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## JO UR NA L

## ASIATIC SOCIETY OF BENGAL.

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PART I. (History, Antiquities, \&c.)
(Nos. I то III.-1891.)

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The ffonorary Philological Secretary.
"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science in different parts of Asia, will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish, if such communications shall be long intermitted ; and it will die away, if they shall entirely cease."

Sir WM. Jones.

## CALCUTTA:

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IN

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## ERRATUM.

for
read

At foot of Plates I, II, III and IV CHAGHALTAI. CHAGHATAI.

## JOURNAL

OF THE

## ASIATIC SOCIETY OF BENGAL.

Part I.-HISTORY LITERATURE, \&c.

No. I. -1891.

Report on Archceological Excavations in Bijnor, N.-W. P.-By A. Macadlay Markham, C. S., F. R. G. S., F. Z. S.
In November 1884, His Honor Sir Alfred Lyall placed a sum of money at my disposal for the purpose of making certain archæological excavations in the Bijnor district.

I first excavated a strange looking mound of evidently great age, at Típ on the left bank of the Ganges Khádir, 15 miles N. N. E. of Bijnor. In this no relic chamber or relics of any kind were fourd. I have little doubt, however, that the mound was of Buddhist origin. A square doorless structure was disclosed, which I take to have been the plinth of a temple. In the light of fuller experience, I should like to take an opportunity of again examining this mound, which is not far from the border of the Muzaffarnagar district.

Six gold Indo-Scythic coins, of great beauty and rarity, were found near but outside the base of this mound. These were as follows :-

Three of Vasu Deva-Average weight $120 \cdot 17$ grains.
Two of ditto (differing) " 118.87 do.
One of Bhṛi Sháka. Weight $120 \cdot 0$ grains.
These kings were contemporary in Northern India with the earlier Gupta kings, or say not later than A. D. 200.* The coins were, by order of Government, sent to the Curator of the Lucknow Museum.

[^0]Some silver coins, of comparatively recent date, and of no archæological value, were found buried close under the surface of this mound. They were sold as silver, and the proceeds credited to the excavation fund.

I next commenced operations on a fine mound in the old ruined Fort of Mor Dhaj (Mayúra Dhwaja, also known formerly, ${ }^{*}$ but not now apparently, as Munavvar Júr), lying 7 miles north-east of Najíbábád, to which I drew the attention of General Cunningham, R. E., many years ago, and which has been briefly described by him in the Archæological Reports, Volume II, page 237.

The mound was in dense jungle, and usedt to be known as Shigrí ((Qy. Sher-Garhi, or Shri-Garhi?), but I now find that this name, like that of Munavvar Júr, has dropped out of local use and knowledge.

After careful clearing of the overgrowth of jungle, the mound was disclosed, 35 feet in height, and 308 feet in circumference, circular. A closer examination showed that the outer portion of the mound was composed of brick rubbish, the remains of some large superstructure. The size and importance of this building, originally, no doubt, a large Chaitya, with the usual series of umbrella-like discs composing its lofty spire, and in later days probably a temple, may be guessed at from the fact that the entire surface of the mound, to a depth of from 3 to 8 feet, and many square yards of plain surface around its base to a similar depth, were covered with broken brick debris. I am informed that, within the memory of living men, there were still portions of the superstructure standing on the mound, but that the materials were utilized in the construction or repair of bridges on the Najíbábád and Koṭdwára road, which skirts the base of the old fort, at a distance of about 400 yards. If this be true, it is a matter of very serious regret.

I first had the covering of debris very carefully removed from six foot lines on the centre of all four sides, these lines meeting at top, and being extended to the foundation, 7 feet below the present level of the soil. In this debris nothing was found of any interest. It was all composed of pieces of brick, which had mostly been of the large size usually found in these old remains. No pieces of building stone were found.

The only things of any interest found in this or in the surrounding debris were the following :
(a). A portion of a terra-cotta figure ; left leg from groin to ankle, $7 \frac{1}{2}$ inches ; right thigh (only) $4 \frac{1}{2}$ inches. Wearing a tight dhoti, with an ornament over the seat of the genital organ. (This ornament differs

* Within the last 20 years.
$\uparrow$ Within 20 vears back.
from that in Fig. 4, Pl. XIX, Prinsep's Thomas' Indian Antiquities). The figure was in very high relief on a brick slab, and there are traces of drapery or other carving on the slab between the legs. Found in debris of well 60 yards north-east.
(b). A small headless figure (terra-cotta) probably of Buddha the Teacher, seated cross-legged, with soles of feet upturned; with the elbows on the thighs, and the hands (broken) raised in front of the body. The fingers were originally no doubt in contact, right index on left, in the attitude of demonstration. The figure is seated on a lotus ornamented couch, supported on the heads of two couchant antelopes. As the antelope was the totem or cognizance of Santánáth, the 16th Jain hierarch, the statuette may be his, but I take it to be a Buddha.

Total original length of figure about $4 \frac{1}{2}$ inches. Present total length of fragment of figure, seat and supporters, 6 inches. This was also found in the debris near the well, not on the mound.
(c). Head, neck and shoulders of a small sandstone figure, probably female. The hair arranged in a highly ornamental manner in a double roll. Features undistinguishable. This figure has evidently been broken off a larger work, of which no portions were found. No other pieces of this stone were found.
(d). A portion of apparently the lintel of a door. It is of very heavy black basalt. It represents a figure seated on its hams, with the legs partly crossed, with a club (?) held upright in each hand, the base of the club resting on the thigh of the figure. This figure is within a Chaitya.

On each side of the Chaitya are what appear to be issuant demons or elephants. Sculpture of the rudest. There is an indication of a trunk and large ears, so that the figure may have been meant for Ganeśa; but the position is against that, and there is no sign of the usual rat. Features of figure gone. No other portions of this series, nor of any figures in this stone were found. Height of Chaitya 7 inches. Interior of Chaitya, $3 \times 2 \frac{1}{2}$ inches. This was found within the old well, in the accumulated rubbish which filled it.
(e). A conical implement of stone. Either a hammer or a ricehusker. It is marked with a series of indented sockets all round the thick end, which would seem to have been interded to give the fingers a purchase or grip of the implement when in use. The lower end is much chipped. Extreme length $5 \frac{1}{2}$ inches; extreme breadth $3 \frac{1}{8}$ inches.
$(f)$. A small brick fragment from a canopy of a figure. Debris of main mound.
(g). A mason's plumb weight of burnt earth, shaped like some in
use to-day, with a hole in the centre of the top in which to fasten the cord. In the debris in the old well.

The core of the mound, that is to say, the original stúpa was revealed by the clearing away of the debris from the above lines, and proved to be conical in general elevation, with a truncated top; the superficies being found to be in a series of deep steps all round, the bottom step, i.e., the plinth, being much wider on top than the others, thus forming the usual ceremonial promenade (parikarma) surrounding the stupa. The foundation of the structure is 7 feet below present ground level, but the latter is, to the depth of at least an average of 3 feet, composed of debris. There was no trace of a railing, nor were any pieces of a railing found. The surrounding earth might repay digging,

I then commenced to sink a shaft down the exact centre of the stupa. Two and a half feet below the platform-like top, the relic chamber was found. It was completely full of terra-cotta objects, in loose mould, huddled in without care or arrangement, and much broken, thus showing, I think, that the chamber had already been opened, and no doubt rifled of its casket and of anything supposed to be valuable.

These terra-cotta objects found in the relic chamber, consisted of the following :-

First. At least one thousand small tablets $3^{\prime \prime} \times 2,{ }^{\prime \prime}$ from $\frac{5{ }^{\prime \prime}}{}$ to $\frac{7^{\prime \prime}}{8}$ thick at the base, and from $\frac{3^{\prime \prime}}{8}$ to $\frac{5}{8}{ }^{\prime \prime}$ at top. They are all stamped from the same die, or cast in the same mould, and bear a seated figure similar to those of Buddha the Ascetic, in the usual position of meditation, with the feet impossibly folded, soles uppermost, and the hands joined in the lap, palms upwards, the right hand being on top. The figure is, however, naked, and Buddha is seldom so represented. It is seated upon an ornamented circular pedestal, and is in mezzo relievo. The hair is arranged in a knot on the top of the head, aud from that knot appears to rise a high plume-like ornament with a spreading top, possibly representing peacocks' feathers. This might, however, be intended to represent the top of the ornamental back of the seat, but I take it to be a head ornament. There is a halo or 'glory' round the nead. There are two diminutive naked male figures as supporters, one on either side; holding in their inward hands (i.e., one in the right hand and the other in the left) objects which may be wands of office or long bows. These tablets bear no inscription. There is nothing on the reverse. They were no doubt votive tablets. Several hundreds of these tablets were broken to pieces. Each tablet was separate, and none were enclosed in clay or in model stúpas. A collection has been deposited in the Lucknow Museum, two were submitted to the Government N. W. P., and about six hundred have been left with my successor in Bijnor.

As far as I can discover, no such tablets have been hitherto found anywhere else. In his description of Sárnáth, (Archæological Reports, Volume I, page 119), General Cunningham says incidentally that he has seen in Burma accumulated heaps of small burnt clay figures of Buddha, bat he does not describe them. If those were not similar to these now discovered by me, then my find is, I believe, unique. There is no other mention of any similar figures in the entire series of the Archæological Reports. The figures may, however, represent some Jain patriarch, but I doubt it, from the immense number of them, and their being evidently in a relic chamber.

Secondly. Two large circular terra-cotta medals, both from the same die; $3 \frac{3}{4}$ inches in outside diameter. Having been less thoroughly baked than the tablets, these medals were much broken, the more beautiful of the two being unfortunately badly shattered.

These handsome medals are quite unique. Somewhat similar representations are said to be depicted on the Bharhut stones, now in the Indian Museum, (vide General Cuuningham's Bharhut Stúpa, Pl. XIII, which, however, is not at my hand for reference). Also see Prinsep's (Thomas') Indian Antiquities, Fig. 1, Pl. XIX, where is figured a portion of a clay medal found at Bihat. Pakna Bihar (Archæological Reports, Vol. XI, p. 31, Pl. XII.), S'ravastí (ibid., p. 89, Pl. XXVIII), Dharáwat (ibid., Vol. XVI, p. 45, Pl. XIII), and Kusinagara (ibid., Vol. XVIII, p. 70) are, as well as I can discover the only places where terra-cotta seals have been found. None of the seals found at the first three places are similar to, or of such fine execution as mine; and unless some of the Kusinagara seals were similar, which apparently was not the case, or they would certainly have been described, those now found by me are the first of their kind.

Mr. Carlleyle gave no plate of his (Kusinagara) seals, but a very meagre description of some only; a description which does not represent either of the Mayúra Dhwaja seals. Lac seals have been found in many stúpas, but none bearing an impress like these.

The following is a description of these beautiful medals. In the centre is Buddha the Ascetic seated in the usual attitude save that there is an appearance of something on his right, which may, however, be an effect of the earth which was adherent to the seal. There is a halo round his head, and the semblance of a necklace, which may possibly be the edge of the mantle, leaving the right shoulder bare. Buddha is seated within a handsome Chaitya with a lofty pinnacle of the diminishing umbrella type, decorated with streaming garlands. On either side of the pinnacle are flying human figures, with perhaps drums or other musical instruments. These flying figures are said by General

Cunningham (Arch. Report, I, 263) to be the usual accompaniments of the Ascetic Buddha. On either side of the body of the Chaitya stands a male figure as a supporter.

These wear the dhoti, and one a necklace. Their hair is dressed high, each in a different style, and there is a halo or 'glory' round the head of each. (Possibly the figure on the proper left, wearing the necklace, is a woman?) Each would seem to carry a chaumri in the outer hand, and at least one, if not both, a bow or wand of office in the inner. (There is an indication that the line forming this implement near the figure on the proper left is part of an oval ornamental ring round the Chaitya.) It is impossible to say clearly what this figure has in his right hand. There are also some matters unintelligibly depicted alongside of each figure, especially to the left of the left hand supporter. There are two marks on either side of the Chaitya which look like conventional palm trees.

It will be noted that on the tablets Buddha is large, while the supporters are diminutive. Here Buddha is small and the supporters gigantic. Underneath the base of the Chaitya is the Buddhist creed, of the usual formula "Ye Dharmmá hetuprabhavá \&c." Under the inscription is a strange figure, apparently a woman, kneeling, with uplifted adoring hands, before what looks like a pan with handles set upon a chúla. This figure may be that of the Bhikshuṇí Utpalá or Utpalavarná, who was the first person to see Buddha after his return to earth at Sankisa from his visit to his mother in the Trayastriṃ́a heavens; (Cunningham, Archæological Report, XI, p. 26) or it may represent something of the nature of the Burmese shiko. (See Cunningham, regarding some kneeling figures, somewhat analogous; Arch. Report, Vol. I, p. 9.) On the reverse of that one of these two large medals which was photographed is a rude delineation of the Bo tree, cut after the stamping of the medal. This is not on the duplicate medal. The least broken of the two large medals, and six copies of the photograph of both sizes of medal by Col. Waterhouse were submitted to the Government N.-W. P.* The finest but most broken medal is in the Lucknow Museum.

Thirdly. About two dozen smaller terra-cotta medals. Several of these were broken to pieces. The clearest one has been photographed. They contain a panel with a seated ascetic Buddha, having two attendants on each side. The panel is surmounted by a miniature stúpa in the centre, with a still smaller one on either side of it. The panel and stípas are surrounded by a wreath of bells. Underneath the panel is

[^1]the Buddhist creed, as above. Specimens of this medal have been deposited in the Lucknow Museum.

Fourthly. One copper salai or instrument for applying antimony to the eyes, similar to those found in the Bihat excavations (vide Prinsep's (Thomas') Indian Antiquities, Fig. 18, Pl. IV.)

Judging from the type of character used in the inscriptions on these medals, the stamp was probably of the 8th, or at latest of the 9th century of the Christian era. The date of the building of the stúpa cannot therefore be earlier than A. D. 700.

The excavating shaft was carefully continued down to the foundations, but nothing else was found. The entire mound consists of an uniform mass of solid brick work. The bricks are chiefly of large size $\left(14 \times 8 \times 2 \frac{1}{4}\right)$, laid in mud. They are all well-burnt, some being very hard. Small galleries, driven in at about present ground level, or a little lower, and at the cardinal points, might yield something. The shaft ought to be thatched over before the rains, or it will fill with water, and the mound will be much injured thereby.

The old fort of Mordhaj (Mayúra Dhwaja), if it were built by the king of that name, would date from about the beginning of the 10th century of our era, A Mayúra Dhwaja reigned in Gauḍa (Gonda), a portion of the ancient realm of Ayodhya, in $900 \mathrm{~A} . \mathrm{D}$. (Archæological Report, I, 329. But see Vol. XVII, 98, where General Cunningham may be understood as placing Mayúra Dhwaja and his brethren in the 8th century A. D.). Mr. Carlleyle, not a very trustworthy authority, however, (Archæological Report, VI, 233) has a Mora Dhwaj flourishing anywhere between 50 and 210 B . C.; while the popular tradition, which makes him contemporary with the Pandus, would relegate him at least to the 14th century before Christ! We may assume, I think, that the fort was not built before the beginning of the l0th century. If so, and if I am correct in referring the characters on the seals to the 8 th or at latest the 9 th century, (and I think that the former is more likely,) then, of course, the stúpa which I have excavated is much older than the ruined fort which surrounds it.

The whole country round the fort, for several square miles, is covered with almost uninterrupted traces of ancient ruins, chiefly composed of pieces of the large bricks of the builders of those days. All cuttings in the course of the work of widening the Najíbábád and Koṭdwára road, about to be taken in hand, should be carefully carried out, and well watched, where they pass through these ruins. The place must have been the site of a large and wealthy city. It may have been one of those many in this neighbourhood which perished in the exterminations of the ruthless Tímur, "at the close of the 14th century. There
are many such brick ruins in the Bijnor district, some of them, and the most extensive, in the middle of dense forest ; their very names vanished from memory long ages ago. All these remains would I think repay excavation. I grieve that I never had leisure to take it up.

## The Coins of the Chaghatái Mughals.-By E. E. Oliver. (With four plates.)

In the January number of the of the Royal Asiatic Society's Journal for the past year, I endeavoured to give a short geographical sketch of the Chaghatái Khánate, and a historical outline of the rulers of this, the most obscure branch, of the great house of Chengiz. A branch which nevertheless ruled over a vast extent of country; from Dzungaria, on the Chinese frontier, to Afghánistán; had its eastern capital at Almálik, the modern Kuldja, north of the Thian Shan mountains; and its western at Bukhárá in Máwará-un-Nahr. Of this line Mr. Poole, in the VIth Volume of the British Museum Catalogue of Oriental coins, says the national collection possesses but three coins, struck by Danishmandjeh and Búyán Qulí: and I therefore propose in the following list, to bring together all the numismatic evidence I have been able to obtain through the kindness of friends, who have so generously placed their coins at my disposal. I would take this opportunity to tender my best thanks to them, and also to point out that at present there is no dynastic list of rulers that can be considered accurate or complete, either in regard to the names of the Kháns, the extent of their appanages, or the length of their reigns, and that an extensive comparison of their monetary records affords one of the most hopeful means of obtaining further evidence. Every well verified name, date and mint that either private individual or public society can publish may prove a useful contribution towards the compilation of any history.

With the exception of Akhur all the mints noted in the present series are towns within the western division of the empire, Bukhárá, Samrqand, Kash, Soghd, Utrár, Tarmaz, and Badakhshán. What coinage may have issued from the eastern mints would probably be more likely to find its way to China than to India. On almost every coin the characteristic mark of the dynasty $\mathcal{P}$, a Tibetan 'Chh' turned upside down, occupies a prominent position. This on half a dozen of Khalíls and Qazáns [Nos. 12 to 17] is replaced by one of a slightly varying character she the lower half of which is a noticeable mark on the coinage of the Kháns of the Qrim, also descendants of Chengiz.

The signification of this characteristic Chaghatái mark is a question of interest. According to the chronicle of Ssanang Setzen, who, himself a prince of a leading tribe, wrote a history of the " Eastern Mongols" in 1662, which is accepted as a high authority, the royal house originally sprung from that of Tibet: and Howorth in his history refers to a terminating Tibetan syllable written "l'ri" pronounced "thi," which means "throne," and is found in all the names of the ancient kings and princes of Thibet. Possibly Tibetan scholars may be able to throw some light on the $\varphi$ " chh " in connection with the house of Chaghatái.

Most of the rulers describe themselves on their coins as "Kháqán", probably as not recognizing the sovereignty of the supreme Qáans of the line of Oktai, and several affix the name or title of "Tímúr," as Yasún, Khalíl, Qazán, and in the lists Tuká, Duá, and Tughlaq, though on the first three coins, noted as struck at Bukhárá, neither word is used. The following list, taken from my paper in the R. A. S. Journal, is the best approximation I can offer of the line of Chaghatái Kháns, but it is very possible that some readers of this Journal may be able to supply from coins in their cabinets some additional means of verification and check. I need hardly say I shall be greatly obliged for any such information.

```
    A. H. A. D.
    624-1227 I. Chaghatái.
    639-1242 II. Qará Hulákú.
    645-1247 III. Yassu Mangu.
    650-1252 Qará Hulákú, restored.
    650-1.252 IV. Organah (Khátún) spent the 10 years of her
        reign probably at Almálik.
    V. Alghu.
    VI. Mubárak Sháh, driven from the throne the
        same year as nominated.
    C. 66 5
        668-1270 VIII. Nikpai ) both nominated and killed within
        670-1272 IX. Tuká } 3 or 4 years.
    C. 672-1274 X. Duá.
        706-1306 XI. Kunjuk.
        708-1308 XII. Taliku, reigned but a few months.
        709-1309 XIII. Kabák.
        709-1309 XIV. Issenbuka, appears to figure under several
        names.
    C. 718-1318
        Kabák restored.
```

| 726-1325 | XV. | Ilchikdai. |
| :---: | :---: | :---: |
| $726-1325$ | XVI. | Tarmáshírín. |
| 73 年-133 ${ }^{\text {a }}$ |  | Sanjar (? jointly or when Tarmáshírín was in India). |
| $734-1334$ | XVIT. | Jinkshí. |
| 739-1338 | XVIII. | Yasún. |
| C. $741-1340$ | XIX. | 'Alí Sultạn. |
| , 742-1341 | XX. | Buzun. |
| , $74 \frac{3}{4}-154 \frac{2}{3}$ | XXI. | Khalíl. |
| , $744 \frac{4}{5}-134 \frac{2}{4}$ | (? XXII. | Muhammad Pulád, a doubtful prince.) |
| , 745-1344 | XXIII. | Qazán. |
| 747-1346 | XXIV. | Danishmandjeh. |
| 749-1348 | XXV. | Búyán Qulí. |
| 760-1359 | XXVI. | Tímúr Sháh. <br> (?) Buáyán. |
| 761-1360 | XXVII. | Tughlaq Tímúr (nominal). |
| 765-1363 | XXVIII. | Ilyás Khwája. |
| 767-1365 | XXIX. | 'A'dil Khán. |
| 767-1365 | XXX. | Kábul Sháh. |

$\left.\begin{array}{ll}771-1369 & \text { Suyurghatmisb. } \\ 790-1388 & \text { Maḥmúd. }\end{array}\right\}$ nominal, under Tímúr.

## LIST OF COINS OBSERVED.*

QARA HULA'KU', son of Mutahkan. Mutukan of the lists and grandson of Cbaghatái. According to Shaw اوغلى means a male child in Eastern Turkistan.

Baldah Bukhár'á, xx1 H. Fiæhu's Recensio.

ALGHU'. Algu of the lists, son of Baider and also grandson of Chaghtái.

Bukhárá, 660 H. Fræhn's Recensio.



* In the above list, besides private collections, I have referred to Fræhn's Recensio, the British Museum Catalogue, and M. Tiesenhausen's notice of M. le Count Stronganoff's collections.

No. 1. A. 1 •55. Bulhárá, 660 H. Mr. L. White King.



KABA'K. The Guebek of D' Ohsson. The mint Madínatu-l-rijál (the city of the people) Tarmaz is the Tirmid of the maps north of the Oxus.

No. 2. $\nrightarrow 1 \cdot 10 ; 119 \cdot 5$ grains. Madíaatu-l-rijál Tarmaz. My cabiuet
沙
| مهديزه-الرجال | توهن
... | $\mid$ | 1 | 1 | 1 |

No. 3. R. 1•3; 119 grains.
 | ...................

No. 4. R. 8; 19 grains.
كباك | الغُ، قان | العادل | خان

Bukhárá, 71x.H. My cabinet.
كهاك خان | الغاقان العادل ...... | 9 |

Bukhárá, 722 H. Mr. Rodgers.


Ditto. 75,20 grains. Bukhárí, 723, 725 H .
My cabinet.
Ditto. Ditto ; 722, 723, 724, 725 H. Count Stronganoff.
Ditto. Samrqand, 725 H. Ditto.
No. 5. A.. $8 ; 29$ grains. Madí [nat] Tarmaz, $71 \times \mathrm{H}$. My cabinet.



## TARMASHI'RIN.*

No. 6. R. 75 ; 18 to 22 grains. Utrár, 733 and 734 H. Mr. L. White King.

$$
\begin{aligned}
& \text { عللا الدين | تورا شُيرين | خان } \\
& \text { vMr. } \\
& \text { و خله | اللهة }
\end{aligned}
$$

Ditto. A. 8. Madínatr-l-rijál Tarmaz. Count Stronganoff.


[^2]Ditto. R. Samrqand, 726 H .
(لإبهاز

Ditto.
vry |

SANJAR.
No. 7. A. $1 \cdot 15$; 116 grains. Samrqand, 731 and 732 H. My cabinet. d
y

-VNI | dia $\varphi$ في
سí
| ضوب في ايابم دولنّ السلطان

| خلا الله الها

## JANKSHI'.

No. 8. R. 7 ; 19 grains. Balahdah-Utrár, xx6. My cabinet. سكه | . ...

Ditto. Utrár, 736, 737, 739 H Count Stronganoff.
Ditto. Bald Utrár 73x.
Ditto.


## YASU'N.

No. 9. Ar. $1.2 ; 120.5$ grains. Madínatu-l-rijál Tarmaz. My cabinet.


$$
\begin{aligned}
& \text { Ditto. } A 1 \cdot 2,122 \cdot 5 \text { grains. } \\
& \text { سـك...يد-..... } \\
& \text { تـته...... | تر } \\
& \text { Ditto. Mrs. Stoker. }
\end{aligned}
$$

خ خله ....

No. 10. $A .1 .05 ; 123.5$ grains.

INIS. Stoker.

Ditto. Mrs. Stoker.

(

 King.

$$
\begin{aligned}
& \text { يسون تهو ذان | الغاقان العادل } \\
& \text { Vind | ... ..... عظم }
\end{aligned}
$$

## KHALI'L.

No. 12. A. 1.25; 119 grains. [Samr]qand, 74 x H. My cabinet.



No. 13. A. 1•15; 121 grains. Bukhárá, 744 H. Mrs. Stoker.

الله | الد
No. 14. AR. $1 \cdot 15$; 123.5 grains. Bulkhárá, 744 H. Mr. L. White King.


...... | ...... | ......

السِلطان العادل | خليل تيّهور | ...




## QAZAN.

No. 15. R. 1.2 ; 116 grains. Bald-i-Badakhshán, 747 H. My cabinet.


Ditto. R. $1 \cdot 15,123$ grains. ditto. Without date. Mrs. Stoker.
No. 16. A. $1 \cdot 20$; 123 grains. Bukhárá, 746 H. Mr. L. White King.



No. 17. A. 1.25 ; 118 grains.

$$
\begin{aligned}
& \text { ابوبكر | عهور| ....... | ا علي ا }
\end{aligned}
$$

$$
\begin{aligned}
& \text { | ...... | } \mid
\end{aligned}
$$

Bulkhárá, 744 H . My cabinet.

$$
\begin{aligned}
& \text { | السلطان . . } \\
& \text { خلاه الله } \\
& \text { 居 } \\
& \mid \text { +ivow | ...... | ..... } \mid \text {...... | | vick } \\
& \text { اربع | و اربعين) | سبعهائهُ }
\end{aligned}
$$

## DANISHMANDJEH.

A. $1 \cdot 25,115$; grains. Bulchárá, 747 H. British Museum. لעاله الעالله | إبوبكر | عهر | عثّهان | عله

 BUYYAN QULI＇．
No．18．AR．1•2； 111 grains．Alhúr，x57 H．My cabinet．



עال


No．19．A． 1.2 ； 1195 grains．Samrqand．Mr．Rodgers．
 ｜ضرب｜

－ーツか1

No．20．AR． $1 \cdot 25$ ； 118 grains．Samrqand， 7 xx ．Dr．Stulpnagel．


 ｜خله ملهك اله

No．21．R． $1 \cdot 55 ; 116$ grains．Samrqand， $755 \cdot 4$ H．My cabinet．

 اللal
في
．．．．．．｜．．．．．．｜．．．．．．
No．22．A． $1 \cdot 25$ ； 120 grains．Samrqand， 754 H ．My cabinet．


 ｜lالسلطان الوعظم｜بويان ．．．． ｜．．．．．．｜｜．．．｜

No． 22 A．R． 1.2 ； 122 grains．Samrqand， $7 \times 5$ H．My cabinet．


No．23．A． 125 ； 15 grains．Samrqand， 755 H．My cabinet． السالطان العادل｜بويان قلي
voo｜／dim｜

．．．．．．．｜ $5 *$

خان｜خلمه الله اله الكه


No. 24. A. $1 \times 2$; 124 grains. Utrár, 752 H. My cabinet.



No. 25. A. 1.25 ; 118 grains. Utrár. My cabinet.
................

My cabinet.
ا قان العادل | الاعظظم بويان | فلماد الله
 | ...... | ......

No. 26. A. l•25; 122 grains. Bukhárá, 756 H. My cabinet.
 Vay | $\mid$ ...... | ...... | الوبكر | عهر |

No. 27. A. $1 \cdot 25$; 123 grains. Bukkárá. My cabinet.
ضوب--بذارا
 $1,{ }^{\prime}$

No. 28. R. $1 \cdot 25$; 122 grains. Kash, 753-4 H. My cabinet.
في

No. 29. R. 1.25; 126 grains. Kash. My cabinet.

Ditto.


Soghd. Count Stronganoff. ذا | بويان...

BU'AYAN. P Seldúz. After Búyán Qulí was murdered in 760 H . and the puppet Tímúr Sháh set up, there was something like general anarchy, various Amírs seizing provinces and asserting their independence. The whole of Máwará-un-Nahr was seized by an Amír whose
E. E. Oliver-The Coins of the Chaghatái Mughals. [No. 1, 1891.] name is generally written Bayán Seldúz ${ }^{2}$ galan whe spelled "Biaun Suldoze" in White's Institutes of Timur. He seems to have governed in a way, though a dissipated hard-drinking Amír, and to have been put to death by Tughlaq Tímúr Khán (ruling in Eastern Turkistan) circa 764 H. It seems possible that the two following coins may be his.

No. 30. AR. 1.25 ; 121 grains. Madínatu-l-rijál Tarmaz, 764 H. My cabinet.


$$
\begin{aligned}
& \text { Ditto. ? Bukhárá, } \quad 7 \times x \text { H. Mr. L. White King. }
\end{aligned}
$$

Doubtful coins.
Ah. 9. (? Duá.) Badakhshán, 69(4) H. Count Stronganoff.


No. 31. 凡. 1.2 ; 120 grains. Maḥmu[dábád], x 27 H. Mr. Rodgers.

No. 32. $\quad$ R 1.2 ; 124 grains. Samrqand, 753 H. Mr. L. W. King.

$$
\text { vor | } \quad * \varphi^{*} \text { | ... عطان ابو | }
$$

Ditto. Without mint, 754 H .
Ditto.
In these two coins and in some others, Búyán Qulí calls himself Náṣiru-d-dín.

KATLAGH KHW AJA, the son of Duá, who with his father invaded India, and appears to have been at Jalandhar 696, as far as Delhi 697-8, and Lahore 701 H. (See Zia-ud-din Barni, and D'Ohsson's account.) His copper coins, like the two following, are not uncommon in India.

No. 33. AE. 6 ; 53 grains.

$$
\text { ضوب لو ... } \mid \text { | } \mid \text { | } 1 . . . .
$$

No. 34. A. • 6 ; 52 grains.
[قتلغ] | ذر.ه-... | سشا

## JOURNAL

ASIATIC SOCIETY OF BENGAL.

## Part I.-HISTORY LITERATURE, \&c.

## No. II.-1891.

Report on the Boria or Lakha Medi Stúpa near Junagadh.-By Hevry Cousens, M. R. A. S., Archcological Surveyor of Western India.
(With a Plate.)
On the 27 th of January, 1859, I received a demi-official from the Director-General, Archæological Survey, enclosing a cutting from the Morning Post in which was given a short account of the opening of a stípa near Junagaḍh, Kathiawaḍ, by Mr. J. M. Campbell, C. S., directing me to take immediate steps to ascertain what was being done. On the same day I wrote to Rao Bahadur Haridas Viharidas, Divan of Junagaḍh, and in reply was told that Mr. Campbell had, during the Christmas holidays, commenced the excavation of the stripa in question, and had left instructions with them for its continuance. I then wrote to Mr. Campbell (letter No. 12 of 31st January 1889) asking him what had been done, and what was still doing, and received from him a statement of all that had been done up to that time. In his note accompanying it, he said that, should anything be found, he would be immediately informed, and would try to return to Junagadh for a few days. On the night of the 15th instant, I received a telegram from the Assistant Divan of Junagaḍh from which I understood that a 'find' had been made. The Assistant Divan, Mr. Ardesir, wrote me at the same time, but the letter did not reach me then, as I started early next day. At Dhola Junction I met Mr. Campbell, and we went together to Junagadh. The next morning we went out to the stípa. But before describing the 'find,' I will try and describe the position and surrounding of the stripa.

At the foot of the southern slopes of Girnar whose precipitous cliffs rise a short distance to the east of Junagadh, is a small secluded valley-an amphitheatre among the hills-almost entirely surrounded by the latter. It is about six miles from Junagadh, and the only path to it leads for some distance along the course of the river, past the celebrated Aśoka Rock, and crossing an intervening spur, debouches at once into it. It is thickly wooded, and the bush and scrub, with a good sprinkling of larger trees, climb the hill sides to near their summits. At every turn in the path, lovely glimpses of the surrounding scenery are seen through the foliage, and many a charming view is further enhanced by its vivid reflection in an occasional pool in the watercourses crossed in the way. The great rugged sides of Girnar, with its everlasting rocks, kissed by the lingering rays of the rosy sunset, and begirdled with a cloak of varied tinted foliage, now fading into the softest pearly greys, is a picture one loves to linger before. Around us, beside this old patriarch among hills, we have in the soath-east the heights of Gadesing, crowned by its ruined fort, on the south-west Dátar-no-dongar, with the hills of Máklán Kundi, Taktakgiyo, Sazadiári, and Pavandhoda between, and the low pass on the eastern slopes of Girnar known as Súrya-kund-ki-godi. In the middle of this beautiful valley, then, thus cut off from the outside world, upon a rocky knoll, stands the great mound known as the Boria Stúpa or the Lakha Medi (the abode of Lakha). The ground on every side between it and the western edge of the valley is strewn with fragments of bricks, and here and there are small mounds which look much like the remains of little stípas. Directly eastward of the big stípa, and on the eastern edge of the valley, is the small temple of Bor Deví, so called from the Bor trees which surround it.

On our arrival at the stípa we found that a relic casket had been unearthed. The digging that led to its discovery is described in Mr. Campbell's notes attached, from which it would appear that the depth of the casket from the summit of the mound was 39 feet. During the excavation the top of the mound had been cut off to a depth of 22 feet, and a trench 20 feet wide at the top had been driven from the east straight into the centre. The sides and floor of the cutting shew, that the whole stípa was built of close horizontal layers of good brickwork in herring-bone bond, and it is a solid compact mass. The bricks are of the old Buddhist type, measuring $18^{\prime \prime} \times 15^{\prime \prime} \times 3^{\prime \prime}$. Whatever the state of the upper portion, which has been cleared away, may have been, the lower part now standing is solid enough to allow a perpendicular cutting to be carried down without fear of the sides falling in.

During the excavation various slabs and fragments of sculptured stone (Junagadh freestone) were met with, most of them having been
found about the vertical axis of the mound. They were numbered as found, but owing to no plans or sections having been plotted as the work progressed, there was some little doubt as to the positions of some few fragments. The two great heavy rail slabs were no doubt placed in. the positions in which they were found for the purpose of the better securing the relics from any burrowing thief. The others were probably put in without any special purpose.

Before describing these fragments it will be as well to revert to the relics. See Plate V. On our arrival at the mound on Monday, the 18 th February, we entered the trench and found the stone coffer, with its lid upon it, standing on one side (west) of its original bed. As far as could be seen, it had been placed in the vertical axis of the mound, and, from measurements taken by me, and the statement that it was at a depth of 39 feet from the original top, I conclude that it occupied a position in the centre of that axis. On finding the box, Mr. Ardesir had it lifted to one side to see if there was anything beneath it, but he kept its bed undisturbed so that we could see how it was placed. From the discovery until we arrived a day or two had elapsed, during which time the coffer had been left standing in the trench under a guard, but had not been sealed or otherwise made fast. This outer receptacle consists of two blocks of white free stone, one upon the other, the upper serving as a covering to the lower. The block had been placed, so far as I could see by the marking of the bed, with its sides facing the cardinal points. Upon lifting off the upper slab we found a small circular well in the upper side of the lower stone, closed by a thin circular slab which rested upon a shoulder inside round the top of the well. On lifting out this little cover, whose top was flush with the top of the slab, we found inside a small stone pot with lid. The shape of the lower part of this is that of a shallow bowl, while the upper, or lid, was like an inverted saucer with a lip on its underside. This pot was very nearly as big round as the well in which it was placed, and it was with some little difficulty got out. The bowl or the lower part of the pot is perfectly plain, but the top has, by way of ornament six concentric grooved circles. The material out of which it is made is a dull red claystone, and the whole has been turned very neatly upon the lathe. This is evident from the circles, where the tool in its progress round has very slightly chipped or serrated the edge of the circles. A curious thing about this pot, and which will be noticed again presently, is that the lid does not fit the bowl, being too big for it, its lip overlapping and resting on the inner edge of the bowl instead of dropping into it. Within the well, surrounding this pot, was found a small quantity of gritty powder.

In the stone pot was found a little copper pot in two parts like
the last-bowl and lid. Thus far had the pot been opened by Mr Ardesir before our arrival. The copper pot being encrusted with green verdigris was not so easily opened, and the further opening of the vessels was entrusted to me. To open the copper pot, I had to insert the blade of my penknife between the lid and the bowl, and by gentle leverage force the former off. The general shape of the copper pot is that of the stone one, being slightly rounder. But it has an addition. of a little drum-like protuberance forming a kind of handle to the lid. When the copper pot was opened a silver pot of the same shape was found within, while underneath it, and between it and the sides of the copper pot, was a dry brittle substance covered with verdigris. This, on close inspection, has the appearance of compressed vegetable matter, bearing the impress of the silver pot on it. It looks as if some green (moist) grass-like vegetable had been put in, and the silver box added and pressed down upon it. Its moisture had greatly corroded the inside of the copper vessel up to a line above the junction of the lid. Beyond this, the interior of the dome of the lid was not corroded, being apparently protected by the intervening silver box, and this part had a purplish metallic sheen which is probably the result of fire when heating out and shaping the lid. The corrosion had eaten a considerable hole in one side of the bottom of the bowl.

The silver box was quite bright. The only difference between this and the copper one being in the shape of the knob on the top which has a narrower waist at its junction with the top of the dome of the lid. This, on being opened, revealed a bright little gold box. Between the two was a small quantity of very light knobbly brown stuff which on close examination and under a low power microscope appeared to have a distinctly fibrous texture. To me it appeared to be a mouldy or fungus vegetable matter.

Great interest and curiosity now centred round the opening of the gold box, and the lid was removed amidst much speculation as to its contents. Its shape differed from the others only in the shape of the knob on the lid which was here conical. In the box we found the relic and a few grains of coaly grit, accompanied by the usual five offerings, in this case comprising an aquamarine (?) bead, a ruby, a sapphire, an emerald, and a small piece of dry twig or white coral with a smaller chip of the same. The relic upon close examination seems to be a small chip of stone that has been under the action of fire. It is a flake about $\frac{3}{3}$ of an inch long by $\frac{1}{4}$ of an inch broad, of a dull yellowish drab colour with darker smoky stains. Its surface is cracked all over as if by fire. Under the microscope the surface appears to be covered with fine grains of sand of various hues and dimensions. A lower power shews
the surface as blocks of rock with the rifts or fissures (the cracks) filled. with gravel. It is most certainly not bone, nor does it appear to be burnt clay, unless it has been burnt into hard stone ware. The gritty substance under the microscope looks like lumps of coal of various sizes, and to the naked eye as a few grains of different sized gunpowder. The bead which is the largest jewel, is in cross section triangular with rounded corners, one side being much longer than the other two, which, themselves, are unequal. The bead, in its length, has thus three faces. The hole has been drilled from both ends, which is evident from the meeting in the centre not being quite true. It is transparent, with a slightly, but decided, green tinge, and Mr . Campbell thinks it an aquamarine. It may be crystal. The ruby, which is ruby-coloured by reflected light, is of the colour of strong tea by transmitted light. It is in the shape of a very flat cone, the diameter of its base being about $\frac{3}{16}$ of an inch. The sapphire is a deep blue by reflected, but a lighter blue by transmitted light, while the emerald is light opaque green. These two stones are smaller than the ruby, the emerald being the smallest. Now we come to the last article, which has all the appearance of a piece of dried $t$ wig, though perhaps a trifle heavy for such. It is about $\frac{5}{8}$ inch long and nearly $\frac{1}{4}$ inch in diameter. The outside is covered with fine parallel lines or scoring, running with the length of the substance, and on it are one or two eyes where leaves or small branches may have been attached. It is of an uniform grey tint. The fractured ends or sections do not, however, shew any woody texture, but is more solid looking. In the five offerings made to images, and at the consecration of Hindu temples, the coral always forms a fifth with jewels, but then it is generally the red coral. It is not unlikely that this may be a piece of coral too, but of the white kind. The nature of the bead requires a professional opinion to decide. The usual five offerings in Hindu shrines are-a diamond, a ruby, an emerald, a pearl, and a piece of coral.

The relic boxes were carefully examined, but no trace of inscription or of single letters could be found, nor has any coin been discovered. We are thus still without any clue to the age of the stípa, unless we get it in the fragments of sculptured stones which may yet be excavated. On the 20th the relic boxes and the contents of the small gold box were photographed full size.

The excavation is still being continued, and when we left the mound on the evening of the 19th, a well had been sunk in the brick work to a depth of 8 feet below the centre of the position, where the coffer stood; but without anything more being found.

