths and silks, &c.

No. 76 **تجربات شاہی**

*Tajirrabat Shahi*.—This is probably the work of Mahomed Mehdi on practical medicine, written A. D. 1756.

There are fifteen other works in this class, of which we omit the description.

V. ETHICS AND SUFYISM. **کتاب علم تصوف و سلوک**No. 77 **چہل کتاب**

*Chehel Kitab*, or the whole duty of a Sufy student, in forty chapters, by the author, Shaik Mahomed.

No. 78 **شرح غوثیہ**

*Sharah Ghausiah*.—Essays on the world, futurity, and approximation to the Divinity, according to the Sufy doctrines; by the author, Abdul Kadir Jilani.

No. 79 **کیمیای سعادت**

*Kinia-i-Saadat*, a general System of Ethics, by the author of the *Ahiya*. The author was the celebrated Imam Mahomed Ghazali, of Tus or Meshid, in Khorasan. This was one of the favourite books of the Emperor Akbar.

No. 80 **نشاط العشق**

*Nishat-al-Ishk*.—An exposition of the Sufy doctrines and regulations; by the author, Abdallah Ansari.

No. 81 **رسالہ عادل شاہی**

*Risalah Adil Shahi*.—This work is not described, but must be, from its name, the production of one of the kings of Bijapur, or was written under their reign.

In this class, books of prayer, fundamental principles of faith, and poetical works on Sufyism, have been ignorantly blended into one list: in which fifty or sixty works are enumerated, that need not be described.

## VI. GRAMMAR, LOGIC, AND PHILOLOGY. کتاب صرف و نحو منطق و لغات

No. 82 جاربردي شرح كافيه

*Jarbaradi Sharah Kafiah.*—A commentary on the celebrated Arabic work on Syntax; by the author, Jamal-ad-din.

No. 83 مچمومر منطق

*Mujmuai Mantik*, or a compendium of Logic; the author's name not mentioned.

No. 84 ترجمه كافيه مير سيد شريف

A translation of the Kafiah, by Mir Saiyad Sharif.

No. 85 شرح شافيه

*Sharah Shafiah*, a very celebrated and scarce treatise on Arabic Grammar, by Nizam-ad-din bin Hussain.

No. 86 ميزان منطق

*Mizani Mantik*, or the balance of logic.

No. 87 كافيه

The celebrated Arabic treatise on Grammar called the Kafiah.

No. 88 حاشيه شرح

*Hashiah Sharahi Mulla*, or marginal notes on Jamí's commentary on the Kafiah.

No. 89 شرح ملا

*Sharahi Mulla.* Jamí's commentary on the Kafiah.

No. 90 حاشيه عبد الغفور

*Abd-al-Ghafur's* marginal notes on Jamí's commentary.

No. 91 واقيه شرح كافيه

*Wafiah Sharah Kafiah.*—A celebrated commentary on the Kafiah by Jamal-ad-din Amru Osman, the son of Amru, the son of Abubikr, the son of Yunis Almisri, of Egypt, commonly called Ibn Hajib, who died A. D. 1243.

No. 92 تهذيب المنطق

*Tahzib-al-Mantik*, or the quintessence of Logic, a celebrated treatise on this subject by Saad-ad-din, the son of Masaud-bin-Omar Tuftazani, and author of a commentary on the Kuran, already described.

No. 93 صراح اللغات

*Surah-al-Loghat*, an abridgment, with explanations in Persian, of the

*Sehah-al-Loghat*, which was translated, by Golius, into Latin. This is a most useful dictionary of the language, by the author, Abul Fazl Mahomed, the son of Omar, the son of Haled-al-Koraishi.

No. 94 صحاح اللغات

*Sehah-al-Loghat*, a very ancient dictionary of the Arabic language, and translated into Latin as just mentioned.

No. 95 شرح نصاب الصبان

*Nisab-al-Sibyan*, or an introduction to the study of the Arabic language, for the use of the young.

No. 96 فرهنگ رشیدی

*Farhang Rashidi*, a most useful Persian Dictionary, giving the correct pronunciation of each word. It was dedicated to the Emperor Shah Jahan, by the author Abdal Rashidi, the son of Abdal Ghafur-al-Husseni.

There are forty other works under this head, which cannot be now described, as they would occupy too much time and space.

