

apprize them, that any further increase of the amount must necessarily become the subject of representation to the rt.hon. the Governor in Council.

20. We enclose a medical certificate of Mr. Davison's indisposition, which prevented his attending the examination. Mr. Blair and Mr. Graham Sterling are absent from the presidency on leave.

We have the honour to be,
Right Honourable Sir,
Your most obedient humble servants,
F. C. GREENWELL,
W. OLIVER,
R. CLARKE,
J. M'KERRELL,
A. D. CAMPBELL,
H. VIVKASH.

College,
27th Dec. 1819.

LITERARY AND PHILOSOPHICAL INTELLIGENCE.

ASIATIC SOCIETY.

On Saturday evening, the 13th Nov. a meeting of the *Asiatic Society* was held at the Society's apartments in Chouringhee, the Marquis of Hastings in the chair.

The committee elected for the present year consists of the Bishop of Calcutta, Sir E. H. East, Colonel Hardwike, W. B. Bayley, Esq., Vice-presidents. Messrs. G. Swinton, H. Mackenzie, J. Bentley, J. Atkinson, G. J. Gordon, Rev. J. Parson, Rev. Dr. Carey, Dr. Wallich, and Capt. Roebuck, Committee of Papers: Capt. Lockett officiates as secretary during the absence of Mr. Wilson from the presidency.

A letter was read from Dr. M'Culloch, of Baltimore, who some time ago presented to the Society his ingenious Essay on the Aborigines of America. He has been induced to make some enquiries, interesting in the history of the human family, and of especial use in the particular investigation he has long been employed upon, which he has addressed to the members of the Asiatic Society. He conceives it highly desirable to obtain further descriptions, and, if possible, drawings of the *Morias* (Hindee, *muré*) and other monuments to be found in various islands of the Pacific Ocean, particularly those of the Friendly, Society, Sandwich, and Eastern Islands. The island of Tinian, one of the *Marianne Islands* (see La Perouse, and subsequent navigators), contains some singular monuments which Dr. M'Culloch says are entirely unknown to him, except from the very brief description given of them by Lord Anson in his voyages.*

The deities worshipped in the islands of the Pacific he recommends as deserving of investigation, no particular account of them having hitherto appeared.

Dr. M'Culloch observes, that General Valancy has stated, in the 87th page of his Irish grammar (Dublin 1781), that the

Persians, instead of intercalating, as is customary, one day every four years, to adjust their years with the course of the sun, they regarded no hours until they amounted to 30 days, which does not take place in less than 120 years. These thirty days were then added to the year (making a year of 13 months), which year was called *Bihreck*. This mode of intercalation is said by Dr. M'Culloch to bear a singular resemblance to the method of the Mexicans, and he is therefore anxious to ascertain, through the medium of the society, whether there are any other parts of an astronomical system to be found among the Persians to which such a mode of intercalation would seem properly to belong.

At the last meeting, Mr. Palmer presented to the society a marine production, called the *Soonge plant*, obtained on the coast of the newly acquired island of Singapore. Colonel Hardwicke, one of the most distinguished naturalists of this country, has favoured the Society with a description of it. He observes, that in the *systema naturæ* of Linnæus, it belongs to the natural class *vermes*, and to the genus *spongia*. In its form it resembles that kind of drinking-cup called a goblet, with a well defined base or root, a cylindrical stem, and a capacious bowl or cup. Its texture is non-elastic, composed of numerous tubes or anastomosing cells; the external surface or epidermis not thicker than the coats of the tubes, and covered with innumerable stellated pores, which under a lens appear to be the mouths of as many vessels, and ramifications of the internal structure. The root is formed of several irregular perpendicular shoots, in their origin apparently cellular, but enlarged by an accumulation of earthy, sandy particles and broken in shells, and of rather a fragile texture. The bowl is circular or sub-conical, with several nodes or protuberances, and covered both within and without with circular pores of various diameter, the mouths of which are closed with fine cottony fibres, radiating from

* The Jesuit Gobien has published a particular history of the Ladrões, or Marian Islands. See also the supplement of De Brosses, II, 498, for an ample account of the Ladrões.

the circumference to the centre; and the same fibrous substance extends over the surface of the bowl, giving to it, when viewed under a lens of common powers, a tormentous appearance. The stem is cylindrical, of proportional height and thickness, and of the same cellular substance as the bowl.