The sculptured stones that had been found are themselves full of interest, and if the remaining portions of the structure of which these form
part can be discovered, the trouble and expense in getting at them will be amply repaid. The top member of the Tee or triple umbrella is a huge heavy slab one foot two inches thick. The edges round are broken away, but one image mortise remains at one corner, 3 feet 4 inches from the centre. The centre of the slab is pierced with a large round hole, 1 foot $3 \frac{1}{2}$ inches in diameter, to receive the stem of the umbrella. Three-fourths of the entire rim of the great umbrella were found, and they all piece together remarkably well, and give a diameter of 10 feet and a thickness of 1 foot. Four fragments of the four supporting images (one of each) have also been found, and the tenons under their feet correspond with the mortise in the top of the Tee. In the lower edge of the umbrella rim are the corresponding mortises to receive the tops of the images. The underside of the umbrella is slightly hollowed out. The whole was originally in one piece, but as yet the central parts and the remaining fragments of the rim have not been found. Nearly half the collar, however, with portions of the two upper ones, of different thickness, have been excavated. The holes in these decrease in size. Portion of a smaller figure, probably from the second tier, has been recovered. In the top of the big umbrella are four mortises immediatly above those below, but near the centre, for the feet of these upper images. In the edge of the umbrella small holes are drilled through half way, between the images and about $\frac{5}{8}$ inch diameter, apparently intended for hangings or the sticks of small flags. There are many other fragments and slabs whose original use cannot as yet be definitely determined, but in addition to these are the fragments of two lengths of rail slab, 8 feet 3 inches by 3 feet $5 \frac{1}{2}$ inches. These have long tongues at either end to fit into long mortises in some supports not yet found. The surface is carved into uprights with three bands of rail running through them. On the upright struts are incised central circles with a half circle at top and bottom. The length of these slabs is the length of a side of the original polygonal railing round a stripa or structural dagoba.

The question which now requires solution is, whether the triple umbrella was an erection over a previous stípa or over a structural dagoba. That it was never erected over the present stupa is self-evident from the positions in which the fragments were found. If a larger stupa existed on this spot, it is very unlikely that it would have been pulled down and rebuilt. It would have been repaired if necessary or an outer casing added. It is my opinion that a structural dagoba existed probably on this spot before the stúpa, and the triple umbrella being so top-heary fell and was smashed as we find it; and in this was enshrined the present relics. Finding how unstable this arrange-
ment was, the Buddhist determined to build the present stipa, and the fragments of the old dagoba, which had to a certain extent become sanctified by its use as a relic receptacle, were buried in the mound. I should thus not be surprised, if the bulk of this original structure be found at the ground level, being thrown in to help to get the required height for the relic coffer.

It has been decided to carry on the excavation to the rock ; and I estimate that there are 35 to 40 feet of brick work between the position of the coffer and the foundation. I have advised that a well be continued down through the centre, a sloping approach being made to it from the east along the present cutting. Then, if necessary, the cutting east and west might be carried straight through the mound down to the foundation. If nothing is found, then it will be needless to demolish the mound in the chance of finding anything in the two halves. If, on the contrary, my suppositions are correct, and the remains of some structural dagoba be found scattered throagh the mound then nothing is left for it but to clear away the whole.

At a point in the mound at about 4 feet from the coffer, and on the same level, was found a handful of broken chips. These were the fragments of a pot of exactly the same material as the stone pot containing the relics, and on piecing some of the fragments around the lip of the cover of the latter they were found to lie evenly to it and to have exactly the same curve. I have already mentioned the little trouble we had in getting the stone-pot out of the well, which was a good deel deeper than it, there being hardly enough room round about it to get the fingers in. The inference I draw from this is, that the original bowl, of which the present lid was its cover, is now represented by these fragments. The accident probably happened thus. After enclosing the copper box within the stone pot, the latter was being let down into the well, when, from the small diameter of the latter the priest's fingers slipped from the bowl to the lid. The bowl fell into the well and got broken while the lid remained in his fingers. The fragments were then taken out and cast aside, and a new bowl obtained which did not quite fit the lid. The immense pressure of the mass of brick work above reduced the fragments to chips as we find them. But the amount of these is quite sufficient to build up a complete bowl as large as the whole one.

It is curious that no heads of images have as yet been found.
I have not been able to revisit the stípa since my first visit, but have been informed that nothing of any consequence was found upon further excavation.

Notes on some Rolarian Tribes. No. II.*—By W. H. P. Driver. The Koroas.

Habitat.-Koroas are to be found scattered over various parts of Chuțiyá Nágpur, from Palamu in the north down to the most southwestern of the Native States. They are in various stages of civilisation, from the Birhor-Koroa of the jungles to the cultivator on the plains who prefers to call himself a 'Kisán.'

In Palamu they call themselves Korea-Munḍas rather than Koroas, and in Sirguja and Jaspur they like to be called Paharias, the name Koroa being looked upon as a term of reproach.

Language.-As usual when branches of any tribe become isolated, the Koroas in different districts have various dialects, and the following are a few samples of differences between the Baroai and Manipat Koroas.

| English. | Baroai Koroa. |  |  | Manipat-Koroa. |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
| White ant | $\ldots$ | Bunumku | $\ldots$ | Santi. |  |
| Bear | $\ldots$ | Nunikmai | $\ldots$ | Bana. |  |
| Blood | $\ldots$. | Chala | $\ldots$ | Balgi. |  |
| Bone | $\ldots$ | Kod | $\ldots$ | Jang. |  |
| Body | $\ldots$ | Harom | $\ldots$ | Sindir. |  |
| Cloth | $\ldots$ | Pagi | $\ldots$ | Sonhe |  |
| Hair | $\ldots$ | Silik | $\ldots$ | Ub. |  |
| Thigh | $\ldots$ | Bul | $\ldots$ | Tob. |  |
| Lie | $\ldots$ | Lobra | $\ldots$ | Buri. |  |
| Mouth | $\ldots$ | Totna | $\ldots$ | Ah. |  |
| Rice (cooked) | $\ldots$ | Kode | $\ldots$ | Jow. |  |
| Word | $\ldots$ | Balda | $\ldots$. | Barra. |  |
| There | $\ldots$ | Inandera | $\ldots$ | Hona. |  |
| Far | $\ldots$ | Sanging | $\ldots$ | Langka. |  |
| That | $\ldots$. | Man | $\ldots$. | Mader. |  |

Traditional and Sonjectural History.-The Koroas like other wild tribes know little of their own history, but they have traditions about the Mahádeo Hills, and the same fiction as the Asurs about their origin, viz., that they are sprung from scarecrows. Their traditions also connect them in a distant way with the Korkus, Kurs, Saonts, Asurs and Beonarias.

When these aborigenes were driven south by the Aryans they appear to have been generally known amongst themselves as Kors, their word for man. The more eastern branch of the Kolarian race was in those

[^3]days evidently known as Horo. To this day the members of the eastern branch can be distinguished by the use of H , where those of the western branch use the letter K. From the remains of brick and stone temples, it would appear that in ancient times small communities of Aryans used to settle amongst these aboriginal tribes, perhaps at first as conquerors, but afterwards on a more familiar footing, until with the lapse of time they became absorbed in the Kolarian population. Traces of mixed blood are plain enough amongst the population of this part of the country at the present day.

Authentic history.-The earliest historical fact we have in connection with the Koroas is, that in 1818 A. D., when Sirguja and Jashpur were ceded to the British by Appa Sahib, the Koroas, under a chief named Manawar Sing, were at war with the Rája of Sirguja. Then in 1857 the Koroas of Sirguja went into open rebellion against the British Government, and one of their chiefs Dharam Sing was hanged after we regained the country. Again in the beginning of 1884 this same tribe (probably owing to scarcity) took to highway robbery and murder. The ring-leader ou this occasion was one Katra, and he and three others, named Bandhan, Jitu and Ledra, were tried and hanged at Ranchi. Of the others implicated, two more, Dunde and Punea, were transported, and another Bandan received five years' imprisonment. It is said that in years when the hill Koroas crops were scarce, they used to pay a visit to the Rája in a large body, armed with their terrible bows, arrows and battle-axes. The Raja in those days was only too glad to get rid of them by ordering a general subscription for their benefit. Alas! now, gone are the days of "the good old rule, the simple plan," and the British are here to maintain law and order.

Divisions.-The Koroas are divided into several sub-tribes, the Pahariá or Bor-koroas, the Birinjia-koroas, the Birhor-koroas, the Koraku-koroas, and the Koria-munḍas. All live amongst the hills and jungles and speak dialects of the Kolarian language. The Dand-koroas or Dih-koroas and the Agaria-koroas live on the low lands, and speak only a dialect of Hindí.

Food.-In the way of food, Koroas of the hills can eat goats, pigs, forvls, cows and buffaloes, but not snakes, or frogs or lizards. Only Birhor-koroas can eat monkeys. They all eat various jungle products, and many of them know of the medicinal properties of herbs, roots de., to be found in their jungles. The following are the names of a few such medicines, viz., Churaphal, Gethi, Bhourmali, Barkajeri, Harraphal, \&c.

Religion.-Koroas employ three kinds of priests, who must, however, all be Koroas. The Pahan-Baiga is the head priest, the 'Pujar' is his
assistant, and the Dewar is the consulting priest. They also have Ojhas, Dains and Motis, i. e., wizærds, witches, and sorcerers, who deal with various kinds of spirits, and work on the superstitions of the people. The mediumistic powers of such people are supposed to be innate. Koroas worship the sun. Once a year in the month of November, the religious-minded Koroa goes out by himself, before dawn, to meet the rising sun, and without the assistance of a priest, he offers ap a sacrifice of a white cock, upon an open field. The priests offer their sacrifices under the Sarna of sal trees, which is to be found near every village. Darha and Darhin are worshipped in the Sarna, and the binduised Koroas of the plains worship Kálí in a temple. A red or spotted cock is offered to Darha and a red hen to Darhin, and to these are added a little 'Handia' or native rice beer, which the soul of the Koroa loves. There is also a Paht Deota or hill god who eats red cocks. On occasions of distress the Baiga offers an oblation of milk to Kálí. The goodwill of 'Arha Burhi' (their ancestors) is invoked on any occasions of moment.

Festivals.-At the 'Phagna' festival, in March, a 'simal' (cotton tree) branch is planted on the east side of the village, straw is tied on the top of it, and then set fire to. After drinking and dancing round this, the Baiga cuts off the top with a 'balua' (battle-axe). He then takes and sticks it over his own door, and offers a sacrifice of a spotted fowl, and some bread made of rice flour. This festival lasts for two days, and they dance the 'Tharia' and 'Jhumta. The 'Sarhul' festival, in April, lasts four days, a red cock and hen are sacrificed and they dance the Jhumta and Chandrani. Once a year, in the month of July, the Pahan sacrifices to Kálí a 'khassi,' goat which the whole village subscribes for. At the 'Nowa' or first crop festival in September, the dances are Chandrani and Desoari, and only a hen is sacrificed by the Pahan, but after the harvesting is over, every Koroa household offers a thanksgiving sacrifice of a red and white hen to ancestors. The 'Sohorai' or cow festival, in September, lasts four days, and two red cocks are the proper sacrifice on this occasion. At the 'Dassain,' in October, the Diwan of Khuria sacrifices a 'khassi' goat. The Karma festival, in October, lasts two days. The villagers cut a branch of a karam tree, plant it in the middle of the 'akhéa,' or dancingground, and drink and dance round it. At this the Chandrani is the proper dance.

Marriage ceremonies.-Although Koroas do not marry until they are grown up, their marriages are often arranged by parents. The would-be-husband has always a say in the matter, and in his eyes, workingcapabilities are the chief beauty in a wife. Koroas are divided into
several families, each of which is known by its 'gotor,' and no two people of the same gotor are allowed to marry. The gotor stands for our surname. An orthodox marriage is conducted as follows. First the betrothal is formally gone through by the parents of the bridegroom, taking to the parents of the bride two 'kalsis' of 'dar'u' or native liquor made from the 'mahwa,' and settling the price of the girl, which is generally about Rs. 5 . The young man goes with his parents next time and takes besides the Rs. 5, a 'khassi' goat, a piece of cloth for his intended, and another for his future mother-in-law. On the wedding-day a feast is given at the house of the bridegroom's father to which all relatives and friends are invited, and a party of the bridegroom's filiends go and bring the bride. A person called an 'aguait' arranges all the ceremonies. The clothes of the bride and bridegroom which have previously been dyed yellow are tied together by the 'Lokundis,' who must be unmarried people. The 'Lokundis' are the bridesmaids and bestmen. The bridegroom then puts 'sindur' on the bride's forehead, and the 'aguait' throws a fist-full of uncooked rice on the ground. The happy pair then go and salaam to their parents and to the assembled company. They then seat themselves between their parents, and the husband puts bangles on his wife's wrists, and anklets on her feet. The company then begin to eat and drink, and afterwards the young people commence their dancing, which is kept up all night. The next morning, after a final drink, all the party go and bathe, and then leave the happy couple to their own devices.

Marriage customs.-A Koroa can marry a second wife, if he has no children by his first, or if his first wife leaves him, or if he is divorced from her. If his wife leaves him, he can get back her price, from her parents or guardians, and this is as good as a divorce. Widows can remarry, and a man who marries a widow or divorcee is called a 'Biyáhur.' If a man leaves his wife without a cause, she can call a 'pancháyat,' and have him find Rs. 5. When young people marry without their parents' leave, it is called a 'Dhuku.' The relatives then hold a 'pancháyat,' and make the young man give a 'khassi' goat and two ' kalsis ' of 'daru,' for their bencfit.

Birth customs.-For about a week or ten days after a birth, the mother is considered unclean. Children are named a month after they are born. They are only named after their grandparents, when the mother dreams of a visit from the said ancestors. If a girl is to be born, the woman dreams that either her own or her husband's mother came with offerings of 'tarpat' earrings or beads; but if a boy is expected, she dreams that either her own or her lusband's father came with an offering of a 'dibi' or a 'batua' (small brass pots for eating out of).

The child is then called its grandparents' 'aotár,' and is named after the said ancestor. A big feast is always given at a christening. Boys are preferred to girls.

Young people.-Boys are burnt on the forearms, when they are about ten years of age, but girls are not tattooed like Muṇdas, Kharias and Uraons. Property descends only to male heirs. Every large village has its Dhamkuria or bachelor's quarters, for boys who are too old to live with their parents. Girls stay with their parents until they get married. The dancing-ground is usually an open space in front of the Dhamkuria. Young people enjoy considerable freedom until they are married. There are no old maids amongst Koroas. Children take the 'gotor' of their father.

Death Customs.-When great persons die their remains are conveyed to the banks of a river and burnt by their relatives. Ordinary people are buried and large stones are placed over their graves. When the Pahan Pujár or Dewar die, their remains are burnt and buried in their own fields. Ten days after a death, the nearest relatives give a big dinner. When a pregnant woman dies, her ghost haunts its relatives and has to be turned out of the village with the assistance of the Baiga.

Appearance.-In appearance the Koroas of Jashpur, Sirguja and Barowai are usually very black with flat square faces, and matted locks. Physically they are short but very strongly made.

## The Pahariyá-Kharias.

Habitat.-The Pahariyá-Kharias have little to boast off in the way of history, and those in the south-west have the same tradition as the Kharias of Lohardagga, viz., that they came from 'Roides' and 'Khariaghát.' They are found scattered on the hills in the south of Mánbhúm, in various parts of Singbhúm and Kionjhar, and on the borders of Gangpur and Raigarh, and (as their name implies) they are exclusively hill men. At the foot of the hills in the thickest jungles are found the PeraiKharias, who are said to have been outcasted by the hill men, and with them are also found the Makria-Kharias, both these tribes being gross feeders. The Makria-Kharias eat monkeys, and thus stand in the same position to the Kharias as the Birhors to the Muṇdas. It is most probable that in ancient times all the Kolarian tribes ate monkeys.

Language.-There is a difference in the language of the hill and plains of one word in twelve, and the following are a few examples :-
English. Plains-Kharia. Hill-Kharia.

| Cloth | $\ldots$ | Lutui | $\ldots$ | Sirak. |
| :--- | :--- | :--- | :--- | :--- |
| Fever | $\ldots$ | Ghorna | $\ldots$ | Tonor. |
| Flesh | $\ldots$. | Mas | $\ldots$ | Kumang. |


| English. | Plains-Kharia. |  | Hill-Kharia. |  |
| :--- | :--- | :--- | :--- | :--- |
| Foot | $\ldots$ | Katta | $\ldots$ | Jura. |
| Jackal | $\ldots$ | Tuyin | $\ldots$ | Karcha. |
| Monkey | $\ldots$ | Bandar | $\ldots$ | Sakoi. |
| Morning | $\ldots$ | Meang | $\ldots$ | Patar. |
| Plantain | $\ldots$ | Kera | $\ldots$ | Kondo. |
| River | $\ldots$ | Ompai | $\ldots$ | Jor. |
| To-day | $\ldots$ | Musa | $\ldots$ | Kone. |
| Near | $\ldots$ | Ubdu | $\ldots$ | Ekor. |
| Weep | $\ldots$ | Yamna | $\ldots$ | Libdana. |
| Bad | $\ldots$ | Bekar | $\ldots$ | Kambo. |
| Old | $\ldots$ | Buddha | $\ldots$ | Kendrubo. |

Divisions.-There are two tribes of lill Kharias, the 'Pahariyá' and the ' Neosa.' The Pahariyás are the more civilized, being more fastidious as to their food, and wearing cloth, while Neosas are said to eat cows, and animals that have died of disease, and most of them wear only leaves. Neither of these tribes can speak any language but their own, but it is only with difficulty that they can understand each other.

Food.-Pahariyá-Kharias eat buffaloes, sheep, goats, pigs, fowls, \&c., but not cows, tigers, snakes, lizards, \&c.

Religious Festivals.-In religious ideas the Pahariyat-Kharias are wonderfully advanced. They worship the Sun, 'Giring Pájá,' every two or three years, in the months of June or July, the head of every family doing his own pújá, on a bare rock, and offering a white cock, a white goat, or a white pig, according to his circumstances. Every village has its priest, or 'Kalo,' who must be a Kharia, and his sacrifices are to be made at the 'Sarna' or Jangkorbo. In February there are three festivals. At the 'Phágun' festival each household offers its own sacrifice. At the Jangko festival, the Kalo offers a sacrifice for the whole village. This festival is kept in honour of the Mahua and Mango, which fruits are then in season. Then there is the 'Lamlam,' or hunting festival, at which the Kalo again officiates for the whole village. At all these festivals the 'Tharia' is the fashionable dance. In June each household offers its 'khidori' sacrifice. In September the 'Kalo' offers the 'kadoleta' sacrifice, at the cutting of the upland crops. At the 'Karam' festival, in September, the young people of both sexes offer sacrifices at the akhrá, or dancing place. In October the 'Kalo 'offers a sacrifice at the 'Kharra Pújá,' of a brown khassi goat, and three cocks and one hen of different colours. The 'Bandai' festival is kept in October, and at this they dance the 'Jadura.' They dance, the 'Desaoli' in May and June and the 'Jadura' in October, November and December. In the months of February and September each house-
hold offers a sacrifice to its ancestors, who are supposed to act as guardian angels to their living relatives.

Demons.--It is the 'Kalo's' duty also to keep an eye on the various malignant spirits that haunt every Kharia village, and to propitiate them when necessary. The following are the most common of such evil spirits: The ' Pahto-Dubo ' or horse demon. The 'Dorbo-Dubo' or elephant demon. The 'Gorea-Dubo' or fire demon. The 'Raksa-Dubo' has a man's body with big protruding teeth, and he carries a rod with a noose at the end of it, for catching people with, a big basket to put them into, and a hatchet to kill them with. He can only be appeased by the offering of a ram. Then comes the 'Gumi-Dubo,' whose proper sacrifice is a cow. When sacrificing to these demons, the priest kills the animal, whatever it may be, and runs away. The other evilly disposed spirits are the ghosts of women who have died while pregnant, called 'Churil-Dubos', and the ghosts of people who have met with violent deaths, called 'Jianth-Muahs.' These sometimes go about screaming or crying at night, and they inhabit large trees by the roadside, and pounce down on people who do not offer sacrifices. They frighten and sometimes kill the unfortunate wayfarer. The 'Pahariyá-Kharias' also personally offer sacrifices to the 'Baranda-Dubo' who lives in ant-hills. The sacrifice for this demon may be a buffalo, a ram, or a pig.

Good Spirits.-All the gods of the Kharias, however, are not evil. There are two great good spirits named Dhowlagir and Mainagir, and these have several spiritual apostles, who do their bidding. Three of the said apostles, known to my informant, were named 'DeoganGuru,' 'Lugu-Guru,' and 'Mado-Mantri. Some 'Pahariyá-Kharias', known as 'Deonra-Lebus' or 'Motis', can invoke the above mentioned good spirits, but only for good purposes. The ceremony is as follows : The 'Deonra-Lebu' takes a 'samu' or bamboo fan, in which he puts some rice, and he places a small light in front of him. He then begins to rub his hand over the rice, and to invoke the good spirits with the following chant-

> "Come, come along, on the road I will make you sacrifices.
> "Here I stand, your priest, cause the sick man to be set free, and I will give you sacrifices.
> "Keep me (as your Deonra Lebu), and at the head of the waterfall I will make your sacrifices.
> "Make the sick man stand up, walk and work, and then will I give you sacrifices."

If the sick man recovers, the 'Deonra-Lebu' knows that Dhowlagir and Mainagir have granted his prayer, and he gives his sacrifices according to promise.

Witches.-But should the person die, and there be the slightest suspicion of the existence of a wizard or whitch in their midst, the Deonra-Lebu again calls the good spirits to his assistance, and sees the wizard's or witch's face in the light that is set before him. He then tells the 'Re,' or head of the village, who calls up all the villagers and explains the circumstances. The unfortunate wizard or witch is then turned out of the village, with much bad language and rough treatment. If any resistance is offered, the offensive person is beaten and sometimes killed outright.

Marriage customs.-' Pahariýá-Kharias' only marry when they come of age, and widows or divorcees are allowed to remarry. They may marry two or more wives, but very few ever do so. They must, however, only marry with other Pahariyá-Kharias, and the parties to the marriage must be of different 'gotors' or septs. The following are a few such septs, viz., 'kiro' tiger, 'dungdung' eel, 'bilung' salt, 'baa' dhan, 'kerketa' a bird, 'soreng' stone, 'kulu' tortoise, \&c. Pahariyá-Kharias have no 'dhamkuria' or bachelor's hall, but they have an 'akhṛa' or place for dancing. Marriages take place at the home of the bridegroom, outside of the house. The groom has to pay the girl's father a present, called ' gining.' This is not paid in money but in cattle. A fair price for a wife is two buffaloes, or seven heads of cattle. All friends and relatives are invited to the marriage feast. The bridesmaids anoint with oil the heads of both bride and bridegroom. The bridegroom then puts sindur on the forehead of his bride, and she returns the compliment. The best man then splashes them both with water, and the ceremony is complete. The happy couple are then carried about, by two strong men, to receive the congratulations of the company. After this the party sits down to eat and drink, and the rest of the night is spent by the young people in dancing, and by the elders in drinking. Next morning they all go and bathe together, in the nearest river or pond. When a man cannot afford to have a ceremonious marriage, he marries without ceremony, and this is called a 'dhuku' marriage. If married people cannot agree, they are at liberty to separate and to remarry with others if they choose.

Regarding children.-All property descends to male heirs. After child-birth the mother is considered unclean for six days, and during this time she must live and eat in a separate room by herself. The child is named when it is a month old. To find an auspicious name, grains of rice are thrown into a bowl of water, as each name is called, when all the grains come together at the bottom of the bowl, the last mentioned is the proper name. When boys reach the age of 8 or 10 years, they have their forearms burnt. Girls at about the same
age are tattooed (by 'Malar' women) on their foreheads and temples, never elsewhere.

Regarding the dead.-The rich burn and the poor bury their dead. Dead people turn into ghosts, and these live chiefly near their burialgrounds. When a person is dying, all the ghosts in the neighbourhood get round his deathbed, and dance and make merry, for a new 'muah' or ghost is about to be born to them. People on the eve of death can see such ghosts, and then they know their time has come. The ghosts of people who die a natural death are quite happy, and do not molest the living.

## The Sobors or Savaras.

History and traditional references.-The Savaras (a numerous section of the Kolarian race) are the southernmost of any of the aboriginal tribes who still speak a Kolarian language, and they have maintained their distinctive title from very ancient times. There is an inscription cut on the rock at Girnar in Gujerat from which we learn that Rudra Dáma (one of the Sah kings about 300 B. C.) conquered the Savaras and other wild tribes; and the Savaras are also referred to in the Puránas as a wild tribe in the south-east. Ptolemy mentions the Sabarae, and Pliny speaks of a tribe of Suari. Martin in his History and Antiquities of Eastern India, says that a large tribe of Siviras are traditionally reported to have existed and flourished in Sháhábád and Bihar contemporaneously with the Cheros, but there are none in those districts now. However Sherring in his "Tribes and Castes of India" states that a tribe of 'Seoris' who were in former times much mixed up with the Bhars, Cheros, Kols and Kharwars, were once established in Ghazípur and Mirzapur, and that a few are now to be found in Central India. "These people muck resemble the Gipsies of Europe. Their women wear a tartan dress and often have a kind of horn projecting from the forehead as an ornament. They live in light and easily-moved booths made of grass and reeds, are fond of intoxicating drinks, and eat the flesh of swine and oxen. They procure wives for their young men by kidnapping female children, and live principally by jugglery, coining false money and theft."

Mythological and Historical references.-It is difficult to say whether these 'Seoris' are a branch of the Savaras of the south or not. A Mahábhárata legend says that the Savaras were created from the excrement of the wonder-working cow "Nandiní", which belonged to the hermit 'Vasishṭha,' who employed them to punish a Kshattriya king named
"Viśra-Mittra" the son of Gadhi, king of Kanauj. From this legend it might be inferred that the Bráhmans employed an army of Savaras, (whom they imported from the south) as mercenary soldiers to fight on their side against the Rájpúts of Kanauj. These Savara soldiers would naturally leave their wives behind, and this would account for their almost total extinction, and for the necessity for their young men to procure wives from other tribes. The Cheros and Kharwars with whom the Savaras were associated are still very numerous and prolific in Mirzapur, Sirgúja, Palamu and other neighbouring districts.

Geographical Distribution.-In Sambalpur, Orissa and Ganjam the Savaras are found in various stages of civilisation and adopting various languages and customs according to their surroundings. In Ganjam they speak a mixture of the Kolarian and Dravidian languages and are known as Sonds, Sowras, Jara Savaras, Luda-Savaras, Arisa-Savaras and Tekkati-Savaras. In the Native States of Orissa and in parts of Sambalpur they speak dialects of Uríyá and are divided into the following sub-tribes, viz.,-

Divisions.-Sowras or Saondas, very hinduised cultivators. Taalas, very hinduised cultivators. Bentkars, hinduised, and weavers by trade. Ludhas, hinduised, and blacksmiths and ironsmiths by trade. Kella-Sobors or Potor-pinda-Sobor, the men are musicians and the women dancing-girls. It is said that in former times their women only wore leaves.

Sub-division of Sobors.-The purest representatives of the race call themselves Sobors, and speak a dialect of the Kolarian language which could be understood in Chuṭiyá Nágpur. These people are only to be found in the most jungly parts of the Native States of Orissa and Sambalpur, and a few are also found in Gangpur one of the southern tributary states of Chuṭiyá Nágpur, and the following notes only refer to these Sobors.

They are divided into three sub-tribes, viz., 一

1. Pardhea or Jara-Sobors are cultivators and shikaris. They, are sometimes known as 'Kurus.' They eat pigs, fowls, goats, fish \&c., but not cows, buffaloes, tigers, lizards \&c.
2. Potkota-Sobors, boat and string-makers and cultivators. They can eat the same animals as the Pardheas and also buffaloes, but cows are forbidden.
3. Bassu-Sobors are chiefly cultivators. They can eat the same as the Pardheas and also shell-fish.

These sub-tribes cannot intermarry or eat together, but they dance, drink and otherwise frateruize quite freely.

Septs and Totems.-They are divided into numerous septs of which the following are a few, viz., -

Saram, sambar cannot eat.
Murmu, nilgai do.
Barhia, wild pig do.
Guincha, tree mice do.
Ir-tirki, guinea-pig do.
Nag, cobra cannot kill.
Sua, parrot cannot kill or eat.
Toro, lizzard do.
Hemrom, a bird do.
Pardhán, a title, the man who reinstates into caste.
Bisual, a title, the man who officiates at deaths.
Nega, a title, headman of a village.
Bhui or Bohi, those who carry palkis.
No two people of the same sept can intermarry. The wife belongs to the sept of her husband after marriage, and male and female children belong to the same sept as the father.

Religious Festivals.-The Sobors who retain their aboriginal customs have priests of their own tribe, who sacrifice goats, fowls, pigs \&c, at the village 'dimur' or spirit-grove. The head priest is called 'Turi' or 'Jhankor' and his assistant the 'Lengena,' and these offer sacrifices at the following festivals, viz.,-

Mágh-porob and Mágh-puni
Phagua, Phágun-pun and Gundi-Khia
Choit-porob and Choit-puni
Boiság porob
Jet-puni
Assar-porob or Dutia
Rakhi-puni and Pura
Nua-khia, Korma and Ekadasi
Tugilosa, Buriusa and Dalkhai
Kártik-puni, Bhaijinta, Pojinta Borousa \}
Usa-borot, Kolasi-usa and Kola-Chusa $\}$
Pús-puni
in January.
in February. in March.
in April.
in May.
in June.
in July.
in August.
in September.
in October
and November.
in December.
Gods and Demons.-The head of every household is also supposed to sacrifice to numerous gods, of which the following are a few. Gorompoti, village god. Bonera, hill god. Bons-poti, jungle god. Panchkonda and Peta-bulia, outside gods. Ludha and Ludni, Kandi-bent, Pagura-bent, and Pardhia-bent are household gods. Debí, Mahádeo, Mahábír, Bura-Bhim, Bhogia Bura-Deo are all great gods. Satbohoni and Jolkomoni are water nymphs, and the following are demons of
sorts, Rakas, Bodru, Kalka, Rui bonga, Podmasini Temasini, Bhandargohoria, Churguri, Horli-pat and Kondra-pat.

Dances and Music.-Sobors have the following dances; viz.,-
Jadura men and women together.
Karma do.
Khedapar do.
Jatra do.
Kalanga do.
Biha do. at weddings.
Sudni only women.
Konkor do.
Kheldi single woman of Kela Sobor tribe.
Dond danced by single man carrying bells on a stick.
They use the following musical instruments: Lepur, Champ, Betbari. The Kela-Sobors use the Khonjini or Ghurka, a peculiar instrument which emits groans and grunts.

Wedding customs.-The uncivilised Sobors do not marry until grown up and the price of a wife is usually Rs. 5. Widows and divorcees can remarry, and a divorce is effected by returning the price paid for the wife. The marriage takes place at the man's house, and the bride is borne to the wedding on the backs of the bridesmaids. The bridegroom has to give a cloth to the bride, her mother and younger brother. At weddings Sobors do not dance the war-dance of Chuṭiyá Nágpur, but have a peculiar wedding dance of their own. The preparations for the wedding party are very much the same as in Chuṭiyá Nágpur.

Marriage customs.-They have the usual 'Mandua-tand.' Branches of 'Mahua' and 'Sargi ' are planted on the altar, which consists of a fourcornered mound of earth, at each of the corners of which are placed water-pots with lights in them, a string being passed round the lot. The ceremony commences by the happy couple holding each other's little fingers and marching seven times round the 'Chouuda' or altar, the woman going in front. The two being then seated together, the bridegroom puts a spot of 'sindur' on the bride's forehead with his right hand little finger, and she returns the compliment in exactly the same manner. The bridesmaids then draw near and tie the clothes of the pair together. After this they make the bride promise never to leave her husband, and (as it were to certify to the contract) put a big broad mark of 'sindur' on the bride, reaching from the crown of her head to the tip of her nose. The happy pair then retire into a house prepared for them, while the rest of the party sit down to dinner. After dinner dancing and drinking are commenced and usually carried on until next
morning. Larly in the morning the bridesmaids appear to wash the feet of the newly-married couple, the man receiving their attentions first. Sobors are permitted to marry as many wives as they choose, but do not usually have more than one.

Customs relating to children.-After childbirth the mother is considered unclean from six months to a year, and the husband has to live and eat a part from his wife, not even being allowed to drink water from her hands ; and if there are no female relatives in the house, he has to do all the cooking. To effect a purification an official called 'Pardhán' has to give some drinking water first to the mother and then to the father, and finally to drink some himself, each one drinking out of his or her own hand. Just previous to this ceremeny the mother has to bathe. Before the purification, neither the father nor the mother can eat meat. After the purification they have a big dinner to which relatives and friends are invited. In Chuṭiyá Nágpur the 'Pardháns' are a subtribe of the Kheroars or Bhogtas. The Sobors do not usually burn 'sika' marks on the boy's fore-arms, as is customary amongst the aboriginal tribes of Chuṭiyá Nágpur. Girls are tattooed chiefly on the biceps. The Kol custom of tattooing on the forehead is practised by a few ; but I noticed only old women with these marks, and I therefore presume the custom is dying out. The tattooing is done by the women of the Temna or brass-working caste. Amongst Sobors all property descends to male heirs only. The 'Dhamkuria' or bachelor's hall of Chuṭiý Nágpur villages is not known amongst the Sobors. The Sobors usually bury their dead and put stones over the graves. The clothes, ornaments and sometimes the weapons of the deceased are buried with them. They believe in the existence of the spirits of the dead and also that they haunt their own homes; therefore at meals it is customary to put aside a pinch of food and some liquor to show the spirits they are not forgotten. Sobors are very superstitious; they believe in sorcery, and people suspected of practising the black art are hated, feared and often ill-treated. A grim sect of these people, known as ' Bisuals,' are the officials whose duty it is to offer sacrifices to the dead. They get paid for their services, and the office is hereditary, so that the Bisuals will doubtless become a sub-tribe in time, just as the Baigas have done amongst the aboriginal tribes in the Western Native States of Chuṭiyá Nágpur. The Bisual sacrifice consists of rice and the gum of the Sarai tree.

Language.-The following list of words slows where the Sobor and Saonda differ most from other Kolarian languages.

| English． | Sobor． | Saonda． | English． | Sobor． | Saonda． |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Ant | Juri | Bobo | When | Kote | Yenga |
| Boat | Dhondsa | Voda | Bad | Bogda | Sedele |
| Day | Angiana | Tamba | White | Tele | Palu |
| Where | Kon | Tenga | Small | Dihing | Doyina |
| Without | Guritke | Vodita | Thin | Pandra | Palapala som |
| Near | Hopora | Yaya | Hungry | Raing | Dolijan |
| Mach | Birbarang | Bari | Be silent | Atupme | Kandang ama |
| What | Kate | Vongado | Hear | Anjom | Andangna |

H̄̄̄－shang－rgyal－po and Ug－tad，a Dialogue．From the Tibetan．

## By Karl Marx，Missionary at Leh，Ladakh．

（Once upon a time）there was a king named Há－shang，who did naught but sin．（Now），had this king died，he would have gone to perdition ；Chom－dan－das，however，had mercy upon him，and transformed himself into a minister called Ug－tad．${ }^{1}$ After he had come into the presence of the king and performed his obeisance，（the king）accepted him as his minister．
（It so happened，that）the king had two wives．Now，the king raised his second wife ${ }^{2}$ to（the rank of）the first and gave her the golden crown．The first wife ${ }^{3}$ ，being jealous，threw the Chhang ${ }^{4}$－cup at the king．The king resented this and gave the command to Ug －tad ： ＇Go and kill ${ }^{5}$ this woman！＇Ug－tad replied：＇It is not right to kill the queen for an offence so trifling．＇The king（again）said：＇If you will not kill the queen，I shall kill you！＇

Then Ug－tad conducted the queen to a grave－yard，and after having made her over to the care of the hobgoblins，${ }^{6}$ he made a sign to her meaning ：＇don＇t be afraid，＇and left her．

Thereupon he returned to the king．The king asked：＇Have（you） killed（her）？＇The minister said：＇（Yes，I）have killed（her）．＇＇Very well，＇said he．

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* 34" श्रृ"
2 कॅ"む'
s \grave{``अ"}
* あद' the beer of Ladakh and Tibet.
5 'Kill and come'र्ञॅॅ'थ'\9`凶'
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＇Ug－tad，＇the king（then）continued，＇your erudition is consider－ able，and your parts are good．（Tell me then）：amongst acts perform－ ed by human beings，which are well（done）？＇

The minister said：＇If you do not consider accomplishments of little account ；（this is）well（done）；
＇if you do not look upon learning as being a fraud；（this is）well （done）；
＇if a rich man keeps his wealth under control，＇（this is）well（done）；
＇if a poor man curbs his tongue；（this is）well（done）；
＇if a women subdues（her own）body；（this is）well（done）；
＇if the Tsun－pa fulfils the disciplinary statutes ${ }^{3}$ ；（this is）well （done）；
＇if the Ngags－pa ${ }^{4}$ keeps the vows ${ }^{5}$ ；（this is）well（done）；
＇if the king can govern ；（this is）well（done）；
＇if a man rises above bad report ${ }^{6}$ ；this is）well（done）；
＇if a sick man conforms with the rules of diet＇；（this is）well （done）；
＇if all（men）always were successful；（this would be）well；
－Brothers are good companions ；
＇one＇s own relatives make good governors ；
＇father and mother are dear to the heart；
＇a wife is pleasant to give one food；
＇a neighbour is nearer than a relative at a distance ；
＇on－foot is swifter than a weak horse；
＇vegetables are sweeter than a porridge made of bad grain ；
＇there＇s more pleasure in being a spinster，than in having a husband with an evil countenance．＇

1 In this and the following 8 sentences，the original always has घुप able，etc．
${ }^{2}$ 】క్తుおび Priest，Reverend．


－ 5 お案包
 Csoma as given in the text，still doabtful．In Ladakh the word is entirely un－ known．
${ }^{7}$ Tibetan dictary rules forbid under circumstsnces meat（esp．of goats），snar milk，onions，chhang，anything sour，salt，vegetables，cold water，unless after its having been boiled previously；sleep during daytime is also strictly forbidden to any patient．

Upon this the king considered: "A wife is pleasant to give one food,' this is truly said; 'there is more pleasure in being a spinster, than in having a husband with an evil countenance,' is true likewise. Such has been said unto me. 'Again he thought: 'Ug-tad (probably) did not kill the queen,' so he said to Ug-tad; 'for the sake of one single offence, to command you: "kill the queen!" was not right; therefore, if the queen is not dead, I will make over my reign to you, (ii) you go and bring ${ }^{1}$ her (here).'

Ug-tad said: 'To raise a person from the dead, and to come and bring ler (back), is a thing unheard of.'

The king said: 'Is there any means of bringing her to life again?

Ug-tad said: ' None that I have. Had Your Majesty² not ordered me to kill her, I would not have dared to look at the queen [MS. with my eyes] ; much less would I have dared to put her to death. If, for instance, you leave $a^{3}$ hatchet without a handle in an empty riverbed, then (surely) no wood will be cut. And I, just as little, have any means of bringing her to life again. I, too, was no party in her execution; it was Your Majesty, ${ }^{4}$ who put her to death.'

The king said: 'As it seems evident, that the queen is not dead, bring her here ${ }^{5}$ !'

Ug-tad said: 'She is dead. This is very muck like the stories of the dove and of the hoopoe in times gone by.
'There once were two doves, a married couple, who, in autumn, hid some fine barley in a hole. In winter it dried up and grew less (in bulk). The husband (noticing this) said: 'Wife, thou hast eaten it!' and struck his wife with his bill and killed her. After spring had gone by, however, the hole was full again, and now the dove husband said: ' (Indeed,) thou hast not eaten it, stand up!' But his wife being dead, a few maggots only came out.
'Also a hoopoe-couple once found seven peas. In order to eat (them some other time), they dug with their bills (in the ground) and hid (the peas) in the furrow. But the furrow closed up, and they


 improvement.


could not find (the peas). (Then) the husband said: 'Thou hast eaten them!' and killed his wife. Next sammer, for every pea one flower sprang up, and the hoopoe said: 'Last year's peas, all seven, this year have brought forth the flower Ha-lo, and now many peas will grow. So thou shouldest stand up! don't be long ! arise !' But on lifting her up with his bill, a few maggots (only) came forth.
'Similarly, Your Majesty, ${ }^{1}$ after having destroyed the queen, said (to me):' Ug-tad, you are (a) superior (person), ${ }^{2}$ go and bring back ${ }^{3}$ the queen!' But I say ${ }^{4}$ : ' I never committed any mean offence ${ }^{5}$, I never did a sinful act, I never took an unlawful wife, it was not I who killed the wife in question, and she being dead, there is no hope of her ever returning. (As it is), Your Majesty is (undoubtedly) my superior ${ }^{6}$.'

The king said : 'Ug-tad, you should not tell falsehoods, but go and fetch (my) queen!'

Ug-tad said : 'Falsehoods there are many indeed:
'to say: there are five horses flying about, is a falsehood;
' to say: ants go to parched wheat, is a falsehood;
'to say: fish have their hearts in their heads, is a falsehood;
'to sny : to a male a boy is born, is a falsehood.'
The king said: 'You are talking absurdities.'
Ug-tad said: 'Absurdities there are many indeed :
' (to say:) winter is naturally getting hot, is absurd;
'(to say:) summer is naturally getting cold, is absurd;
' to reject the advice of a loving friend and listen to the flatteries of an enemy who hates you, is very absurd.'

The king said again: 'You are a disgustingly foul (fellow)!'
Ug-tad said: 'Disgustingly foul there are many indeed :
'the archer's collar is foul;
' the tongue of a man digesting is foul.'
The king again said: 'You are lankering after disease!'
Ug-tad said : 'Hankering after disease, there are many indeed :



4 3凶"


' if a man, not ill, takes drugs, he is fond of disease ;
'if a sick man can't submit to régime, he is fond of disease ;
' if in winter, a man puts on thin clothes, he is fond of disease;
'if in summer, a man sits down on damp ground, he is fond of disease.'