کتابهای نجوم و رمل و هیاه

VII. ASTROLOGY, GEOMANCY, AND ASTRONOMY.

No. 97 ملخص در هیاه

*Malakhas-dar-Hayat*, or an abridged treatise on Astronomy.

No. 98 کشف الاسرار در رمل

*Kashf-al-Asrar dar Raml*, or the disclosure of secrets by Geomancy.

No. 99 کتاب در علم اسطرلاب

*Kitab dar Ilmi Astarlab*, or a book on the science of the sphere.

No. 100 مفتاح الرمل

*Miftah-al-Raml*, or a key to Geomancy.

No. 101 کتاب در ذکر افلاک

*Kitab dar Zikri Afak*. A book on the history of heavens.

There are three other works belonging to this class, not here enumerated.

## VIII. HISTORY.—کتابهای تواریخ

No. 102 جذب القلوب

*Jazb-al-Kalub*, a history of the city of Medina, and of Mahomed's Tomb, &c., by the author, Abdal Hak.

No. 103 حبيب السير— نصف اول

*Habib-as-Sair*.—The history of Mirkhond, the first half complete.

No. 104 هفت اقلیم در دو جلد

*Haft Iklim*.—A geographical and biographical treatise, by Amin Ahmad Razi; in two volumes.

No. 105 روضة الصفا

*Rauzat-as-Saffa*.—This is the most esteemed history in the Persian language, and if complete is invaluable.

No. 106 قصص الانبياء

*Kissas Al Anbia*.—An account of the creation of the world, and a history of the prophets preceding Mahomed: Author, Ibrahim-bin-Ismael.

No. 107 نفحات الانس

*Nafahat-al-Ans*.—The celebrated abridgment of the Arabic *Tabkat-al-Sufieh*, or lives of the Sufy Shaikhs, by the poet Jami.

No. 108 مطالع الانوار— دو جلد

*Mutlaa-al-Anwar*.—Anecdotes of the prophet Mahomed, describing his mode of life, by the author Abdul Hak, who appears to have been a cotemporary of Ferishta. It is on the authority of this work, Ferishta asserts, in his introduction to the general history of India, that the Afghans are descended from a race of Copts.

No. 109 روضة الشهداء

*Rauzat-al-Shohrda*, or the garden of martyrs, describing the murder of Hussain, and the battle of Kerbela.

Besides the above works there are twenty in this class which have not been described; ninety-four different works of poetry and fables, and several books translated into the language of Sindh and the Panjab. In fine it is one of the most complete extant libraries on this side of India.



ART. IX.—*Extracts from the Proceedings of the Society.*

At a monthly meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms on the 10th January, 1844.

The Hon'ble G. W. Anderson, President, in the Chair.

It was proposed by the Hon'ble the President, seconded by Dr. James Burnes, K.H., F. R.S., Vice-President, and the Secretary, and was carried unanimously,—That the name of Sir Jasper Nicolls, K.C.B., one of the founders of the Society, be placed on the list of Honorary Members.

\* Dr. James Burnes, K.H., Vice-President, read a paper, illustrated by drawings, on the Anatomy of the Musquitoe, by J. H. Carter, Esq., Assistant-Surgeon, a member of the Society.

A paper on the Tenets of the Armenians, by R. X. Murphy, Esq., was also read.

Dr. Burnes, K.H., Vice-President, presented a brass image, holding a club and bearing an inscription on its breast, which had been found at Babylon by Mr. Assistant Apothecary J. Anderson, of the Euphrates Flotilla. A number of engraved gems found at the same place, and transmitted by Mr. Anderson, were presented at the same time.

The Transactions of the Agri-Horticultural Society of Western India, from 1839 to 1842, were presented by that Society.

An extract of a letter from Mr. Westergaard, Honorary Member of the Society, dated Tehran the 15th November, was read, stating that he had been able, with the aid of a fine telescope, to make a copy of the *Nakhshi Rustam* inscription never before copied; and of which a facsimile had been sent to Major Rawlinson. The Secretary was directed to forward to Mr. Westergaard's address, at Copenhagen, a copy of the *Yaçna* and *Visparad*, as requested by him.