The foregoing description is taken from a specimen something larger than the one in the Society's museum, the dimensions being as follow: the greatest diameter of the bowl is, at its brim, 17 inches; the smallest at the bottom $7\frac{1}{2}$, in the middle $12\frac{1}{2}$; the circumference of the stem 17, but near the root is a tumescence increasing it to a larger dimension. The cavity is capable of containing 36 quarts.

Colonel Hardwicke further observes, that in an essay on British sponges by George Montague, Esq., published in the 2d volume of the Transactions of the Wernerian-Society, is described a sponge, under this specific denomination of *scypha*, and this sponge in its characters has affinity to the subject here mentioned. The Indian species, however, is gigantic in all its parts, compared with *spongia scypha*, and a more appropriate specific distinction may perhaps be given to this, in denominating it *spongia potera*, the goblet sponge.

Several articles have been selected as presents for the Edinburgh college museum, in conformity with the resolution passed at the last meeting. They will be forwarded by the Marquis of Hastings.*

Some beautiful models in ebony, of the instruments used by the natives of India in manufactures and husbandry were laid before the Society.

Colonel Fitzclarence presented, through the medium of the most noble the President, his Travels through India and Egypt to England.

A copy of *Recherches sur la Découverte de l'Essence de Rose*, par M. Langles, was also received.

The narrative of a journey from Soobat'hoo to Shinkè in Chinese Tartary, by Lieut. A. Gerard, of the Bengal infantry, was presented by Mr. Metcalfe, at the desire of Sir David Ochterlony. The journey occupies a period from the 22d of September to the 22d of November, 1818.

* The collection of natural curiosities at the college museum is on the increase, and ere long promises to be one of the most scientific and beautiful in Europe. The classical Zoological cabinet of Dufrenoy of Paris has been purchased for a great sum by the college, and is now on its way to Edinburgh. The sale of Bullock's museum in London was attended by a gentleman on the part of the University, and he is understood to have made purchases to a considerable amount. Every month collections and specimens are pouring into the museum from different parts of the world, as donations by those who feel an interest in the advancement of natural history, and in the Edinburgh museum.

Soobat'hoo lies in lat. $30^{\circ} 58'$ and $77^{\circ} 2'$ and is 4,200 feet above the level of the sea. On the 26th of Sept. Lieut. Gerard reached Gujyudee, in Nawar, a small district of Busehur, famous for its numerous iron mines. It contains but few spots fit for cultivation, and the inhabitants, who are miners, live chiefly by their trade in iron. They work the mines only about three months in the year, and commence digging them in March, after the snow has sufficiently melted.

On the 2d of Oct. he pitched his tent on the crest of the Brooang Pass, 15,095 feet above the level of the sea. It is situated in lat. $31^{\circ} 23'$ and long. $78^{\circ} 12'$. The country is secluded, rugged, and barren, and the villages very thinly scattered, not more than one or two occurring in a stage. The inhabitants wear a frock of white blanket, often two fold, reaching down to the knees, and having sleeves, a pair of trowsers and girdle of the same, a cap of black blanket like a bounet, and shoes, of which the upper part is woollen, and the sole alone leather. The people are very dark and extremely dirty; the villages are generally large, and the houses spacious, and even elegant. They are built of stone or wood, and either slated or flat roofed; the last is most common. The temples of the Deotas (Delties) are magnificent, and adorned with a profusion of ornaments. In Koonawur the crops are extremely poor, and in time of scarcity small pears and horse chestnuts, after being steeped in water to take away their bitterness, are dried and ground into flour. Bears are very numerous, and the dogs are of a large ferocious breed, covered with wool, and generally chained during the day, otherwise it would be dangerous to approach a village. The language differs much from the Hinddee, most of the substantives ending in *ing* and *ung*, and the verbs in *ing* and *nig*.