The king said : ‘You want to destroy yourself !'
Ug-tad said: 'Wanting to destroy themselves, there are many indeed:
' one going to combat without armour, wants to destroy himself ;
' one climbing a steep rock, wants to destroy himself;
'one crossing a raging torrent, wants to destroy himself.'
Again the king said: 'You wish to die.'
Ug-tad said: 'Wishing to die there are many indeed :
'one walking over a glacier in summer, wishes to die ;
' one climbing a tree in winter, wishes to die ;
'a fat sheep in autumn, running into a village, wishes to die;
'if a bad man is passionate, he wishes to die.'
Again the king said: 'You are in error !'
Ug-țad said: 'Erring there are many indeed:
'if a man does not guard himself against disease, he is erring, for there is a risk of his being attacked himself;
'if a man does not guard against cattle-disease, he is erring, for there is a risk of his own cattle-yard being made empty;
' if a man robs another man's wife from his bosom, he is erring, for there is a risk of himself being killed through the chastisements of the other ;
'if a man takes oaths on things good and evil, he is erring, for there is a risk of his posterity being (suddeuly) cut off ;
'if a woman deserts her husband and makes love to another, she is erring.'

The king again said: 'Your power of speech is terrific.'
Ug-tad said: 'Terrific are many things indeed :
'the earth giving way, would terrify the hare ;
'the heavens breaking down, would terrify the duck;
'the thing-ril' is terrified by the swamp drying up;
'the child,...... ${ }^{2}$ having come, is terrified.'
Again the king said : 'You can't keep within bounds!'
Ug-tad said: ' Immoderate are many indeed :
'if a poor man has become rich, he will be immoderate in boasting;

[^4]'if a bad companion has been indulging in slander, he (afterwards) will be immoderate in hypocrisy ;
'if a vulgar person ${ }^{l}$ has conceived a great hatred, he will be immoderate in the use of violent language.'

Again the king said: 'You are (one of those fellows saying:) if only I could, I would be glad.'

Ug-tad said: 'Glad if they could, there are many indeed :
' if one could (avert) the calamities connected with riches, one would be glad;
'if one could (command) the vigour of a country, one would be glad;
' if one could (endure) the talk' of a wife, one would be glad;
' if a champion could keep peace, ${ }^{3}$ one would be glad.'
Again the king said: ' (But) you are saying, I can't !'
Ug-tad said: ' Not able (to do a thing,) there are many indeed :
' one vanquished cannot boast;
' many (at once) cannot govern a country ;
' a rich man has no control over his wealth;
' a poor man has no control over his stomach.'
The king again said: 'You don't know shame!'
Ug-tad said: 'Knowing no shame, there are many indeed :
'dress knows no shame; (still) there should be moderation in dress ${ }^{4}$;
'sleep knows no shame; (still) there should be moderation in sleeping;
' the stomach knows no shame; (still) there should be moderation in eating ;
'carnal desire ${ }^{5}$ knows no shame; (still) there should be moderation in cohabitation ${ }^{6}$.'

Again the king said: 'It is possible to prolong the queen's life !'

2 匈卦
 tingly and invariably given by my Tibetan assistants; the 'Ge-sar' (MS.) uses it frequently in the same sense, e.g., 'a treaty of five years' daration,' in: $\overline{2}$ '


4 It should be worn neither too long nor too short.


- दें

Ug-ṭad said: 'If it is possible to prolong the queen's life; what is to be done, if she is dead?
'(Still if you want) to prolong life, there are (means) many indeed :
' if (you) cure a sick man, (you) prolong (his) life;
'if (you) reconcile men quarrelling, (you) prolong (their) lives;
' if (you) give armour to men fighting, (you) prolong (their) lives;
'if (you) point out (to the stranger) the precipice and the watercourse, (you) prolong (his) life.'

Again the king said: 'If it is true, that you killed the queen, then death would seem easy to me.'

Ug-t.tad said : 'Death seems easy to many indeed :
'if a man's family, elder and younger brothers, all have perished at the hands of men, death (seems) easy to him;
'if one has incurred the contempt of one's equals, death (seems) easy to him;
'if one is unable to fulfil one's obligations towards friends and relatives, death seems easy to him ${ }^{1}$;
'if one's opponent in betting has left no pledge, ${ }^{8}$ death seems easy.'

Again the king said : ' Although you never learnt all this,-how do you know it?'

Ug-tad said: 'Things known, though never learnt, such there are many indeed:
'weeping one knows, though one never learnt it ;
' eating one knows, though one never learnt it;
' lust one knows, though one never learnt it;
' $\sin$ one knows, though one never learnt it.'
Again the king said: 'Although I was taught, yet I do not know it.'

Ug-tad said: 'Things taught, but not comprehended, there are many indeed:
' though you teach the lake where to go backward, yet it will not comprehend it ;
' though you teach the glacier to float downhill, yet it will not comprehend it;
' though you teach the water (how to tie) a knot, yet it will not comprehend it;
 donbtful. The translation given in the text is in accordance with the explanation given by Tibetans.
 the one most appropriate.
＇though you teach millet seed building，yet it will not comprehend it．＇

Again the king said：＇That you should know all this，is most wonderful！＇

Ug－tad said：＇Things most wonderful，there are many indeed：
＇that the holy．Chhosl should be preached and expressed in words， is a most wonderful thing；
＇Sin renounced and virtue accomplished，is a most wonderful thing＇；
＇Sitting idle and yet to complete（one＇s redemption）is a most won－ derful thing ；
＇wealth and property heaped up and its crumbling away，is a most wonderful thing．
＇Unseen and gracious Lha！
Unseen and terrible phantom ${ }^{2}$ ！
Untasted yet wished－for delight ${ }^{3}$ ！
Never partaken of，though sweet nectar！
Clouds undressed yet warm！
Bright sun and moon are without support！＇
Upon this the king Há－shang，not knowing what else he should say， remained silent，and Ug－tad continued：＇Oh，great king！If you wish for elevation，attend to things that are low．

If you covet happiness，leave aside the causal connexion．
If you covet things near，traverse what is distant．
If you covet victory，put up with defeat．
If you covet wisdom，cultivate your mind．
If you covet Tsun－pa－ship，keep the ordinances．
If you wish for rest，feed your dog．
If you covet learning，leave the＇Chapter＂．＇
If you want joy，do the Chhos．＇
（Ug－ṭad）having said this，the king believed and asked：＇Ug－ṭad， how must the Chhos be done？＇

The minister said：＇The Lama patron－saint＇must be worshipped
1 あN＇doctrine
－ $25^{\circ}$
3 2ぢぢあ凶N゙
 chapters，＇the most elementary book in Lamaistic religious literature．
 one such patron saint ；notably in Ld ：the Sa－skya－pas to Tsan，m．（monastery at Ma－ sho），the Ge－ldan－pas to Dol－ma，f．（monasteries at ：Tikse，Spi－tuk，Sang－kar，Li－kir）
like a Lha．The vow must be held like one＇s own body．Hearing， thinking must be developed so as to equal the border of the heavens． Thoughts must be meditated upon like the oceans．＇Oh king！trust a loving friend！Cohabitation gives no satisfaction；hence do not allow carnal passion to gush forth like a torrent．
＇Of spiteful enemies there will be no end；therefore do not allow hatred to burn like a fire．
＇Though this be the period of dullness and error，do not allow ignorance to advance like darkness．
＇There should be no talk of one＇s own attainments ；hence do not allow pride to be born like a mountain．
＇Other people＇s want being loss to one＇s self，do not allow envy to whirl like a cyclone．
＇The doing of works never will cease；take up，then，the burden of suffering．
＇Of worldly goods enough，is a thing unknown；cut asunder， therefore，the knot of avarice．
＇There exists no measure to indicate the time of one＇s death ；hence exert yourself to be pious．
＇There is no telling，when death will draw nigh ；therefore don＇t put off（striving after）virtue until the morrow．
＇A small sin even is visited with a heavy penalty；therefore do not commit sin at all．
＇All men at the first were equal ；pay attention therefore to other people＇s dying and not dying．
＇When another（person）dies，do not mourn at his corpse ；thyself also must die．
＇Nothing else is of use ；seize hold of the Chhos，for it is of use in the end．＇

The king believed and said：＇Father and mother，though searched never found！Fire and water，needful morn and even alike！Wife though absent，yet to be found！

Needful in the end is the holy Chhos！＇
Ug－tad（again）said：＇If you of your own accord have come to believe in the Chhos，then body and intellect＇both are annihilated by the mind．${ }^{2}$ These and the vanities ${ }^{3}$ that are destroyed in the end，are
the Di－gung－pas to Ab－chi f．（monast．at：Sgang－ngon，Ya－ra，Shang．），the Dug－pas to Gon－po．m．（monast．at He－mis，Tchem－re，Stag－na．），the Rgyud－pas to Tsong－Kh－ pa．m．（monast．at Ri－rdzong）．All these patrons are said to have been great teachers and saints，either male or female．
1 लेखベ
覴
（all）illusions．If you know the inner sense，${ }^{1}$ then there remains no－ thing that could be called death．Virtue or vice，whatever has been done in times gone by，what kind of lives have been led，let their foot－ steps be your guides．Dear friend！do what is said in the holy doc－ trine．${ }^{2}$ Death being certain，do the holy Chhos．As there is no intelli－ gence of our being exempt from death，be diligent and make haste． There is no profit in anything，but strain every nerve and seize hold of the Chhos．（The doctrine of）cause and effects（in the moral world） being true，（accomplish4）virtue and renounce sin．Even at the risk of your life，don＇t throw aside the performance of the moral law．The state of metempsychosis causes weariness to the soul；having left behind the round of transmigrations and cast away suffering，happiness will spring forth．
＇On love and compassion a loving heart for ever meditates．
＇All－vanity and the inner sense，the two truths take to heart．＇${ }^{2}$
In such manner did（Ug－ṭad）teach（the king）many things．There－ after in order to stablish him in the faith，he（sent word）to the queen， formerly hidden，（saying）：＇The king－－－－－－－－－－

> Life of Atíśa (Dípaṃkara S'ríjñána).-By Bábú Sarat Chandra Dás, C. I. E.

Lha Lama Yes＇e hod，king of Tibet，who held his court at Tholin̂ in Nah－ri was a devout Buddhist．He ruled peacefully over his country for many years．About the year $1025 \mathrm{~A} . \mathrm{D} .$, he founded the monastery of Thoding at Tholin̂（the lofty place）．With a view to introduce pure and undefiled Buddhist monachism in Tibet，he selected seven intelligent lads， each ten years old，and carefully trained them up in Tibetan．Then，with the consent of their parents，he admitted them into the sacerdotal order． When these lads advanced in their study of the sacred books and became

1．否あちよ
2 Д㱞क＂
－躬って我
 accord with the tenor of the previous exhortations；we prefer to insert 줜यN fulfil．

## 5 扬ぢ「＂象内＂

initiated in the practice of monastic discipline, he appointed two novicemonks ( $S^{\prime}$ ramanera) to attend to each of them, and thereby increased the strength of his institution to twenty-one. Not satisfied with the Buddhist teachers of Tibet, whose cult had become greatly debased by the admixture of Tantrik and Pon mysticism, he sent these young monks to Kashmir, Magadha and other places of India where pure Buddhism still prevailed, with a view to their studying the philosophy of Ananda Garbha of Kashmir and the code of monastic discipline. He commanded them to invite to Tibet, if possible, the renowned Kashmirian Pandit Ratna Vajra and Dharmapála (the Buddhist hierarch of Magadha) and other holy men whose acquaintance they might make during their sojourn in India. He also instructed them to ascertain if there were any other pandits who, when invited, would be useful to the cause of Buddhist reformation in Tibet. Accordingly they proceeded to India in search of knowledge and holy men, bidding a long farewell to their native country. Though the king succeeded in getting the services of thirteen Indian pandits, it is said, that out of the twenty-one monks whom he had sent to India, nineteen died there from heat, fever, snake-bite and other causes. Rinchhen bssan̂po, the great Lochâva, and Legs pahi S'erab were the only survivers who had the good luck of returning to Tibet crowned with success. They studied Sanskrit under some of the eminent Sanskrit scholars of India and acquired great proficiency in the Buddhist literature. Bearing in mind the instructions of their royal master, they visited Vikramaśilá to inquire of the S'ramanas if there was a saintly scholar in their midst who, when invited to Tibet, would be useful to the reformation of Buddhism. There they heard of Dípaṃkara S'ríjñána, whose spiritual attainments and learning were of a superior order, and who then occupied the first position among the Buddhist scholars of Magadha. They were also told that he was, in fact, the second Sarvajña of the school of 500 Arhats which is commonly called the Mahásangika. The Lochávas, however, did not venture to ask him to visit Tibet, being told that any such proposal would be premature at this time, if not absurd. On their return to Tibet they submitted an account of their experiences in India, and also of the condition of the Buddhist church of Magadha.

Greatly desirous of seeing the renowned sage of Magadha, the king commanded Rgya-tson-gru sen̂ge, a native of Tag-tshal in Tsang to proceed to Vikramaśilá, taking with him one hundred attendants and a large quantity of gold. After encountering immense hardships and privations in the journey, the traveller reached Magadha. Arrived at Vikramaśilá, he presented to Dípạ̣kara the king's letter with a large piece of bar gold as a present from his sovereign and begged him to honour his country with a visit. Hearing this, Dípaṃkara replied :-
"Then it seems to me that my going to Tibet would be due to two causes :first, the desire of amassing gold, and second, the wish of gaining sainthood by the loving of others, but I must say that I have no necessity for gold nor any anxiety for the second." So saying he declined to accept the present. At this unexpected reply Gya-tson wept bitterly in his presence, wiping his tears with a corner of his sacerdotal robe. He explained to the sage that he was come from the country of Himavat thus far to Vikramaśilá, suffering immense privations, spending much treasure and suffering the loss of many of his companions who died of heat, fever, snake-bite and other causes in the journey, and at last he had to go back to his sovereign depressed at heart and disappointed in his hopes. Dípaṃkara sympathized with him and tried to console him.

On his return to Tibet the Locláva explained to his royal master the circumstances of the failure of his mission and returned the presents. Thinking that it was hopeless to bring Dípamkara to Tibet, the king again commanded the Locháva to proceed to Vikramaśilá to invite the scholar who was second to Dípamkara in learning and moral purity. At this time Nag-tsho, a young monk of Gung-thân, met Gya-tson and begged to be his pupil, but the Locháva desired him to wait till his return from Magadha. He proceeded to India with five attendants and a small quantity of gold, barely enough to meet the expenses of his journey to Vikramaśilá.

At the same time king Lha Lama started for the frontier for the purpose of collecting gold. When he arrived to the south of Purang, he was attacked by the troops of the Rájá of Garlog (Garwal ?) and made a prisoner. The Tibetan force that was despatched from Tholing by the king's sons failed to defeat the enemy, and Chanchhub Hod, his nephew opened negotiations with the Rajá of Garlog who agreed to release the king on two conditions :-that either the king became a vassal of his and embraced his creed, or that he paid a ransom consisting of solid gold of the size and shape of the captive king's person. The second condition being more agreeable to Lha Lama than the first, his two sons and nephew Chanchhub Hod sent officers to collect gold from their subjects in Tsang, U, Kham and the nine minor provinces called the Lin-gu. The gold that was collected and brought for ransoming the king did not satisfy the heretic Indian chief. It is said that when melted and cast to form a statue of the captive king, the gold fell short of the quantity that would be necessary to make its head. Seeing that it was impossible to satisfy the greed for gold of the Garlog Rájá and despairing of his release, Lha Lama advised his sons and nephew to make considerable religious offerings at Thoding and Lhasa and also to repair the monastery of Sam-ye for his moral benefit. He impressed in their
minds the importance of inviting to Tibet a scholarly Indian pandit like Dípaṇkara for reforming the degenerate Buddhism of his country: But his sons and Chan̂chhub, being anxious for his release, went back to Tibet to collect more gold. In the meantime Lha Lama died in confinement.

When the news of Lha Lama's death reached Tholing, Chanchhub made religious offerings at Thoding and Lhasa, and, with a view to give effect to his royal uncle's long-cherished desire of life, charged Nagtsho Locháva of Gun̂-than̂ with the mission of going to Vikramaśilá in search of Gya-tson and also for inviting an Indian pandit to Tibet. Addressing the Locháva, he said:-" You know how degenerate the Buddhism of Tibet has become, how mixed are the religious practices here with the heretic cult of the red and blue robe Tantriks; the late king in his ansiety to reform our religion, thrice sent messengers to Magadba to bring the sage Dípaṃkara S"rijñ̃ána to Tibet. Gya-tson-senge has not come back, and it is not known if he is still living. You are also aware of the calamities which befell my royal uncle, and that cost him his life. Go, therefore, to Vikramaśilá, if possible, again to invite the renowned sage of Magadha to our benighted country, bat if he still declines to come, invite the pandit who is second to him in learning and holiness." At first, the joung Locháva, who was only twenty-seven years old, hesitated to take so difficult a charge upon himself, but the king having insisted on his going to India, of which place he had some experience, he agreed, though very reluctantly, to proceed to Magadha. The king gave him leave to equip himself for the journey with one hundred attendants and to furnish him with a large quantity of gold, but the Locháva would take with him only four attendants and a small quantity of gold. On his arrival at Vikramaślá he met with Gya-tson, who was then prosecuting his studies under one of the learned pandits of the grand monastery. With the help of Gya-tson, who had by his long residence at Vikramaśilá and other Buddhist places of Magadha, learnt much of the ways and manners of the people of Magadha, the young Locháva became introduced to the principal personages of Vikramasilá. He resided in the monastery for some time as a pupil of the abbot Sthavira Ratnákara, and with his assistance he succeeded in inducing Dípaṃkara to visit Tibet.

Dípampara was born A. D. 980 in the royal family of Gaur at Vikramanipur in Bangala, a country lying to the east of Vajrásana (Gayá). His father called Dge-vahi dpal in Tibetan, i.e., "Kalyáṇa S'rí" and his mother Prabhávatí gave him the name of Chandragarbha, and sent him while very young to the sage Jetari an Avadhut adept for his education. Under Jetari he studied the five kinds of minor sciences, and thereby paved his way for the study of philosophy and religion.

Growing in age he acquired proficiency in the three pitakas of the four classes of the Hínayána S'rávakas, in the Vaiseshika philosophy, in the three pitakas of the Maháyána doctrine, the high metaphysics of the Mádhyamíka and Yogáchárya schools and the four classes of Tantras. Having acquired the reputation of being a great pandit in the S'ástras of the Tírthikas which he studied till the twenty-fifth year of his age, he defeated a learned Brálman in Logic. Then, preferring the practice of religion to the ease and pleasures of this world, he commenced the study of the meditative science of the Buddnists which consists of the Trisikshá or the three studies -morality, meditation and divine learning-, and for this purpose he went to the vihúra of Krishụagiri to receive his lessons from Rahula Gupta. Here he was given the secret name of Guhyajñâna Vajra, and initiated in the mysteries of esoteric Buddhism. At the age of nineteen he took the sacred vows from S'ila Rakshita the Mahásamgika Áchárya of Odantapurí who gave him the name of Dípaṇkara S'ríjũaṇa. At the age of thirty-one he was ordained in the highest order of Bhikshu and also given the vows of a Bodhisattva by Dharma Rakshita. He received lessons in metaphysics from several eminent Buddhist philosophers of Magadha. Lastly, reflecting on the theory of "the evolution of all matters from voidity" he acquired what is called the "far-seeing wisdom."

On account of these divers attainments which moved his mind variously in different directions, he resolved to go to Áchárya Chaudrakírti the High Priest of Suvarụadvípa Accordingly in the company of some merchants he embarked for Suvarmadvípa in a large boat. The voyage was long and tedious, extending over thirteen months during which the travellers were overtaken by fearful storms. At this time Suvarụadvípa was the head quarter of Buddhism in the East, and its High Priest was considered as the greatest scholar of his age. Dípampkara resided here for a period of twelve years in order to completely master the pure teachings of the Buddha of which the key was alone possessed by the High Priest. He returned to India accompanied by some merchants in a sailing vessel visiting Támradvípa and the island of forests on his way. Returning to Magadha he sought the company of eminent sages, such as S'ánti, Naropánta, Kuśala, A vadhuti 'Tombhi and others.

The Buddhists of Magadha now acknowledged him as their chief and unanimously declared him to be the "Dharmapála" or the hierarch of Magadha. During his residence at the shrine of Mahá Bodhi at Vajrásana he thrice defeated the Tírthika heretics in religious controversy, and thereby maintained the superiority of Buddhism over all other religions in Magadha. At the request of king Nyáya Pála he accepted the post of High Priest of Vikramaśilá. At this time Magadha was in-
vaded by the king of Kárnya (probably Kánauj). Nyáya Pála's armies suffered several defeats at the hand of the enemies who advanced near the capital. The Magadha king sued for peace, and a treaty was signed by which friendship was established between the two kingdoms. In this treaty Dípankara took an active part. It was he who reconciled the king of Kárnya to Nyáya Pála.

He visited Tibet in the year 1038 A. D., accompanied by his brother Víryachandra, Rájá Bhúmi-Samga, and Nag-tsho Locháva. The king of Tibet gave him a most cordial reception and commanded his people to receive his teachings with profound veneration. Finding that Dípangkara was the best and wisest of the Indian pandits whom he and his father had ever asked to visit Tibet, the king out of reverence for his deep learning and purity of morals gave him the name of Jovo Atiśa (the Supreme Lord who has surpassed all). Arrived at Tholing Dípaṇkara preached the profound doctrine of the Maháyána doctrine and wrote several works on the principles and cult of the general and esoteric branches of Buddhism among which Bodhipatha Pradípa is pre-eminent. In short he revived the practice of the pure Maháyána doctrine by shewing the right way to the ignorant and misguided Lamas of Tibet, who had all become Tantriks. He cleared the Buddhism of Tibet of its foreign and heretic elements which had completely tarnished it, and restored to it its former purity and splendour. Under his guidance the Lamas of Tibet discovered what is called the " real and sure path of the exalted excellence." After a residence of thirteen years which was distributed over the different parts of Tibet, during which he assiduously devoted himself to the propagation of pure Buddhism, enjoying uninterruptedly the good will and veneration of the people, Atísis died at Nethang near Lhasa at the age of seventy-three in the year $1053 \mathrm{~A} . \mathrm{D}$. He is remembered with deep veneration all over high Asia or wherever the Buddhism of Tibet prevails. He was the spiritual guide and teacher of $\Pi$ Bromton the founder of the first grand hierarchy of Tibet.

Dípaṃara wrote several works and delivered upwards of one hundred discourses on the Maháyána Buddhism. The following names of his works occur in mdo 凶̀ of Bstan hgyur.

2. $\left\{\begin{array}{l}\text { Charyá saṃgraha pradípa. } \\ \text { âr }\end{array}\right.$
















18.


This was delivered by S'rí Dharmapála the king of Suvarụadvípa to Dípaṇkara and Kamala.

This last is an epistle addressed by Dípaṃkara to Nyáyapála, the king of Magadha.

> Place and River-Names in the Darjiling District and Sikhim.-By L. A. Waddele, M. B.

Facility for finding etymology of names in this area.-The manner in which place-names are assigned in Sikhim, Eastern Nepál and Western Bhotan, and also in Southern Tibet, can be ascertained with unusual facility and certainty by a local review of place-names in the Darjíling district, Native Sikhim and British Bhotan, owing to the great majority of the villages therein, having been founded within the present generation by migrant Sikhimites and Bhotiyas and immigrant Nepális and Tibetans, under the Government policy of quickly peopling these hitherto sparsely populated tracts; so that the reasons for the special nomenclature of such new sites and villages are still currently known by the villagers. And, the etymology of many of the river-names and older place-names can be more or less readily traced owing to the still existingpresence of the race of Lepchas-believed to be the autochthones of the area. The relative simplicity of the subsequent ethnic elements, all of which are still represented, also tends to simplify the problem.

Desirability of fixing the Lepcha etymology as the language is becoming extinct.-The present time, too, seems specially indicated for investigating this subject, from the fact that the Lepcha, though still a living language, is fast becoming extinct; and no vocabulary of the language having been published*, the names which the Lepcha race las given to

[^5]the rivers and the mountains and other sites in Sikhim, although remaining as ethnological landmarks, might, through much longer delay, prove wholly unintelligible, through their meaning becoming lost.

In my attempt to fix the etymology of some of these Lepcha names, I have to confess to the difficulty of the task in the absence of any vocabulary; but I have spared no pains in the endeavour to trace the exact meaning of the various roots by the help of the few more-intelligent Lepchas available (of literate Lepchas there are now none), and by local enquiry at most of the several spots during the past two or three years.

Ethnic history of Sikhim.-A reference to the ethnic history of Sikhim itself is necessary in essaying the discovery of the system adopted by its inhabitants in naming places within its area. And first of all as to the limits and position of Sikhim.

Sikhim defined.-Sikhim forms a narrow oblong tract in the southeastern Himalayas and sub-Himalayas, wedged in between Nepál on the west and Bhotan on the east, and bounded on the north by Tibet and on the south by the plains of Bengal. Its position is peculiarly isolated, it being separated from Nepál and Bhotan by high wall-like ridges, from Tibet by the snows, and from Bengal by the dreaded Tarai jungle.

Darjiling district defined.-The Darjiling District consists mainly of 'British Sikhim,' $i$. e., the southern third of Sikhim, including the Sikhim Tarai (or Morang), the plains skirting the foot of the hills. To this tract was added, as a result of the Bhotan war of 1862 , a slice of the hilly portion of western Bhotan from the Tísta castwards: the remainder of 'British Bhotan' is the tarai-tract known as the 'Dwárs' and a strip of hill territory in the neighbourhood of the British frontierposts of Buxa and Dewangiri, which for administrative purposes are included in the Jalpaiguri District and Asam.

The Lepchas.-As above stated, the Lepchas are believed to be the aborigines of Sikhim. Their own tradition, which, is very vague, credits them with having entered Sikhim about 500 years ago.* As, however, they preserve the tradition of a great local deluge, $\dagger$ it is probable that their entry was much earlier than this. The peculiarly

* Col. Mainwaring in Introduction to Grammar, p. x.
$\dagger$ This tradition is a somewhat circumstantial account of the flooding of the country by the Great Rangít river, quarrelling with its spouse the Tísta and refusing to go with her to the plains. The waters rose as high as 'Rangli Rangliot' (q. v.), i. e., over 4000 feet above the present level of the river, and even Mt. Mainom the sister of Tendong was submerged, Tendong saving the inlabitants only by raising himself above the waters. The quarrel was ultimately mended and the pent-up waters fell. There are so many side-stories bearing on this great delnge, that it is almost certain that a great local flood actually happened here, by a vast landslip \{volcanic or otherwise) damming up the waters for a time.
isolated position of Sikhim and its inhospitable nature can account for its comparatively late occupation. The term 'Lepcha' is, like the current name for their country (viz. Sikhim), of Nepáli origin and uncertain meaning.* The Lepchas call themselves Rong which in their vernacular means a 'squatter' or 'care-taker,' $\dagger$ and the country they call 'Ne láyang' or 'the country of caves,' i. e., for shelter. By the Bhotiyas (Tibetans) they are called Möm-bô (Mon-pô) and Mö-rî (Mon-riks), i. e., 'Inhabitants of the Mon Valleys 'and 'Mon tribe '. The Lepchas seem to have preceded the Bhotan Bhotiyas in the trans-Tísta (British Bhotan) portion of the Darjíling District, as most of the mountain and river-names there are of Lepcha origin.

The 'Sikhim-Bhotiyas' or 'Sikhim-Tibetans.'-The next ethnic element was an influx of Tibetans from the Tsang province of Tibet immediately to the north of Sikhim. The date of this immigration is fairly well known-it occurred about 400 years ago. $\ddagger$ These Tibetans promptly usurped the sovereignty and became the dominant race, and the present 'rájá' of Sikhim is about the 10th or 11th of this series of Tibetan chiefs. The routes by which they entered are still called ' the great pass' (La-chhen), and 'the short pass (La-chhung). Although they intermarried freely with the Lepchas and still do so to a considerable extent, they awarded them a very low social position; and so unfashionable and effete has the Lepcha race now become that the Lepchas seek self-effacement by intermarriage with Bhotiyas and Limbus, and so are fast contributing to the speedy extinction of their own race. These Tibetans of Sikhim are by the Nepális called Sikhim Bhotiyas. It is desirable here to define the terms 'Bhotiya' and Bhotan as they are frequently confused and misunderstood. The native name of Tibet is written Bod and pronounced Pöt. The Sanskrit form of this word was Bhot, § and its inhabitants by all the Sanskritic speaking races of India are called Bhotiya (also written Bhutiya) which is synonymous with Tibetan-'Tibet,' the current European form, being believed to be merely the Persian or Tartar

[^6]form of the same word Pöt.* The country generally known in India as Bhotan $\dagger$ was so called by the Bengalis iu the belief that it was 'the end of Bhot,' which is the literal meaning of the full Sanskrit form of the word, viz., 'Bhotánta.' The natives of Bhotan as well as of Tibet proper are also by Hindus called Bhotiyas as being inhabitants of Bhot. It is therefore to be remembered that the terms Bhotiya and Tibetau are synonymous, the various divisions being designated by prefixing the name of the country in which the Bhotiyas are now settled, e. g., Sikhim-Bhotiya, Nepáli-Bhotiya, Bhotan or Dharma-Bhotiya, Tibetan and Chinese Bhotiyas.

The Limbus.-More peaceful intruders were the Limbus $\ddagger$ a Mongoloid race from the adjoining hills on the west. These like the Sikhim Bhotiyas intermarried, and still do so, to a considerable extent with the Lepchas. They, however, had a superior civilization and formed settled abodes. Latterly, they have generally given up Buddhism in favour of a rough form of Hinduism, and have adopted the dress and to a large extent the dialect (Parbatiyá) of the Nepáli highlanders.

The Nepális or 'Pakáriyás.' §-These three tribes, viz., the Lepchas,

* E. Coleborne in J. R. G. S., Vol. I, Supp., I, p. 98, says " A Tibetan arriving in Ta-chien-lu from Lhasa on being asked from what country he has come will often reply 'from Ten Peu', meaning from High or Upper Tibet. Perhaps Teu Peu is the source of our Tibet." The word should properly be spelt Tö-pöt, which fairly approximates to our 'Tibet.' L. A. W.
$\dagger$ The natives and all Tibetans call this conntry 'Duk-pa' (hbrug-pa) which literally means ' the thunderer,' evidently, it seems to me, on account of the unusual amount of thander experienced here; as the mountains of the greater part of the tract receive the full force of the monsoon from the top of the Bay of Bengal. The Lamas on the other hand assert that the name is derived from the Dok-pa sect of Lama and implies the worship of the thanderbolt which is so pecaliar to Bhotan Lamaism : the name of thunderbolt, however, is 'dorje' not 'duk,' and the name may more probably be merely a result of the worship of the (for Tibetans) striking and somewhat mystic natural phenomenon (thunder characteristic of this area. And this view is supported by the vernacular history of Bhotan-the 'Namtharkyi Nag-wang-ten-dsin Nam-gyal'—which translates the title 'hbrag-pa' (i.e. Dukpa) into Sanskrit as megha-swar'a or 'clond-voice.'
$\ddagger$ So called by the Nepális; they call themselves Yák-thumba (or Yák-herds), and the Lepchas and Bhotiyas call them Tshong (which in the vernacalar means ' $a$ ) merchant' ; and the Limbus were and still are the chief cattle-merchants and butchers in Sikhim, and cattle was the chief form of exotic merchandise until the British occupation.)
§ It is to be noted that the term 'Parbatiyá', a Sanskritic word having an identical meaning, viz., 'of or belonging to the hills', is in practice restricted to the lunguage, a Hindí dialeco spoken by the Paháriyás. And the title of paháriyá is confined to those hillmen only who profess Hindaism, and this usually of a most lax type.

Bhotiyas and Limbus, formed the population of Sikhim; and this simplicity of ethnic constitution remained undisturbed (except for a brief incursion of Ghorkhas about the beginning of the present century, the intruders, however, being soon expelled by the British) until the British occupation of Darjíling as a Sanitarium. This latter event, which took place in 1837 was speedily followed by a large addition to the population, consisting mainly of Nepáli or 'Paháriyáa' (Hindí for 'hill-man ')* settlers from Eastern Nepal. $\dagger$ This great influx of Nepális during the past few decades, although comprising very numerous and distinct tribes, (viz., Newars, Kiranti, Murmi, Gurung, Mangar or Magar Khas \&c., all more or less Mongoloid in type and until recently each speaking widely different dialects) is from a linguistic point of view practically homogenous, from the great majority of these tribes having adopted the Sanskritic 'Parbatiyá' dialect along with the Hindú ceremonial of their Gorkhálí rulers.

The Bhotan Bhotiyas or Duk-pa.-The portion of Bhotan annexed to the Darjiling district in 1862 had previously contained only a very few settlements of Bhotan Bhotiyas (or ' $D u k-p a$ ') and Lepchas. This tract being also thrown open to emigrants, a large portion was soon occupied by Nepális, and a not inconsiderable number of refugees from independent Bhotan, and a few Tibetan Bhotiyas or Pö-pa.

Simplicity of the linguistic elements.-Linguistically then, there may be considered to be, and to have been, only three generically distinct languages prevalent among the settled inhabitants of Sikhim and the Darjíling district, viz., the (1) Lepcha (or Rong-ring) with

* So sparsely was Sikhim populated that Dr. Campbell estimated ('The Oriental' January, 1874, p. 13) that, at the British occupation of Darjiling, the population of Native Sikhim was not more than 5 to the square mile: in the proportion of Lepchas 3,000 , Bhotiyas 2,000 ,and Limbus 2,000 . While in the southern third of Sikhim forming the Darjíling Hill Tract the total population amounted only to about 100! In 1849 the population of the latter area had, by attracting settlers from Nepal, Sikhim and Bhotan, increased to about 10,000, and the Census of 1881 showed the population of the Darjiling district, including the added strip of Bhatan to the east of the Tísta, to amount to $\mathbf{1 5 5 , 6 4 5}$, and the 1891 Census brings the number over 200,000 . The population is still increasing, and Native Sikhim also shares in this increase, although at a much less rapid rate.
$\dagger$ The Gorkhas, now the ruling race of Nepal, derive their name immediately from the town of Gorkha which is abont 60 miles W. N. W. from Katmandu (Oldfield's 'Nipal,' Vol. I), and which formed the first location of their Rájpút ancestors in the Himalayas; but this place-name is in its turn derived from the eponymous deity of the now royal family, viz., Gorakhanáth, who seems to be a form of S'iva (Cunningham's Anc. Geog., p. 165). Only a small proportion of the members of our so-called 'Gorkha' regiments are really Gorkhas, the majority are Mangar, Gurung, Kiranti, \&c.
which may be included the Limbu dialect which seems structurally allied to it, (2) the Tibetan or Bhotiya, including its Sikhimite and Bhotan dialects, and (3) the Sanskritic dialect (Parbatiyá) of the Nepáli Paháriyas. All these linguistic elements are represented in the local names of the area here discussed; and in addition, in the Tarai is a slight Bengali (Sanskritic) element of recent introduction; and in the hill-tract are several English names designating settlements connected with colonization and British enterprise in the tea-industry, e. g., Hope-town, Bloom-field, Bannock-burn, Birch-hill, \&c., but too few to merit special notice.

Plurality of Place-names.-The oldest names are found to be of Lepcha origin. The Lepchas from their wild forest life are 'born' naturalists, possessing a name for nearly every natural product, animal or vegetable, whether of economic value or not. Hence they readily gave discriminating names to the ohief mountains, rivers and sites in their neighbourhood. A few of these old names still survive in places where the Lepchas no longer are present. The Bhotiyas, on settling in Sikhim, bestowed their own names on many of the already named sites, partly perhaps from the fact that the meaning of the Lepcha name was not evident, and partly to express their contempt for the Lepohas. Thus, many of the hills and rivers possess two names, viz., a Lepcha name and a Bhotiya (Tibetan) name, e. g., the Riot Ung and Rang-nyu Ung of the Lepchas are the Dik-chhu, and Tsang-chhu of the Bhotiyas ; and the Kong$l \hat{o} \cdot c h u$ and $N a$-tam chu of the Lepchas are called Kang-clhen-dzö-nga and Kabur by the Bhotiyas. And since the influx of Nepális a third synonym in the Parbatiyá dialect of Hindí has been added in several instances for rivers, mountains and already named sites, e. g., Tista and Jalapalár are the current Paháriyá names for the Lepcha Rang-nyı Ung and Kang-gol hlo; but such Nepáli synonyms usually are merely corruptions of the Lepcha or Bhotiya names, e. g., the Rá-d $\hat{o}$ of the Lepchas, Ohumi-chhen of the Tibetans and Am-bi-ok of the Bhotan Bhotiyas are corrupted by the Nepális into Ladhoma, Simile chi and Ambek respectively.

Orthography employed.-A few words here are necessary regarding the orthography employed. The current English forms (in maps \&c.) of spelling geographical names in this area, as elsewhere, are usually most incorrect and unsystematic : the spelling and pronunciation disagree at every turn, and are out of keeping with the native form, which is the only true one. The system adopted in this paper is the precise method of Sir W. Jones as recognized by the Society, and now generally followed for philological purposes. To adapt it to the complicated vowel-sounds and semi-silent final consonants of the Tibetan, and
the peculiarity that such words are not pronounced directly as they are spelt，the following modifications generally following De Körös＇system have been introduced：－In transliteration all the words are fully spelt （and not as in Jäschke＇s method which seems to me too contracted and symbolic），and the silent letters are put in italics．Diacritical marks are only used in the alternative spelling which gives the pronuncia－ tion：the letter ô has an $a w$ sound like the $a w$ in $l a w$ and awful，it literally represents the spelling in the written form；the vowel sound $\dot{e}$ is as in French，and $\ddot{0}$ and $\ddot{u}$ are as in German；a subscribed dot to a final consonant indicates that it is almost silent．The following Tibetan letters are transliterated thus ：－

$$
\begin{aligned}
& \Sigma=\mathrm{ch} . \quad \quad \checkmark=\mathrm{ph} . \quad \zeta=\mathrm{ng} . \\
& \text { あ }=\text { chh } . \quad \text { あ }=\text { tsh } . \quad Я=n y \text {. } \\
& \Omega=\mathrm{th} . \quad \text { Q }=\mathrm{zh} . \quad \delta=\mathrm{n} .
\end{aligned}
$$

and the nasal $n$ is represented as $i$ ．The Lepcha words are spelt phonetically－their vowel sounds are so very complex and the lan－ guage so decidedly tonic in character，that it is frequently almost impossible to express the exact sound in writing even by compound diphthongs．

Division of the names．－In detailing the etymologies of the local names it is convenient to arrange these in groups according to their Lepcha，Tibetan and Paháriya origin ；and also to divide the place－ names into names of mountains，passes，gompas（monasteries）and village or ordinary place－names．

## THE RIVER－NAMES．

Of Lepcha origin，the majority．－In so mountainous countries as Sikhim and British Bhotan the rivers are very numerous．Most of the river－names in Sikhim proper are known only by their Lepcha names to both Bhotiyas，Paháriyas and the English．The Lepchas have no special word for＇river，＇but employ instead the word for water，viz．，ung in a variety of combinations．The Bhotiyas in adopting the Lepcha river－ names substitute for the Lepcha suffix $u n g$ ，the suffix chhu which has an identical meaning．While the Paháriyas substitute khola（which in Parbatiyá literally signifies＇a valley＇）or nadí the ordinary Hindí name for rivers．Thus the Rang－nyet ung of the Lepchas is the Rang－ nyit chhu of the Bhotiyas，the Rang－gît nadi of the Paháriyas and the Rungeet river of the English．

## Lepcha River－names．

The majority of the Lepcha names for rivers contain the prefix Rang
which conveys the sense of extension or length* and is to be met with in other words, e. g., Rang-gan $=$ a steep ascent, \&c. The following are instances of river-names with this prefix.

Rang-nyet ung $=$ Rang, extended, + nyet, two $+u n g$, water $=$ 'the two extended waters.' There are two rivers of this name, viz, the Rang-nyet ung mo, 'the mother', or greater Rangit' aud the Rang-nyet ung lap or ' the young, or lesser Rangít,' and they form 'the two' principal rivers of Sikhim proper. (The Tista, which is of course larger, arises beyond Sikhim).
RANG-FO UNG $=$ Rang + fo, muddy brown $+u n g=$ 'the muddy brown estended water.' A rivulet arising in the reddish lateritic soil of the low outer hills, and tributary to the Tísta near Sivok.
Rang-zo UnG $=$ Rang $+z o$, precipitous or semi-vertical $+u n g=$ ' the precipitous river.' A torrent tributary of the Tísta.
Rang-rong ung $=$ Rang + rong, splashing. A tributary of the Tísta in Sikhim descending throughout greater part of its length over boulders and precipices.
Rang-po ung $=$ Rang $+p o$, to shift or wander.
Rang-glo ung $=R a n g+g l o$, to fall.
Rang-guk ung $=$ Rang $+g u k$, narrow and constricted.
RANG-NON-UNG $=$ Rang + non, to go straight.
Rang-fok ung $=$ Rang + fok, to be incised deeply.
Rang-nyu ung $=$ Rang $+n y u=$ queen, 'the queen river' as it-the Tísta-is the Spouse of the great Rangit. Nyu is also said to be a contraction for nang-y $\ddot{u}$, $i$. e., 'straight-going.' Where the Tísta receives the Great Rangit, the chief river of Sikhim, which joins it at a right angle, the Tísta continues in its straight unaltered course, its direction being unaffected by this great accession of waters, hence is attributed its Lepcha name. It is more likely, however, that it is so-called on account of its straight arrow-like course after leaving the hills, in contradistinction to the other great effluent river of Sikhim (the Mahaldi) which means 'the bent moving water'. Another possible derivation is from $a-n y u n g=$ deep; the Tísta being the deepest river in Sikhim and always unfordable.
Other river names containing this prefix are Rang-bi ( $=b i k$, to tear asunder), Rang-mo, Rang-li and Rang-fap, \&c.

A few of the rivers share the prefix ra in common :-

* Another possible, though not very probable, derivation is from Dang $=$ to run, $i e .,+u n g=$ running waters; $d$ is frequently converted into $r$ by the Lepchas -bnt this particular word in the colloquial is not subject to such change.