An extract of a letter from E. Blyth, Esq., of Calcutta, stating he had sent a skull of the *Gangetic Gariala*, for comparison with that of the Indus, was read: and several fossil specimens recently discovered at Perim Island in the Gulf of Cambay, were presented.

The meeting adjourned to Wednesday the 14th February 1844.

At a monthly meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms on Wednesday, the 14th February 1844.

The Hon'ble G. W. Anderson, President, in the Chair.

A letter was read, from Messrs. Longman and Co., stating that the copper plates of the three volumes of the Society's Transactions are in their possession, and mentioning the terms on which they are prepared to reprint the same Transactions, in 3 volumes 8vo. with a 4th volume of plates. It was thereon resolved—that the Secretary be authorized to enter into an engagement with Messrs. Longman and Co. for having the Transactions reprinted, in the form, and on the terms specified, provided subscriptions for one hundred copies, at 20 Rupees each copy, can be obtained : and that a subscription paper be accordingly circulated to every member of the Society.

A paper containing Observations on the Geological composition of the hills and alluvial soil from Hydrabad to the South of the Indus, by Assistant Surgeon J. H. Carter, was also read : along with a further notice and drawing of the Sindh musquitoe.

\* A paper on the Iron Ore in the vicinity of Malwan, accompanied by specimens, presented by Bal G. Shastree, Esq., was also read.

Specimens of the wood of the Frankincense and Gum-arabic trees, were presented by Dr. J. P. Malcolmson, of Aden : also of the plant which produces Dragon's blood, brought from the mountains of Africa, situated twenty miles inland from the coast, where the Government steamer *Memnon* was lost. This interesting plant appears to belong to a new genus, allied to the *Dracænor* of the Cape-de-Verde Islands. Flowers and fruit of this plant, and of the Olibanum or Frankincense, would be important acquisitions to science.

The following works were presented to the Society, viz.—

By Charles D'Ochoa, Esq., Honorary Member, *Orationes et Epistolæ Isocrates*, Greek and Latin, Paris, 1521.

Raynard de Lally, Paris, 1758.

Copy of the printed report of the Botanic Garden at Calcutta, and three copies of the proceedings of the Board of Education for 1842, were presented by Government.

Letters from the Trustees of the British Museum, and the University-keeper of the Royal Library, Berlin, acknowledging the receipt of the *Vandidad* and *Yaçna*, were read.

The President announced his resignation of the Chair of the Society, in consequence of his being about to return to England ; and expressed his gratification at having been elected to the honourable position he

had occupied, and announced his readiness to further the objects of the Society in England, or in whatever way he might be best able to do so.

It was thereon proposed by Major General D. BARR, and seconded by James Burnes, K.H., Vice-President,—That a special meeting for considering in what manner the Society can best express their sense of the late President's valuable services, should be fixed, by public advertisement, for Friday the 16th instant.

The meeting then adjourned to Wednesday the 13th March 1844.

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At a special meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms, on Friday the 16th February 1844.

**PRESENT.**

**JAMES BURNES, K.H., F.R.S.,** Vice-President, in the Chair.  
**The Honorable Sir ERSKINE PERRY, Knight.**

*Members.*

**THE HON. L. R. REID.**  
**J. P. WILLOUGHBY, Esq.**  
**Lieut.-Col. P. M. MELVILLE.**  
**Maj. Gen. D. BARR.**  
**W. HOWARD, Esq.**  
**W. H. HARRISON, Esq.**  
**A. SPENS, Esq.**  
**JAMES BIRD, Esq., F.R.G.S.**

**THE REV. G. COOK.**  
**M. CURSETJEE, Esq.**  
**G. BUIST, Esq., L.L.D.**  
**F. SHEPPEE, Esq.**  
**P. W. LEGEY, Esq.**  
**W. ESCOMBE, Esq.**  
**H. FAWCETT, Esq.**

**The Rev. GEORGE PIGOTT, *Acting Secretary.***

The minutes calling the meeting having been read over, it was proposed by James Bird, Esq., seconded by James Burnes, K. H., *Vice-President* :—

That the Society record their high sense of the obligations they are under to the late President, the Honorable G. W. Anderson, for the zeal and devotion manifested by him, on all occasions, in promoting the best interests of the Society ; and especially for the ability and courtesy with which he has presided over their meetings since his elevation to the chair.