At Rispe he first saw Lamas, and near that place he passed several tumuli, from 10 to 40 feet in length, 2 broad, and about 4 high. They are constructed of loose stones without cement, and upon their tops are numerous pieces of slate of all shapes and sizes, carved with strange characters. They are called Mané, and are erected over the graves of the Lammas. There are invariably roads on each side of them, and the natives, from some superstitious custom, always leave them on the right hand, and will rather make a circuit of half a mile than pass them on the wrong side.

The course from Brooang to Shipké had been about N. E. Lieut. Gerard arrived at the latter place on the 12th of Oct.

Shipké is a large village in the district of Rongzhoong, under the Deba or governor of Chubruug, a town, or rather

collection of tents, on the left bank of the Sutluj, eight marches to the eastward. The houses are very much scattered, and are built of stone with flat roofs. There are gardens before each, hedged with gooseberries, which give them a neat appearance. Lieut. Gerard and his brother were the first Europeans the inhabitants had ever seen. The Tartars pleased them much; they have none of that ferocity of character so commonly ascribed to them; they have something of the Chinese features, their eyes are small; they go bareheaded even in the coldest weather, and have their hair plated in a number of folds, ending in a tail two or three feet long. Their dress consists of a garment of blanket, trowsers of striped woollen stuff, resembling tartan, and stockings or boots of red blanket, to which are sewed leather shoes. Most of them wear necklaces, upon which are strung pieces of quartz or bone. They have also knives in brass or silver cases, and all carry iron pipes of the same shape as those used by the labourers at home. The women, whose dress resembles that of the men, literally groan under a load of ornaments, which are mostly of iron or brass, inlaid with silver or tin, and beads round their necks, wrists and ancles, and affixed to almost every part of their clothes. While at Shinké the Chinese officers, of whom there are several to regulate the affairs of the country, brought to Lieut. Gerard and his brother 16 seers of flour, as a present. A short time afterwards the principal officer showed them a long piece of parchment, written in a character supposed to be Chinese, and said that it was an express order from the Garpan of Garoo, under whose authority the debas are, prohibiting strangers from entering the country. He at the same time observed, that Lieut. Gerard had so many people with him (nearly 100) that he could not oppose his progress, but it would cost him his head if he afforded him the means of going on, and therefore he would not supply him with provisions.

The latitude of Shipké is $31^{\circ} 48'$, the long. $78^{\circ} 48'$. The people are affable and good-natured. Lieut. Gerard exchanged a gold button for a goat, which he took with him to Soobat'hoo. The wool was extremely fine, and almost equal to what is used for the manufacture of shawls. He was informed that the best was procured further to the eastward near Garoo, or Gartop, which is the famous mart for wool, but its fineness seems to depend almost entirely on the elevation and coldness of the climate. At Soobat'hoo, 4,200 feet above the sea, the wool is little better than in the plains of Hindoostan, but it gradually grows finer as you ascend, and in Koonawur, where the villages are more than 8,000 feet

high, it is fit for making coarse shawls. Gartop is said to be 11 marches from Shipké.

The traders who cross Guntung pass put on so many clothes to defend themselves from the excessive cold, that they can scarcely walk. They wear a long garment with sleeves made of sheep skin with the woolly side inwards, trowsers and stockings of the same material, a kind of rude gloves of very thick woollen stuffs, and caps and shoes of blanket. They likewise occasionally wrap three or four blankets round them, and thus accoutered set out on their perilous journey. No herbage is to be met with for two days. Leh or Leo is the capital of Ladak, and about midway between Cashmeer and Garoo.