Ra-thong ung $=R a$, surging and tumultuous advance, + thong, to swallow or drink up. The main source of the Rangit, and a glacier-fed rapid torrent subject to sudden and destructive flood.
$R_{A-d o ̂ ~ U N G}=R a$, (as above) $+d \hat{o}$, a lake. The river arises from a small lake called 'Kala pokh'ri', or the black lake' by the Nepális and Ung-Dô by the Lepchas.
RA-mith ung $=R a+$ mith, dust or grit. Arises in the lower slopes below Birch Hill and is turbid.
RA-MOM UNG (Pahariya 'Ra-mám') $=\mathrm{Ra}+$ (?) Mong, a demon, the name of the lake-Mong-d $\hat{o}$-whence this river rises, beyond Phallut. (As an alternative derivation mom = incomplete, somewhat, in the sense of the Latin sub).
Other rivers are named:-
Ro-LO UNG $=$ Rol, tortuous.
Rí-Lí- UNG $=$ Ril, to revolve or turn round.
Rí-Rí ung $=R_{i}$-rí, swift or rapid.
Rí-yot UNG $=R$ i, rapid $+y$ yot, let loose, or unlimited. An extremely rapid river called by the Bhotiyas the Dic-chhu (q. v.).
Rí-shí ung $=R i,+P$ shiap, whirling. A rapid mountain torrent.
Re-ing ong ('Raing' of map) $=R e-i n g$, to spread out, or be shallow. A shallow and broadish rivulet in the outer hills near Sivok.
Ma-haL-dí ung (corrupted by Bengalis and Paháriyas into 'Mahanadí' or 'Mahananda') $=$ Má-hal, bent or curved $+d i$ to move. This river, as seen from the hills, takes a very sudden bent to the right on reaching the plains; and seems so-called in contrast to the Rang-nyu Ung, i. e., 'the straight river,' the Lepcha name for the other great effluent river of Sikhim, viz., 'the Tísta'.

## Bhotiya River-names.

The Sikhim-Bhotiyas exhibit much poverty of invention in naming their rivers. When not directly borrowing the Lepcha name, which is the rule, they usually name the stream after the mountain whence it arises, or after the chief village or pass near which it flows. For example :-
 water: ' the water of the great pass.'
La-chaing chei $=1 a+\$ 5^{\prime}$ chhung, small + chhu: 'the water of the small pass.'
Rí-TSE CHHU $=$ Rí-tse, the name of the hill + chhu.
Rong-li cheo = Rong-lí, a Lepcha's house + chhu. At the ford or bridge over this river was encountered the first Lepcha's house on the way from Tibet.

As a result of this loose style of nomenclature，the same river pos－ sesses different names at different parts of its course，e．g．，the Lachhang is called the＇Yum－thang chhu＇and＇Mome chhu＇opposite these two villages．

Exceptions to this practice are had in the following amongst others ：－
 A snow－fed stream which in a rocky bed descends about 10,000 feet in a course of abont twelve miles．
Rí－zE CHHU（Ang．Rishi）İ rí a mountain＋Фオよ’ gzar（pr．zé）a torrent．A mountain torrent crossed on the way from Tibet．
Tsáng－chiu $=\triangle$ ถ็ち＇$g$ tsang，pure + chhu：＇the pure water＇－the Bhotiya name of the Tista，deriving the name from its pro－ perty possessed in common with all large rivers of tending to become quickly purified from defilement．
 twist or coil．

Lakes are neither large nor numerous in this area，but such as do exist have usually mythological names and are believed to be the spouses of the hills in the neighbourhood．A small lake on Lebong Spur which was filled up last year in preparing the Station polo－ground was called Me－long tshô or＇the mirror－ lake＇．Another lake valley is called Ohhu lonk－yo，said to mean ＇a spoon of water＇．

## Nepáli（Parbatiyá）River－names．

The Paháriyas have accepted the Lepcha and Bhotiya names for the rivers within the hills，but have usually contorted these names by mispronunciation to an almost unrecognizable extent：e．g．，the＇Ra－dô＇ and the＇Kale＇of the Lepchas have become the Ladhoma and Kulhait of the Paháriyas．

The small hill streamlets are called by them jhorá from the Shet． भर，jhara，a cascade or water－fall，from the root jha，to waste．These jhoras are individualized by being named after the adjoining village，or the special use they are put to，e．g．，Dhobi－jhora（ $H$ ．धोबो dhobi，a washerman）$=$＇the washerman＇s stream＇；Kák jhora（H．काक kálı a crow）＇the crow＇s brook＇，near the municipality rubbish－heap at Darjiling，where crows and kites congregate．When a hill－stream is subject to very sudden and violent outbursts，it is called Paglá jhora （ $H$ ．पगला，paglá insane or mad）＇the mad stream，＇on account of its furious and erratic behaviour．

As regards the effluent rivers which debouch on the plains, the Pahárias have accepted the current Bengali names for these, viz. : -

Tísra. The Sanskrit form of the name is Tri-srota (Skt. नि + सोत) $=$ 'the three currents.' The Tísta, until the year $1787 \mathrm{~A} . \mathrm{D}$. , when it suddenly forsook its old bed and opened for itself a new channel, on emerging from the hills divided into three portions named the Atrai, the Púrnabhadra and the Karotoya rivers, which each followed independent courses to the Ganges and the Brahmaputra respectively. The name is of very old application, being mentioned as the Tri-srota in the Puránas; and as this name well described its leading physical feature in the plains, and under the Prákrit rules the $r$ of compound consonants is dropped in ordinary speech, thus forming 'Tísota' or 'Tísta'-this seems to be its true etymology. An alternative etymology might be suggested, viz., Slit. cम्ट, trishta $=$ 'harshly sounding'; but in the deltaic portion of its course this is not a character of its slow-flowing waters, and the literate Bengalis had no access to its course within the hills.
Mabananda. This is the Bengali corruption of the Lepcha name Mahal-dí, which name, as already shown, describes the most obvious feature of this river suddenly bending away to the right. The letters $l$ and $n$ are always interchangeable in speech, but after having made this interchange, as no plausible interpretation could be put on such a word, the Bengalis, and following them the Paháriyas, usually pronounce it 'Mahánadí,' i. e., 'the great river,' although its size does not warrant such a title.
Bálasan or Bálason is the Bengali name for the plains-portion of the Rishi Chhu of the Sikhimites. It is believed to be derived from the Bengali वालि, báli ( H. bálu) sand, + सेन, sona, gold, with reference to its extensive bed of yellowish sand.
Mech or Minge, the remaining morang (tarai) river (excepting the Chenga) is said to be so named from being the western boundary of the tribe, called by Bengalis Mech and by themselves Bodo-the semi-aborigines of the morang.

## THE MOUNTAIN-NAMES.

The mountain names are mainly of Lepcha and Bhotiya origin. The names of the snow-clad peaks are almost wholly Bhotiya (Tibetan); as the Lepchas affect the lower levels and the valleys; while the Bhotiyas usually keep to the cooler heights, and were brought into
constant relation with the higher peaks and passes in their commercial and religious intercourse with transnivean Tibet. The Paháriyas have no name for the individual snow-peaks, but call them collectively 'Himál' from Slet. हिम hima snow, + आाल âlaya, house $=$ 'abode of snow ; ' or 'Dhaula giri, Skt. घवल, + गिरि 'white mountain' (= 'Mont Blanc.')

## Lepcha names of Mountains.

Shin-shel hlo (Ang. Senchul) $=$ Shin, cloud and mist-enveloped + shel, to be wet or dank $+h l o$, a mountain $=$ 'the damp misty hill.' This mountain overlooking the plains receives the full force of the monsoon and is cloud-capped for the greater part of the year, so as to have been abandoned as a military site for the very qualities designated by its Lepcha name.
Ma-mal-di ram $=$ Mahaldi, name of river above described, + ram, the source or fountain-head $=$ 'the head of the Mahaldi' river.
Sa-thong hlo (Ang. Sitong) $=$ Sa-thong, a tiger + hlo, a hill $=$ 'tiger-hill.' A hill near Kursiong overlooking the tarai and still frequented by tigers.
Kung-gol hlo, the Lepcha name for Jalapahar = Kung, a tree + gol, fallen or upset. The appearance from above is that of a prostrate tree: Birch Hill and Lebong Spurs being the main branches, and the smaller spurs the branchlets.
Fok-lut (Ang. Phallut) $=$ Fok to be excoriated or denuded + lut, an elevation or peak. This peak is so called on account of its top being bare of forest (being above the limit of trees), giving the appearance of being stripped or peeled of forest.
Sing-le hlo (Ang. Singlelah) $=$ Sing-le, a kind of alpine Alder (Alnus vel Betula, sp.). A steep mountain on the Nepal frontier beyond Phallut crowned by Alder trees.
Tun-ḍong or TÜn-rong (Ang. Tendong) = Tün, to heap or raise up + rong, a horn; also Tung rong, $=$ a ladder. A subconical mountain, which tradition asserts arose like a horn from amid a local deluge, and so enabled the Lepchas to escape being drowned. Their tribal name of Rong may perhaps be associated with this legend.
Ma-nom $^{(A n g}$. Mainom) $=M a$, mother + nom. sister. 'The elder sister' of Tenḍong.
Sa-bar kam (Ang. Subarkum) $=\boldsymbol{S} a$-bar, the musk-deer, $+k a m$, an overhanging rock. Formerly a favourite haunt of musk-deer, between Sandukfu and Phallut.

Kong-lô chu $=$ Kong, highest or pre-eminent $+l \hat{o}$, a screen or curtain + chu, snow and rocky mountain : 'the highest curtain of the snows.' The Lepcha name for Kangchhen-dsö-nga (Ang. Kanchinjunga) which is worshipped as a god.
$\mathrm{N}_{\mathrm{AN} \text {-TAM }} \mathrm{Chu}=\mathrm{Nan}$, level + tam cut away, truncated (also tám a plain) + chu. The Lepcha name for Kabru or Kabar: describing the peculiar truncated appearance of that mountain as seen trom the greater part of Sikhim proper.
Pan-din chu $=$ Pan-dim, a ling's minister (derived from pa-no a king). A high sub-conical peak, which is considered to be an attendant on the god 'Kanchinjunga.'
$\mathrm{T}_{\mathrm{A}-\text { sing }} \mathrm{BLÜ}=$ Tasing, ? $\ldots \ldots+$ blii, a ridge.

## Bhotiya Mountain-names.

Kang-cheen dsö-nga (Ang. Kanchinjunga) $=$ खदN' gangs, snow +
 lnga, five $=$ 'the five repositories of the great snows,' refurring to the 5 peaks of this, the second highest mountain in the world, which is an object of worship to both Bhotiyas and Lepchas.
Frum-gavg $=$ Fyum a kind of bambu (Thamnocalamus, sp.) + 줭 ${ }^{\circ}$ sgang, a ridge. Hooker noted* the appropriateness of this name.
 mountain $=$ 'the goddess mountain.'
 wo, pr. gya-o, bearded, with reference io its monster icicles.
San-duk-phu. This is interpreted by Lama Ugyen Gyatsho, whom I consulted regarding several of the Tibetan names, as
 a height $=$ 'the height or cave on which wishes by meditation will be obtained.' This mountain, however, is not called 'Sam-dup-phu,' nor has it reputed sanctity or any sacred spot. I believe that the name is derived from 旖 $r$ tsa, a plant +5 . dug, poison $+\mathrm{phu}=$ 'the height of the poison plant.' Here aconite and poisonous rhododendron are so abundant that all the sheep and cattle are muzzled while crossing this mountain; and it is a peculiarity of the Sikhim and Tsang dialect of Tibetan that a final $n$ is frequently introduced as an affix to the first syllable

[^7]where absent in the written Tibetan＊；thus $t s a-d u k$ becomes tsan－duk．
 nose，＇descriptive of the appearance of the mountain as seen from lower Sikhim．
 ＇the shield of the winds．＇This high ridge tends to shield lower Sikhim from the S．W．monsoon．
Rí－nak（Ang．Rhenock）＝〇̣ rí，a hill＋क凶 nag，black．The soil of this hill is a very black humus．
 the path leads over the top of the hill．
Chhorten－gang $=$ mchhoḍ $r$ ten，a chaitya + sgang $=$＇the chaitya ridge．＇
Pö－ga gang $=P \ddot{o ̈}-g a$ ，the sal tree + sgang $=$＇the ridge of sal trees＇．
 site three ridges unite．
Rí－zHAP（Ang．Rishap）$=$ ì rí + QयN＇zhaps，a foot $=$ a site at foot of the Himalayas．
Lung－thu（Ang．Lingtu）$=$ शुन ${ }^{2}$ lung，a mountainous valley + बुI• thur，a steep descent．This mountain presents an unusually steep descent to the valleys．Many of the Bhotiyas call this

 ka－sha，a kind of grass + ri．＇$k a$－sha pasture－land．＇
DÁ－ling $=$ あち2＇mdah，an arrow + gling．A subconical（arrow－ head like）hill．Formerly a strong frontier fort of the Bhotanese．
 neck：＇the burned saddle or spur＇．

## Paháriyá Mountain－Names．

The Paháriyás generally accept the Lepcha and Bhotiya mountain－ names．Amongst the exceptions are the following ：－
$\begin{aligned} \text {＊Examples of this in Sikhimite are ：－} & \text { min－da，a gan，for the Tibetan me－dah．} \\ & \text { min－tok，a flower } \\ & \text { mingo，not wanted } \\ & \text { gyâm，fat }\end{aligned}$
And in Tsang－pa dialect of Tibetan an $n$ is frequently inserted where the following syllable has，as in this case，an initial d；e．g．：－

$$
\begin{aligned}
& \text { gan-de ( = good) spelt dga-bde. } \\
& \text { tshan-de ( = hot) " tsha-hde. }
\end{aligned}
$$

Jala pahár $=$ H. Jala, burned + pahár, a hill. 'The burned hill.' This accounts in part for the presently bare condition of this hill.
Gîdha pahár $=\mathrm{H}$. Gídh, a vulture + pahár. 'The vulture's hill.' Here great numbers of vultures infest the rocky cliffs overlooking the plains.

## THE PASS NAMES.

The names of the mountain passes are all of Tibetan origin. The term $\mathbb{V}^{\prime} l a$, or pass is often loosely applied to the mountain itself. The following list comprises most of the passes :-

Dong-kiya la (Ang. Donkia) = 2ম্রद" hbrong ( $p r$ r. ḍong), the wild yak + K A herd of wild yaks, in attempting to spend the night in this pass ( 18,100 feet high), were frozen to death.
 of the way is under snow.
 white. This pass presents a field-like expanse of snow, all the year round.
Jo-la (Ang. Chola) $=\overline{F^{\prime}}$, lord. 'The lordly pass,' said to be so called on account of its height and difficult approach. An alternative etymology is अ笑 $m$ tsho, a lake. Numerous lakes are in this pass.
Yák la = बUひप' gyag, the yak (Bos grunniens). The pass for herds of yaks into eastern Sikhim.
Yom-tsho la $=$ wुw', yum respectful title for 'mother' $+m$ tsho. 'The lake of our (holy) mother,'-a nymph who is worshipped here.
Rí-shis la (Ang. Rishi) $=$ rí, mountain + shik, slipping or falling. The pass has appearance of a landslip.
 for ' tired' laden yaks proceeding above Lachhang.
 level pass', with reference to its ease and patency.

Ku-pho (Ang. Kupup) = 줭 sku, the body especially of a saint + phu, a summit. Tradition relates that the saint Guru Rimbochhe (Padma Sambhava) rested here, in passing to Tibet.

T＇uK－LA $($ Ang．Tukola $)=\triangle$ 텅 $g$ gtug，to tear or pluck off．Tradition states that the Pass was created by Guru Rimbochhe tearing off a portion of the rock to hurl at a demon who infested a lake in the vicinity to the annoyance of passengers．
$D \ddot{\mathrm{U}} \mathrm{LA}=455$＇$b \mathrm{dud}(p r . \mathrm{d} \ddot{\mathrm{u}}$ ）a demon．＇The devil＇s pass＇．
Ku－chak la ${ }^{2}$（Ang．Quiche）is said to be derived from ku a lock，or Fug crooked $=$＇the locked pass．＇It is a difficult snow－locked pass．
Rô－bang la（Ang．Rabong）$=$ I＇$^{\top}$ rô，a carcase + पद＇bang，a grave．In the pass is an old mendong grave－cairn．
La－cheen $=l a+$ chhen，＇the great pass．＇The longest pass into Sikhim from the Tsang province of Tibet．
La－chiong $=1 a+$ あ ${ }^{\prime}$ chhung，small．＇Theshort pass＇from Tsang into Sikhim．

## NAMES OF GÖMPAS OR MONASTERIES．

Sikhim having derived its Buddhism and civilization from Tibet，its monasteries mostly bear Tibetan names and these usually of an ideal or mystic nature．The word दर्बिक＇य＇dgon－pa，pronounced gömpa literally means＇a hermitage，＇and the oldest monasteries were，and many of them （e．g．，Dub－de，Sang－nga－chhö－ling，Pema－yang－tse，\＆c．，）still are situ－ ated in solitary places；but around some of the others，villages have gradually sprung up，and those of the most recent ones have been founded within villages from which they take their name，which in such cases is usually of Lepcha origin，e．g．，Ram－tek，Ling－tâm．

DUB－DE $=$ ㅈㅝㅝ あ＇sgrub（ $p r$ ．＇ḍub，＇）a hermit＇s cell＋庐’ sde，a place．＇The place of the hermit＇s cell＇－the oldest monastery in Sikhim founded by the pioneer missionary Hla－tsün Chhen－bo．
Sang－nga－chiö－ling（Ang．Sangachiling）$\triangle$ IVム＇gsang，secret or occult，$+\mathbb{N}_{\Sigma} \triangle \mathbf{V}^{\prime}$ sngags，spell or magic $+\mathbf{W}^{\prime}$ chhos reli－ gion + 右द＇gling，a place．＇The place of the occult mystic religion．＇A．catholic Buddhist monastery open to all classes， including deformed persons，nuns，Lepchas and Limbus．
Pema－tang－tse（Ang．Pemiongchi）$=$ பi＇$^{\circ}$ padma（ $p r$ r．＇péma＇） a lotus＋খץ＇yang，perfect or pure + 势 $r$ tse，the highest ＇the monastery of the sublime perfect lotus（－born one，i．e．， Padma Sambhava）．＇A monastery open only to pure，celibate，＊

[^8]and undeformed monks（ $=$ Tasang）and especially associated with Guru Rimbochhe who is worshipped here．

 ＋ल्స్సॅफ＇lding，a soaring up or elevation．＇The gömpa of the elevated glorious white rock．＇The site，a bold high promon－ tory at the junction of and between the Great Rangít and Ratong rivers，is believed to have been miraculously raised up by Guru Rimbochhe，and amongst other traces a broad longi－ tudinal white streak in the rock is pointed out as being the shadow of that saint．
Рho－dang（Ang．Fadung）＝文㳖দ＇pho－ldang，a sloping ridge； such is the site of this gömpa and the usual spelling of the name．As，however，this is the＇chapel－royal＇of the rájá，it seems possible that the name may be र्य＇ब्रद，pho－dang＝ palace，＇the gömpa of the palace．＇
La－brang（La－brang）$\equiv$ 젹 bla，a contraction of lama or high－priest
＋Қ্র＇द brang，a dwelling．Here is the chief monk＇s dwelling． $N$ ．B．－This is one of the very few words in which $b r$ is lite－ rally pronounced as spelt．
Dorje－hing（Ang．Darjeeling）$=$ 关．＇它＇$r$ dô－rje＇the precious stone＇ or ecclesiastical sceptre，emblematic of the thunder－bolt of Sekra （Indra or Jupiter）＋苟 $\boldsymbol{L}^{\prime}$ gling，a place．The monastery from which Darjíling takes its name，and the ruins of which are still visible on Observatory hill，was a branch of the Dorjeling，usually curtailed into Dô－ling（Ang．Dalling）monastery in native Sikhim ；and to distinguish it from its parent monastery，it
 bdus，accumulated or concentrated）on account of its excellent situation，and powerful possibilities．
De－tháng $=$ De，a kind of tree（Daphne papyraceae，Wal．）from the bark of which ropes and paper are made + घদ＇thang，a meadow $=$＇the gömpa of the $D e$ meadow．＇Here these trees are abundant．
Rí－gön $($ Ang．Ringim $)=$ rí $+\Delta \overline{4} \mathbf{A}_{\bar{\prime}}$ dgon，a hermitage $=$＇the hermitage hill．＇It is situated near the top of the hill．
Tô－IUNG $=₹^{\circ} r$ do，a stone $+2 \hbar^{\circ}$ lung，a valley．This valley is remarkably rocky，and avalanches of stones are constantly falling in showers．
 A monastery on a tongue－shaped spur．

Phe＇n－zang $=$ यお＇phan，bliss or profit + 廿ন ${ }^{\prime}$ bzang，excellent． The monastery of＇excellent bliss．＇
 spyod（pr．chö）to accomplish or reach + โป『＇dpal，noble + ri $=$ the monastery of＇the noble mountain of the Garuda（a messenger of the gods）＇or＇of reaching heaven．＇
Má－Ni＝お＇${ }^{\text {º }}$＇má－ní，a tablet inscribed with＇Om máni \＆c．，＇a mendong．＇The gömpa of the mendong＇：here the gömpa was erected near an old mendong．
$\mathrm{Se}_{\mathrm{E}-\mathrm{xön}}=S e$ ，a sloping ridge + おै $^{\circ}$ nön，depressed．Situation on a depressed sloping ridge．It is also spelt gzigs（ $p r$ ．sî）seer or beholder，+ अनक $m$ nön，to suppress ；and in this regard it is alleged that here Padma Sambhava beheld the local demons underneath and kept them under．
 ＇The monastery of the lucky ridge．＇
LHÜN－TSE $=$ 럭a＇lhun，lofty + 동＇$r$ tse，summit．＇The monastery of the lofty summit．＇
Nam－TSE $=$ あお＇$r$ nam，a division or district $+r$ tse．＇Lofty divi－ sion＇one of the subdivisions of Native Sikhim，on the flank of Tendong．It is probable that this is a Lepcha name from tsii＝＇Seat of Government，＇as the site is a very old Lepcha one．
 ＇respected one，＇i．e．，a lama or monk；also marriage + 凤ら＇ thang，a meadow．This gömpa is situated overlooking a mea－ dow at the junction of the Lachhen and Lachhung rivers．It may mean＇the meadow of marriage（of the two rivers），＇or ＇the meadow of the lamas，＇or＇the meadow of the lady＇－its
 ＇$b$ tsun－mo rin－chhen thang，＇implies that the lamas would have the monastery derive its name from＇the precious Lady－（pig）＇ whose image is prominently displayed within the gömpa，
Rab－hing（Ang．Rawling）＝ IZ $^{\prime}$ rab，excellent or high $+g$ ling，a place．This monastery is situated on a high cliffy ridge．
Nub－ing（Ang．Nobling）＝бu＇nub，the west $+g$ ling $=$＇The gömpa of the western place or country．＇It lies on the western border of Sikhim．
De－kyt－ling（Ang．Dikiling）यदें स्रूち＇bde－skyid，happiness +
$g$ ling $=$ 'The place of happiness.' It is a rich arable site with extensive marwa cultivation.
Rin-chhen-pung (Ang. Ringkingpung) $=$ rin-chhen, precious + pung, a heap or knoll, 'The precious knoll.' The soil is rich and fertile.
For names of other monasteries see under the heading of Villagenames.

## VILLAGE AND OTHER PLACE-NAMES.

## Lepcha Place-names.

When the place-name indicates the site of a village the suffix kyung or kyong = 'village,' is added; and for a site without any existing village lay-ang = ' a place or tract' is added.

Ali-bong (Ang. Lebong spur) $=a-l i$ a tongue $+a$-bong, mouth. A tongue-like spur of land below Darjiling.
Pa-dán-tam (Ang. Badamtam) $=P a-d a m$, a large species of bambu (Dendrocalamus Hamiltonii, N. et A.) from which watervessels ('chongas') and marwa jugs 'pa-hip' are made: it grows only below 4,000 feet + tám, a contraction for par-tám, a level spot. 'The padam-bambu bank:' here formerly was a forest, the nearest to Darjiling, of this kind of bambu which is in much demand.
Yokri-bong $=$ Yokri, India-rubber tree (Ficus elastica) here abundant + bong, $\left(=\right.$ Tibetan $\left.49^{\circ}\right)$ a stump or foundation, hence also a residential site. A village founded among (the stumps of felled or simply among) ' rubber' trees.
Kanki-bong $=$ Kanki', the 'padma' tree (Prunus puddum, Roxb.) here abundant + bong.
Kung-bong $=$ Kung, a (any) tree + bong.
Koi-bong $=$ Kol, a walnut tree, here abundant + bong.
Po-bong $=P o$, a large kind of bambu + bong .
$\mathrm{Nak}_{\mathrm{k}}$-Grí $($ Ang. Nágri $)=N a k$, straight + grí, a high stockaded fort.
Tung-sung = a stockade .
Nam-for $=$ fat + hollow, 'the fat hollow.'
Nan-TsÜ̈ (Ang. 'Namchi') =Nam fat + tsï, Government. 'The Government of the fat site.'
Pa-zok (Ang. 'Pashok') = 'jungle.' Here the dense sub-tropical 'jungle' or forest of the Tísta valley commences.
Sand-dA $^{\text {(Ang. 'Sonadah ' })=S a n a, ~ a ~ b e a r ~}+d a$, a lair $=$ 'the bear's lair.' Bears are still in the neighbourhood.
Tsong-kyung $=$ Tsong, the Limbu tribe + kyung, a village. A village founded and still mainly inhabited by Limbus.

Rang-muk $=$ Rang + muk, weeds. An old extensive clearing, now a tea-garden.
Rang-Lot (Ang. Rangliot) $=$ Rang + lot, to return. This is the limit from which the Rangít flood waters returned.
MAHL-MAN-DAP $=$ Mahi, (a corruption of Bengali gशिय, mahish, a buffalo, + man, flesh + dap to obtain. A site of a market overlooking the tarai, to which buffaloes were brought up from Bengal and slaughtered for retail of their flesh.
$T_{A K-v o ̂ k ~(A n g . ~ ' T u k v a r ') ~}=T a k$, a hook-thread $+v o ̂ r$, a fish hook: the land is curved somewhat like this, and the local Lepchia tradition asserts this origin for the name.
Shing-tám $=$ Shing, a garden + tám, a level spot.
Song-Khani $=$ Song, copper, + kháni, Hindí and Parbatiyá for a mine. A village where copper ore is mined.
Gok $=$ narrow and difficult (of access) : an old military post on a narrow promontory between the Great and Little Rangit and Ramam rivers.
Rong-mí $=$ Rong, Lepcha + lí, a house.
Jing-hlím or Zhing-illám $=$ zling, weak, or poor soil + hlam, sloping. 'The sterile slope.' The soil of this locality las a sterile reputation.
Sallo-kuxg $=$ Sallo, name of a kind of tree + liung, tree.
Ung-Lap $=$ Ung, water + lap, a well. Here is a well, a most unusual feature in Lepcha villages, where the usual water-supply is from brooks.
Kalön-pong (Ang. 'Kalimpong') $=$ Ká-lön, a king's minister (a term borrowed from the Tibetan + pong, a stockade. This was formerly the stockaded headquarters of a Kalön.
Su-vok (Ang. 'Sivok') = sï or sï-e, a breeze or rush of cool air + vol, concentrated. The mouth of the gorge whence the Tísta debouches into plains, and along which a strong breeze is ever present.
Tsong-tong (Ang. 'Chongtong') $=$ ? Tsong, an arrow + tong, a resting place. An arrow-head-shaped site at junction of two rivers, at an acute angle.
Long-song $=$ Long, a stone + song, resounding. A rocky site in the resounding gorge of Tísta opposite junction with Great Rangít.
$P_{\text {a-kyong }}=P a$, a kind of cane $+k y o n g$, village.
Ling-tám $=$ Ling, a slope, or hill side + tám, level spot. A mixture of slope and level.
Ting-kap $=$ Ting, a plain + kap, little. An unusually (for Sikhim) large meadow.

Rab-den-TSI $=$ Rap, a collection $+a$-den, highest sect of Lepchas + tsii, law or government. This was the original seat of the Lepcha pa-no (rájá) before the influx of the Tibetan Barfungmos.
Payong-kang $=$ Payong, a species of bambu (Cephalostachyum capitatum, Munro) from which arrows are made $+k a n g$, a ridge.
Pashen-bong $=$ Pashen, a tree-fern (Alsophila latebrosa, Hk.) + bong. Tree-ferns are here numerous.
Silim (Ang. Selim) $=$ a kind of tree (Terminalia chebula, Retz.) abundant at this site, the seeds of which are eaten.
Sum (Soom) $=$ a tree (Phyllanthus emblica, Roxb.) the fruit of which is eaten.
Sirim-pung $=$ Sirim, Limbu name for a species of wild citrus + pung the Limbu form of bong.
Havg-má-fung = Hang-má, Limbu name for a kind of tree with perfumed flowers + fung, a flower.
Ram-ter $=$ Ram, god + tek, gone. Local tradition states that the name was given to the site last occupied by their (Lepcha) chief on his deposition by the Bhotiyas, to express their misfortune.
Yuk-sam $=Y u k$, 'a superior' hence a lama + sam, three. The place of meeting of 'the three lamas' to choose a rájá for the Lepchas.

## BHOTIYA PLACE-NAMES.

 a peak, an eminence. 'The eminent ridge.'
Kar-тнок $=d$ kar, white + thok, 'The white eminence.'
Yang-tháng $=$ बứ' gyang, a precipice + thang, a field, 'the field of the precipice.'-A huge cliff overhangs this meadow-site.
Zam-dang (Ang. Samdong) $=$ त्रम zam, a bridge +2 ब्रद $h$ brang, a halting place, stage or dwelling.
Mo-Me $=$ solitary, a site (circa 16,000 feet) at the last bridge below the Donkya pass.
$\mathrm{Na}_{\text {A-thávg }}($ Ang. Gnatong) $=$ nak, black (or nags, forest) + thang. 'The black meadow,'一the first meadow on this side of the Jelep pass; it is black with pines.

Ojak-mia (Ang. Iche) $=\stackrel{\text { Qr' }}{ }$ O, the previous name of the village + $\mathrm{FA}^{\prime} \mathbf{I A}^{\prime}$ jag-kha, broken. So called after the road had been cut through it, dividing it into two parts.

Chhom-naga, $=$ chhum, water + naga, a grassy bank.
 ing grove.
 heap or knoll. 'The collection of burned sites or jungle clearings.' The oldest Bhotiya division in Sikhim.
 the shrine.
DAM-THÁNG $=$ ब्वस" gram ( $p r$. dam) mud + thang, a marshy muddy meadow.
BA - KHyim $=b a$, a kind of bambu used for making mats + 这み' khyim, a house. A house of bambu matting-a halting stage on Tendong hill.
Ming-machien $=$ Ming-ma, a kind of bambu + chhen, large.
Sedong-chien $=$ Sedong, name of a tree (Albizzia, sp.) + chhen, large. Here a halting stage for travellers at a large Sedong tree, an uncommon tree in Sikhim.
Pha-dom cheen $=p h a ́-d o m$, a clearing + chhen. A largish clear. ing in jungle forming a halting place.
Dô-Lep-chenen $=r$ do, a stone + 2' $^{\prime}$ leb, level or flat + chhen. A halting stage at ' a big flat stone.'
Сhнum-mik chien $=$ chhu-mik, a spring + chhen, big. Here is a large spring.
Kyo-shing (Ang. Keuzing) $=$ Kyo wheat + shing, field. 'The wheat field.'
 Sikhim comprising an upper valley.
Pö-dang (Ang. Pedong) = pö̈ or pö-ga, a kind of cypress, also a $S a l$ tree, of the gum of which incense is made + Q dang) a halting-place. 'The halting-place at the Pö tree.'
 [ ${ }^{\prime}$ ' kha, mouth. Name of a site at 'the mouth of the canebridge ' leading into Bhutan.

## PAHA'RIYA AND BENGALI PLACE-NAMES.

$$
\text { ( } \mathrm{P}=\text { Paháriyá, } \mathrm{B}=\text { Bengali and } \mathrm{H}=\text { Hindí. })
$$

Lapohe-jagat $=$ P. Lapche the Lepcha + jagat, a toll-bar. A village on the Nepal frontier where the Lepchas levied toll on the Nepáli imports into Sikhim.
SUngri-Tívr $=P$. Sungar, a pig + tánr, a jungle clearing. A halting stage of the Nepáli pig-drivers on their way to Sikhim,

Sing-bung dera $=$ Sing-bung, Limbu for tree-stump + dera P. and Hindustání for camp. A wood-cutter's camp.
Chiladni $=$ P. Chilauni, a kind of tree with perfumed blossoms (Schima Wallichii) ; here abundant.
Katinjalta $=$ P. Kainjal, a kind of tree (Bischoffia Javanica, Bl.); here abundant.
$T_{\text {aktá-bás }}=\mathrm{P}$. तन्ता taletá, a plank + वाষ bás, a habitation. A wood-catter's village in jungle where planks were stored for transit to Darjiling.
Chúna-batí $=P$. चुए chuṇa, lime + वाती bátí, a lamp. A lime-kiln is here.
Chailá-dura $=$ P. chailá, blocks of fire-wood + dura, a hut. A settlement of cutters of fire-wood.
Brotiva-basti $=$ Bhotiya + वस्सी basti, a residence. The Bhotiyas' village.
Bátási $=$ P. बातासी bátási, windy. A breezy site.
Shepi $=$ P. बेपि shepi, to be wet or moist. A new village in a forest clearing where unusually dense dew falls.
MÁṬí-ghara $=P$. माठो mátí, mud + घर ghara, a house. The first mud-house met with at the foot of the hills (the houses in the hills being built of stone or wood).
NúṆA-MÁTí $=P$. नुष nuna, salt + mátit e earth. Here is a 'salt-lick.'
Chetedhára $=$ P. cheten, a Buddhist chaitya + धार, dhára, a ridge. Here on the ridge is a chaitya.
Gumti $=$ P. a turn of the road. Site in the angle of a turn of the road.
Pul-bázár $=$ Hindust. pul, a bridge + P. and H. वाजार bázár, a permanent market. A market at bridge over Little Rangit.
Jor-POKHRí $=P$. जोड़ jor, a pair + पोखरी pokhri, a small pond. Here are two small ponds.
Sukiá-pokhrí $=\mathrm{P}$. दूसा, sulihd́, dry + polihrí. A small semi-dry pond.
KáLá-pokhrí $P .=$ काला, káló, black + pokhrí. A small pond with dark peaty water.
Bahman-pokhrí $=$ B. Bahman, a Bráhman + pokhrí $=$ 'The Bráhman's tank.'
Jor-bangalá $=$ P. jor, a pair + bangalá, the Bangala (Bengali) style of a European's house. Formerly there were only 'two bungalows' here.
Lambá-dhara $=\mathrm{P}$. ल्यक्षा lambá, long + dhara. Here a long ridge.
Lámá-gan = Lámá, superior monk + गíq gánw, a village. Formerly a lama's residence.

Sipáhí-dora (Ang. Sepoy-dura) $=$ Sipáhí, a native soldier +P . dura. The 'lines' of the pioneer Sepoys now disbanded.
Kuá-páNí = P. कुज्चा, kuá, a well + पानी páni, water. No stream near, hence villagers had to dig a well, an unusual source of water-supply in the hills.
Goru-báthán $=$ P. गोष goru, a cow + वाथान, báthán, from Skt. वस bas to dwell + sthán, a place. A grazing station.
Símana $=$ P. सीमन, simana, a boundary. A village on the Nepal frontier line.
Páví-GHáta = P. páni, water, + घाट gháta, a ferry or ford. The ford over Balasan at foot of hills.
Páthar-gháṭa $=\mathrm{H}$. पाथर páthar, a stone + gháta, a ferry. The ferry on the Mahananda where stones are gathered for roadmetal.
Sili-gurí $=$ P. and Skt. शिल, a stone + P. guri from Skt. गढ़ी garhí, a small fort. 'The stone fort.' The furthest out site from the hills where stones are locally available for building.
$T_{\Delta R A ́ I}=\mathrm{P}$. and H. तरादू, tarúí, a swamp, or marshy tract.
Tariyana (Ang. Tirihana) $=$ a form of above.
Dwár (Ang. Dwar) H. B. and Skt. द्वार dwár, a door, or passage. 'The door or entry (to the hills).' The broad shallow valleys leading from plains into the hills.
Kanán, the ordinary name used among the hill-coolies for tea-gardens. It seems to be the Parbatiyá word meaning 'to earn money,' from the same root as the H . कमाना kiamáná ' to work for hire.'
$\mathrm{Sanyásí}^{-\mathrm{tt}} \mathrm{t}$ án $=$ Sanyásí, a religious mendicant +B . थान thán, 'the place, usually a shrine. Here it is a Sanyásí's hut.
Dawál-páví $=\mathrm{B}$. and H . dawái medicinal + pání $=$ 'Mineral spring.' Here is a chalybeate spring.
Bágh-dokrá $=\mathrm{B}$. वाघ bágh, a tiger + dokráa, roaring. A village in the Tarái in a locality infested by tigers.
Bairááí-bhíta $=$ B. and H. Bairágí, a religious mendicant + bhíta, a plot of land. 'The mendicant's plot.'
Dángar-bhíta $=$ B. and H. Dángar, a hill-man + bhíta. Here a settlement of some Uraon hill-men.
HÁthí-p̣úba $=\mathrm{H}$. and B. háthí, an elephant + डूव dúba, to immerse. A marshy tract which elephants could not cross.
Rájú-jhar $=$ H. and B. Rájá + फाड़ jhar, a jungle. 'The king's forest.'
Ghorá-márá $=$ H. and B. घोड़t ghorá, a horse + márá, killed. A local tradition states that a horse was killed here by a tiger.
Bhainsí-mári $=\mathrm{H}$. and B . भิষ bainsa, a buffalo + मारि mári, killing.

Mahish-mári $=\mathrm{B}$. मfिष, mahish, buffalo + mári.
Gâí-bárí (Ang. Gayabárí) gáe or gáí, cow + वाड़ी bárí, a habitation $=$ cow-shed.
SáL-bárí = B. and H. sál, the valuable timber tree (Shorea robusta) + bár' = 'The Sal-grove.'
Álu-, Ám-, Champa-, Kamlá-, Phul-bárí = B. and H. álu, a yam or potatoe, ám, mango, champa, the champak-tree, Famlá (the citron) tree, phul, a flower + bárí, a habitation-hence as regards vegetables, a grove or garden.
Sukná = B. शुकना sukná, dry. A dry site in Tarái on plateau at base of a spur where water-level is relatively low.

The general import or meaning of tee names.
The above lists of names with their etymological definitions, although not exhaustive, suffice to show the manner in which place and rivernames are assigned in this area. The great majority of the names are given by illiterate persons, so that grammatical accuracy is not always to be expected. The names, as to their meaning, may be generally classed as descriptive; a few are mythological and religious, but these are chiefly confined to monastery names; and the personal designations perpetuating the names of the founders of villages are found almost exclusively amongst the Paháriyá settlements.

Names mostly descriptive.-The descriptive names predominate, and these usually well express some very obvious physical feature of the site or river, e. g., of rivers, an especial tortuosity, steepness, impetuosity, shallowness or otherwise of a course or channel; of mountains, their shape, appearance \&c.; of village sites, the stony, precipitous, meadowlike character, quality of soil, jungle-product, conspicuous tree \&c.

Names of the country.-In naming the country, both the Lepchas and Bhotiyas characterized the most striking feature of the country, each from their own respective point of view. The Lepchas, a roving forest-people, even still living largely on jungle-products and sleeping under rocks for shelter, called this country Ne-layang or 'the country of caves,' while the Bhotiyas, a much more pastoral and agricultural race, who came from across the Himálayas, where rice is highly prized as food, but not there growable, called the country $2 \mathrm{SN}^{\prime}{ }_{\mathrm{N}}^{\mathrm{E}} \mathrm{E} \mathrm{V}^{\prime}$ hbras-ljongs, pronounced Dé-jong* or 'the rice-country,' as rice is abundantly cultivated in Sikhim. These Sikhim Bhotiyas in the course of the three or four

* As de is a form of demo परे" ${ }^{\text { }}$ = good, although the name of the country is not spelt in this way, it is occasionally called 'Demo-jong', i. e., 'the happy or good country.'
centuries which have elapsed since migrating from Tibet, have acquired* a dialect which differs in many ways, but chiefly in pronunciation, from the polite speech now prevalent at Lhasa. One feature of this difference is the tendency, shared in common with the Tsang-pa Bhotiyas of Nepal, and already noticed, to insert a final $n$ where such does not appear in Tibetan. The country has thus come vulgarly to be called Dén-jong, instead of Dé-jong, and the people generally call themselves Dén-jongpa, $i$. e., 'the people of Den-jong.' And the Lepchas in accepting the name imposed by their conquerors usually pronounce it Ren-jong-r being with them frequently interchangeable with the letter $d$.