Resolved—That the Acting Secretary communicate this resolution to the Hon'ble Mr. Anderson.

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At a monthly meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms on Wednesday the 13th March 1844.

The minutes of last meeting having been read and approved, the following Gentlemen, Cursetjee D. Pestonjee, Esq., E. M. Suart, Esq., of the Civil Service, and Lieut. W. S. Suart, Engineers, proposed at the last meeting, were balloted for and duly elected members of the Society

Captain J. P. Saunders, I.N., was then proposed by Captain H. B. Lynch, K.L.S., I.N., and seconded by J. F. Morier, Esq., M.D.; A. Thompson, Esq., M.D., H. M. 14th Light Dragoons, was proposed by the Vice-President Dr. Burnes, and seconded by James Bird, Esq.

It was directed that in the next circular, calling a meeting of the Society, notice be given that a President will be elected in succession to the Honorable G. W. Anderson.

A letter from Major General Vans Kenedy, accompanying a stone with an Inscription in the Hamaiyaric, or Ethiopic character, from Aden, was read.

\* The Secretary laid on the table the concluding portion of the Rev. Mr. Menge's translation of Ehrenberg's treatise on the Coral Rocks of the Red Sea.

A letter from the Honorable G. W. Anderson, in answer to one from the Society, thanking him for the offer of his services in England, was received and read.

The meeting then adjourned to Wednesday the 10th April next.

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At a monthly meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms, on Wednesday the 10th April 1844.

The Vice President, James Burnes, M.D., K.H., in the chair.

The minutes of last meeting were read and approved.

A. Thompson, Esq., M.D., and Captain J. P. Saunders, I.N., having been balloted for, were duly elected members of the Society.

Captain H. James, 18th Regt. N.I., was proposed as a member by James Burnes, K.H., Vice-President, seconded by C. Morehead, Esq., M.D.

Dr. Osborne was proposed as a member of the Society by J. F. Morier, Esq., M.D., seconded by the Rev. G. Pigott.

The following resolutions being then proposed, at the meeting, by the Chairman, were seconded by James Bird, Esq., and carried unanimously.

*1st.* That the Bombay Branch of the Royal Asiatic Society, enter on their records an expression of deep and heartfelt regret for the loss of their Secretary, the late J. G. Malcolmson, Esq., M.D., F.R.S.G.S., a gentleman whose high integrity of character, generosity, warmth of heart, zeal in the promotion of science, and wide and varied acquirements, obtained for him the esteem and respect of all who knew him, and especially of the members of this Society, with whom he was in continual and gratifying intercourse.

*2nd.* That, with the view of perpetuating a record of these feelings towards the memory of that eminent individual, the Society accord yearly a gold medal, to be designated "The Malcolmson Medal," to the author of the best paper presented to the Society on the Natural History and Literature of India,—points on which the late lamented Secretary evinced the deepest interest.

*3rd.* That a fund be raised by subscription for the above purpose, among the members of the Society.

The Society then proceeded to the election of a President.

The amendment notified, proposing that the election be made by printed circular, having been rejected—

It was proposed by Dr. Bird, seconded by Colonel J. H. Dunsterville, and carried unanimously,—That the Honorable J. H. Crawford be requested to accept the office of President.

Proposed by James Burnes, K.H., seconded by the Rev. George Pigott, and carried unanimously,—That Colonel G. R. Jervis be requested to accept the office of Vice-President of the Society.

Proposed by James Burnes, K.H., seconded by A. B. Orlebar, Esq., and carried unanimously,—That Dr. Bird be elected Secretary to the Society.

Proposed by the Rev. G. Pigott, seconded by James Bird, Esq.—That A. B. Orlebar, Esq., be elected Secretary for the Museum.

Read a letter from the Curators of the Dublin Geological Society, tendering an exchange of published proceedings, and announcing the despatch of a box of fossils of the carboniferous limestone and other Irish

formations, and requesting to be favoured with such Indian duplicates as the Society may be able to spare.

**Resolved.**—That the exchange of proceedings be sanctioned, and the thanks of the Society be returned for the fossils despatched, and that the Secretary for the Museum be authorized to forward such duplicates as are available.