The Wangtoo J'hoola, a rope bridge over the Sutluj, consists of 5 or 6 cables close together, upon which is laid half a hollow fir tree, about two feet long, with pegs driven through it to prevent its coming off. From this hangs a loop of 3 or 4 ropes, in which the passenger takes his seat. It is pulled across by two pieces of rotten twine, that from constantly breaking occasions this to be a tedious mode of transporting baggage. The conveyance is a pretty safe one, but greatly alarming to a novice, for the J'hoola is elevated 20 feet above the stream, which runs with great rapidity and a deafening noise.

The Sutluj has a variety of names, being called Sutlooj, Sutroodra, Sumudrung, Sampoo, Langa hing, Kampa, Muksung, and Zung Tee, in different parts of its course. Sutrooda is the most commonly used, by which name it is known from its source to the plains. By the accounts of many people who have travelled along its banks to its source, it issues from lake Rawanrud, called also Rawathud and Lanka, which was confidently said by every body Lieut. Gerard saw that had been there to communicate with Mansurur, although Mr. Moorcroft could not discover the outlet of the latter lake. The circuit of Rawanrud is represented as seven days' journey, but it is most likely both lakes were included.

But we must abstain from further notice of this interesting and valuable paper, as it will probably be included in the 14th volume of the Researches now in the press.

Mr. Wilson presented a copy of his Sanscrit and English Dictionary to the Society.

Several sculptured antiquities were received from Dr. R. Tytler, and amongst them a curious black stone, with three female figures upon it, presented by Major Thomas, of the Bengal Infantry.

A letter was also read from the secretary to the Bombay Literary Society, communicating a resolution, that any member

of the Asiatic Society of Calcutta, who may be occasionally at Bombay, shall have free access to the library.

Dr. Wallich was appointed to act as superintendent to the museum.

The most noble the president proposed Baron de Richemont as an honorary member.

The following gentlemen proposed at the last meeting were unanimously elected members of the Society. Messrs. George Money, David Scott, William Eaton, William Linton, and Capt. Lachlan.

DESCRIPTION OF PASSES IN THE HIMALYA.

The extract No. 1 is part of a letter from Capt. J. A. H., 10th regt. Calcutta infantry, enclosing No. 2, which was a communication to himself from Lieut. J. D. H. Both relate to the subject of papers which had been read at the Asiatic Society. They were sent for publication to the India Gazette.

No. 1.

Extract of a Letter from Capt. J. A. H.

“ I have the pleasure of sending you an extract from a letter I have just received from Lieut. H. of the 8th. regt., my companion in the surveys of the Ganges and Jumna within the Himmalya mountains, giving an account of his passage over the great snowy range, between the Jumna and Suttluj rivers, by a pass hitherto unknown to Europeans, at the head of the Roopin river, which is one of the three branches of the Tounse, which you know is a very large river flowing from the south-western face of the Himmalya mountains, and which joins the Jumna near Umburry in the Doon valley, and loses its name in that of the Jumna, though it is three times the size of the latter stream, which rises at Jumnoutri, also on the hither face of those mountains, as described in the paper tendered by me to the most noble the Governor General, and presented by him to the Asiatic Society.

Mr. H.'s is a brief, and I am sure a faithful description of the formidable barrier he crossed; if you think it would be acceptable to any of the editors of the journals, it is at their service. You know I was the first European who ever crossed that part of the snowy range which lies between the Baghretti (or Ganges river) and the Suttluj; I did so in June 1816. Having penetrated up the bed of the Suttluj in the rugged province of Kunawr, I found myself to the north of the range, and ascending it, crossed over the crest to the Bassahar district of Swarra or Chohara, descending by the bed of the Andreitie, one of the branches of the Pabur; Mr. H., on the contrary,