The etymology of the modern name of 'Sikhim' is not at all so clear. It is generally alleged by the Lepchas and Bhotiyas to be a Parbatiyá name, applied to the country by the conquering Gorkbas. As the great majority of the Parbatiyá words are derived almost directly from the Sanskrit, I venture to suggest that the most probable derivation is from the Sanskrit मिखिन Sikhin = crested : this would characterize the leading feature of the approach from the Nepal side-a long high ridge, with Kanchinjunga 28,000 feet and Kabur 22,000 feet in its middle, separates this country from the Gorkha territory ; and being shut off from Bhotan by another high ridge, the intervening narrow tract which constitutes Sikhim presents within itself an unusual number of ridges (crests) running more or less in N. to S. direction, transverse to the vista from Nepal. $\dagger$

Many of the place-names merely denote halting places or stages presenting a rock-shelter or a clearing in the jungle with water-supply near, and occasionally pasture. These sites, being on lines of communication and always near a water-supply, occasionally develop into villages. These names were probably given by Tibetan merchants or other travellers such as priests or monks. The process of such namegiving might arise through a pioneer merchant or other traveller, narrating the stages of his journey into 'the rice country' (Dejong) and his successors adopting his stages and nomenclature. Such a traveller might be supposed as saying that, on crossing ' the level track pass'

[^9](Je-lep-la), he passed the 'Saints' mount' (Kuphu) and 'the Guru's defile'* and reached 'the black meadow' (Na-thang) where he halted. Next day he proceeded down 'the steep descent' (Lung-thu), past 'the big clearing' (Phadom chhen), to the large Sedong tree' (Sedong chhen). Next day, continuing the descent, he crossed 'the water (chhu) at 'the Lepcha's house (Rong-li) and ascended to 'the big flat stone' (Dô-lep chhen) where he halted. The following day he crossed 'the black hill' (Ri-nak) and 'the mountain torrent' (Ri-ze chhu), and ascended to 'the Pö-tree halting place ' (Pö-dang). Next day continuing his march, he lunched at 'the big spring' (Chhu-mik chhen), and crossing the ridge at the junction of 'the three hills' (Rî sum), reached 'the Kalön's stockade or 'pong' as the Lepchas call it (Kalönpong), \&c., \&c.

The Paháriyás and Bengalis are addicted to giving a personal name to their villages; this is perhaps inevitable where the area, as is usual in such cases, is thickly populated, and presents no striking natural features. The Paháriyás share with Europeans the tendency to transplant to their adopted home, names taken from their old country, although these possess no local appropriateness in their new application.

## On the date of the Bower Manuscript.-By A. F. Rudolf Hoernle.

The Bower manuscript was exhibited to the Society at the two meetings in November, 1890 and April, 1891. I call it the "Bower MS.," in order that Lientenant Bower, to whose enterprise the learned world owes the preservation of the manuscript, may receive the honour due to him. Some account of the locality and circumstances of its finding will be found in the Society's Proceedings for November, 1890 ; and a preliminary account of the manuscript and its contents was published by me in the Proceedings for A.pril, 1891. Since then I have spent a long summer vacation in carefully examining the whole manuscript, and, with the exception of a few leaves, I have read and transcribed the whole. I have every reason to hope that the Bengal Government, with its usual liberality in such matters, will enable me to publish a complete edition of the manuscript which I am now preparing.

This paper had been written (in Darjíling, in May), when I received (in July), through the kindness of Professor Bühler in Vienna, an advance copy of his notice $\dagger$ of the specimen pages of the Bower MS.,

[^10]which were published in the November Proceedings. It was particularly gratifying to me to find that, reading the manuscript, he in Vienna and I in Calcutta, at about the same point of time, we independently arrived at essentially the same conclusions, both with regard to the age and the contents of the manuscript. Such a coincidence most distinctly makes for the truth of our conclusions.

The substance of the paper which I now publish on the age of the Bower MS., and which I promised in the April Proceedings, was originally intended by me to form a part of the introduction to my edition of the manuscript. But seeing the interest which the manuscript has already excited in Europe, I publish it now in anticipation, and hope similarly to publish portions of the manuscript, with translations, from time to time.

I may state here briefly the result of my detailed examination of the manuscript. It consists of not less than five distinct portions.

The first portion consists of 31 leaves. It contains the medical work of which I have published the commencement in the April Proceedings, and two pages of which are figured in the upper parts of the two plates accompanying the November and April Proceedings. I shall designate it by the letter A.

The second portion, to be called B, which immediately follows the first portion, consists of five leaves, and forms a sort of collection of proverbial sayings. A specimen of it is figured in the lower part (No. II) of the plate in the April Proceeding.

The third portion, C, consisting of four leaves, contains the story of how a charm against snake-bite was given by Buddha to Ánanda while he was staying in Jetavana, the garden of Anáthapiṇ̣a. A specimen of this portion is figured in the lower part of the plate in the November Proceedings.

The fourth portion, D, consists of six leaves. It is preserved in a rather unsatisfactory condition, and appears to contain a similar collection of proverbial sayings as the second portion, B.

The fifth portion, E, which also consists of five leaves, contains the commencement of another medical treatise. It appears to be-so far as I can judge at present-a fragment of a larger work.

Besides these five connected portions, there appear to be a few detached leaves, quite unconnected with one another and with those larger portions.

Of the fourth and fifth portions no specimens have been published, but the fifth is written in the same style as the first portion. The fourth portion is written in an exceedingly slovenly and hurried hand, much resembling that of the third portion, but written far more slovenly. It may possibly represent the handwriting of a fourth scribe; though, on
the whole, I am disposed to believe that there are really only three distinct styles of writing represented in the entire manuscript. The first is that of the first and fifth portions (A and E) ; they are so nearly alike, that I believe them to be of the same scribe. The second is that of the second portion (B), which is a fine, ornamental writing. It must be ascribed to a distinct scribe. The third is that of the third and fourth portions ( C and D ), which seem to me to differ more in the manner than in the character of writing, and may not improbably be due to the same scribe, though a different person from the scribes of AE and B .

I come now to the question of the age of the MS. Here the first points to be settled are the locality and class to which the characters of the MS. belong. Mr. Fleet has clearly shown, in his Volume III of the Corpus Inscriptionum Indicarum on the Gupta Inscriptions,* that, irrespective of varieties, there existed, at the time of the Gupta period, two very distinct classes of the ancient Nágarí alphabet, the North Indian and the South Indian (see Fleet, pp. 3, 4). The test letter for these two great classes is the character for $m$, which in the Southern alphabets retains its old form 8 , resembling the figure 8, while in the Northern alphabets that old form has been displaced by a square cursive form $¥$. Tried by this test, it is at once seen that the alphabet of our MS. belongs to the Northern class. Throughout the MS. the square form $\mathbb{F}_{5}$ used exclusively. It is particularly distinct in the portions C and D ; in ABE the left hand curved line in drawn rather more straight.

The Northern class of alphabets, however, is again divided into two great sections, which, though their areas overlap to a certain extent, may be broadly, and for practical purposes sufficiently, distinguished as the Western and Eastern sections. The test letter in this case is the cerebral sibilant sha. In the North-Eastern alphabet its form is $\boldsymbol{\$}$, while in the North-Western alphabet its form is $\boldsymbol{U} . \dagger$ Examples of the former alphabet we have on the Allahabad pillar inscription of Samudra Gupta, of about 400 A. D. (Fleet, pp. 1, 6), the Kuhaun pillar inscription of Skanda Gupta, of 460 A . D. (Fleet, p. 65), and others in Mr. Fleet's volume. $\ddagger$ The same alphabet is shown to perfection in the

* All subsequent references to "Fleet" refer to this work.
$\dagger$ At the same time the Indian N. E. alphabet has the form $~$ for the dental $s a$, the two forms of sha and sa being very little distinct from one another. The Indian N. W. alphabet has $\mathbf{W}$ for sa which is also used by the Nepalese variety of the N. E. alphabet.
$\ddagger$ The following Nos. in Mr. Fleet's volume belong to this class: Nos. 1, 6, 7 $8,9,11,12,13,15,64,66,68,69$; occasionally the Western form is used in con. juncts, such as ksha, shta.

Nepalese inscriptions, Nos. 1 to 10 and No. 12, published in the Indian Antiquary, vol. IX, p. 163; also in the Nepalese inscriptions Nos. 1 and 2, in Mr. Bendall's Journey in Nepal, pp. 72, 74. On the other hand, the other Nepalese inscriptions in vol. IX of the Indian Antiquary, Nos. 11, 13, 14, 15, and in Mr. Bendall's Journey, Nos. 3 to 6, exhibit the North-Western alphabet. The latter alphabet is also to be seen in all the Nepalese MSS, described in Mr. Bendall's Catalogue of Buddhist Sanskrit MSS., including the two oldest, Nos. 1049 and 1702.

Examples of the North-Western alphabet in Mr. Fleet's volume are the Mathurá stone inscription of Chandra Gupta, of about 400 A . D., the Indor plate of Skanda Gupta, of 565 A . D., and others.* Also the Toramána inscription in the Epigraphia Indica, Vol. I, p. 238, and the Nepalese inscriptions above mentioned.

In both the North-Eastern and North-Western sections there are divisions into varieties, some of which Mr. Fleet has noticed. However for my present purpose, there is no need to enter into any consideration of these. But the distinction of the two great sections is very marked, and can never be missed when once pointed out.

There is one point, worthy of notice, with regard to these two great Northern divisions. It is this, that in India proper the North-Eastern alphabet gradually came to be entirely displaced by the North-Western alphabet, in comparatively very early times. This displacement must have been in progress during the earlier part of the sixth century A. D., and must have been completed about $580 \mathrm{~A} . \mathrm{D}$. For in 588 A . D. we already find inscriptions in Bodhgayá (of Mahánáman, Fleet, p. 274) which show an exclusive North-Western character; and there is not a single inscription known (so far as I am aware) about and after 600 A. D. which shows the distinctive marks of the old North-Eastern alphabet. Outside of India proper, that is in Nepál, the North-Eastern alphabet maintained its ground for about three centuries longer; for the inscription, No. 4 in the Indian Antiquary, vol. IX, dated in 854 A. D., still shows the use of that alphabet. This survival is accounted for by the fact, that the North-Western alphabet made its way into Nepál, apparently, about a century later than into Eastern India proper. For the earliest known inscription, in that alphabet, is No. 11 in the Indian Antiquary, vol. IX, which is dated in 653 A. D. For the purpose of manuscript writing, as distinguished from documentary inscription, the North-Western alphabet probably made its way into Nepál very much earlier, as shown by Mr. Bendall's old MS. No. 1049, if (as I think it may well be) it is dated in 252 of the Gupta Era, that is, in 571 A. D.

[^11]Now the Bower MS. is distinctly written throughout in the NorthWestern alphabet. This is an important point and must be kept in view throughout the following enquiry. The age of our MS. must be judged solely by the facts as disclosed by the circumstances of the North Western alphabet. No conclusion that can be drawn from circumstances connected with the South Indian or the North-Eastern alphabets may be applied to the determination of the age of our MS. For it stands to reason, that no scribe, who was habituated to write in the North Western alphabet, would in any writing of his habitually introduce any peculiarity of the South Indian or North Eastern alphabets, with which he was not familiar.

Having premised this much, I proceed to the consideration of the points that appear to me to afford the means of determining approximately the date of the Bower MS.

Among the existing varieties of the North-Western alphabet, there is one which has most nearly retained its ancient character. This is the so-called S'áradá alphabet, which is still current in Káshmír and the adjacent Sub-Himalayan provinces, such as the Chambá and Kángrá valleys. The most striking point of difference between the S'áradá alphabet and its more ancient parent, the original North-Western alphahet, is the sign for the letter $y a$. The S'áradá alphabet uses the modern cursive form $\boldsymbol{U}$, while the original North-Western alphabet employed the more ancient tridental form $\mathbb{C N}$. This is the test letter by which any inscription or manuscript written in the S'áradá characters may be at once distinguished from any inscription or manuscript written in the more ancient North-Western alphabet. The latter I shall, for the sake of convenience, briefly distinguish as the Gupta alphabet. The oldest MS. in the S'áradá characters, of the existence of which we know, is the so-called Horiuzi MS., of which Professor Bühler has published an account and illustrative plates, in Volume I, Part III of the Anecdota Oxoniensia.* According to him, "it is certain that this MS. cannot date later than the first half of the sixth century A. D." (ibid., p. 64). It employs throughout the modern cursive form of ya. On the other hand, the Bower MS., though showing in the writing of parts $A$ and $E$, in many respects, a very decided resemblance to the S'áradá characters, employs in the portions BCD exclusively, in AE almost exclusively, the older tridental form of the letter $y a$. It follows, therefore, that the Bower MS. is not written in the S'áradá alphabet, but in the more ancient

[^12]Gupta alphabet. The general similarity of its letters to the S'áradá probably shows, that the locality of its writing was somewhere in the extreme North-West of India, but its use of the ancient tridental form of YA shows that its date must be antecedent to the elaboration of the S'áradá form of the North-Western alphabet. When this event took place, I shall now attempt to show.

The old form (though not quite the oldest which was $\downarrow$ ) of the letter $y a$ was $\boldsymbol{N}$ or $\boldsymbol{\mathcal { V }}$. It was made by two separate movements of the hand, one for drawing the left-hand perpendicnlar, the other for drawing the remaining portion of the letter. The next step was an attempt to draw the letter with one movement of the hand. This led to the contrivance of the form $-\mathbb{J}$, by which the end of the left-hand crook or loop was brought forward to the point of junction of the perpendicular and horizontal portions of the letter. It was now possible to draw the letter with one stroke of the pen, beginning with the top of the left-hand perpendicular, downwards ; then round the loop, from left to right, to the bottom of the perpendicular; than finishing with the right-hand crook or angle. This change was clearly due to the convenience of cursive writing. But the tendency of cursive writing to quickness and economy of effort very soon led to a further change, which produced the form $\boldsymbol{\sim}$, by severing the point of junction. This was the final form of the process ; it is still essentially the modern cursive form. The intermediate form $\mathbb{G V}$, as I shall presently show, only existed for a comparatively very short time, and is essentially a mere transitional form.

It is a well-accepted fact that cursive forms first make their appearance in manuscript writing, and may be, and generally are, in use in MS. writing some time before they are introduced in the inscribing of documents on stone, copper or other material. Such documents are of a conservative nature; they have a tendency to preserve old forms, after they have long disappeared from ordinary MS. writing. The common or exclusive use, in an ordinary MS., of a distinctly archaic form is, therefore, a safe means of determining its age.

The old form of the letter $y a$ was once current in all the alphabets of India. In all of them it gradually became displaced by some cursive form. But this displacement did not take place in all of them at the same point of time. In the South Indian alphabet it survived, at least in inscriptions, down to the twelfth century A. D.* The North-Eastern alphabet,

[^13]as I have already remarked, was, in India proper, as early as the middle of the sixth century, superseded by the North-Western alphabet; but in Nepál it survived about three centuries longer, and there, with it, the old form of $y a$ survived, at least in inscriptions, down to the middle of the nineth century A. D. It should be noted, however, that the old form of $y a$, in the shape in which it survived in Nepál, is somewhat different from the old form in its original shape, as it was once current in the North Indian alphabets. Its original shape is that of a sort of trident, of which the left-hand prong makes a curve or even a loop, thus ow or $\mathcal{W}$. In the Nepalese shape, the curve or loop, is replaced by a ringlet which is poised on the top of the left-hand prong, thus $\mathbb{U}$.* The difference is marked, and the two shapes can be very easily distinguished from each other.

The North-Western alphabet is the first to discard the use of the old form of $y a$. From it, as I shall presently show, the old form disappeared, even in inscriptions, as early as the end of the sixth century A. D. ; and from cursive writing in that alphabet, according to the wellknown rule, above stated, it must have disappeared much earlier. There is an obvious conclusion, which is suggested by these facts; it is, that the invention, so to speak, of the cursive form of YA took place in the NorthWest of India, somewhere within the area in which the North-Western alphabet was current.

The first document from which the use of the old form has entirely disappeared is the long Bodhgayá inscription of Mahánáman of 588 A . D. (Fleet, p. 274). It uses exclusively the transitional form, with one or two exceptions in which the modern form itself is used. $\dagger$ In another short Bodhgayá inscription of Mahánáman, of about the same date (Fleet, p. 278), the modern form is used exclusively. In fact, after 600 A. D., there is no inscription known, which shows any trace of the survival of the old form. In all of them the cursive form of $y a$ is fully established in exclusive use ; thus in the Lakkha Mandal inscription of about 600 A. D. (Epigr. Ind., vol. I, p. 10), $\ddagger$ the Madkuban inscription of Harsha, of 631 A. D. (ibid., p. 67), the Aphsad and Sháhpur inscriptions of Adityasena, of about 672 A. D. (Fleet, pp. 200, 208), the Deo Baranark inscription of Jivita Gupta, of (about) 725 A . D. (Fleet, p. 213), the Sárnáth inscription of Prakatáditya of somewhere in the seventh century (Fleet, p. 284). To these may be added the evidence of those Nepalese inscrip-

[^14]tions, which are not written in the North-Eastern or proper Nepalese alphabet, but in the North-Western characters; thus the Gaidhárá inscription of 688 A. D. (see Mr. Bendall's Journey in Nepal, p. 77), the Jaisí inscription of 751 A. D. (ibid., p. 79), the inscription of S'iva Deva, of 748 A. D., another of 750 A. D., and the inscription of Jayadeva, of 758 A. D. (see Indian Antiquary, vol. IX, pp. 176-78). In all these inscriptions the modern cursive form is used exclusively.

Another piece of evidence, in the same direction, is the Tibetan tradition respecting the introduction of the Northern Indian alphabet into Tibet (see Journal, Asiatic Society of Bengal, vol. LVII, pp. 41 ff .). It is said that these characters were introduced into Tibet by the sage Sambhota, who brought them from Magadha, where he had resided from A. D. 630.650 . These characters are known in Tibet as the "Wartu" characters of Magadha; their forms, as traditionally preserved in Tibet, may be seen in Plate I of the Journal (ibidem) ; and it will be seen that among these the letter ya has the cursive form. This shows that at the time of Sambhota's visit to Magadha, in the second quarter of the seventh century A. D., the cursive from of ya was in current use in North India.*

I am not aware of the existence of a single dated inscription in North India, written in the North-Western alphabet, which indubitably proves any use, still less the exclusive or almost exclusive use of the old form of YA, after 600 A . D. It follows from this evidence that, since the old form of ya had entirely disappeared from inscriptions, from the end of the sixth century (say from about 580 A. D.), it must have disappeared from the cursive writing of ordinary manuscripts long before. Accordingly a manuscript, like the Bower MS., in which the old form is still used almost exclusively, must be placed long before the end of the sixth century, and much nearer the beginning of it.

This conclusion is fully supported by the evidence of all the ancient dated (or practically dated) MSS. that are, as yet, known to exist. The oldest is the Horiuzi MS. The date of its writing has been shown by Professor Bühler to be somewhere in the middle of the sixth century,

[^15]that is, between 520 and 577 A. D. (see Anec. Oxon., p. 63 ff.). It exhibits throughout the exclusive use of the cursive form of $y a$, thus showing that this cursive form was fully established for MS. writing in the middle of the sixth century A. D. The next oldest MSS. are two, described as Nos. 1049 and 1702 by Mr. Bendall in his Catalogue of Buddhist MSS. in the Cambridge Library, p. XXXIX. One of them is dated Saṃvat 252 , which Mr. Bendall takes to be in terms of the Harsha era and to be equal to 857 A . D. For my part, I can see no valid objection, on palæographic grounds, to understanding the date in terms of the Gupta era, and as equal to $571 \mathrm{~A} . \mathrm{D}$. I do not notice any such material difference between the writing of the Horiuzi M.S. and the two Cambridge MSS., as to account for a supposed interval of three centuries. Any how, both Cambridge MSS. exhibit the exclusive use of the cursive form of $y a$.

The conclusion appears to me inevitable, that any MS. which shows, as the Bower MS. does, the exclusive use of the old form, or which shows an uniform absence of the use of the cursive form, cannot possibly be placed later than 550 A. D., and in all probability is very much older. The only question is, whether there are any indications in the Bower MS. that render it possible to fix its date somewhat more definitely.

Here the following facts are to be observed. The first appearance of the modern cursive form of $y a$ in any inscription is met with in the Bijagaḍh inscription of Vishṇu Vardhana, of 371 A. D. (Fleet, p. 252), in śreyo, line 4 (if the plate can be trusted) ; and it is to be noted that it is used in junction with the vowel $o$. The old form, however, is more usual, as in námadheyena, 1. 3, and abhivriddhaye, 1. 4, in both cases with the vowel $e$. The first appearance of the transitional cursive form is met with about a century later (see below), but there can be no doubt that, though in the existing inscriptions, the first appearance of the modern form happens to be earlier, that form, as compared with the transitional form of the letter, is of later development.* Probably there was no great interval between the development of the two forms. In any case, the invention (so to speak) of the transitional form and, with it, the first beginnings of the modern form of $y$, may, thus far, be placed at about 350 A . D.

The actual first appearance of the transitional form occurs in the Indor copperplate inscription of Skanda Gupta, of 465 A . D. (Fleet, p. 68), in the words abhivriddhaye, 1. 4, and upayojyam, 1. 7, in both cases with the vowels $e$ and $o$. Side by side, the old form occurs in yogam, 1. 9, yo 1. 11, abhivriddhaye, 1. 8. Other instances occur in the Karitalai inscription of Jayanátha, of 493 A. D. (Fleet, p. 117), in

[^16]abhivriddhaye, 1. 7, and chhreyo, 1. 15, here also with the vowels e and $o$; and side by side with the old form in ye, 1. 10, lopayet, 1. 12, práyena, 1. 16, yo, 1. 20. Another instance occurs in the Khoh inscription of Jayanátha, of 496 A. D. (Fleet, p. 121), in the word abhivriddhaye, l. 8, again with the vowel e, and side by side with the older form in pratyáyopanayam, 1. 11, and práyena, 1. 17. A very clear instance is in the Tusam inscription, of about 500 A. D. (Fleet, p. 269), in yogícháryya, l. 3, again with the vowel 0 , and side by side with the old form in upayojyam, 1. 6.* Another clear instance occurs in the Jaunpur inscription of I'śvaravarman, of about 520 A. D. (Fleet, p. 228), in anvaváye, 1. 2, again with the vowel e. So again in the Mandasor inscription of Yaśodharman, of about 530 A . D. (Fleet, p. 149), in yo, 1. 4, again with the vowel $o$, and side by side with the old form in pádayor, 1. 5. Similarly in the Mandasor inscription of Yaśodharman as Vishṇuvardhana, of 533 A . D. (Fleet, p. 150), in yena, 1. 8, again with the vowel $e$, and side by side with the old form in bhirrayo, 1. 8, $\dagger$ yena, 1. 8 , $13, y o, 1.17,18$. Likewise in the Khoh inscription of S'arvanátha, of 533 A. D. (Fleet, p. 135), in nyáyena, 1. 13, ye, 1. 16, and pratyáyotpannaka, l. 9 , again with the vowels $e$ and $o$, and side by side with the old form in lopayet, 1. 18, grámayor, 1. 7, yo, 1. 25, ye, 1. 27, etc. These are all the instances of the occurrence of the transitional form that I have been able to discover among the 43 (Gupta) inscriptions in the North-Western alphabet, published by Mr. Fleet.

Contemporary with them are the following instances of the use of the modern cursive form. In the Maghgawan inscription of Hastin, of 510 A. D. (Fleet, p. 106), it occurs in the words chhreyo, 1. 14, yo, 1. 16, paniyeshu, 1. 17, ye, 1. 18, again with the vowels e and $o$, and side by side with the old form in the words anvayopabhogyas, 1. 10, yo, 1. 11, ahayo, 1. $18 . \ddagger$ The transitional form also occurs in the word abhivriddhaye, 1. 7.

Now as to the conclusions that follow from the above statistics, note, in the first place, the extreme rarity of the transitional and full cursive forms, as well as the peculiar circumstances under which alone they occur. And here mark the following four points.
(1) They occur only in a small proportion of inscriptions. Of course, the only inscriptions with which we are here concerned are those that use more or less exclusively the old form. Those that already use

[^17]the transitional or modern cursive forms exclusively are outside the question; so are, of course, all those that are not written in some variety or other of the North-Western alphabet. Now there are 34 inscriptions of the former description in Mr. Fleet's Volume III of the Corpus Inscriptionum Indicarum. To these may be added a few others, such as the Toramána inscription in the Epigraphia Indica, vol. I, p. 238, and the Kumára Gupta seal in the Journal, Asiatic Society of Bengal, vol. LVIII, p. 88. Among these there are only ten inscriptions, a little more than one-fourth, that exhibit the occasional use of the transitional and modern cursive forms at all. The rest use exclusively the old form.
(2) The transitional and full cursive forms occur, in that one-fourth of inscriptions, exclusively in connection with the vowels $E$ or O.* With all other vowels, $i$. e., in every other case, the old form is used.
(3) Even in connection with the vowels $E$ and $O$, the transitional and modern cursive forms are not obligatary, but optional. In fact, even with those vowels, the old form is used more commonly than the transitional and modern cursive forms. On the whole the former is used twice as often as the latter.
(4) Of the two :cursive forms, the transitional and the modern, the former is used much more frequently than the latter (viz., transitional: modern $=13: 4$ ).

In the second place, note that the period during which the sporadic use of the transitional and modern cursive forms occurs, is a comparatively well defined and short one. Its termini, so far as the evidence of the available inscriptions goes, are from 371 A. D. to 533 A. D., or in round numbers from 370 to 540 A. D., i. e., 170 years. Or, if we omit the very early case of the Bijagaḍ inscription, of 371 A. D., as perhaps of a suspicious character, because it stands by itself, separated by an interval of about 100 years from all others, the transition period extends from about 470 to 540 A. D., that is, 70 years. Antecedently to this period, we find the old form of $y a$ in undisputed possession of the field, and subsequent to it, the cursive form of $y a$ is in equally undisputed possession.

Now it appears to me, that from these facts there is but one conclusion, to which one is irresistibly driven. It is this, that there is here disclosed to us evidence of the actual point in time, when the invention, so to speak, of the cursive form of $y a$ was made, or, to speak more precisely, the application of it to the non-conjunct $y a$. For to suit the case of the conjunct or under-written $y a$, the cursive form had been long before

[^18]invented and exclusively employed. But to the non-conjunct $y a$, it only began to be applied about 470 A . D. At first it was only applied tentatively and hesitatingly in those cases in which the non-conjunct $y a$ carried the vowels $e$ or $o$ (or $a i$ or $a u$ ). But the convenience of the cursive form soon carried everything before it, and displaced the old form entirely about 540 A . D. In all probably this process commenced, in the case of manuscript writing, earlier than in that of documentary inscription, perhaps already about 400 A. D., and terminated proportionately earlier, perhaps about 500 A. D. On the other hand, in documentary inscription the process began later and ended later. Here the use of the old form may have lingered on to about 600 A . D. ; but from that date, as already shown from the evidence of existing dated inscriptions, the use of the cursive form of ya enjoyed an undisputed possession of the field.

Accordingly for practical purposes, the rule may be laid down, that any inscription in the North-Western Indian alphabet which shows the more or less exclusive use of the old form of IA must date from before 600 A. D., while any inscription showing an exclusive use of the cursive form of YA must date from after $600 \mathrm{~A} . \mathrm{D}$.

With regard to manuscripts the same rule must hold good, with this modification, that the termini must be put back by about 50 (or it may be 100) years; that is, a MS. showing the exclusive use of the cursive form of YA must date from after 550 or perhaps 500 A. D., while a MS. showing the more or less exclusive use of the old form of YA must date from before 550 or 500 A. D., and a MS. showing the exclusive use of the old form of YA must date from before $450 \mathrm{~A} . D$.

That this rule, as deduced from the above collected facts, is correct is proved by the Horiuzi MS. This MS. uses the cursive form of ya exclusively, and, as shown by Professor Bühler, it certainly dates from some time between 520 and 577 A . D.

This rule further proves that the elaboration of the so-called S'áradá alphabet may be placed about 500 A. D. For it possesses the cursive form of ya. Hence it follows that any manuscript and a fortiori any inscription, written in the $S^{\prime}$ aradá characters must certainly be later than 500 A. D.; though as the S'áradá characters, with slight modifications, are used up to the present day in Káshmír and the adjacent regions, a mere consideration of the form of the cursive ya is insufficient to fix with any approximation the date of such a manuscript or inscription in any particular year after that epoch.

Now let us see the bearing of the results of the above enquiry on the question of the age of the Bower MS.
(1) It is to be noticed that the old form of $Y A$ is used almost ex-
clusively throughout the MS. Indeed, in the second, third and fourth portions it is used exclusively, and it is only in the first and fifth portions, that the transitional form occasionally occurs.
(2) This transitional form is never used, except when carrying the vowels $E$ or $A I$ or $O$ or $A U$.
(3) Even with those vowels, the use of the transitional form is optional; though on the whole, it is more usual than that of the old form.
(4) Of the two forms of the cursive YA, the transitional and the modern, the former is used almost exclusively; the modern cursive form occurring only in a few isolated cases.

The following examples are all taken from the two published plates; and I have only to remark, that the pages, figured on the two plates, are very fair specimens of the whole manuscript.

The transitional cursive form is to be seen on Plate I, No. I,* in yoga, 1. 1, yoga, 1. 2 twice, yogánám, 1. 3, trayodaśam, 1. 5, Kalpayet, 1. 9; again on Plate III, upper page, in jivaniyo, 1. 2, payo, 1. 4, jivaniyaischa, 1. 4, lepayet, 1. 4, vimiśrayet, 1. 6, prayojayet, 1. 6, avagáhayet, 1. 6, yo..., 1. 6, lehayet, 1. 8, prayojayet, 1. 11. Note that it is always used with the vowels $e$ or $a i$ or $o$.

There is only one instance of the modern cursive form ; it occurs in the akshara yet of prayojayet in Plate III, upper page, in line 11. Here we have the transitional and the modern cursive forms side by side in one word, the former form being used in the akshara yo, the latter in the akshara yet. A similar instructive example of the use, side by side, of the old and the transitional forms, we have ibidem in prayojayet, in line 6 , where the old form is seen in the akshara yet, while the transitional form occurs in the akshara yo.

Of the old form there are the following instances. On Plate I, No. I, we have it in chúrnnayet, l. 10, and on Plate III, upper page, in upakalpayet, 1. 2, * * yet, 1. 3, prayojayet, 1. 6, lehayet, 1. 8, páyayet, 1. 9. Note here again, that all these instances are with the vowel $e$. Of the old form with the vowel o there is no instance in the figured pages ; but I have noticed a few cases in other parts of the manuscript. Of course, I exclude here, as being beside the precise point in question, all instances of the use of the old form in combination with any other vowel, only remarking, that it is used uniformly with all other vowels.

To sum up, the examination of the two specimen pages shows: ad Nos. 1 and 2, that the old form is used exclusively, except with the vowels $e, a i, o$ and $a u \dagger$; ad No. 3, that out of 23 instances, in which the

* Plate I is in the April Proceedings 1891, and Plate III in the November Proceedings, 1890.
$\dagger$ Of $a u$ there is no instance in the figured pages, but I have met with a few in other pages of the manuscript.
letter $y$ is combined with the vowels $e$ or $a i$ or $o$, the cursive (transitional and modern) form is used in 17, while the old form is used in 6 ; that is, the former is used about three times as often as the latter ; ad. No. 4, that out of 17 instances of the use of the transitional and modern cursive forms, the former is used 16 times, while the latter occurs only once; i. e., that the transitional form is used almost exclusively.

Now comparing the case of the Bower MS. with that of the Gupta inscriptions, the result is this, that the two cases, while fully agreeing in the main points, differ only in one particular, namely, that the cursive (transitional or modern) form is used in the manuscript rather more frequently than the old form (viz., cursive: old $=3: 1$ ), while in the inscriptions the old form is used rather more frequently than the cursive form (viz., cursive : old $=1: 2$ ). This, however, is nothing more than may be expected, if we consider that on the one side we have a case of ordinary manuscript writing, on the other one of documentary inscription, and remember that (as Professor Bühler says, in Epigraphia Indica, p. 68) "everywhere in India the epigraphic alphabets are in many details retrograde and lag behind the literary ones."

One thing, however, is clearly brought out by the evidence above set out, that the writing of the Bower MS. must be placed within that period, which, as we have seen, is marked out by that evidence as the period of transition from the use of the old rigid form of $y$ a to the use of the (still existing) cursive form ; that is, for manuscript writing, within the period from about 400 to 500 A . D., or the fifth century.

It is true that in the second, third and fourth portions of the Bower MS., the old form is used exclusively. There is no trace whatsoever of either the transitional or the modern cursive forms. Judging by this circumstance only, we should have to place the MS. still earlier, somewhere before the fifth century A. D. But this would certainly seem to be wrong with regard to the second portion. For the fact, that this portion was written after the first, seems to be clearly proved by the circumstance that it commences on the reverse of a leaf, on the obverse of which we have the ending of the first portion. Properly considered, however, that circumstance only tends to confirm the conclusion that the main portion ( ABE ) of the Bower MS. was written during the transitional period. For it is only natural to suppose that during that period, some scribes had already more or less adopted the new fashion of cursive writing, while others, more conservative, adhered to the older fashion. On the whole, therefore, considering that the portions $A$ and E of the MS. appear to manifest a decided tendency to a free use of the transitional form, it will probably be safer to place the date of the main portion of the MS. nearer to the end than the beginning of the transi-
tion period, that is to say, in the second Fialf of the fifth century (say, about. $475 \mathrm{~A} . \mathrm{D}$.$) . The portions C$ and $D$, however, may be referred to the commencement of that period (say 425 A . D. or even earlier).

This result will probably be startling to most of my readers. There exists,-and I admit, hitherto not without reason-a pretty general tendency to discredit any claim to great age on the part of any Indian manuscript. I used to incline to the same opinion, and the present result was an unexpected one to myself. But I do not see, how the force of the evidence can be gainsaid.

Let us see what the objections are. In the first place it is said, that the material of the MS:-birch bark-is of a nature too weak and flimsy, to permit us to believe that it could endure for such a length of time. This argument has been already well answered by Mr. Bendall in his Catalogue of Buddhist Sanskrit MSS., p. XVII ff., and by Professor Bühler in the Anecdota Oxoniensia, vol. I, part III, p. 63 ff. No a-priori rule will apply; all depends on the circumstances under which a MS. may have been preserved; and the argument, from the nature of the material, will not stand for one moment against positive arguments from epigraphic history. According to Lieut. Bower's account, the MS. "had been dug out of the foot of one of the curious old erections just outside a subterranean city near Kuchar." These erections are described as being generally about 50 or 60 feet high, in shape like a huge cottage loaf; built solid of sun-dried bricks with layers of beams now crumbling away." I suppose it cannot be doubted that these erections are Buddhist stúpas. Such stúpas often cortain a chamber enclosing relics and other objects; these chambers are generally near the level of the ground or "at the foot" (as it is said) of the erection, and they are often dug into by persons who search for hidden treasures. In this way the MS. was probably dug out, perhaps not long before it was made over to Lieut. Bower. In such a, practically air-tight, chamber there is no reason why a birch bark MS. should not endure for any length of time.

Another objection is that the characters used in a MS. are no guide to its age. It is said that "characters of the Gupta type have been used in very late times, and indeed are in use to the present day all along the region from which the Bower MS. comes." The characters which are here meant, are those used in the Káshmír, Chambá and Kángrá valleys. They are those which are commonly known by the name "S"áradá characters. These, as already remarked, are a variety of the North-Western alphabet, and are that variety which has, more than any other, preserved the shapes of its ancient parent, the NorthWestern Gupta alphabet. Now it is not quite correct to say, that
the S'áradá alphabet has not changed; it is quite possible to distinguish the modern form of the S'áradá from its more ancient form. But what is really important is this, that the $S^{\prime}$ áradá alphabet, so far as we have any dated evidence, never possessed, at any period of its oxistence, the old (Gupta) form of the consonant YA. It always possessed exclusively the modern cursive form of that letter. I maintain, that there exists not a single dated MS. or inscription, written in any variety of the S'áradá alphabet, which does not show the exclusive use of the cursive form. This being so, it follows that any conclusions, drawn from facts connected with the S'áradá alphabet, have no application to a MS., which shows the almost exclusive use of the old (Gupta) form of $y a$, and which, therefore, is not written in the S'áradá characters. Now, what conclusions can be drawn from the facts connected with the S'áradá alphabet? Its exclusive use of the cursive ya shows that its elaboration is to be dated on this side of 500 A . D. But as it has but little changed the shape of its letters since the date of its inception, it follows, that any undated MS. or inscription written in the S'áradá alphabet must be placed after 500 A. D., but may be placed almost at any time after that epoch. That is really all that can be intended by the principle that the S'áradá characters are no guide as to age. More the principle will not bear, and it clearly is not applicable to a MS. which is not written in the S'áradá characters, but in a form of alphabet more archaic and very possibly the parent of the S'áradá. With the proviso, now explained, I fully agree with Professor Kielhorn's remark, made with reference to a Chambá Grant (in the Indian Antiquary, vol. XVII, p. 7) that "it would be impossible to determine the age, even approximately, from its characters," these characters being, as Professor Kielhorn explains, the well-known S'áradá. Judging from these characters, all that one could say would be that the grant may date from any time after 500 A. D., which, of course, would be a futile proposition.

The main argument for the age of the Bower MS. is the preservation in it of the old form of ya. No objection can be raised on the ground that the old form was preserved much longer in the SouthIndian and the North-Eastern Indian (Nepalese) alphabets. As these alphabets differ from the North-Western Indian, which is used in our MS., any conclusions, drawn from the circumstances of those alphabets, have no applicability to our MS. It stands to reason that no scribe, used to his own North-Western Indian alphabet, would, in writing a MS., think of introducing the old form of a letter, which did not exist any more in his own alphabet, from another alphabet, unfamiliar to him, in which it did still exist.
P. S.-Since writing most of the above remarks I have, as already stated, read and transcribed nearly the whole of the manuscript. I have carefully noted every occurrence of the aksharas ye, yo, yai, and yau.

In the portions BCD I have found the cursive form (either transitional or modern) used not once. The aksharas yai and yau never occur ; the akshara ye occurs 19 times (B 4, C 13, D 2), always with the old form of ya. The akshara yo occurs 9 times (B 7, D 2), again always with the old form.

In the portions $\mathbf{A}$ and E , the case stands thus: there are altogether 333 cases of the occurrence of those aksharas, viz., 202 of $y e, 125$ of $y o$, 4 of $y a i$ and 2 of $y a u$. In every case of yai and yau the transitional form or is used. With ye and yo the transitional form is used 227 times, and the modern form $\mathbf{N}, 16$ times. The transitional form occurs 117 times with ye, 110 times with yo, 4 times with yai, and twice with yau. The modern form occurs 12 times with $y e$, and 4 times with yo. Altogether the cursive form occurs 249 times. The old form occurs 73 times with $y e$ and 11 times with $y o$. The following table exhibits this :

| Aksharas: |  |  |  |  |  | Totals. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Old | ... | ye 73 | yo 11 | yai 0 | yau 0 | 84 |
| Transitional | ... | , 117 | ,, 10 | ,, 4 | , 2 | $233)$ |
| Modern | ... | , 12 | ", 4 | " 0 | " 0 | $16\}^{249}$ |
| Totals | ... | ye 202 | yo 125 | yai 4 | yau 2 | 333 |

Now with regard to point No. 3 (see p. 89), there being 233 cursive forms to 84 old ones among a total of 333 cases, the proportion of cursive to old forms is as 3 to 1 . With regard to the point No. 4, there being 233 transitional to 16 modern forms among a total of 249 cases, the proportion of transitional to modern forms is as (about) 15 to 1 . In both cases, it will be seen, the evidence of the entire manuscript most accurately bears out the evidence of the specimen pages (see p. 91) and thus confirms my conclusions based on the latter. I may add with regard to the points Nos. 1 and 2, that in the portions A and E, the cursive (transitional or modern) form never occurs in any other akshara but those four : ye, yo, yai, yau. With the aksharas $y a, y \dot{a}, y i, y i, y u, y u ́$, in every case, without any exception, the old form $\mathcal{W}$ is used. The occurrence of these six aksharas, especially of ya and yá is very frequent, and this fact all the more accentuates the striking circumstance that the cursive form is only employed with the vowels $e, o, a i$, and $a u$. There must have been some reason for this peculiarity,-perhaps one of mere

96 A. F. R. Hoernle-On the date of the Bower Manuscript. [No. 2, 1891.] convenience of writing, though I cannot suggest any satisfactory one. I should note, that the vowels $e, o, a i$, and au are drawn, both with the old and the cursive forms, in every possible variety: entirely sidemarked, half side and half top-marked, and entirely top-marked. The cause of the peculiarity, therefore, cannot well have had any connection with the form of the vowels.

I would suggest that similar statistical enquiries should be made with reference to some other leading letters; e. g., $m$, sh, the sub-scribed $y$, the super-scribed $r$; also with regard to the numeral symbols. I have little doubt but that from such statistics may result some further useful land-marks for the determination of dates of writing. I hope to pursue the enquiry myself, so far as leisure from official duties will permit me.

## JOURNAL

OF THE

## ASIATIC SOCIETY OF BENGAL.

Part I.-HISTORY JIITERATURE, \&c.

No. III. -1891.

Three Documents relating to the History of Ladalk : Tibetan Text, Translation and Notes.-By the late Dr. Karl Marx, Moravian Missionary at Leh, Ladakh.*

## Introduction.

The late lamented Emil von Schlagintweit, Ph. D., etc., in 1866 in the 'Abhandlungen der k. bayer. Akademie der Wissenschaften, I. Cl., X. Bd., III. Abth.,' under the title of 'Die Könige von Tibet,' published for the first time the text and translation, with notes and commentaries, etc. of the so-called 'Ladakh-Gralrabs.' This little hook contained, after an introductory chapter, firstly, the genealogy of the S'ákyas; secondly, a brief history of the kings of Tibet (Yar-lung), and thirdly, a history of the kings of Ladakh. Now for the present it is not my intention to examine at all the first and second of these three divisions, but my remarks refer solely to the third and last, viz., the history of the kings of Ladakh, commencing at page 23a of the Tibetan text, and at pp. 62, 854 of the translation.