Read a letter from G. Buist, Esq., LL.D., in charge of the Magnetic Observatory, Colaba, forwarding, by direction of the Government, lithographed copies of the Meteorological and Magnetic Observations made under his direction, and suggesting that it would be advisable that one of the two copies granted by Government should in future be forwarded as issued monthly, and the other retained in the Observatory to the end of the year.

**Resolved.**—That the thanks of the Society be returned to Government, and the suggestion of Dr. Buist adopted.

Read a letter, forwarded by the Secretary of the Board of Education, announcing the sanction of Government to the exchange of rooms now occupied by the Board of Education for those in which the Museum is kept.

Read a letter from R. Kirk, Esq., forwarding a box containing varieties of Madrepore lava, from the islands of Jibal-Tor, and other mineralogical specimens from the coasts of the Red Sea.

**Resolved.**—That the thanks of the Society be returned to Dr. Kirk for the above specimens.

Read letters from Professor Lassen, and Dr. Pertz, Principal Librarian, King's Library, Berlin, thankfully acknowledging the receipt of the copies of the *Vandidad* forwarded by the Society.

The Society directed that notice be given in the next circular, calling the monthly meeting, of the change of the day of meeting, from Wednesday to Thursday.

Dr. Buist read and presented some observations by one of the assistants of the Observatory to the late Secretary, on the springs of Vizrahoy.

The thanks of the Society were voted for the above, and the meeting adjourned to Wednesday the 8th May next.

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At a monthly meeting of the Bombay Branch of the Royal Asiatic Society, held in the Library Rooms, on Wednesday the 8th May 1844.

The Hon. J. H. Crawford, President, in the Chair.

The minutes of the last meeting having been read and adopted, Captain H. James, 18th Regt. N. I., and Assistant Surgeon S. Osborne, were balloted for and duly elected members of the Society.

The following resolution, of which due notice was given, was proposed by Dr. Burnes, K.H., Vice-President :—

That the day of the monthly meeting of the Society be changed from Wednesday to Thursday ; and being seconded by Dr. G. Buist, was unanimously agreed to.

Read a letter from Assistant Surgeon Malcolmson at Aden, presenting, on the part of Lieut. Cruttenden, I.N., specimens of limestone from Ras Asser, where the *Memnon* was lost.

Read a letter from the Secretary, to the Asiatic Society, Bengal, acknowledging the receipt of the Vandidad Sade, and offering the Society's services in any way calculated to forward the views, literary or scientific, of the Bombay Asiatic Society. The letter also announced that the Asiatic Society of Calcutta has been pleased to present to the Bombay Society the following works :—The Mahabarata, in Sanscrit, 4 vols. large paper. Harywansa, 1 vol. Ryl. 4°, Raja Tarangini, large paper, and the Naishada Charitra, 4°.

Read a letter from the Colonel G. R. Jervis, acknowledging the receipt of the Secretary's communication that he had been elected Vice-President of the Society, and expressing his high sense of the honor and his gratification in accepting the office.

The Society instructed the Secretary to forward to the Chief Engineer a copy of the letter from the Secretary of the Board of Education, relative to the exchange of rooms in the Town Hall, as sanctioned by Government, and to ascertain what would be necessary for carrying into effect the removal of the Society's Museum to the rooms now occupied by the Board of Education.

\* The Secretary then presented and read a paper entitled, " A brief account of the Minor Caves of Beira and Bajah, in the neighbourhood of Karli," given to him in a letter from Mr. N. L. Westergaard, accompanied by copies of the inscriptions, which the Secretary had rendered into English. On the motion of Dr. Burnes, it was resolved to return thanks to the Secretary for the communication now presented, and that it be published in the forthcoming number of the Society's Journal.

The thanks of the meeting were also voted to Lieut. Cruttenden for the Geological specimens forwarded, and to the Calcutta Society for the generous offer of their services, and the valuable books presented.

The meeting then adjourned to Thursday the 13th June next.



## W.

Westergaard, Mr. N. L., describes, in a letter, the caves of Beira and Bajah, 438 ; copies of the Nakhshi Rostam inscription.  
 Wilson, The Rev. Dr. John, Address to the Bombay Branch R. A. S. on

tendering his resignation of the Presidentship, and being about to return to Europe, 235.

## Y.

Yádava Kings of Ráshta kuta, list of, 211 ; Bahu Raja of this race a tributary of the Chalukyas, 221.