went up the bed of the Roopin or Roop Gunga, ascending on the S. W. or hither side, to cross to the Suttluj. The heights and general features of the two passes are nearly the same, except that the scenery in the route Mr. H. took must be grander, as the Roopin is a much larger body of water than the Andreitie; and the general difficulties, particularly that of passing through the snow, are more in October than in June; but, even in the end of that month, the snow fell heavily as I crossed the crest, at 40 minutes past 11 A. M. The passes, you know, always lead over the lowest parts of the snowy range; they are in general about 16,000 feet high, though there is one visited by Capt. Webb, I believe 17,000 feet; those I have seen are always flanked by peaks, which rise 3 or 4,000 feet higher; in some places they may be more or less, but it is not in the vicinity of the passes where the most lofty pinnacles are found.

It may be said that the method of determining altitudes by boiling water is only approximative: that is true; but it is nevertheless capable of some degree of accuracy, indeed a very desirable degree in many cases, as in hollows where no peak of a known altitude is visible, and where barometers are not at hand; and it is very difficult in the rugged paths in the great mountains to keep them in order. With a thermometer of a foot in length, the fourth part of a degree may be easily read off by a magnifying glass; but those of Dr. Woolaston's construction will, I think, completely supersede the use of barometers, as they are capable of great accuracy, and cost little, are easily carried, and little liable to injury. An account of these instruments has appeared in the Philosophical Transactions. I first used this method (but with common thermometers only) in the snowy pass before mentioned, on the 24th June 1816, and before I knew of Dr. Woolaston's improved instrument. I did not then know of its having been resorted to before, but I since found that Saussure had used it on Mont Blanc. Lieut. Herbert and I have frequently compared the differences of altitudes given by the thermometer in this way with those known and determined by geometrical operations, and found the results very satisfactory, within certain limits. Of course geometrical methods are always preferable, where they can be used, and by them Mr. H.'s estimation of the height of the pass will be corrected, by means of the observed angles of elevation, and known heights and distances of the two peaks he mentions. Their altitudes, as well as of a great number of the lofty summits of the Himmalya, are determined trigonometrically, with good instruments, and on just principles, as will be detailed hereafter.

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VOL. IX.

JANUARY TO JUNE, 1820.

THE
ASIATIC JOURNAL

FOR
JUNE 1820.

ORIGINAL COMMUNICATIONS.

MEMOIR
OF A
PATRIOT KING.

(Continued from p. 432.)

Rank.—RESUMING the classed series of select anecdotes, we have to insert one which proves that his Majesty was superior to any little pride of rank, when put in competition with the strict discharge of duty, even by an humble individual. It is recorded under the date of August 16, 1787.

A very particular circumstance occurred on Wednesday, which has occasioned much conversation in Windsor. His Majesty, after parading the terrace with the Duke of York, rested his arm on the sun-dial which is near the end of the walk; the Duke did the same, and continued in conversation with some gentlemen, with whom they had for some time before been walking. During this parley, a sentinel upon duty there, walked up to the King, and “desired his Majesty to remove from the dial, as it was under his particular charge.” His Majesty removed accordingly, observing at the same time, that the man’s

rigid adherence to his orders was highly commendable; and, a few hours afterwards, he was graciously pleased to recommend him to the colonel of the regiment, as an object worthy of promotion, and one who ought to be provided for in as eligible a manner as the nature of the service would possibly admit.

Fortitude.—The following is a specimen of invincible courage, blended with piety and magnanimity. Two of the preceding heads might, therefore, support a joint claim to the characteristics displayed in this example.

A STATEMENT BY THE EARL OF
ONslow, OCT. 29, 1795, TWELVE
AT NIGHT.

Before I sleep, let me bless God for the miraculous escape which my King, my country, and myself, have had this day. Soon after two o’clock, his Majesty, attended by the Earl of Westmor-

8. Mr. Lewin's progress in Tamil since the last examination has been very considerable. He understands the general meaning of papers of ordinary difficulty, and translates intelligibly into that language. In Telooگو, the present is his first examination, and we have the satisfaction to state that he has already acquired so considerable a knowledge of that language, that it only requires a closer application to the study of Tamil grammar, to entitle him to our recommendation for an increase of allowance. Further attention to that branch of study can alone enable him to acquire the requisite precision in apprehending Tamil sentences, and translating with accuracy into that language.