The Tibetan text was obtained for his brother Emil by Hermann von Schlagintweit-Sakünlünski, when on a visit to Leh, in 1856. It was a copy specially prepared for him, executed by three Lamas, but not until valuable presents had been given to the Rájá. It apparently

* [The author of this paper died, before he could revise the proofs. It is now printed, as received from him. The press-corrections of the Tibetan portion have been kindly made by Bábú S. Sh. Dás, C. I. E. Ed.]
was written in U-chan characters; consequently in all those cases, when certain U-med letters are apt to be confounded, it may be taken for granted that, as compared with U-med MSS., preference must be given to Schlagintweit's edition, as being founded on an U-chan MS. On the other hand, any MS., specially prepared by a native of Ladakh for a foreigner, is apt to be less reliable than others of independent origin, for the reason,-which would especially be true regarding historical documents-that the copyist will have a tendency to slightly alter the text, in the interest of his master, religion or country, suppressing such facts as may seem derogatory to their fame, and substituting for phrases liable to be misunderstood others of a less equivocal character. As to Schlagintweit's edition it must be admitted, that the Lamas, who wrote the copy for his brother, did not give way to any such tendency until they reached the 6 th line of folio 30 a : be it that they wished to suppress certain facts contained in the sequel, or that they were of opinion, that the 'merit' of the presents extended no further : certain it is, that beyond this point, the text is merely a meaningless jumble of words, culled at random from the original and put together in such a way, that only a careful examination of the text by one who knew the language could reveal the fraud. These two and a half pages, therefore, which are supposed to embrace the history of about two centuries, are really not fit for translation, and the attempt can only conduce to results totally misleading. All the other parts of the MS. seems to have been done fairly well. There are mistakes in spelling, and here and there an omission or an addition of a word or phrase that did not belong to the original, but, on the whole, the MS. seems to have been better than many one sees here. The pages of this Journal, however, are, I fear, not the fit place to enumerate and discuss in detail all the various errors in writing that occur in the MS. The new Tibetan text, herewith published, will, to any one interested, clearly show where and how, in my opinion, Schlagintweit's text ought to be corrected; and to explain the reason why I dissent from his opinion, would, in a MS. of comparatively so little classical value as the 'Ladakh Gyalrabs', be sheer waste of time.

Schlagintweit's translation I would much prefer to pass over in silence, but as, for a new translation, there would be no raison d'être whatever, if his translation were at all adequate, I am compelled to state my opinion regarding it. It is as follows:

Considering that, in the first place, his Tibetan text left much to be desired;-that, secondly, in 1866 the Standard-Repository of the language of western Tibet, viz., the Dictionary of Aug. Heinrich Jàschke, had not yet been published, and that therefore the meaning of many
words and idiomatic expressions with which we now are familiar were still undetermined;-that, thirdly, Schlagintweit was not in a position, by constant intercourse with natives of Ladakh, to test for himself the accuracy of the conclusions he arrived at;-that, fourthly, he, being at a distance, could not possibly have that knowledge of the country and people, which a sojourn in the country itself only confers; and, finally, that to him even no map of western Tibet, and of Ladakh probably none more full than Montgomerie's route map of 1864, was available:-considering all these drawbacks, his translation, no doubt, was all that at that time could be accomplished. The amount of acumen and learning he expended upon it was so great, that the result certainly ought to have been of the first order.

Still, in the light of the present day, and with materials at hand that, no doubt, would have excited Schlagintweit's envy, it must be said that his translation can no longer be left unchallenged. Not only does he himself admit that there remain a considerable number of obscure passages, which he was unable to solve and which admit of a solution now ;-but also, where he is confident to have divined the right meaning, his translation either remains so mysterious, as to be little more intelligible than the original Tibetan, or it is, from some misunderstanding or other, erroneous. Throughout the whole 'History of the Kings of Ladakh' there are, indeed, very few sentences, that at all give a correct idea of the meaning intended; most of it is either in part or totally wrong. I may say, that had his translation lent itself to being corrected and translated into English, I probably would have used it. But this was not the case. I had to discard it entirely and build entirely afresh on new ground.

In proof of this assertion I probably again ought to discuss in full, where and in what respects my translation differs from his, and show cause why I consider mine an improvement upon his. This, however, could again only be done, if I had an unlimited space at my disposal. Hence, as to the 'where' and 'how' we differ, I must again refer any one interested to the pages of the two translations themselves. He will, probably, find it difficult to reconcile the two, and possibly not understand that the original text, after all, should be almost identical. And also, as to the 'why' and 'wherefore,' I find myself under a necessity to abstain from any discussion, because if once gone into, it would be necessary to rewrite almost the whole of his and my own translation, and to analyze nearly every sentence. All I can do, therefore, is to submit my translation, without any special defence, to the judgment of Tibetan scholars and abide their verdict. I trust, however, that they will find it not so very difficult to discover, why I had definitely to set aside Schlagintweit's translation and attempted a new one.

And even those, who do not know Tibetan and hence are not in a position to determine every point of difference for themselves, will readily discover that, after all, the subject has gained a little in lucidity, and that the history of Ladakh, as far as it is contained within these pages, is no longer a chain of insoluble mysteries, but a coherent and intelligent, though simple and brief account of the past. This criterion is available to any one and is, probably, the best in any case.

The fresh material at my disposal consists of three different manuscripts. All of them are written in the U-med character.

A-MS. is a small book in 16 mo ., bound in leather and well kept. It contains, on 109 leaves, 1st, a cosmogony and cosmology in outline; 2nd, the genealogy of the S'akyas; 3rd, a history of the kings of Tibet (Yar-lung) ; 4th, a history of the kings of Ladakh down to king Senge-nam-gyal (XXII). Throughout, it is most neatly written with comparatively few mistakes. As it was not originally written for an outsider, but for the private use of its owner, its text may safely be supposed not to have been altered on purpose. The history of the kings of Ladakh down to Senge-nam-gyal fills 20 leaves. It forms the basis of the Tibetan text, now published.

B-MS. are four loose leaves in folio, very old looking, very much worn at the edges and corners, and torn in some places. It commences with the history of the second (Nam-gyal) dynasty of Ladakh kings (compare translation, p. 123), and gives a comparatively full account of the history of Ladakh down to the Dogra invasion. This MS. is very badly written, so much so, that even Ladakhís find it difficult to read; still in point of excellence it ranks next to A , and the information it contains regarding the decline of the Ladakh empire (since De-ldan-nam-gyal, XXIII) is especially valuable. In order to avoid trespassing too much upon valuable space, I amalgamated the preceding and overlapping portions of B with the corresponding portion of A ; that is to say, the portion of B containing the history of the Ladakh kings from Dags-pa-bum to Senge-nam-gyal inclusive, which coincides almost exactly with the corresponding portion of A, I do not purpose publishing separately, but it is embodied in A-MS., though any new matter contained in it is conscientiously preserved and specially marked there. My next publication will, therefore, have to commence with the successor of Senge-namgyal, that is, De-ldan-nam-gyal. It will have for its basis the rest of B-MS. with such additions as may be derived from C-MS.

C-MS. consists of two parts. The first part was specially prepared by command of the Wazir of Ladakh. Consequently all the vices, inherent in such MSS. as hinted at above, are manifest in it. It consists of 23 folio leaves. It is very carelessly written, and the text is very
incomplete. It is much inferior to either A or B. It is obvious in several places that alterations were introduced on purpose, and the principle underlying this practice can easily be discovered: it is, to avoid, in the first place, the miraculous, secondly, anything that may be offensive to the Dogra reader, and thirdly, all that may throw an unfavourable light on the Royal family. Still, there are a few passages preserved in it that are new; and they will be found introduced in their proper places and specially marked in A and B. This MS. covers the entire history of the kings of Tibet (Yar-lung) and of Ladakh to close upon the Dogra invasion. It also contains an interlinear translation into Urdú, but written in Tibetan (U-med) characters.

The second part of C-MS., was prepared for me at my special request by the writer of the first part, who is the head of one of the ancient families that presided over important functions under the old régime. As I am not an official personage, I think, I need not apprehend that he withheld the truth from me. In this portion he almost exclusively relates the events of the Dogra wars and the fall of the Ladakh empire. As his own father was mixed up to some extent with these painful affairs, it is to him a kind of family history as well. The very fact that he tells it at all and without any embellishing touches, goes far to prove his veracity in this case; and as the whole narrative does not contain one word derogatory to the conquerors, but a long tale of ignominy and shame to the losing, $i$. e., his own, side, I think the character of the writer is fully established thereby. I, therefore, purpose giving this part of the MS. separately under the title of C-MS. It consists of about 6 folio leaves. Its language is the modern Ladakh book-language, and this fact alone should render it particularly interesting to students of the Tibetan language.

It will appear from these remarks, that all the three manuscripts were arranged by me so as to form one consecutive whole, containing as full an account of the history of Ladakh, as, for the present, it is possible to give.

As none of these documents, however, from a literary point of view, is really of classical value, I did not hesitate to introduce such corrections in the spelling of words, as were necessary to render them as readable as possible. The spelling uniformly adopted is that of Jáschke's Dictionary. Only in C-MS. I shall preserve the original orthography, wherever it is accounted for by Ladakh usage.

As to my own translation it is superfluous te say, that I attempted to give as true and faithful a rendering of the original in English as I could; and I hope and trust, that mistakes are few and far between. On the other hand, I may say, that it has been my aim throughout to
present it in such a form as will make it acceptable to English readers. If, after all, the wording seems clumsy and of little fluency,-I can only say that I 'tried my best.' As the English language is a foreign idiom to me, I think, that in this respect I am entitled to a certain amount of forbearance. Somehow, it seems to me, that to combine, in a translation, faithfulness to a Tibetan original with fluency in English is particularly difficult.

Apart from my own observations and special studies, I had to rely greatly upon the assistance of natives of Ladakh. Information derived from this source has, however, in every case been carefully sifted and compared with statements by other persons. As to works by European authors, Jàschke's Dictionary was found invaluable. Koeppen's 'Religion des Buddha' and 'Lamaistische Hierarchie' was a great help in many places. Sir Monier Williams' 'Buddhism' (1890) sometimes proved useful. E. von Schlagintweit's 'Buddhism in Tibet (1863) is, I fear, not more reliable than his 'Könige von Tibet' (1866). Cunningham's 'Ladakh,' I regret to say, was not accessible here, nor was Wassiljew's 'Buddhismus.' Drew's 'Northern Barrier of India' and his map are referred to on several occasions. Other maps used were the map of the Government Survey for Ladakh etc., and one sheet (SE) of the 'Map of Turkestan' (in four sheets, 1882). No maps relating to Central Tibet were available here.

In romanizing Tibetan names, I adopted, for the sake of its simplicity, Jàschke's system as set forth in his useful 'Tibetan and English Dictionary' (Kyelang, 1866), with one or two exceptions, viz., $h$ as indicating an aspirate, I replaced by an apostrophe, (e. g., for $c h h$, $t h s$, etc., I wrote $c h$ ', $t$ 's, etc.) ; instead of $s h r$, I used $s h$, and $g$ indicates the soft guttural $g$ (in the Comparative Large Dictionary $\gamma$ ), $d, t, t, s h$ represent the cerebral class of consonants. The vowels invariably have the Italian sound. This system of transliteration very nearly corresponds with the ordinary Ladakh pronunciation of Tibetan. It widely differs, as is well known, from the Lhasa pronunciation, but has the advantage of representing more accurately the spelling of Tibetan words, and of simplicity.

As I am not acquainted with Sanskrit, I had to rely upon the authorities adduced for any information derived from Sanskrit sources.

A small contingent of new Tibetan words and phrases will also be formed embodied and explained in these pages.

The notes appended at the end of the translation will, I trust, be found useful.
A.

Tibetan Text.



















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3 पब्สิस'大̊ำ 1

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* From MS. B only.
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* This word is torn off in the MS. I give the word which, according to popular belief, would be the correct rendering.
$\dagger$ This entire passage is omitted in all the MSS. but B, neither is it contained in Schl,'s edition.
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* Schl.'s edition and MS. B have both 女শ্'̄ which may also be correct.

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* MS. A has โ aI'

$\ddagger$ Passage in B only; the first word is illegible.


















* This sentence seems incomplete.
$\dagger$ From B only, it is not free from Ladakh provincialisms, and probobly somewhat defective.



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A.

Translation.
This (Lde-pal-k'or-tsan's) ${ }^{1}$ sons were: Skid-lde-nyi-ma-gon and Ṭa-shis-tsegs-pal ${ }^{2}$ ), these two. Sliyid-lde-nyi-ma-gon, when on his way to
${ }^{1}$ The Gyal-rabs-sal-wai-me-long (Gyalr. s. m.) MS. in my possession further explains, that Lde-pal-k'or-tsan (Gyalr. s. m. Ie-pal ${ }^{\circ}$ ) was the son of Od-shang, the legitimate son of Lang-dar-ma. Od-sḥung's claim to the throne was contested by Yam-stan, the suppositious son of the 'great' queen (the first wife), Od-shang being the true son of the 'lesser' queen (second wife).
${ }^{2}$ Skyid-lde ${ }^{\circ}$ and TTa-shis', the one the son of the 'great', the other of the 'lesser' wife of Lde-pal ${ }^{\circ}$, were both robbed of all their possessions in Tibet proper by Yumstan, and fled to 'Nga-rigs' (i. e., Nga-ris-kor-sum). From Skyid-lde ${ }^{\circ}$ the kings of 'Nga-rigs' derive their pedigree; from Ta-shis', the chiefs of Yar-lung (Gyalr.

Upper Nga-ris-Tibet proper being in a state of revolution ${ }^{3}$-and accompanied by a hundred horsemen under the leadership ${ }^{4}$ of Bal-ma-zugtsan, K'ong-mo-nyag-pa (and) A'-ka-wadzra, these three, (happened to be in so straitened circumstances) that he had nothing to eat but eggs and fish. Now (his servants) brought him (this dish) covered with a napkin. From this it has come to be a custom with the kings of Tibet to use the (so-called) 'Giant's Napkin.'5 Eventually he arrived at Ra-lai-gyud. ${ }^{6}$ He built K'ar-mar ${ }^{6}$ in the Horse-year, ${ }^{7}$ Tse-sho-gya-ri ${ }^{8}$ in the Sheep-year. He caused many villages and hamlets ${ }^{9}$ to be built throughout the broad valleys of Dam and Lag. ${ }^{10}$ Mar-yul ${ }^{11}$ he left undisturbed.
s. m.). -The word Lde, in this and other names, Koeppen (II, 52) assumes to be identical with lte-wa, 'navel, umbilicns, centre.' I find, however, that wherever lte-wa has the meaning of 'navel' ctc., it is never spelt lde, so that I feel inclined to search for another meaning of lde.
 learned Lama, Ta-shis-stan-p'el ( $\dagger$ Dec. 1890), informed me that in his opinion
 it is as given in the translation.
 most prominent were the three etc.' Similar phrases occur frequently throughont these documents, also relating to weapons and turquois (p. 123), monasteries (Schl's ed., p. $30 a$ ), etc.

5 With the Rájás of Ladakh it is still in ase under the name of Sang-K'ebs

${ }^{6}$ Said to be a Steppe-district inhabited by nomads, beyond Ru-t'og; near it the ruins of an old castle, called K'ar-mar, still exist.

7 These definitions of years without the number of the cycle of 60 are quite useless. Relating to haman beings, the name of the year, in which they were born, usually suffices to determine their age, as their appearance and features clearly enough indicate through how many cycles of twelve years they may have lived. But relating to cities etc., after the lapse of conturies, no such corroborative evidence usually is available, and hence the name of the year alone is no clue to their age.

8 Not known.
9 ब्बैद. 它工’ Several of the places, designated by this term and mentioned here, still exist and may be inspected any day. It must be said that they are not 'towns,' but merely ' hamlets.'

10 Not known. In the Upper Sutlej valley (map of Tarkestán, 4 sheets, 1882) I find, however, the names Dam and Lak,-could they have any connection with the places referred to here?

11 Mar-yul and Mang-yal, (according to TTa-shis-stan-p'el, derived from a word me-ra, meaning 'bare rocks') inclades Upper and Lower Ladakh, Nab-ra (comp. page 122), Zangs-kar etc.

At that time, of Mar-yul Upper Ladakh ${ }^{12}$ was held by the descendants of Ge-sar, ${ }^{13}$ whilst Lower (Ladakh) was split up into various independent principalities.

At that time Ge-shes-tsaul ${ }^{14}$ (was sent) to Pu-rang, where he asked and obtained the hand of Do-za-k'or-skyong. He married her and she bore him three sons. He now built the palatial residence of Nyi-zungs ${ }^{15}$
${ }^{12} \dot{\chi} \mid \boldsymbol{J}$ the Persian transliteration of the word $\mathrm{Q}^{\prime}{ }^{\prime} \Delta \Delta \mathrm{N}^{\prime}$ is certainly not warranted by the pronunciation of the word in Ladakh itself, where everybody says ' La-daq', but I am informed by the Rev. J. Weber of Pu in Kunawar, that in that district the terminal $\cdot \triangle \mathbb{N}$ ' is invariably pronounced like $\dot{\boldsymbol{Z}}$ or ch in 'loch ;' this may acconnt for the transliteration in Persian. The boundary between Upper and Lower Ladakh is the platean between Basgo and Saspola (Survey Map: Bazgo and Saspal).
${ }^{13}$ Ge-sar, the name of a fabulous king of Tibet, or more correctly of the 'Ling-' people ( ${ }^{2} \hbar^{\prime}$ ), and champion of the Lamaistic faith. He is not in any way con. nected with the kings of Tibet properly so called, and in the annals of these kings, so far as they are contained in the Gyalr. s. m, he is referred to only once, viz., as one of the suitors of Kong-go, the Chinese princess, who afterwards became the
 the Iang, Hor and the Chinese form the subject of an elaborate epic, the epic of Tibet. The parts relating to the Iang- and Hor-wars are printed and published, but the story of the war against the Chinese, I am told, is kept secret, lest the Chinaman should be too much offended by its publication. The narrative itself is not in metre, but in prose, but there is only very little of it, as compared with the number of speeches, songs etc. which are in metre. The 'Iang-war' is in the K'ams dialect, and for this reason difficult to read to ns in Ladakh. The ' Horwar' is much easier. The epic is popular throughout Tibet, but people in Parig are said to know more of it than anyone else. In Ladakh the Bhe-da (professional musicians) do much towards its preservation, by rehearsing portions of it on festive occasions, to which they are invited to provide the musical part of the entertainment. Consequently most of the people are familiar with the names of the chief heroes and the general drift of the story, and indeed, if interrogated regarding it, will grow quite enthnsiastic in their praises of the same. The Mongol version of the story (Translation into German by I. J. Schmidt, 1839) is very different from the Tibetan version, inasmuch as it dwells mainly on the exploits of Ge-sar when a boy and young man. Still, it is possible, that the war against the Kháns of Shiraighol and the 'Hor-war' may be identical as to their subject-matter.-In a house at Leh, belonging to one of the old Ka -lon (State-minister) families, illustrations of the story of Ge-sar may still be seen painted on the wall all round one of the rooms. -My own small collection of Tibetan MSS. includes parts of the 'Iang.' and 'Horwars.'
${ }^{14}$ Translation doubtful. It depends upon the exact meaning of Ge-shes-tsan.
${ }^{15}$ Said to be in Pu-rang.
along with the city，${ }^{16}$ and then conquered Nga－ris－skor－sum ${ }^{17}$ complete－ ly．He ruled in accordance with the Faith．

His three sons were：Lha－ch＇en－pal－gyi－gon，${ }^{18}$ Taa－shis－gon，the second，Lde－tsug－gon，the youngest．He gave to each of these three sons a separate kingdom，${ }^{19}$ viz．，to（I）Pal－gyi－gon ：his dominions were Mar－yul，the inhabitants using black bows，in the east，Ru－t＇og and the gold mine of Gog，${ }^{20}$ nearer this way Lde－ch＇og－kar－po，${ }^{21}$ at the frontier Ra－wa－mar－po，${ }^{22}$ Wam－le ${ }^{23}$ and to the top of the pass of the Yi－mig－ rock；${ }^{24}$ to the west，the foot of the Kashmir pass ${ }^{25}$ from the cavernous stone ${ }^{26}$ upwards hither；${ }^{27}$ to the north，${ }^{28}$ to the gold mine of Gog：all the districts included（within these limits）．To Ta－shis－gon，（his）

16 勾ひ＇N＇does not necessarily mean a large city，but rather a village connect－ ed with a royal palace（e．g．，Ting－gang，now Ting－mo－gang，near Nyur－la，is called a気ひ＇$V$＇but is merely a village．）

17 Nga－ris－kor－sum usually includes the districts of Ru－t＇og，Gu－ge and Pu－rang only．Here，however，it seems to include all Ladakh，Zangs－kar etc．as well．

18 Lha－ch＇en is an epithet usually applied to the eldest son only，and may mean ＇the heir－apparent＇；it is not a component part of the name，as it may be omit－ ted（see 3 lines further down）．It droped out of use from the time of Ts＇e－wang－nam－ gyal（XX）．（Comp．Lha－gchig＝＇princess．＇）


${ }_{20} \mathrm{Gog}$ ，not known．East and North seem to be quarters of heaven not definitely fixed in Ladakh geography．Here，Gog may be east or north；at some other place Ngam－ring is said to be east or north of Ladakh．Now Ngam－ring is known to be a place on the road to Lhasa， 21 marches this side of this city，and hence cannot possibly be to the north，but is to the west of Ladakh．An explanation，how this confasion came about，I am at a loss to give．
$2125^{\circ} \hat{e}$ down．＇Lde－ch＇og－kar－po $=$ Dem－ch＇og of the maps（Turk．）．Near the frontier and on the river Indus．

22 Not known．
${ }^{23}$ Wam－le $=$ Han－le，famous for its magnificent Lamasery（pictare in Canning． ham，Ladakh）．

24 ＝Imis－La（map of Turk．），at the foot of which the Han－le stream has its source．

25 i．e．，the Zoji－la or Zoji－bal．
26 Not known．
27 To Ladakh people：＇going in the direction of Lha－sa＇is＇going up，＇＇coming away from there＇is equal to＇going down．＇（Comp．the word על על in Hebrew．） Hence みあ＇あら＇always means，＇away from Lha－sa，down to hore＇＝＇downwards
 Lha－sa direction，as far as Ladakh＇＝＇upwards hither．＇
${ }^{23}$ See note 20. second (son), he gave: Gu-ge, Pu-rang, Tse, ${ }^{29}$ etc. To Lde-tsug-gon, (his) youngest (son), he gave: Zangs-kar-go-sum, ${ }^{30}$ Spi-ti, Spi-lchogs, ${ }^{31}$ etc.

Pal-gyi-gon, the eldest, had two sons: (II) Do-gon and Ch'os-gon.
The son of Do-gon was: (III) LHa-ch'en-ḌagS-Pa-LDe.
His son was: (IV) Lha-ch'en-jang-ci'ub-sem-pa.
His son was: ( $V$ ) Lha-cu'en-gyal-po. As to the reign of this king: he built the Lamasery of Lu-k'yil ${ }^{32}$ and caused a brotherhood of Lamass ${ }^{33}$ to settle down (there). He provided for a long time, with untiring (zeal), the recluses ${ }^{3 \pm}$ that lived in the neighbourhood of the Kailása and the three lakes ${ }^{85}$ with the necessaries of life; when they were numerous (there were) about five hundred, when few, one hundred.

His son was: (VI) Lha-ch'en-ut-pa-la. As to the reign of this king : after having united the forces of Upper and Lower Ladakh he invaded Nyung-ti. ${ }^{36}$ The king of Nung-ti bound himself by oath, so long as the glaciers of the Kailása will not melt away, or the Manasarovar lake ${ }^{37}$ dry up, to pay tribute and dues ${ }^{38}$ (to the king of Ladakh), (viz.) Dzo ${ }^{39}$

29 Not known.
${ }^{30}$ Go-sum, ' 3 doors,' may refer to the 3 valleys that join at the central part of Zangs-kar.

31 Spi-ti, well-known district within British territory. As to Spi-lchogs I would venture to suggest, that Lahoul may be meant by this term. This district would have well rounded off his dominions and would have been the connecting link between Zangs-kar and Spi-ti. B MS., however, relating to the present century, has $\triangle 7 I^{\prime} Q{ }^{\prime}$ Gar-zha, the nsual Tibetan name for Lahoul.
32. Schl.'s ed. and mlgo : Li-kyir (Survey Map : Likir), a village on the upper road from Leh, or rather from Bazgo, to Nyurla (Snurla) and Ka-la-tse (Khalsi). This name would suggest (as well as the name of Lama-ynura, Yurru being = Yung-dang $=$ Svastika) that, as in Tibet so also in Ladakh, the Bon religion at one time was prevalent, of which the worship of the Lu (Nágas) and of the Yung-dung, and the idea of a Bon, i.e., summum bonum, seems to have formed the most important elements. (This is borne out by the contents of a volume on the Bon religion, which was recently placed at my disposal).


35 The maps know of two lakes only. But there is a possibility that the Kailása counts as one and, with the 2 lakes, makes up 3 separate places.

36 Nyung-ti $=$ Kallu, Capital : Saltánupur.
37 Viz., the Ma-p'am lake, the more easterly oue of the two.
33 Tib. 耳च्ट' in Jäschke's Dictionary, but the MSS. and Schl.'s ed. unanimously write

39 Well-known cross-breed between jak and cow.
and iron, etc. This treaty remained in force till this day. ${ }^{40}$ He also subjected Lo-wo, ${ }^{41}$ (and the country) from Pu-rang downwards hither; in the south the country of D e-shang to the place, where the water is fiery; ${ }^{42}$ to the west, from Ra-gan-deng-shing (and) Stag-k'u-ts'ur ${ }^{43}$ upwards hither ; to the north, from Ka-shus ${ }^{43}$ upwards. (They all) paid an annual tribute and attended the Darbár. ${ }^{44}$

His son was: (VII) Lha-ch'en-nag-lug. This king built the palace ${ }^{45}$ at Wan-la, ${ }^{46}$ in the Tiger-year, K'a-la-tse ${ }^{47}$ in the Dragon-year.

His sons were: (VIII) Lha-ch'en-ge-bhe and Ge-bum.
His son was: (IX) Lita-ch'en-Jo-idor.
His son: (X) TA-shis-gon.
[His son: Lha-gyal.] ${ }^{48}$
This king caused a copy to be written of the Gyud-do-rje-tse-mo, ${ }^{49}$ and of the Ngan-song-jong wai-gyud ${ }^{50}$ and of the Gyud-bum, ${ }^{51}$ all in gold.

His son was: (XI) Lita-ch'en-jo-pal. This king performed royal,

40 Some twenty years ago the tax-collector of the king of Ladakh, still used to visit Lahoul and probably Kullu, although the two districts then already were under British rule.

41 Not known.
42 Not known, although people pretend to know well that a lake exists, callea by them I'so Padma-chan, to which the passage is said to refer. It is supposed to be in British territory. The Sham-bha-la-pai Lam-yig contains the following passage: 'At the city of the king Da-ya-tse of Pa-rang, in consequence of water striking against coal, at night the coal is seen burning. It is said of this coal and water, that they have the peculiarity that the water, if introduced into the stomach of man or beast, turns into stone.' What to make of this, I cannot divine, bnt it seems certain that the phenomenon referred to here is the same as that alluded to in the passage.

43 Not known.
44 Tib. वマ"
45 स『I' usually translated by 'palace;' I feel inclined to prefer 'fort' or ' castle.'

46 One march off the Kashmir road, near Ka-la-tse and Lama-yurru. (Survey Map: Wanbah.)
${ }^{47}$ At the bridge crossing the Indus (Kashmir road). Map of Turkistan and Survey : Khalchi ; Drew : Khalsi.

48 Mentioned in Schl.'s ed. only. Doubtful.
49 'Treatise of the Vajra-point.'
50 'Treatise on the Removal of Going to Perdition.'
51 ' 100,000 -Treatise.' With the two first-mentioned treatises I am not acquainted. The Gyud-bum consists of 12 vols. (in the ordinary printed edition), but I have also seen very fine written volumes, one, $e . g$., on indigo-tinted paper with letters in gold. The contents seem to be disquisitions on the Mahâyâna philosophy.
as well as clerical duties（to such perfection）that he arrived at the end ${ }^{52}$（of his transmigrations）．

His son was：（XII）Lha－ch＇en－ngos－pob．During the reign of this king the usage of novices going to Us－Tsang was first introduced．He also repaired the colleges that had been built by his ancestors ；but more important than this：he laid down before the Prince of the Faith，the Lord of the three Worlds，${ }^{53}$ gold，silver，copper，coral－beads，pearls，etc．， all（presents numbering）one hundred．He also caused to be copied ${ }^{54}$ the Ka－gyur twice and the Sang－ngags－kyi－skyil－k＇or ${ }^{55}$ many times．

His son was：（XIII）Lha－ch＇en－gyal－bl－Rin－ch＇en．
His son was：（XIV）Lha－ch＇en－shes－rab．As to the reign of this king ：having built the hamlet Seng－ge－sgang on the top of the so－ called Hang－tse－mo（－rock），he made it a dependency of the Chang castle of Sa－bu ${ }^{\text {b6 }}$ in Mar－yul．

His son was：（XV）LHA－CH＇EN－T＇T－TSUG－LDE．This king built（one row of）ch＇ortens（numbering）one hundred and eight ${ }^{57}$ at Leh，${ }^{63}$ and two （rows of） 108 at Sa－bu．

His two sons were：（XVI）LHA－ch＇en－pags－bom－Lde and Pags•pa－bum．
Dags－bum－lde held Leh etc．He erected，for the sake of his repu－ tation with posterity，${ }^{59}$ the Red College ${ }^{60}$ and a Buddha Maitreya，the
 あ゙エ゙ざら「ざずび
$53=$ Baddha，i．e．，his image，probably the so－called Io－wo．
54 女वेদ＇य＇most closely agrees with the German：＇stiften，stift，stiftung＇； an exact equivalent in English I have not been able to discover．

55 ＇Wheel of Dháraṇi＇（＇secret spells＇），a kind of book of which there exists a great variety．

56 Village six miles SE．of Leh，off the main valley．（Survey Map：Soba．） The Hang－tse－mo is a rock well known there．The castle is in ruins．

57 108，4包＂总 a sacred number． 108 is also the number of beads of the ordinary rosary of Lamaists，（for other examples see Sir Monier Williams＇book on Buddhism，second edition，page 383）．I find in G．H．Schnbert＇s Sternkunde（1832） the observation，that in India 4，320 lanar years constituted one sacred period，the first of which terminated about the commencement of our era．It may be divided into 4 periods of 1080 ，equal to two Phœnix periods of 540 years．＇As 108 is a constituent of all these figures，it may be supposed to be in some way connected with them．The rows of ch＇ortens referred to here usually consist of ch＇ortens not higher than 2 or 3 feet，and resemble low walls built at random anywhere across the desert．

 ＇Nachrahm．＇

60 Probably the one on the Nam－gyal－tse－mo at Leh．

Lord, in size (such as he will be) in his eightieh year. ${ }^{61}$ On his right and left there were a Mañjuśrí and a Vajrapáni, each one story high. He caused to be painted all fresco pictures, representations of the departed Buddhas, of the preserver of the universe, ${ }^{62}$ and of all his own private deities. He also built a triple temple (one surmounting the other) on the pattern of (the one at) T'o-ling. 63 As a symbol of the Word, ${ }^{64}$ he caused a copy to be written of the Zungs-bum-ch'en-mo ${ }^{65}$ and of the Kon-ch'og-tsegs-pa lang-kar shegs-pa ${ }^{66}$ and some others. As a symbol of the Spirit: some fatality having occurred at Leh, he built over the Teu ${ }^{67}$ ser-po ('Yellow Crag') completely, outside in the shape of a ch'orten, inside containing 108 temple-shrines. The ch'orten is called: Teu Ta-shis-od-t'o. ${ }^{68}$ Again, in the lower part of the valley of Leh, there is a crag resembling an elephant. The king caused to settle down on this rock a brotherhood of four Lamas. ${ }^{69}$ Having done all this, he said : ' If I die now, it matters not.'

61 I. e., in a sitting posture aboat 20 or 25 feet high.

 Totlingmat, 'mat' $=$ 'the lower' $i . e$. lower part of the city.' The Sham-bha-la-pai Lam-yig contains a reference to this temple: "it had been built (A. D. 954 Schl.) by the Lo-tsa-wa Rin-zang-po. The Hor (Tarks?) barnt it down, bat at some later date it was rebailt, and now, in its lowest compartment, it contains the 'Cycle of the Collection of Secrets'." Adolph von Schlagintweit visited it; see 'Results of a Scientific Mission.'





 is not without some underlying idea of a Supreme Being, ruling over all, some other more obscare and deeper meaning embodied in these symbols.

65 'The great 100,000 of Dháraṇí.'



67 Tibetan 天 $\mathfrak{Z}^{\prime}$ 'crag.'
68 This ch'orten 'Brilliant good fortane,' still exists, though in a dilapidated condistion, aboat two miles up the Leh valley from the British Joint-Commissioner's compound.

69 Also still extant at the suburb of Leh called Ska-ra, near the Kil'a.
（At that time it came to pass that）the Omniscient of the period of degeneration，the great Tsong－k＇a－pa，Lobzang Dags－pa，${ }^{70}$ having in his possession a T＇se－pag－med71 about as long as a finger joint，which had originated from the blood of his nose，entrusted the same to two as－ cetics，and said，＇Give it either to the one called Dags－pa or to the one called Lde．＇When the two arrived in Mar－yul，the one called Dags－pa was in Nub－ra．They went into his presence，but he did not deign to look at them with so much as one eye．So they went on to Leh．On the morrow the king gave command：＇At to－day＇s Darbár，whosoever attends，be it ascetics，or Bhe－da，${ }^{72}$ or $\mathrm{Mon},{ }^{73}$ or Ti －shi，${ }^{74}$ he should not be refused admittance．＇Now when the two ascetics came into his presence，the king rose and went to meet the two ascetics．The two ascetics made over the present，and the king was delighted with it． Taking the precious law of Buddha for his pattern， 75 he built the Lamasery of Spe－t＇ub，${ }^{76}$ though in reality he did not build it，but it came into existence by a miracle．Having built it，he caused many brotherhoods of Lamas to settle down（in the country）．

His son was（XVII）Lo－poos－ch＇og－Ldan．As to the reign of this king ：from Gu－ge were brought： 18 coats of mail， 77 the most excellent

70 Lo－bzang（＝pron．Lobzang）Dags－pa is Tsong－k＇a－pa＇s spiritaal name（comp． Koeppen II，p．118）．

71 ＇Time without measure，＇＇Eternity，＇an epithet of Gautama Buddha．
72 Bhe－da ：professional musicians of low caste，Muhammadans，of Balti extrac－ tion．They，as well as the other low caste inhabitants of Ladakh，now may possess fields and houses．

73 Mon：joiners and carpenters by profession，also of low caste，though not quite so low as the Bhe－da．They probably are remnants of the tribes of aborigines， but at one time occapied the hill districts of the Himalayas．Though Baddhists， the zamíndárs keep apart from them，and any zamíndár who would marry a Mon－ maiden would by doing so lose caste．

74 Ti－shi：another low caste，shoemakers by profession．They also are Buddhists．

75．This probably means ：＇he adopted the reformed doctrines of Tsong．k＇a－pa．＇ Tib．：ちざみ＇Pf．ちさN＇＇to imitate．＇

76 Lamasery and village，on the river Indus，five miles south－west of Leh．The Lamas belong to the Ge－ldan－pa order of Lamas．The Lamasery has an incarnated
 Pittuk．）Other Lamaseries of the Ge－ldan－pa order in Ladakh are TT＇ik－se（Survey Map：Tikzay），Sang－kar（a Leh suburb），Li－kir，Ri－dzong and many small ones．
$N$ B．－Although the＇Order＇primarily refers to the Lamas，yet every family or hoase（ other of the Lamaseries，and hence is attached to the respective Order of Lamas as a kind of lay－dependency，and worships the same tutelary deity（খे・ち ${ }^{\circ}$ ）．

77 Names given to weapons eto．are very common in Tibetan literatare．They
of their number being the Mu-ț'ab-zil-pa, ${ }^{78}$ the Ma-moi-mun-Didb, ${ }^{79}$ the T'ab-ch'ung ka-ru ${ }^{80}$ (and) the Lha-t'ab-kar-po; ${ }^{81} 18$ swords, amongst them being the Nam-k'a-t'ag-ldag, ${ }^{88}$ the Dong-tse-rings ${ }^{83}$ (and) the Log-mar-me-sad ; ${ }^{84} 15$ knives, whereof the best were: the Dud-di-nagpo ${ }^{85}$ (and) the Dam-di-zlung-gyad; ${ }^{86} 15$ turquois, the best of these were: the Lha-yu-od-ldan ${ }^{87}$ (and) the Lha-yu-kar-po ;83 20 saddles, amongst them the Ga-ma-ji-t'i-stengs ${ }^{99}$ (and) the TTa-shis-od-ldan. ${ }^{90}$ (Also) ponies (viz.), 50 gray ones, 50 isabel, 20 black, 30 piebald ; also 20 young yak-cows and twenty light-brown yak-bulls, besides sheep, etc.; in short (they brought) tribute, revenue and presents in vast quantities. Having conquered Nga-ris-skor-sum as well, (his dominions) grew much in extent.

Lha-ch'en-dags-pa-bum had ruled over Rab-stan-lha-tse, ${ }^{91} \mathrm{Te}$-ya, ${ }^{92}$
etc. He built the royal city of Ting-gang. ${ }^{93}$
His son was: Lha-ch'en-bha-ra.
His son was: (XVIII) Lha-ch'en-bha-gan. This king was very fond of fighting. He and the She ${ }^{9 t}$ people having formed an alliance, they deposed and subjected the sons of the king of Leh, Dags-bum-lde, (viz.), Lo-ḍos-ch'og-ldan, Ḍung-pa-a-li and Lab-stan-dár-gyas.
present a serious obstacle in reading, e. g., the Ge-sar epic. Schl. also, in this passage, failed to recognize the fact that it chiefly consists of proper names. Coats of mail in Ladakh usually were either chain-armour or made of scales of metal. At P'i-yang (Survey Map: Phayang) Lamasery a collection of such armoar is still shown to visitors.

78 'The resplendent Devil-Coat-of-mail.'
79 'Devil-Darkness.
80 'The little Coat-of-mail Heavy-weight' (?).
81 'White Deva Coat-of-mail.'
82 'Licking blood off the sky.'
83 'Wild yak, long point.'
84 'Killer of the red Lightning-flame.'
85 'Black Devil-knife.'
86 'Knife of 5 marks (seals)' (?).
87 'Luminous Deva-Turquois.'
88 'White Deva-Tarquois.'
89 'Raised Glory-throne Saddle' (?).
90 'Good Fortune, light emitting.'
91 Proper name of the palace of Basgo (S. m. Bazgo), now in ruins.
92 Near Nyar-la (S. m. Snurla), but off the main valley to the North. Survey Map: Jeah.

93 Close to Je-ya; Survey Map: Jemesgam. It is, according to oar ideas, a village. It is one of the prettiest villages in Ladakh.

94 Vulg. She, Survey map : Shay; village ten miles SSE of Leh, on the right bank of the Indus. It has a palace of the Ladakh Rajjá (comp. B MS.)

His sons were : Lha-ch'en-lha-wang-nam-gyal ${ }^{95}$ and (XIX) T 4 -sHIS-nam-gral, (these) two.

Lha-wang-nam-gyal had great bodily strength and was clever at (any kind of) sport. 96 But Ṭa-shis-nam-gyal, the younger (of the two), being very crafty, caused the prince's eyes to be plucked out. Still, lest the dynasty should die out, he gave him a wife and allowed him to stay at Ling-snyed. 97 His sons ${ }^{98}$ were: Lha-ch'en-ts'e-wang-nam-gyal, Nam-gyal-gon-po, and Jam-yang-nam-gyal, (these) three were born. These three sons grew very tall in stature, they grew taller within a month, than what others grow in a year, and they grew taller within a day, than what others grow within a month.

At that time the king Ta-shis-nam-gyal reigned. This king conquered (all the country) from Pu-rig99 upwards and from Do-shod ${ }^{100}$ downwards hither. He brought (home) herds of ponies in inconceivable numbers. He built the fort on the Nam-gyal-tse-mo ${ }^{101}$ of Leh and founded the hamlet of Ch'u-bhi. ${ }^{108}$ He fought against an invading force of Turks, and killed many Turks. He erected a temple (dedicated) to the (four) Lords ${ }^{103}$ on the Nam-gyal-tse-mo and laid the corpses of the Turks
 for the first time as part of a name of a member of the royal family. It seems to designate the new dynasty and remaines in use to this day.
${ }^{96}$ Tibetan
${ }_{97}$ Ling-shed (Survey Map: Linshot) in Zangs-kar, four marches south of Ka-la-tse.

98 The sons of Lha-wang-nam-gyal, that is, of Ta-shis-nam-gyal, had no children. They were brought to Leh, where they received their education (T'a-shis-shan-p'el).
${ }^{99}$ District crossed by the Kashmir road from the Zoji-la to the Po-to-la. Capitals: Kargil (Thanadár) and Kartse. The inhabitants are partly Buddhists, partly Shiah Muhammadans. They are a race distinct from either Baltís and Ladakhís. They wear an upper garment of a dark-brown colour-by which they may be distinguished from Ladakhís-and a small round skull-cap. The long locks of hair on the temples, in fashion with Baltís, are not seen with Pu-rig men. They all but monopolize the carrying-trade between Ladakh and Kashmir, ponies-though not a very good breed-being their chief wealth.

100 Name of a district about the 25th stage from here to Lhasa between Maryum La and Chachu Sangpo (Map of Turkistan).

101 The 'Palace' occupies the very summit of the precipitous rock (Nam-gyal-tse-mo) at the foot of which the city of Leh is built. The 'Leh palace' is at a lower level. Now some religious buildings only remain, the fort itself being in ruins.

102 Chu-bi: about a dozen of honses at the foot of the western declivity of the Nam-gyal-tse-mo. The road to the top passes through it. (Survey Map: Chubbee.)
${ }^{103}$ I. e., 'the four Great Kings (Máharájas),' the Guardians of Buddhism (comp. Sir Monier Williams, p. 206.) The temple and images still remain (information by Ta-shis-stan-p'el).-Asto 'Tarks': ऊु工' in Central Tibet means 'Mongols,' in
under the feet of（the images of）the（four）Lords．Again，by building the temple to the（four）Lords he obtained power over the demon that turns back hostile armies．${ }^{104}$ He invited the veritable Buddha whose name was Ch＇os－je Ldan－ma from Di－k＇ung（Lamasery）${ }^{105}$ ，and then built the Lamasery called Gang－ngon－ta－shis－ch＇os－dzong．${ }^{106}$ He made the rule regarding the number of children that were to be sent by every village to become Lamas，${ }^{107}$ and introduced the doctrine of the Dub－ gyud．${ }^{108}$ At the spot，where the Lamasery is seen（for the first time），

Ladakh，Turks of Central Asia．I am informed，however，that here exists a people in Tibet itself，somewhere between Ladakh and Lhasa，and occupying a con－ siderable tract of country，called by the same name．
 （see Jäschke，Dict．）．I am not quite confident as to the correctness of my transla－ tion here，but if お冃२＇ち列 $\triangle$ means＇the hostile army，＇and not the army of the country＇operating at the frontier＇I think it could not be rendered differently．

105 It gives its name to a special Order of Lamas of the＇red＇persuasion．（Koep－ pen II，78．－Schl．＇s information－Buddhism in Tibet，p．74，－as to this sect is in－ correct．）The head of the lamasery of Di－k＇ung is a Ch＇os－je．

106 Proper name of the lamasery at P＇i－yang（＂j্রু＇ম＇）eight miles west of Leh，valgarly called Sgangon Gon－pa．

107 Tib．মక్రుస＇凶్రり＇＇tax of children to be made Lamas．＇－Under the old régime every family of more than one or two male children，had to give up one，not the eldest however，to be made Lama．Now，of course，this tax is no longer com－ pulsory，and hence the great falling off in the number of Lamas．The Lama－ child ひड్త゙す＂あぢ Tsun－ch＇ung stays at home until his 8th year，wearing the red garment and red or yellow cap from the first．Then he goes to a lamasery，or is apprenticed to a Lama，in order to receive his primary education，until he reaches his
 to Lhasa，where his studies get their finishing touch．After a sojourn there of
 an examination conducted by the Head Lama of the respective lamasery，he is baptized and thereby made a Ge－long（ 5 ウ＂ own conntry in order to perform there the fanctions of a village priest or to enter one of the Lamaseries，where special daties await him．
$N$ ．B．－There is an error prevalent regarding the dress of Lamas，which is pro－ pagated even by Sir Monier Williams in his recent book on Buddhism，viz．，that the dress of Lamas of the＇red＇persuasion is red，that of the＇yellow＇persuasion，yel－ low．This is not so．The dress of both the＇red＇and＇yellow＇Lamas is red（with the exception of one special order of Lamas belonging to the Ge－ldan－pa，who， to my knowledge，only exist in Zangs－kar，whose dress also is yellow）；but Lamas of the＇red＇persuasion also wear caps and scarfs round their waist red，whilst in case of the＇yellow＇Lamas these and these ouly are yellow．

108 ＇Treatise on Esoteric Doctrine．＇
he suspended a long prayer－flag．Whosoever，whether thief or liar， in short，any one guilty of offence against the king＇s palace or life，${ }^{109}$ if he escaped to this spot，should be rid of his crime．Again，he presented to the Di－k＇ung，Sa－skya，${ }^{110}$ Ge－ldan，Lha－sa（and）Sam－yas ${ }^{111}$ （lamaseries）cushions，gold－water，long prayer－flags，（tea for）tea gene－ rals，${ }^{112}$（all）an huudred－wise，etc．He also caused a Ka－gyur and Stan－ gyur to be copied besides many other（religious）books and erected many ch＇ortens．
（He was succeeded by）the incarnate ${ }^{113}$ king（XX），T＇se－wang－nam－ GYal（who）was invited to assume the royal functions．He，when quite a young man yet，already went to war．He conquered（all the country） from Ngam－ring ${ }^{14}$ in the east downwards hither，（viz．，Lo－wo，Pu－rang， Gu－ge，etc．；to the south（his conquests were）Dzum－lang ${ }^{115}$ aud Nyung－ ti ；${ }^{116}$ in the west（they included）Shi－kar ${ }^{117}$ and K＇a－（s）kar ${ }^{118}$ ．He also said，he would make war against the Turks north（of Ladakh），but the people of Nub－ral ${ }^{119}$ petitioned him and he desisted．He brought the

109 I．e．，crimen lcesce majestatis，though in a wider sense than asually accepted．
110 Sa－skya，lamasery of＇red＇Lamas．（Sir Monier Williama，p．448．）It gives its name to the Sa－skya－pa Order．This Order is represented in Ladakh by the Masho Lamasery（South of the Indus，near He－mi）．

111 Ge－ldan，Lha－sa and Sam－yas are lamaseries at or near Lhasa，belonging to the＇yellow＇persuasion．As to Ge－ldan or Ga－ldan see Sir Monier Williams，l．c．，p．
 + Jo－k＇ang（気楊 $=$ house of the Jo－wo）．See Sir Monier Williams，l．c．， p．440．－Sam－yas：id．，p． 448.

112 Gold－water，－i．e．，gold finely divided by prolonged trituration，suspended in water，extensively ased for gold－washing the images．＇Tea generals，＇see id．，p． 330. 113 He is supposed to have been an incarnation of Ch＇ag－na－do－ye（Vajra－páni）．
114 Ngam－ring：on the road from Lhasa to Ladakh， 21 marches this side of Lhasa．It is likely，that the three districts Lo－wo，Parrang and Gu－ge here are enumerated in succession，as they follow each other from east to west．Hence it would appear，that Lo－wo is the most easterly part of Nga－ris－skor－sum．

115 Dzam－lang，not known．May be identical with Jumla（Map of Tarkistan）in Nepal．

116 Comp．note 36.
117 ＝Shi－gar，large village in Baltistán．（See Drew，Northern Barrier，p．210）．
118 K＇a－（s）kar（Tib．区＇ちオ工 — $5^{\prime}$ preceding $\mathbb{N i}^{\prime}$ in Ladakh is frequently pro－ nounced like s）may be Skardo．There certainly is a Kashkar（Chitral）further west， but it is very improbable，that the Ladakh empire ever shonld have extended so far．

119 Trade with Chinese Turkistán is almost essential to the welfare of Nub－ra． It is in Nub－ra，that all the caravans going to，or coming from，Yarkand obtain their supplies for man and beast．Consequently most grown－up people in Nub－ra know the Turkí language fairly well．
rulers of all these (districts with him) as hostages ${ }^{1200}$ and placed his own representatives into (their) castles. All Mar-yul grew much in extent. Gu-ge had to pay as tribute and dues annually 300 zho ${ }^{121}$ of gold, Rut'og 260 zho of gold in addition to 100 three years' sheep, one ridinghorse, 10 tanned skin-bags, and (the proceeds from the royal domains) of K'ar-o-ldong and Zhing-dar-ch'en-dar-ch'ung, ${ }^{122}$ (indeed) from all sides they brought in tribute and dues in inconceivable quantities.

The king then came to consider: 'My ancestors have, on the pattern of the T'o-lings of Lia-sa and Gu-ge, placed the bones of the Buddha-Elephant ${ }^{123}$ on the Tse-mo, ${ }^{12 \hbar}$ but as the people do not go there on pilgrimage, or in order to worship, or to offer up sacrifices, or perform circumambulations, I will, instead, build a college and (in fact) establish the doctrine of Buddha on a basis similar to what it was under my ancestor Ral-pa-chan. ${ }^{125}$ But as his work on earth ${ }^{126}$ was finished, he died.

Upon this all the vassal-princes lifted up their heads. (XXI) Jam-yang-wam-gyal reigned. As to the reign of this king: two chiefs in Pu-rig did not agree. He came with the Ladakh army to the assistance of one of them, called Ts'e-ring-ma-lig. But the time had now come, when the period of darkness should supervene, the period when royal supremacy should well nigh be destroyed. The army of 'Alí Mír, captain of the forces of Nang-gong ${ }^{187}$, broke forth. They met, and by dint of
 pronunciation also : Ste-pa.

1211 zho of gold is stated to weigh $\frac{1}{4}$ tolah, equivalent to almost 3 grammes. Its value in silver is said to correspond to about 15 to 18 Rupees. This would agree with the British gainea. -1 zho of gold is a price charged, e. $g$., for large printed volumes like the Do-mang, which may be had at Leh Lamasery, printed to order for this price.

122 K'ar-o-ldong and Zhing-dar-ch'en-dar-ch'nug are said to be the names of two estates near Rn-t'og (?).

123 Gautama Buddha in one of his births figures as an elephant. His bones are sapposed to be the relics referred to in this passage. They were destroyed by the Baltís at the time of Jam-yang-n-gy. (Commanication by Tra-shis-stan-p'el.)

124 Nam-gyal-tse-mo, compare notes 100 and 101.
125 Name of one of the ancient kings of Tibet. His proper name was: T'i-lde-shong-tsan. His obsequiousness to the clergy rendered him odious to the people and noblemen, and prepared the way for Lang-dar-ma, the apostate and suppressor of Buddhism. He was murdered about 840 A. D., (compare Koeppen II. 72. The Gyalr. s. m, in the last chapter of the book, contains a very full account of the story. Compare also Schl.'s ed., page $20 b$ and his translation, page 57.)
 (karma) of a prior existence in their effects being exhansted' as suggested by Schl.

127 Nang-gong $=$ 'central and upper i. e. districts' viz, of Baltistán. C MS. replaces this term by 'Skardo.'
strategem，（ever）putting off（fighting）from one day to the next，${ }^{128}$（he succeeded in holding them on），until all the passes and valleys were blocked with snow，and the king with his army，wherever they went， were compelled to surrender．${ }^{189}$ All Ladakh was（soon）overrun by Baltís，who burnt all the religious books with fire，threw others into the water，destroyed all the colleges，whereupon they again returned to their own country．

After this（it pleased）＇Alí Mír Sher Khán to give his daughter， Gyal－k＇a－t＇un ${ }^{130}$ by name，who was an incarnation of the white Dol－ma，${ }^{131}$ to Jam－yang－nam－gyal to be his wife．After he had sojourned there for a little while，（it happened，that）＇Alí Mír（had a dream．He）dreamt he saw emerging from the river below his castle a lion，which jumped ${ }^{132}$ and disappeared into（the body of）Gyal－k＇a－t＇un．It was at the identi－ cal time，that Gyal－k＇a－t＇un conceived．Now after＇Alí Mír had pre－ pared a feast for all the soldiers，and Gyal－k＇a－t＇un had put on all her jewels，he invited Jam－yang－nam－gyal to mount the throne and then said：＇Yesterday I dreamt I saw a lion（emerging）from the river in front（of the palace）and jumping at Gyal－k＇a－t＇un，he disappeared into her body．At the very same time also Gyal－k＇a－t＇un conceived．Now it is certain，she will give birth to a male child，whose name ye shall call Senge－nam－gyal．＇Having said this，he gave（the king）leave with the army of Ladakh to return home and to resume his royal functions．

She bore him two sons：Senge－nam－gyal and Nor－bu－nam－gyal， （these）two．

At that time Jam－yang－nam－gyal bethought himself：＇In the first instance，I went with my army to the assistance of T＇se－ring－ma－lig of Pu－rig ；the consequence was，that all Ladakh was laid waste．Now I will employ any means that may serve towards the propagation of the religion of Buddha，and make it spread．But as the religion of Buddha for its propagation is entirely dependent upon the people，I will，on my part，relieve them from all taxation，and treat them like my own chil－ dren．＇（Having thus resolved，）he equalized rich and poor three times
 likely＇（Jäschke，Dict．）．

129 Tib．U्थさ＇＇succumbed，lost，waned．＇
130 ■＇श्रुお＇according to Schlagintweit，a Tatar word，meaning＇Lady of noble birth．＇（See his translation，p．75，note 1）

131 For Ḍol－ma kar－mo，离》＇み’ちশエ＂お＂mong－Tsaghan Dára－Eke，see Koeppen II， 65.

132 Tib．す工＇＇a leap，bound．＇

This king united under his sway（all the country）from Pu－rig upwards，and from lyang－tse ${ }^{138}$ downwards hither．

Ts＇e－ring－gyal－mo，the daughter of Jig－sten－wang－ch＇ug，whom he had married before he took Gyal－k＇a－t＇un，${ }^{136}$ also bore him two sons：Ngag－ wang－nam－gyal and Stan－dziu－nam－gyal．These two sons were sent to Us－tsang in order to（lay down）before the precious Jo－wo：${ }^{185}$ gold－water and cushions；at Das－spungs ${ }^{136}$（and）Ra－lung ：${ }^{137}$ gold，silver，pearls， coral－beads，amber，trident－banners，${ }^{138}$（tea for）tea generals，all numbering one hundred；at De－nam：${ }^{139}$ long prayer－flags，－and（to act）as messen－ gers to the Dug－pa Incarnation，${ }^{140}$ whom they were to invite（to Ladakh）．

For the sake of his reputation with posterity，${ }^{141}$ he caused a copy of

133 Dang．tse（Survey Map：Janbse），well－known village，east of Lein，on the road to the Pang－kong lake and Jang－ch＇en－mo．The limits given here iuclude less territory than there had been under the kings of Ladakh at any other time．

134 Althongh polsgamy is not common with Ladakhis，－－polyandry being more in vogue－yet no one objects，if a man，in case his first wife has no children，takes a second wife．The first wife is then called＇chan－ch＇en，＇the second wife＇chan－ ch＇ung；＇chan ma is said to mean：＇a woman who prepares the food；＇the spelling of the word is uncertain．

135 Jo－wo：I am informed，there are really three images called by this name，two of them，the best known of all，are the Jo－wo Rin－po－ch＇e and Jo－wo mi－skyod－do－ rje，both in the Jo－k＇ang at Lhasa，one on a lower，the other on an upper plat－ form ；the third，Jo－wo Shákya－mu－ne is the one at Ra－mo－ch＇e．The Jo－wo mi－ skyod－do－rje was brought by the queen Ṭi＇－btsun（広‘歪末＇）from Nepal（s．Gyalr． s．m．，chapter 12），the Jo－wo Shákya－ma－ne，on the other hand，by the queen Kong－jo （ त्रिद्रे which has nothing to do with Kon－ch＇og）from China（s．Gyalr．s．m．， chapter 13）．Where the Jo－wo rin－po－ch＇e has come from，I do not know．

136 A Ge－ldan－pa－lamasery（see Sir Monier Williams，l．c．，p．442）．
 the Dug－pa Order，near Lhasa．

138 A long tuft of silk threads，suspended from a trident（K＇a－tam－k＇a or t＇se－ sum）and supported on a pole．It may be carried about or placed on the roof of
 Chob－dar）．
${ }^{1} 88$ Lamasery（Ge－Idan－pa），two or three days＇journey west of Lhasa．
 the tutelary deity（ খै＇ちみ＇）of the Pug－pas．

the Gya－tog－ser－sum ${ }^{142}$ and of the Kar－gyud－ser－ț＇eng ${ }^{143}$ ，in addition（to other books），to be written in gold，silver，and copper．（Likewise）for the sake of posthumous fame，he would have very much liked to rebuild and present anew ${ }^{144}$ whatsoever had been destroyed by the Baltís，but his life being short，he died（before he had been able to accomplish his purpose）．

His son was the king of the Faith（XXII）Senge－nam－gyal．
From his childhood he was very strong and clever at wrestling， running，jumping，shooting with（bow and）arrow as well as matchlock，${ }^{145}$ and riding．In any kind of sport he was to be compared with Siddhar－ tha the son of S＇uddhodana of olden time．

The king，when yet a youth，made war against the back－steppes of Gu－ge．He carried away ponies，yaks，goats and sheep even so far as from the northern slopes of the Kailása，and（indeed）from everywhere on earth．Some time later he made war against the central provinces of Gu－ge also．Sha－wang and Zha－ye he allowed to be killed，${ }^{146}$ and he made all Ladakh to be full of yaks and sheep．He married the


142 気
 the whole，viz．，Ser－od．（See Jäschke＇s Dict．，＇S．O．＇）The Tog－zungs is in my possession bat as yet remains mnexamined．－Althongh＇Trilogy＇is a term applied to dramatic productions only，yet considering that tripartite religious books are fre－ quently met with in Tibetan literature，I think the term may be found useful．

143 Ta－shis－stan－p＇el，－late Head－Lama of Stag－na Lamasery in Ladakh，and pro－ bably the most learned Lama in the country－informed me，that this is a kind of clerical genealogy，or a list containing the names of the chief Lamas of his own order，the Kar－gyud－pa，from its very commencement．The Kar－gyud－pa，who are supposed to derive their name from this genealogy（Kar－gynd，ち才工＂至5＂） are a subdivision of the Dug－pa order．

145 Tib ．त्रㅁ ${ }^{\prime}$（i．e．，त्र्रोप＇reading $)=$ firearms．
146 As to Sha－wang and Zha－ye no information was available．Ta－shis－stan－p＇el，

 and Lahoul and Spiti，usually called Rapshn（Drew）or Rukshu（Survey Map）．The present＇queen＇of Ladakh is also a Rapsha－＇princess．＇

148 ฝय＇हैय＇＇Sidha，＇according to Sir Monier Williams（p．536）seems to denote the degree next to，and below Arhatship．This passage，however，properly refers to Jainism．The word occurs again in the text 4 lines further down，where the eighty
called Stag－ts＇ang－ras－ch＇en（to Ladakh）．This Buddha，${ }^{149}$ who had ob－ tained the rainbow－body，${ }^{150}$ had visited Hindústán，Orgyan，${ }^{151}$ Kashmír， etc．，and had seen all the eighty saints ${ }^{152}$ face to face．In memory ${ }^{153}$ of his father，he erected at Bab－go ${ }^{154}$ an（image of）Maitreya，made of copper

ฝ्रुप＇हेय＇（Dub－t＇ob）are mentioned．The only＇eighty＇referred to anywhere in Buddhistic literatare，are，I believe，the eighty＇Great Disciples，Maháśrávakas＇（M． W．）They，indeed，were not supposed to have attained to Arhatship daring life，but became Arhats at the moment of their death．Hence the गुप＇हेय＇or Siddha would seem to be a＇candidate for Arhatship，＇one who＇will obtain श⿹勹巳寸＇ 4 ＇i．e．，perfection＇ when he dies．Two characteristics of the Dab－t＇ob，incidentally mentioned here， also prove that between him and an Arhat－designate is very little difference．The first is，that he is able to have intercourse with the eighty＇Great Disciples，＇i．e．， that＇time＇to him is of no account．The second is：that he had obtained the ＇Rainbow－Body，＇RFQ＇ひु N＇i．e．，＇a body，which（at death）vanishes out of sight， not leaving any trace behind，just like the rainbow．＇Compare the Ladakh－Gyalrabs （MS．in my possession，p．67，and Schl＇s．＇Könige von Tibet＇，Tib．text，p．14a） where there occurs a passage referring to the death of the seven $\hat{A}^{\prime}$（ $T^{\prime} \mathrm{i}=$
 is an error in writing－and their Deva－body disappeared like the rainbow，leaving no trace behind．＇This，of course，amounts to obtaining Parinirvána．Now as according to Sir Monier Williams the third and highest degree of Arhatship is identi－ cal with Supreme Buddhahood，it is no longer difficult to understand，how the two characteristics referred to apply to the 岛य＇हेय＇nor why Stag－ts＇ang should be styled in the same passage a Nち $\mathbf{V}^{\prime} \mathbf{N}^{\circ}$ i．e．，a Buddha．—Stag－ts＇ang is said to
 bha－la－pai Lam－yig，＇referred to once or twice in these notes．

149 Tib．NGN＇気N＇Comp．in German the words ：＇der Verklärte，Verklärang．
150 See note 148.
151 Sometimes Urgyan＝Udyána．
152 See 148.
 simply＇in memory．＇I think，its primary meaning is ：＇to complete，what may be supposed to have been the intention of the deceased person to do，bat was left undone＇；a secondary meaning would be：＇to perform meritorious works on behalf of the deceased person，so as to benefit him or her in the Bar－do pargatory，＇and thirdly（once in C MS．，distinctly so）：＇funcral rites and prayers read for the benefit of the soul．＇－（The litany used on such occasions is called，in the case of the Ge－ldan－pa， 첟＇இز＇＇the way of removing obstacles，viz．，in the road to a happy rebirth，＇and is usually read for 49 days，（as Sir Monier Williams gives it）．

154 Village on the river Indas，aboat fifteen miles west of Leh．（Survey Maps Bazgo．）The temple and image still remain，whilst the palace is in ruins．The place is well worth a visit．
and gilt，in size（such as he will be）in his eightieth year，and adorned with all kinds of precious stones．He introduced the great deities ${ }^{155}$ of all Hindústán，east and west，and caused a copy of the Jams－ch＇os，${ }^{156}$ five divisions and five volumes，to be written．He appointed for the duration of the（present）Skal－pa five Lamas to be in perpetual atteudance and to offer up sacrifices and keep the sacred lamps burning both day and night．He put up sashes made of the most wonderful Chinese silks， （and also）umbrellas，${ }^{157}$ long prayer－flags，etc．

Again，in memory ${ }^{153}$ of his mother，he sent to be laid down at the feet of the incarnation of P＇ags－pa Rab－jor＇， 159 the Pañ－ch＇en，${ }^{160}$ the Banner （lit．umbrella）of the Faith ：golden earrings，${ }^{161}$ silver earrings，amber （pieces of）the size of apples $108,{ }^{162}$ smaller ones 108 ，coral－beads of the size of fowl＇s eggs 108，pearls of the size of Chinese peas 108 and smaller ones a great many．At ．．．${ }^{163}$ Lha－sa，${ }^{16 \downarrow}$ Ta－ṭ＇ug ${ }^{165}$ and Sam－yas he offered up sacrifices，everywhere one thousand．To the Ge（－ldan），Das（－spungs）， Se－ra，Dug－Ra－lung，Sa－skya and all the other Lamaseries，both great and small，he made presents of（tea for）tea generals and other things， all numbering one handred，in plenty．
＇I＇o the Saint stag－ts＇ang－ras－ch＇en，the same（as mentioned above），

155 Tib ．変＂울 I follow，in my translation，T Ta－shis－stan－p＇el＇s explanation，bnt still some misgivings as to its accuracy remain．
$156=$＇Maitreya religion．＇I have not been able to obtain information regard－ ing it．

157 Tib．参さ＂みらず a crinoline－shaped kind of thing，bat cylindrical，not coni－ cal，in form，about 3 feet in height by 1 foot in width；it consists of 2 or 3 hoops with a covering of black woollen threads or of trinmings of calico．It is planted on the roofs of lamaseries and palaces．Jäschke（Dict．＇trophy，＇）apparently did not recognize the umbrella．

158 See note 153.
159 Subhúti．
160 The Pañ－ch＇en rin－po－ch＇e at Ṭa－shis－lhan－po．He is not nsnally supposed to be an incarnation of Subhúti，but as he may be an incarnation of Amitábba，of Mañjnśrí，of Vajra－páṇi and of Tsong－k＇a－pa，there is no reason why he shonld not be an incarnation of Subhúti as well．（Comp．Koeppen II，127．－For Subhúti ： Koeppen I，104， 600 and the recent publication of the Asiatic Society of Bengal ：the ＇Sher－Phyin．＇－－）

16 L ＇Tib．२Дुみ＂ 5 ＇large earrings of silver or gold，consisting of a ring about two inches in diameter，on to which are strung，like beads，a large number of very diminutive rings of silver or gold．

168 Comp．note 57.
163 Possibly one name wanting．
164 Comp note 111.
165 Lamasery at Lha－sa（Ge－ldan－pa）．
he gave, in the several districts that belonged to himself, estates ${ }^{166}$ as well as sites for religions buildings, ${ }^{167}$ and Stag-ts'ang-ras-ch'en, during the reigns of both the father Senge nam-gyal and the son De-ldan namgyal, the father then being in his decline and the son in his prime of life, ${ }^{163}$ satisfactorily completed the Lamaseries at Wamle, Tra-shis-gang, ${ }^{169}$ He-mi, ${ }^{170}$ 'T'eg-ch'og, ${ }^{171}$ etc. Thus the Law of Buddha made good progress. He governed over all his dominions according to the rule of the ten virtues, ${ }^{172}$ and thus (it came to pass) concerning the kingdom of this world, that the king was like the lion and the Lama like the tiger, ${ }^{173}$ and their (united) fame encompassed the face of the earth as 'the lord and the Lama, ${ }^{174}$ sun and moon, a pair.'

After this, Senge-nam-gyal bethought himself: '(My) uncle Ts'e-wang-nam-gyal (certainly) did rule (over all the country) as far as Ngam-rings in the east (north), but he did not live long, and during the reign of (my) father Jam-yang-nam-gyal all the vassal-princes again rose (and made themselves independent). ${ }^{1775}$ So he again went to

166 Tib. V'Jु5' 'a first offering, earnest of land.'

 -supposing General A. Cunningham's dates to be correct, - that Schlagintweit's first calculation (in 'Buddhism in Tibet,' 1863) has probably more to commend it, than the second one in 'Könige von Tibet,' 1866. -In the former work he finds the dates 1644 as the date of the foundation of the He-mi lamasery, 1672 as the date of the completion. In the latter, on the other land, he gives 1604 as the date of the foundation (under Jam-yang-nam-gyal), completion at 1644.--Primâ facie, it seems very improb:ible that Jam-yang-nam-gyal should have ventured upon building enterprises on such a large scale, after the country had just recently been devastated by a rathless foe.

169 In Tibet about two marches from the frontier, on the river Indus. Map of Turkistan : Tashigong.

170 Famous lamasery in Ladakh (Survey Map: Himis), about 18 miles SSE of Leh. The 'Himis-fair' in summer is the chief attraction to sight-seers in Ladakh. This lamasery is at present still the greatest land-owner in Ladakh, and its steward one of the most influential persons in the country. The Lamas are of the Dug-po order of the 'red ' persuasion.

171 Sister-lamasery to $\mathrm{He}-\mathrm{mi}$, north of the Indas, in a valley which opens out opposite Hemi. Che-de, valg. Chem-re (Survey Map: Chim-ray) is the name of the village, to which the lamasery belongs.

172 See Sir Monier Williams, l. c., p. 128.
173 Allusion to their proper names: Senge $=$ lion, Stag $=$ tiger.
174 Tib. सळَने प्रेक' - अर्के ' = Lama. प्येंक' 'dispenser of alms' (Jäschke, Dict.) i. e., $=$ Anglo-Saxon : hláford $=$ Lord.

175 The Tibetan text of this passage is not very clear.
war (and came) as far as Ngam-rings. ${ }^{176}$ At Shi-ri-kar-mo ${ }^{177}$ (his army) was routed. Upon this, there arrived an ambassador from Tibet, and (it was agreed that) the frontier should remain as before, and that his dominions should include all the country up to Us-tsang. On his return journey he died at Wam-le.

Additions from C MS.
At Wam-le, God-yul, K'a-nag, Tsang-mar, Skyu-mar-nang, Me-ru, Dar-tse ${ }^{178}$ the people, and elsewhere in Upper and Lower Ladakh throughout his dominions he (himself) gave to him for the duration of the present skalpa, sites for religious purposes and estates. The great saint Stag-ts'ang-ras-ch'en built not only the He-mil79 (Jang-ch'ub-samling ${ }^{180}$ ), Che-de (T'eg-ch'og ${ }^{180}$ ), Wam-le (De-ch'en ${ }^{180}$ ), Ṭa-shis-gang and other Lamaseries, but also raised images and ch'ortens of gold, silver and copper. He made the clergy very great.

In memory of his late father Jam-yang-nam-gyal, the king Senge-nam-gyal erected at Bab-go an image of the Buddha Maitreya, made of copper and gilt, three stories high, and adorned it with precious stones, turquois, coral beads, etc. To the Pañ-ch'en-rin-po-ch'e in Us (-Tsang) he sent a present of gold and silver a large quantity, and pearls of the size of Chinese peas 108, coral-beads of the size of fowl's eggs 108, amber, pieces of the size of apples 105 , and other things.

To the great saint, Stag-ts'ang-ras-ch'en, the Supreme, he presented 100 ponies, 100 yaks, 100 cattle, 1,000 sheep, 1,000 goats, 1,000 (Ladakh) Rupees, ${ }^{181} 100$ zho gold, 3,000 loads of grain, one string of pearls, one string of coral beads, one string of turquois, 25 matchlocks,

176 Comp. note 114. It is probably the פृ弓' has come to be a component part of the name, hence: Iang-ngam ${ }^{\circ}$.

177 Name of a small lamasery on a rock on the right bank of the river Charta Sangpo (map of Turkistán) $29^{\circ} 30^{\prime} \mathrm{N} ., 84^{\circ} 50^{\prime} \mathrm{E}$. of Greenwich. The difficulty of crossing the river may to some extent account for the defeat of the Ladakh army. (Comp. Koeppen II, 146 and note 1.)

178 Of these names God-yul is the name of the Han-le district. K'a-nag (Drew's map: Kharnak, Survey map: Khanak; vulg., K'ar-nak), a valley in Zangs-kar. Tsang : abridged from Tsang-k'a, a hamlet near He-mi. Mar: abridged from Mar-tse-lang (Drew : Marchalong, Survey map: Marsahing), near He-mi. Of the combination Skyu-mar-nang: Skyu = Skew or Skio (Survey map) in the valley of Mark'a in Zangskar, Mar stands for Mar-k'r (Drew and Survey : Markha); Nang probably a hamlet in the same valley.-Me-ru (= Miru, Survey map) on the Gya river, one march south of He-mi. Dartse.?

179 In brackets are given the proper names of the lamaseries; the other names properly belong to the villages.

180 Schl.'s edition.
181. 1 Ladakh Rupee equal to $\frac{4}{5}$ Rupee British coinage.

25 spears， 25 swords， 15 coats of mail， 25 pieces of silk， 10 pieces of brocade，${ }^{182} 25$ pieces of gauze with and without a pattern，${ }^{183} 25$ pieces of broad gauze for＇scarfs of blessing，${ }^{18 \star}$ and other presents in all past comprehension．

Then he reared the Leh－ch＇en－pal－K＇ar ${ }^{185}$（palace）of nine stories and completed it within about three years．${ }^{186}$ His own private utensils for re－ ligious worship ${ }^{187}$ were all made of gold and silver and very numerous． He also caused a kagyur to be copied（the writing）in gold，silver and copper，and besides many other（religious）treatises and books．

## I．－An instalment of the Bower Manuscript．－By Dr．A．F．Rudolf Hoernle．

The portion of the Bower Manuscript which I publish in the follow－ ing pages is that which I have marked in my paper＂On the Date of the Bower MS．，＂＊as the fifth．I placed it there as the last portion of the entire manuscript．That，however，was a mere matter of accident，this portion happening to be the last that I examined．What position the portion actually occupies in the entire MS．，will have to be determined hereafter，when I have concluded the more thorough examination of the relic in which I am now engaged．

This portion of the manuscript is written on five leaves．They are regalarly numbered from 1 to 5 ，on the left－hand margin，on the reverse sides of the leaves，in the old style of numeral figures．$\dagger$ On the reverse of the third leaf，however，a little distance below the current number 3，there are two other symbols which look like the number 51，

182 Tib．齐す＂风



184 Tib ． EV ＇ A ＇is the broad variety of this kind of loose ganze．For＇skarfs of blessing＇see Hac and Gabet＇s Memoirs，Sir Monier Williams＇book，etc．

185 This is the palace of Leh，a conspicuous building immediately above the city．
 ＇the first half of the tenth month，＇hence here we probably ought to translate ：＇the first half of the third year．＇

187 ＇Tib．すら’ちぁ＇covers the meaning of this entire expression．

[^19]$i$. e., one symbol for 50 and just below it another for one. What this means, I do not yet know ; but probably it refers to the numbering of the verses.

The first leaf is only inscribed on the reverse side, the others, on both sides.

With regard to the material on which this portion (as well as the whole MS.) is written, I may notice some curious circumstances. One of them has already been noticed in the Proceedings for November 1890 (p. 223), that of the leaves, "some are in single thickness and others from two to four thicknesses." Of the five leaves of this portion, the first four consist each of four layers of bark, while the last has only two layers. Each layer is of extreme tenuity, almost transparent, and one layer by itself would hardly be fit for writing material. The fifth leaf, with its two layers, is still excessively thin. The several layers are not glued together, but appear to be in their natural state of adhesion; with some little trouble, it would not be impossible to separate them.

Another point also has been already mentioned by Professor Bühler in the Vienna Oriental Journal, Vol. V, pp. 103, 104, that the shape of the leaves is different from that of all other birch bark MSS., hitherto known. While the usual shape is nearly quarto, on which the lines of writing run parallel to the narrower side, after the manner of European books, in the Bower MS., the shape of the leaves is very decidedly oblong, the lines of writing running parallel to the long side, after the manner of the usual Iudian paper or palm-leaf MSS. ( $\hat{0} \hat{t} t h \hat{\imath}$ ). The dimensions vary in the different parts of the Bower MS. In the part, which I now publish, the leaves measure $11 \frac{1}{2}$ by $2 \frac{1}{2}$ inches. In agreement with this peculiarity is the further circumstance, that the leaves of the Bower MS. were never bound or made up in a volume, as the Kashmirian birch-bark MSS. are. In the latter MSS. every tiwo of the square leaves above referred to form one sheet; the sheet is folded in the middle, and all the sheets, each making two leaves, are together done up in the form of a volume, very much as European volumes are. The art of preparing the birch-bark leaves so as to admit of this folding and doing up into a volume is now lost,-since the time of the introduction of the manufacture of paper into Kâshmîr under Akbar about 200 or 250 years ago.* The leaves of the Bower M.S. are all separate, and were held together by a string passing through a hole in them. This hole, however, is not in the middle of the leaf, but at the distance of $3 \frac{1}{2}$ inches from the margin, or at about $\frac{1}{3}$ of its length. In the ordinary Indian palm-leaf MSS., the hole is in the middle of the leaf, or if the leaves are very

[^20]long, there are two holes, at equal distances from the narrow margins. The arrangement in the Bower MS. is one-sided and curious. The whole Bower MS. was enclosed between two wooden boards with holes through which the string passed. In general appearance, therefore, the manuscript resembles Indian MSS. rather than the old Kashmirian.

The third point is, that the leaves at the time they were written on were already in a considerably damaged state. Of the third leaf a considerable portion, on the right hand side, is torn out. That this gap already existed at the time the scribe wrote his copy is clearly seen from the fact, that his lines carefully extend to the margins of the gap. There is no portion of the text of the manuscript wanting at this place, as it might appear at first sight. This circrmstance seems to suggest the conclusion that at the place or at the time the scribe wrote, birch bark, as a writing-material, was difficult to obtain; and that he was thus forced to employ even very damaged leaves. On the other hand, it might be said that in that case he would not have wasted as many as four thickness in one leaf. Most of the bark, however, used in the leaves of the manuscript, is of a very inferior description; it is intersected by numerous faults in its texture,* which, in most cases, would prevent a separation of the layers in unlacerated portions of sufficient dimensions to admit of being used as writing material. It appears to me plain that, for some reason or other, the scribe was obliged to content himself with material both of damaged condition and inferior nature. The inferiority of his 'paper' is also shown by the fact, that sometimes when he attempted to write across a fault, his letters would not form, and he was obliged to abandon a half-finished letter and trace it anew on the other side of the fault, thus leaving a more or less extended gap in his line. $\dagger$ Thus on fl. $3 a^{7} \ddagger$ we have विमि[ [ ] ]श्रो, fl. $3 b^{6}$ जो[व]वित्रुकास:, fl. $5 b^{2}$ व्य[व]वायाच, where the abandoned half-finished letters are indicated by brackets. See also fl. $2 a^{9}$.

One further point may be also noticed in this connection. The mannscript shows clear traces of a revision by another hand. In the Proceedings for November 1890 (p.223) it is stated that "the writing is entirely in black ink." This is undoubtedly correct; still, occasionally, letters occur in a very light (apparently faded) ink. A closer examination shows, that in many cases these light-ink letters indicate corrections.

* Distinctly shown in the upper leaf of plate III in the Proceedings for Nov. 1890.
† Compare leaf No. 1 on Plate I in Proceedings of April, 1891.
$\ddagger$ The large number refers to the leaf, the letter, to the side of the leaf ( $a=$ obverse, $b=$ reverse), the raised numeral, to the line. Thus $3 a^{7}=7$ th line on obverse side of 3 rd leaf; $\mathrm{fl}_{\mathbf{~}}=$ folio or leaf.

Thus on fl. $4 b^{9}$ the original writing in black ink was $m e \hat{e} n u$, which is false, for mê srinu; here the akshara şri is inserted below, in the interlinear space, in light-ink, and the proper place of insertion between $m \hat{e}$ and $n u$ is marked by two minute strokes above those two aksharas. Again on fl. $3 b^{8}$ the original black writing was प्रोत्रों स ; this is corrected into प्रोत्तः स, the visarga being inserted and the top-stroke of the second vowel $\hat{o}$ cancelled by two minute strokes, all in light ink. Similarly in fl. $4 b^{4}$ sa-mustâm is corrected to sa-mustain. It might be supposed that the original writer might have, on revision, made these corrections himself. But this is not probable, - -for two reasons : firstly, occasionally a letter in light ink is met with in the middle of a word, in the ordinary line, showing that the original writer had left a blank which was afterwards filled in by the revisor. Thus in fl. $3 b^{7}$, ajarah, and fl. $5 b^{6}$, lavanôpôtair, the visarga and the akshara ṇ̂̂ respectively are in light ink, while all the rest is in black. Secondly, occasionally a correction was made by the original writer himself, and these corrections are in the same black ink as the rest of the writing; thus on fl. $5 a^{2}$ the original writer first wrote मुब्वा which he afterwards altered to मूब्वा, all in black ink. He still left another error, which the revisor also did not notice, for the word should really be मूर्व्वा. These observations seem to suggest the conclusion, that the manuscript is a copy, prepared somewhat inaccurately by a scribe and afterwards revised by another person ; and that, in any case, it is not the autograph of the composer of the work whoever he may have been. But neither did the revisor do his work accurately, for he overlooked some palpable mistakes, thus on fl. $3 b^{1}$ we have munir instead of munibhir; here the akshara bhi is omitted, but has not been supplied by the revisor, though the omission is clearly indicated both by the sense and the metre of the verse. Other similar errors I shall note further on.

With a small exception, the whole of the portion of the manuscript now published is written in verse. The metres employed exhibit a very great variety. They are the following :-

| Metres. |  |  | Nos. | Verses. |
| :---: | :---: | :---: | :---: | :---: |
| 1, Âryâ, | $\ldots$ | ... | $5 \frac{1}{2}$ | $51,52,53 a, 86,109,110$ |
| 2, Indravajra* | - | ... | $42 \frac{1}{2}$ | $\begin{aligned} & 12,14,23,38,67-85 a, 88-103, \\ & 105-108 \end{aligned}$ |
| 3, S'lôka | ... | ... | $49 \frac{1}{2}$ | $\begin{aligned} & 10,11,28-30,39,43-50,54-66 \\ & \quad 87,104,111-131 a \end{aligned}$ |

[^21]| Metres. |  | Nos. | Verses. |
| :---: | :---: | :---: | :---: |
| 4, Aupachchlandasika | . | 4 | 17, 20, 21, 27 |
| 5, Kusumitalatâvellitâ | ... | 1 (2) | 31, (35) |
| 6, Mâlinî ... | ... | 2 | 13,42 |
| 7, Mandâkrântâ ... | ... | 1(2) | $9,(35)$ |
| 8, Mâyâ ... |  | 2 | 36, 37 |
| 9, Pramâṇikâ ... | $\ldots$ | 1 | 26 |
| 10, Pramitâksharâ | ... | 1 | 33 |
| 11, Pṛithvî ... | ... | 1 | 34 |
| 12, S'âlinî ... | ... | 2 | 24, 32 |
| 13, S'ârdûlavikrîdita | ... | 3 | 19, 40, 41 |
| 14, Sragdharâ ... | ... | 1 | 18 |
| 15, Sudhâ -.. | ... | 1 | 25 |
| 16, Suvadanâ ... | ... | 1 | 15 |
| 17, Tôtaka ... | ... | 1 | 16 |
| 18, Vamśasthavila | .. | 1 | 22 |
| 19, Vasantatilaka | ... | 9 | $1-8$ |

Altogether there are 19 metres with $129 \frac{1}{2}$ verses between them. Most of them, however, are represented by only one or tro verses; and all of them, except the three first-named, occur exclusively in the introduction of the treatise. The âryâ metre, on the other hand, is not employed in the introduction at all. The indravajra and slôka, which are the most generally used metres, occur both in the introduction and in the body of the work, though more frequently in the latter. In fact the body of the work is, with the exception of the six âryâ verses, written throughout either in ślôkas or indravajras.

The only prose portions are : a longer passage between the 35 th and 36 th verses, and a short remark between the 48 th and 49 th verses.

The work consists of two distinct portions. The first is a sort of introduction which extends as far as the end of the 42 nd verse, where after a great variety (18) of metres, the first long series of slokas commences. It treats of the discovery and the various medical uses of garlic (laśuna).