9. Mr. Gordon was examined in Tamil and Persian, Mr. Fetherstone in Telooگو and Carnataca, and Mr. Horsley in Telooگو and Persian. In the first of the two languages which these gentlemen have respectively studied, the result of their examination was most creditable; their advancement in the study of the second language, which each has commenced, has also been very respectable; and a continuance of their present exertions cannot fail to ensure to them hereafter a substantial mark of public approbation.

10. Although Mr. Browne possesses a considerable knowledge of the Telooگو language, it is not well grounded; his exercises shew that the meaning of many words has been gathered from the context; and in conversation he evinces an habitual disregard of grammar and precision, though he succeeds in conveying his general meaning. In Maharata he has made a tolerably fair progress, considering the short period of his studying that language.

11. Mr. Eden on the 15th September, Mr. Dallas on the 22d September, and Mr. Stevenson on the 14th October last, respectively made good their claims to the first increase of allowance for proficiency in the Telooگو language. Mr. Eden and Mr. Stevenson continue to make rapid progress in that language, and the advancement of Mr. Dallas is sufficiently satisfactory. Mr. Dallas has selected Persian as a second language, and his progress in it is respectable. Mr. Eden has commenced the study of the Carnataca, and Mr. Stevenson that of Hindoostanee.

12. Mr. Bruce has been attached to the college considerably longer than any of the three gentlemen before mentioned; his knowledge of Telooگو is consequently superior to theirs, and his progress has been fair during the late term, though not so great as might have been expected from assiduous attention to study. In Tamil he has made some progress since he was last examined.

13. Mr. Clementson was absent from the

former examination in consequence of illness, and his progress is stated to have been since impeded, by frequent returns of indisposition. We have, however, the pleasure to state, that he has improved in Tamil since he was last before us. His knowledge of Telooگو is very limited.

14. Mr. Cheape has studied Telooگو little more than two months. His knowledge of the grammar is very superior, and he is able already to translate easy sentences from that language; we therefore submit that, as an encouragement to further exertion, the allowance of Pagodas 75 per mensem be granted to that gentleman.

15. It affords us great pleasure to report to government that, since the last examination, Mr. Bushby has applied to study with diligence; he can translate easy papers, can make himself understood on many common subjects, and has paid attention to the construction of the Tamil language. In bringing the favourable result of his examination to the notice of government, we perform a pleasing duty in recommending that the increased allowance of Pagodas 75 per mensem be restored to him.

16. Mr. R. Grant's name in Telooگو stands above that of many other gentlemen before noticed, but he has been much longer attached to the institution than they have been. We are glad to be now able to state, that the knowledge which Mr. Grant has acquired of this language justifies our recommendation, that the increased allowance of Pagodas 75 per mensem may be granted to him.

17. Mr. Wroughton has not enabled us to report that he has made any progress in the Maharata language, which he selected for his first study; we hope to make more favourable mention of him in our next report.

18. We have formerly remarked on the want of facilities to the study of the regulations, which still continues to be felt; but we have satisfaction in reporting that Mr. Hudlestou, Mr. Fullerton, Mr. Browne, Mr. Bruce, Mr. Clarke, and Mr. Fetherstone, were examined, and displayed a creditable knowledge of the judicial code.

19. In conclusion, we have, with much regret, to report, that our inquiries respecting the debts of the junior civil servants have terminated in a result less favorable than on almost any other occasion. The instances in which debt has been incurred are more numerous, and the amount of debt greater than has generally come under our observation. Several of the junior civil servants continue free from debt; but we have found ourselves called upon to require the special attention of others to the reduction of theirs, and to