The second portion, which forms the body of the work, may be described as a treatise on what in the Suśruta (II, 12 and IV, 20) are called the kishudra-rôga or minor diseases. It commences with verse 43 ; and includes several sub-divisions which are generally indicated by a change of metre.

The first sub-division extends to verse 50 , and consists of eight ślôkas. It lays down a series of general physiological rules.

The second sub-division, down to verse $53 a$, written in two and onc-half âryâ verses, is a sort of appendix giving a prescription, not intended for any particular disease, but to be used by healthy persons for the preservation of health.

The third sub-division, down to verse 58, consisting of five ślôkas, treats of the proportions and definitions of certain ingredients used in the composition of drugs.

The fourth sub-division, down to verse 66, consisting also of eight ślôkas, gives two (tonic) prescriptions, not intended against any particular disease, but to be used by persons in a low state of health, for the purpose of improving the general tone. The curious remark is here added (verse 66) that these tonics should not be administered to any one who has not a son or a disciple, nor to an enemy of the king, nor to any law-breaker.

The fifth sub-division, down to verse $85 a$, composed in indravajras, treats of the preparation and application of lotions (áschyôtana) for the eye. It is marked off from the following sub-division by the interpolation of an âryâ (verse 86), giving a direction as to the preparation of other remedies, similar to the lotions, and a slôka (verse 87), introducing the subject of plasters for the face ( $m u \tau k a-l e$ pa).

The sixth sub-division, down to verse 103 , again composed in indravajras, treats of the preparation and application of plasters for the face (vadana-pralêpa). It is also marked off from the following subdivision by a slôka (verse 104), giving directions as to the size of those plasters.

The seventh sub-division, in indravajras, down to verse 108, treats of certain drugs which may be used either internally against general disorders of the system or applied externally as pastes (vidâlaka) to the eyes. To this are added, in âryâs (verses 109 and 110), some other prescriptions for making such pastes or collyriums (añjana).

The eighth sub-division, down to verse 119, in ślôkas, explains the causes of hair diseases and gives directions as to their treatment.

The nineth sub-division, down to verse $131 a$, also in ślôkas, treats of remedies against various kinds of cough.

The two last-mentioned sub-divisions, which are both composed in stôkas, are marked off from each other by the interposition of the sign $\odot$, which always indicates the end of a subject or chapter.

As there is no colophon, or the usual ending, containing the name of the work and its author, it is doubtful whether the treatise contained in this portion of the manuscript is preserved complete.

The language in which the treatise is written is Sanskrit. There is, however, a noticeable difference in the Sanskrit of the narrative por.
tion of the introduction, and that of the rest of the work in which the prescriptions are detailed. In the former the Sanskrit is comparatively plain and correct, while in the latter it is very rugged and plentifully marked with all those anomalies of orthography, grammar, prosody and vocabulary which distinguish the early extra-scholastic Sanskrit of the North-West of India. The versifying powers of the author were evidently unequal to the management of the technical portion of the work.

I will now enumerate some of the more striking instances, that I have noted down, to illustrate the different kinds of anomalies that occur in the Sanskrit of the work. It might be objected that these apparent anomalies are mere copyists errors ; and undoubtedly in a few cases, they are such errors; thus in fl. $5 a^{l}$ (verse 95) the MS. reading $n a ̂ s y e ̂ ~ k r i t a ̂ ~ v i d h e ̂ y a ̂ ~ p r a l e ̂ p a ̂ h ~ i s ~ c l e a r l y ~ a ~ m e r o ~ c l e r i c a l ~ e r r o r ~ f o r ~ n a ̂ s y e ̂ ~$ kritê etc. But in most cases the surrounding circumstances forbid such an explanation, and show that the anomalies belong to the character of the language. It is also to be observed that the whole of the manuscript is very fairly free of clerical errors. I believe there are only about 17 cases which are certain to come under this description ; in a few others, which I have also marked iu my transliteration as false readings, it may be doubtful whether they are really errors or anomalies or simply slovenly writing. To the class of distinctly clerical errors belongs the omission of two whole pâdas, as in fl. $3 b^{8}$ (verse 55 ), or of a whole syllable, as in fl. $3 b^{\mathbf{l}}$ munir for munibhir, fl. $2 b^{4} c h h a-m \check{a} d i r a ̂ m ~ f o r ~ c h h a ̂ t a-m a d i r a ̂ m, ~$ or of a letter, as in fl. $2 b^{6}$ prayujan for prayumjan; again the substitution of a false word, as in fl. $3 b^{2}$ pushti for pakti, or of a false akshara, as in fl. $1 b^{4}$ śôtan for sîtan or śrôtan, fl. $1 b^{6}$ âtithauviva for âtithâviva, f. $2 b^{3}$ śâlyânna for sályanna; or again a totally blundered word, as in fl. $3 a^{7}$ kâśyếshasnô for kâsaśvâsaghnô. On the other hand doubtful cases are such as fl. $3 a^{4}$ und $\hat{\imath}$ ram for udîrnam, fl. $3 a^{5}$ astrâni for astrâni which more probably are real anomalies of the language ; or such as fl. $1 b^{4}$
 have probably a correct letter written so slovenly as to resemble a false letter.

But to return to the anomalies: there are first the irregularities of orthography. The following are selected examples:

Doubling of consonants: preceding $r$ : e. $g$., in fl. $2 b^{2} k$-krid $i$, fl. $3 b^{5}$ $k-k_{r} i y \hat{a}$; or preceding $y$, in fl. $5 b^{4}$ siddhyati and sâddhyam.
Confusion : of sibilants : e. g., s for $\hat{s}$, in $\mathrm{fl} .4 a^{8} k \hat{k} s \hat{s} s a$ for $k \hat{a} s i \hat{s} \hat{s} a ; s$ for $s h$, in fl. $2 b^{8}$ kulmâsa for kulmâsha; sh for $\hat{s}$, in fl. $5 b^{7}$ shad $\hat{\imath}$ for śaṭ̂ ; or ṇ and $n$ : in fl. $3 a^{5}$ lṛitûstrâni for kritâstrâni, fl. $4 b^{8}$ sthaunaiyaka for sthaunêyaka; or of $r i$ and $r i$, in fl. $3 b^{5} m r i y a t e ̂$
for mriyatê, fl. $4 a^{7}$ and $4 a^{9}$ śritâni for śritâni; fl. $3 a^{10}$ lrimi for kerimi.
Prâkriticisms: omission of a final consonant: fl. $3 b^{3}$ pushty $\hat{a}$ for pushtyâh (abl. sing.) ; fl. $3 b^{7}$ samâ for samât (abl sing.) ; or simplification of a double consonant: fl. $3 b^{11}$ sâtalayôs for saptalayôs.
Use of the guttural nasal before śand $h$ : fl. $1 b^{9}$ and $2 a^{7}$ añs $u$ for ạฺśu.
Next morphological irregularities:
Peculiar inflexion : in declension: fl. $2 b^{11} n$ rin $\hat{a}$ for $n r \hat{a}$; fl. $5 b^{1}$ sahîyaṃ from a base sahîya for sahîyas. In conjugation: fl. $2 b^{9}$ pâyayîta for pâyayéta*; change of class: fl. $5 b^{3}$ pratapyêt (IV能, rare, 'to warm one's self') for pratapêt ; âtm. for parasm.: fl. $2 b^{9}$ śrị̣ushva (but fl. $3 a^{9}$ śrinu), fl. $4 b^{2}$ vinivarttayêta for vinivarttayêt.
Change of gender: neut. for masc.: fl. $3 b^{2}$ utsâham (but fl. $3 b^{3}$ utsâhaḥ), fl. $4 a^{3}$ amaradâru ; masc. for neut.: fl. $3 b^{11}$ limgaś=cha, fl. $4 b^{3}$ âschyôtanô vidhêyah (but fl. $4 b^{2}$ âśchyôtanam) ; fem. for masc.: fl. $5 a^{8}$ rôdhrâm (but fl. $5 a^{10}$ rôdhram) ; fem. for neut.: fl. $5 a^{10}$ ayô vighrishṭ̂m $\dagger$ for vighrishṭam.
Next syntactical irregularities :
Exchange of cases: acc. for nom.: fl. $5 a^{6}$ dâham rujâm sa-dâhận śâmyanti for dâha rujâ sa-dâhâ; nom. for acc. : fl. $5 a^{2}$ mûrvv $\hat{a}=$ pi go-mûtra-yutâṃ vadaṇti for mûrvvâm-âpi; $\ddagger$ altogether the acc. and nom. cases are used very promiscuously, see under 'abnormal concord.' Instr. for nom.: fl. $2 b^{11}$ nriṇ̂́a upakalpayêt for $n \hat{a}$; nom. for loc., fl. $5 a^{5}$ vidrutaś=cha vadana-pralêpê for vidrutê cha; gen. for acc., fl. $1 b^{9}$ mâlâs=tat-parichârakasya janasya ârôpayêt for parichârakaṃ janam ; gen. for dat. : fl. $2 a^{6}$ bhujậ prayôjyô for bhugbhyah ; and loc. for dat.: fl. $4 a^{3}$ râjadvishtê na dâtavyô for râjadvishṭâya.
Abnormal concord: incongruent cases: acc. and nom.: fl. $3 a^{1}$ prasthân dêyâh for prasthâh ; for other examples, see above. Incongruent genders: masc. and neut. : fl. $3 a^{9}$ gunâni prôchya-
 tanam for êtat śritam, $4 b^{1 l}$ êtâni miśritâ vâ ; for other examples, see above under 'change of gender.'
Abnormal construction : many of the verses containing prescriptions

* This, however, may be mercly a case of slovenly writing of the vowel-mark.
$\dagger$ This may be due to the mere exigencies of the metre which here requires a long syllable.
\$ This, however, of course, would not hare snited the metre.
are very halting and defy every attempt at regular construction. Thus in verse 36 (fl. $3 a^{5}$ ) one would expect the accusative of loudava in dependence on yumjyât ; one would also rather expect lkâsaśvâsa-vighnạ̣n vidam. Quite literally translated, the construction seems to be this: "Having crushed one cleaned prastha of garlic, one should join it with one half-pala of powdered triphala; and of both clarified butter and oil one kuḍava : this, when allowed to stand for ten days, they favour as a remedial 'vida' against cough and asthma." An other striking example is the prescription in verses 67-69; there is a wonderful mixture of accusatives and nominatives in verses 67 and 68; and the exact connection of dvâbhyâ!n tribhir is doubtful. Verses, 75, 76, 91, 101 and others are equally difflcult to construe.
Peculiar words or meanings of words : the following I have not found noted in any Sanskrit dictionary available to me:
agra-manas 'attentive' or 'intelligent', fl. $3 a^{9}$.
agaja 'a kind of liquor', fl. $2 b^{\ddagger}$.
$a b d a$ ' mica' (syn. ablira), fl. $1 b^{4}$.
abhi-vi-ji, 'overcome', fl 3a1, in abhivijitya.
$a b h i l u$, some kind of eye-disease, fi. $4 b^{6}, 5 a^{3}, 5 a^{5}$.
utkshita, 'besmeared', fl. $1 b^{6}$.
udaka, 'water-animal', fl. $5 \mathrm{~b}^{6}$.
undîra, 'excellent', fl. $3 a^{4}$, (perhaps a false reading).
upalâbha, 'resemblance ', fl. $1 b^{4}$.
ushita, 'allowed to stand ', fl. $2 b^{11}$; see vyusht ta.
krisiśa-bhâs, 'appearing lean', fl. $3 a^{9}$, (if correctly read).
khalita, ' bald ', in $a$-lihalitâ, fl. $5 b^{3}$.
jîvitu, 'life ', fl. $3 b^{6}$, (perhaps a false reading).
nikvâtha, 'boiling', fl. $3 a^{2}$.
$n \imath i l i k a$, some kind of eye-disease, fl. $5 a^{3}$. pilpa, 'suppuration' (?), fl. $5 a^{4}$; in sa-pilpam.
$\sqrt{ }$ pra-śush, 'desiccate', fl. 4bll, in praśóshya.
yashtihva, 'liquorice ', fl. $5 a^{8}$.
varttyâ (fem.), ' bougie', fl. $3 b^{8}$ (syn. vartti).
viḍa, 'paste ' (?), fl. $3 a^{6}$, (cf. viḍâlakia).
vêdh, 'pierce', fl. $5 b^{4}$, (cf. causal of $\sqrt{ }$ vyadh).
vyushta, 'allowed to stand', fl. $2 b^{7}, 3 a^{6}$, see ushita.
vyatimiśra, ' mixed ', fl. $3 a^{7}$.
shadi, a species of plant, fl. $5 b^{7}, 5 b^{8}$, (cf. sat $\mathfrak{i}$ ).
salîya, 'fortified with', 'joined with ', fl. $5 a^{11}, 5 b^{1}$ (cf. sahíyas).
saṃsúdana, 'destroyer', fl. $3 a^{1 \text { 10 }}$.
suvîraja, 'fermented barley-water' or 'kâñjî,' fl. $2 b^{5}$, (syn. sauvîraka).
sthaunaiyatia, a species of plant, fl. $4 b^{3}$ (perhaps a false reading).
śmârshmin, 'having a sound body', fl. $3 a^{l}$ (perhaps a false reading).
Rare words: athô (for ath $\hat{a}$ ), 'then ', fl. $4 b^{5}$.
ât, 'afterwards', f. $4 b^{3}$.
$u$ (?), 'then', fl. $2 b^{2}$.
ékadhyam, 'together with', fl. $2 b^{6}$.
Marks of interpunctuation : a symbol, exactly like the old numeral figure 'one', occurs twice, apparently as a mark of interpunctuation, on fl. $3 b^{3}$ and $3 b^{4}$. The same symbol is also used to indicate a blank space at the beginning of the second and last lines on $f l . l b$.
In this connection, I may note, that the two signs of the Jihrâmûliya and Upadhmânîya never occur, at least, in this portion of the manuscript. The introduction affords some curious historical information. There were ten sages living together in the Himâlayas : Atrêya, Hârita, Parâśara, Bhêla, Ganga, S'âmbarya, Suśruta, Vasishṭha, Karâla and Kâpya. Once the attention of Suśruta was attracted by a new plant, - it was the laśuna or garlic -, and he went to ask information from a Muni named Kâśirâja. This Muni is then represented as giving to Suśruta all the medical information contained in the manuscript (see verses 9, 39).

This narrative agrees in one leading point with the opening statement of the well-known work, known as the 'Suśruta.' There it is stated that Suśruta with other sages addressed the Kâsirâja* Divôdâsa Dhanwantari in his (Himalayan) hermitage and obtained their instruction in medicine from him. Of the companions of Suśruta seven only are named: Aupadhênava, Vaitaraṇa, Aurabhra, Paushkalâvata, Kararîrya, Gôpura and Rakshita. $\dagger$ None of these agrees with the names given in our manuscript.

* This Kâśirâja is nsually understood to be a title "king of Kấ̂î (Benares)"; though, eren then, it does not follow that " the cultivation of medicine is by Suśruta himself expressly assigned to the city of Kâsí (Benares)" (see Weber's History of Indian Literature, p. 269); for Suśruta learned his medicine from the Kâśirầja while the latter was living with other sages 'in retirement' (âśrama), which according to the usual precedents must be understood to be in the Himâlayas. But from the way in which the name Kấsirâja is used in our MLS., it seems clear that it is understood as a proper name of a Muni. The names Divôdasa and Dhanwantari do not occur at all in the MS.
$\dagger$ Three of them, Aupadhênava, Anrabhra and Paushkalâvata, are again named at the end of the fourth chapter.

On the other hand some of the names mentioned in the introduction to the other well-known Hiud $\hat{u}$ work on medicine, known as the 'Charaka', agree with those in our manuscript. In that introduction it is said that Âtrêya taught medicine to his six pupils: Agnivêéa, Bhêla, Jatûkarụa, Parâśnra, Hârîta*, and Kshârapâṇi. Four of these names are identical: Âtrêfa, Bhêla, Parâśara, and Hârîta, but in every other respect the statements of the two authorities differ from one another. According to the Charaka, Âtrêya was the teacher of Bhêla, Parâsara and Hârîta, while according to our manuscript these four men were fellowstudents, and were taught by Kâsírâja. In the Charaka, Suśruta is altogether omitted, while according to our manuscript, he was the most prominent in the company of fellow-students and their mouthpiece. This, of course, is explained by the fact, that the two works of Charaka and Suśruta, as we now have them, in the main represent two different schools or rather departments of medical science-the former, medicine, the latter, surgery. Of this assumed division there is no sign in our manuscript; nothing in its contents, though coming from Suśruta, is connected with surgery; and in its introduction both Âtrêya, the fountain-head of the Charaka, and Suśruta are mentioned in company. But neither the Suśruta nor the Charaka, as we now have them, are original works ; they are clearly, both of them, recensions (probably much modified) of earlier works. The earlier work on which the Charaka Samhitâ is based was one written by Agni rêśa (said to have been a pupil of Âtrêja), and was probably still exstant, as Dr. Dutt in his Hindu Materia Medica (p. vii) shews, at the time of Vâgbhatta. That the work now called Suśruta is not the composition of Suśruta himself, is shown by the opening salutation in which Suśruta himself, along with other divine personages, is invoked. Of what sort the two original works were, we have perhaps hardly sufficient right to conclude from their modern re-cast representatives. At the time of the composition of our manuscript, however, it is clear, the original work of Suśruta (the so-called vriddha Suśruta?) already existed.

That neither of the two works, now known as the Charaka and the Suśruta, can be accepted as ancient and original compositions, has been clearly shown by Dr. E. Haas, in his tro Essays in the Journal of the German Oriental Society (vol. XXX, p. 617, and rol. XXXI, p. 647). The Suśruta, especially, would seem to be a comparatively modern compilation, somewhat loosely and unscientifically put together in the manner of the Purậas. But Dr. Haas goes much too far in his theory of the origin of that work, which, though seriously put forward, reads

* Our MS. spells the name Hârita, which is there gnaranteed by the metre. I may here mention that a Hârita Samhitû (Âtrêyn-muni-bhûshitâ) has been edited by Kariraj Binod Lal Sen. (Calcutta, Ayarreda Press, 146 Lower Chitpore Road).
much more like an elaborate joke. According to him the name Suśruta is only an Indian adaptation of the Arabic name Suqrât (blaق ), which itself is a confusion with Buqrât ( $1 \mathbf{L}, \mathbf{,}$ ), the Arabic comuption of the Greek Hippokrates (ibid., p. 652). And in the name of the city of Kâsíl (Benares), where (as Dr. Haas believes) the medical science is said to have originated, he sees an adaptation of the name of the island of $\operatorname{Cos}(\kappa \hat{\omega})$, which was known to the Arabs to have been the native land of Hippokrates (ibid., p. 654). Accordingly he holds, that the Suśruta was compiled somewhere between the 12 th and 15 th centuries A. D., and is based on information supplied by Muhammadan physicians (ibid., pp. 666, 667).

One of the main pillars of this theory is the opinion held by Dr. Haas (and others), that according to the Suśruta, Kâsî-Benares is the place where Hindû medical science took its origin (see ibid., pp. 627, 665,654 ). This opinion is based on the statement, that "Suśruta and his companions addressed the Kâŝîrâja Divôdâsa Dhanvantari in his Âśrama ". Now even if it be right to take Kâŝîraja as a title (' king of Kâśsì') of Divôdâsa Dhanvantari, it does not follow that the âśrama, where the instruction took place, was in or near Kâsî̀. On the contrary, all that we know of Indian habits suggests that the meaning of Suśruta is that when the "king of Kísí̂" communicated his instruction, he had resigned his kingdom and retired into an Himalayan retreat, to study and practice asceticism. This may be all invention, but it is just what would be consonant with the ideas of a Hindû author. But it seems to me, our manuscript renders it very improbable that Kâsîraja is a title; it may hare been so in the thonghts of the author of the modern Suśruta, but in our manuscript itself it seems to be nsed rather as the proper name of a Muni. This takes aways all force from the argument based on a supposed origin of the medical science in Benares.

But in his main principles, I am disposed to believe, Dr. Haas is correct. He distinguishes between an earlier and a later period of the literary cultivation of medical science among the Hindûs (ibid., pp. 648, 650). The earlier period extends down to the arrival of the Arabs in India, who bronght with them the knowledge of Greek medicine. To this period, Dr. Haas thinks, the Charaka may belong (ibid., p. 651) as well as other treatises, no more now identifiable (ibid., pp. 628, 629, 657). Two of the earlier works of the second period Dr. Haas considers to be Vâgbhatta's Ashṭanga-hṛidaya and the Mâdhava-nidâna (ibid., p. 649, 650). The Suśruta, as already remarked, he places also in the second period, but much later, after the 12 th century. This may be true, so far as the work, now known as the Suśruta, is concerned; but that some Suśruta existed already in the earlier period, is now indisputably proved by our manuscript. It not only proves that a Suśruta existed
in the earlier period, but that its existence is traceable back to (at least) the fifth century A. D. ; and this fact lends very strong support to the commonly held opinion that the Kitál-i-Susrud ( (,mw بis), mentioned by Ibn Abí Uṣaibi'ah (8th century A. D.), is really a 'book Suśruta'. But what particular Suśruta it may have been, it would be, at present, impossible to say.

Our manuscript, -at least in the portion, now published-shows some affinities to both the Suśruta and the Charaka. I have not yet been able to subject these two works to a very careful examination with a view to discover resemblances or identities. This, of course, is very desirable ; and I hope to do so, as soon as I have more leisure. In the meantime I may note here a few coincidences that I have noticed in the course of a cursory glance through them. My references are to Pandit Jivânanda's editions;* I regret, that no better editions are, at present, available to me. For the English translation of Suśruta I refer to that by Doctors Uday Chand Dutt and Aughore Chunder Chattopadhya in the Bibliotheca Indica.

The only striking coincidence that I have noticed with regard t, the Suśruta is the prescription given in verses 60-66. It refers to ten purgative pills (mddaka), one of which is te be taken daily on ten consecutive days. A prescription, practically identical, occurs in Suśrata's Sûtrastlâna, Chapt. 44, ślôkas 50, 51 (p. 166, and transl. p. 211). The number of ingredients differs, but the principal ingredients are the same, and the number of pills and days is also the same. Moreover the place in the system where the prescription is introduced has some similarity. I have not been able to discover this particular prescription in the Charaka, though perhaps it may be found in it.

With regard to the Charaka I have noticed the following coincidences. In verses 121 and 122 there is a prescription against cough. The first portion of this prescription exhibits a very close resemblance to the first portion of a prescription occurring in the Chikitsita Sthâua of the Charaka, in its 20th chapter which deals with the treatment of cough. It is at the bottom of page 735. I have not found this prescription in the Suśruta. Another coincidence occurs in verse 66. Here we have the direction that a certain medicine "should not be administered to any one who has no son nor disciple, nor should it be given to an enemy of the king, nor to any other sinful liver." A very similar direction occurs in the Charaka, in the 8th chapter of the Vimâna Sthâna (p. 296) $: \dagger$ "medicines should never be administered to the king's

* Also Dallana Mishra's Commentary, the Nibandha Sangraha, prblished by Jîvânanda Vidyâsâgara.
$\dagger$ Also quoted by Prof. von Roth in Journal, German Oriental Society, Vol. XXVI, p. 448.
enemies nor to the enemies of grandees (mahajana), nor to any whose habits are excentric, siuful or disagreeable, nor to any who will not obey directions, etc., nor to such as are on the point of death, nor to women whose husbands are absent or who have no protector." "* In the Charaka this dircetion is a general one ; in our manuscript it appears to have reference to a particular prescription. I may note, horvever, that the identical direction also occurs in the introduction to the first part of the Bower MS., where it is given, not with reference to a particular remedy, but, as in the Charaka, to medical assistance generally.

On the other hand, I have noticed some particulars in which the views or rules of the Suśruta and the Charaka appear to me to differ considerably from those set forth in our manuscript. Thus in verses $43-50$ the digestive faculty (agni) is made the basis of all vital conditions, the last of which is stated to be longevity (ayus), and the physician is advised to direct his first enquiries to the state of the digestion of his patient. In the Suśruta, however, (chapt. 35, Sûtrasthâua, p. 126, transl. p. 143) the physician is directed first of all to enquire into the longevity (ayus) of his patient, and only if he is satisfied on this point, he is to proceed to examine the patient's digestion (agni). Again in verse 43 , food ( $\hat{h} h \hat{a} r a$ ) is mentioned as the first item in a serics, not as being the first in the series of physiological states, but only becanse, as explained in verse 44 , food is that which sets the digestive faculty (agni), the first of the vital functions, in activity. In the Suśruta, however, (chapt. 46 in Sûtrasthâna, p. 192, transl., p. 248) a much more important position is assigned to food (âharra) ; it is made the basis of everything, of strength (bala), colour (varna) and vitality (bjas). It would almost seem as if the writer of the Suśruta had misunderstood or exaggerated the reason why 'food' is placed first in the series in our manuscript. Again four kinds of digestion (agni) are distinguished: sama, vishama, tikshna and manda. Now in verse 46 of our manuscript, the direction is given, in case of vishama or irregular digestion, to take curdied milk, clarified butter and the like. The same direction is also given in the Suśruta (chapt. 35 of the Sûtrasthâna, p. 131, transl., pp. 147, 148), but with reference to too active (tikshuna) digestion. Another instance are the directions with reference to honey and urine. In our manuscript, verse 58, the use of these substances is limited to the products of the

[^22]honeybee and the cow respectively; but in the Suśruta there is no such limitation, though bee's honey is said to be the best and cow's urine is enjoined to be used in preference to that of other domestic animals; see chapt. 45 in the Sûtrasthâna, pp. 184, 191, transl., pp. 235, 246, 247. There are some other substances, such as horn, hoof, etc., mentioned in verse 58 ; and with reference to all of these the use is limited to products of the cow. Similar, though not the same, substances are mentioned in the Suśruta, verse 12 of chapt. 37, Sûtrasthâna (p. 138, transl., p. 157), but here again their use is not limited to products of the cow. For another difference see footnote 7 l .

In the Charaka I have noticed the following instances of a difference. Both in our manuscript and in the Charaka three sorts of diseases of the hair are mentioned : Khâlitya 'baldness', palita 'grey hair', and tâmrabâla or (in the Charaka) hari-lôman 'red hair.' As remedies our manuscript prescribes (verses 11.7-119) : venesections, emetics, unguents, hair-dyes and washings. The Charaka, on the other hand, directs the use of nasyas or 'the application of medicated substances to the nose' (see Dutt's Materia Medica, p. 17), unguents, and the applications of plasters to the scalp and the face; see the Chikitsa Sthâna, section on baldness, pp. 798, 799.

On the whole, therefore, I cannot say that-so far-I have discovered any very striking connection of the Bower MS. with either the Suśruta or the Charaka. It is different with the Chakradatta, or the Chikitsa Sangraha, a compilation from various medical works made by Chakrapânidatta. This appears to be a work, dating not later than from the 9 th or 10 th century (see Dr. Dutt, in his Met. Med., p. xi). My references are to Kaviraj Pyari Mohan Sen-Gupta's edition. In this compilation I have found several of the prescriptions of the Bower MS., in almost identical words. Thus the prescription against cough, given in verse 123, occurs as the last of a set of three prescriptions, quoted in the Chakradatta, p. 210 (No. 2). The only difference is that the drugs are enumerated in a different order in the first halfi-line of the slokka. Again the prescription in verse 128 occurs in the Chakradatta on p. $2 i 6$ (No. 70), and this time, in perfectly identical form. Again the prescription in verses 121 and 122 , which I have already mentioned as also occurring in the Charaka, is also found in the Chakradatta, p. 210, as the second in the first set of two prescriptions. The agreement, however, only extends to the first portion, given in verse • 121 ; and even here it is not very close. But this first portion, as given in the Chakradatta, is identical with the first portion, as given in the Charaka, on p. 735 (bottom). The second portion, as given in the Chakradatta, differs from the versions, given in both the Charaka and in our manuscript. I may add that the first prescription for cough, given in the

Chakradatta, on p. 210 (commencing with vâstuk̂̂ vâyaŝ̂ sfâku $\dddot{c}_{1}$ ), occurs in identical words in the Charaka, on p. 736 (middle), and that there is a faint similarity in this prescription to that given in verse 120 of our manuscript. It is evident, that some of the prescriptions in Chakrapâni's compilation are taken from the Charaka; but I do not know whence he derived the others, which are identical with some in our manuscript (verses 123,128 ). Further, the prescription in verses 121 , 122 (commencing with grâmyânûpa) seems clearly to point to some connection between the medical work, contained in our manuscript and those in the Charaka and the Chakradatta. It would be satisfactory to be able to discover what the sources were on which Chakrapâṇi drew for his compilation; they are not specified anywhere, I believe, in his book.

For the sake of completeness I may add that in the first portion of the Bower MS., the introduction of which I have published in the Proceedings for April, I have come across several prescriptions which, in quite or almost identical terms, are incorporated in the Chakradatta.

There is another work which I lave been able to examine cursorily and which offers a few examples of coincidences. This is the Vangasêna, by an author of the same name. It appears to be a compilation from different medical works, but professes to be a new recension of what was formerly known as the Agasti Samhitâ.*

The formula for the purgative pills, in verses 60-63 of our manuscript, which I have already noted as occurring in the Suśrata, is to be found also in the Vangasêna, in one of its last chapters (the Virêchana Adhikâra), on p. 1020 ; and it may be noted, that in our manuscript, the composition of the formula is expressly ascribed to Agasti (in verse 64), whose work the Vangasêna professes to reproduce. $\dagger$ A very curious verbal agreement occurs in verse 84 of our manuscript. Its first half-line (áschyôtanam mânusha-dugdha yu7tam etc.) is found identically as the secoud half-line

[^23]of a formula given in the Vangasêna，on p．788．The preceding formulas，however，are entirely different，＊and I have not been able to trace the formula of our manuscript in the Vangasêna，or vice versa． I may also note，that the formula，given in verse 76 of our manuscript for ophthalmia，shows a curious resemblance to that given in verses 107 and 108 of the Vangasêna（p．791）．There is also some slight resemblance between the formula，given in verses $70-72$ of our manuscript，and that in the Vangasêna，verses 86， 87 （p．789）and the corresponding verses $2-5$ in the Suśruta（pp．680，681）．It would seem that the options per－ mitted in the formulas of our manuscript（verses 67－74），are made up into a large variety of distinct formulas in both the Vangasêna and the Suślıuta．

I may note，that neither opium nor mercury is mentioned in our manuscript，though，as both drugs came into India with the Muham－ madans，that goes without saying．But it may be noticed that the MS． mentions the riti－lusuma，or calx of brass，in one of its prescriptions，in verse 109 （⿴囗 $5 a^{11}$ ），the knowledge of which，as Professor Garbe points out in his Indische Mineralien（ p 56 ），has been lost in India since many centuries．Also some other drugs，now no longer available，occur， such as the $j \hat{\imath v a k a, ~ m e ̂ l a ̂, ~ e t c . ~}$

Perhaps the mention of lions and elephants and of the light com－ plexion of the people in the introductory verses 6,41 ，and the omission of the winter in verse 92 ，should be noticed，as giving some indication regarding the place of composition of the work．

With regard to the edition and translation，I should explain，that the Nàgarî transcript gives the text as it stands in the MS．，broken letters or aksharas，of course，being printed in full；but where the consonant of a single akshara or a portion of a compound akshara was entirely lost，the missing portion is represented by a blank type（口），to which the extant portion of the akshara，whether vowel or consonant，is joined． Aksharas，which are wholly wanting，are indicated by dots，－in numbers equal to the missing aksharas．Aksharas which now are wanting，but which were still exstant，when I first made my transcript，are enclosed within straight brackets．

In the Roman transliteration，I have attempted to show clearly the state of the original manuscript．Broken aksharas of the MS．text are indicated by round brackets；entirely missing portions are indicated by as many lengths and shorts as were shown by the metres to have existed．Occasionally，when it was practicable，I have made an attempt to restore the text．In some cases，this was easy and the restoration ob－

[^24]vious, as the extant traces taken together with the metre and the context indicated clearly enough what the missing letters must have been. All such restorations, however, are invariably included within straight brackets.

The translation is necessarily somewhat free here and there, though always substantially faithful. I cannot feel certain, however, that I have always grasped the right meaning; the diction of the work is too rugged, and my acquaintance with medicine, limited. I have tried to obtain help, as far as I could, from Hindû practitioners. The Sanskrit names of the drugs I have retained, except in those fer cases, where there are well-known English equivalents. In the case of those Sanskrit names, whose identity is certain, I have added in brackets their scientific equivalents; but in some cases I could not feel certain as to which plant or drug was really intended. I consulted chiefly Dr. Dutt's useful Hindu Materia Medica and Professor Garbe's Indische Mineralien; also Dr. Watt's Economic Products of India.

Transcript.
First Leaf: Reverse.
?
凶ों देबर्षिसिज्जग का किन्नरनायय व्वविद्याधराध्युषितसानुरन न्तरत्नः


नुदग्रः ॥ यन स्फुटन्म रासहृ्समयूखजालविच्तोभितं दपूसु दिन्तु

₹
पूासपि पुनन्न्न तमो च्युपैति॥ यः सेव्यते मुनिगतौरनिपूं सโिश्येनैनैकः समित्वुपू फलोदकपुष्पह्त्तैः खग्गाझ़नाभिरपि च प्रविम्टष्टपाखाः टेप्शनित्यस्थितोद्रपतिदोधितिसंप्रयोगात् पूरोवन्द्ववापि हिमवत्स्मटिकोप-

4 न्दुकान्त्तमायः प्रवइं सवंति याब्याब्टमुक्तजलधौतश्रिलातलेषु कुंजेषु नेकविधवोगा़ानाटि तेषु रम्येषु पुष्पफल लद्नुमसंक-

टेषु राचौ जताभानवदौषधयो ज्वलंन्ति॥ चन्दांशुगौरतरकेसर-


ट्टहासन्न च्वम्यते म्बुधरबृन्द्रवो पि यन ॥ तसि निगराववनिमरडडलमराडमूते सब्ब्वातिथौविव जगहिभवप्रदानैः सर्व्वतुपुष्प फलबह्टुमरम्य-

सानावेते विधूतनमसो मुनयो वसंति॥ चान्रेयह्हाईितमराभाए-


जिज्ञासवः समुदिताः प्रतशः घ घचेरः ॥ दछ्षा पने हैरित हरितैरिन्दु-


मुनिमुपगतः सुग्रुतः काशिराजं किन्नेतल्साद्य स भगबानाह्त तसे यथावत् || पुराम्तं प्रमधितमसुरेन्दः ख खं पपौ तस्य चिच्छेट भगवानु-

त्तमांगं जनार्द्नः॥ कखठनाडी समासन्ना विच्छिन्ने तस्य मूर्धणि विन्दवः पविता भूमावाघ्यं तस्येह्ह जन्म तु॥

Second Leaf: Obverse.
न भच्चयल्येनमतस्च विप्राः पूरीइसंपर्द्धविविःस्टतत्वात् गन्धोग्रतामप्यत एव चास्य वदंति शूास्त्राधिगमप्रवोगाःः ॥ लवारस [वियोगा]दाऊ रेन रश्रूनम्

लमुन इति तु संज्ञा चास्य लोकप्रतीता बङभिरिह किसु त्तोर्देश्रभाषाभिध नि : पृट्यु रसगुयावीयंगाय्यस्य चैबो पयोगात्॥ उसे च पाके च कटुः प्र

दिष्टः पाके तथा साटुरुदाहृतो न्यः लघुप्च गन्धेन सटुर्ज्जराप्रवोर्यैगा चोष्पः प्रथितम्च दृष्यः ॥ कांद्नोष्पासे हभादात्पवन बल हृए:

प्रोक्तो मुनिदृषैः माधुर्यांत्पित्तभावाद्यि च स रसतया पित्तम्रश्रमनः
 दिति

विधिविहितो दोषछयह्इः ॥ पवनं विनिहंत्यमि चास्थिगतं काफ. मप्यधिराटुदितं पूमयेत् जनयेदपि चान्मबलं प्रबलं बलवर्संकरः प्रव-

इस्च मतः ॥ क्य बजविधमद्यमांससर्पर्यवगोधूमभुजां सुखात्मकानाम् ऋयमिह् लशुनोत्सवः प्रयोज्यो चिमकाले च मधौ च माध-

वे च ॥ त्यन्यंते कामिनोभिर्जयनसमुचिता यन काश्चोकलापाः हाशाः पूर्यान्न वच्तस्तनतटयुगलापोडनात्संप्रयांति कांता नेन्द्युज भगाहर्म्य- पष्ठोपभोगाः काले तसिमन्प्रयोन्यो ह्यगुरु बजमतं कुकुंमांकाख यज्न॥ हम्म्याग्रेष्वथ तोरयोषु बलभीद्दाईषु चाविष्कृतःः कन्दाख्या लशुनखजो विरचयेट्मूमौ
[व]थैवार्चनम् मालासत्परिचारकस्य च जनस्यारोपयेत्तन्मयीरित्य-
 [सुरवि]प्रान्प्रतिपून्य पावकं च लशुनात्बरसं पटांतयूतं प्रधिवेद्रक्णि সुभग्रह ह्तयुत्ते ॥ कुडवं कुडवादथापि चाधं कुडवं सार्धमतो पि वाति[--]

Second Leaf: Reverse.
१. नियता न चि काचिद्न मान्रा प्रपिवेद्दोषबलामयानि द्व्वा ॥ सतालवृ • व्यजनानिलैः शुभैः पवन्तमन सम स्पृश्च्चः

भवेटु मूर्छापि वतो पि वा यदि स्पृद्येत्ततः पूरतजलैः सचन्दनैः॥ सुराटतोयांपूविमूर्चितस गएडूषमेकं प्रपिवेदसस्य फूवें गलक्क्रोडिधव . :

हेतोः स्थित्वा मुहृत्तश्च पिवेत्मशेषम् ॥ तस्मिझ्जोर्से ज्वोरपूाल्यान्न-
 से हैमीचयैकं च

कालम्॥ पिवेन्माहींकं वा मधु मधुसमांशाच्छमदिशाम् चरिष्टं पूशधुं वा जगलमगजं मैंरेयमपि वा क्यतो न्यद्वा मद्यं भवति गुणवद्यत्तत्ससलिलम् पिवेटेकेकं वा न

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y
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भवति यथा मद्यव्यतिकरः॥ स्यमद्यपः सुखोटकं पिवेत्तथाम्ल्ल• कांचिक्रम् तुषोदकं सुवोरजं पिवेच मस्तु यच्छुभम्॥ न गुडेन कथंच्चिट्चमद्यान्न तथामच्च जलं पिवे-

 घृतभाजने॥

व्युष्टं दपूाहात्प्रम्टति भच्चयेद्विल्वसंमितम् जीर्सै च रसकल्पोक्तमाह्दारविधिमाचरेत् हावप्येतावभिचितौ कल्पौ प्राग्रह्रं मया च्यनो-यंन्नवा-
 स चुक्रूः सर्पि स्तेलाभ्यां समितविकृतैः स्रूपमांसम्रका है: मौनै स्यूर्से हैं रितकयु-

 इमस्मै

प्रट्याद्यूषं वा स्याहैद्लं तन्विमिश्रम् ॥ क्यथ तैलशुक्तसहितं लगुनं निहितं यवेषु परिलिप्य म्टदा स्थित मेकमब्टमुपयुज्य नरः सीिवेfिणा

नपि जहाति गदान् ॥ चिशाछमुषिता तुगौरनन्टगा यदा स्यात्तदा न्टयार्धमुप क ल्पयेल्नपू . . . . . .

Third Leaf: Obverse.
१ . . द्धिघ्टतानि तक्रमथ वापि तद्यान्मएः प्रयुन्य विविधान्गदानभिविजिय प्मर्ष्मी भवेत् ॥ प्रस्यान्दानिंशूंब्नमुनरसतः

कियवमर्धर्ध्यमस्मात् तैलप्रस्थो व्यपगतमलः पिष्टतः षट्च देयाः द्याएनिन्नाधादपिच कलवां मेषग्टंग्याः

सशीवं प्रस्थौ च हौ पुनइमिहरेतेत्तन पिष्टस्य धीमान् इति सुरेयं पंचपभ्चाहादसवर्संगन्धैः समन्विता

भवति तैलं नामत श्चेद्युन्दौरमत्यर्थकार्मुकम् तैलमेतय्यः सुरामपि वा पुरुषः प्रयुंजोत यन्नतः

परिहूरंति वं गदानीकान्याजौ द्वतास्लानि वेतरे॥ प्रस्थं पिस्ष्वा पूोधित मेकं लगुनानाम् युंन्या चूर्सै स्त्रैफ लैरर्ध-

पलिकै: सर्पिस्तेलाभ्यां कुछवच्चेति टपूाह्यम् व्युष्टं कासम्वासविडं विध्नमुपून्त्त॥ हन्याद्युत्तो मारुतगुल्मं पवनघ्नेः

कुष्ठं हन्याघ्योजितमानं खदिरेगा काश्येश्रो हयगन्धाव्यविमिग्र: सर्यः प्रोन्त्च्चेष विभम স्रों मधुयद्या ॥ नानाविध्यानेष निछ़ंति रोगान् नानाविधद्यविशेषयुत्तः न यंन्या कुनचिद्ति कल्पे यथा प्रयुक्तः सुखिभभः स कल्पः ॥ रसाययावशस्यास्य प्रयुन्तम्य

गुगानि मत् समासतः प्रोच्यमानान्सुश्रुतै यमनाः प्र्यु॥ कुष्ठारो-
 रार्थेंचरः

पच्ताघातकटिग्रह्हक्रिमिगदोदावर्त्तमे हापहः तन्द्रोपोनसवाएप्टष्ठपबनापस्मारसं सूटनः॥ श्रोमान्चे सुम्हदंगवब्यु निनटस्त्वपग्रहेमद्युतिर्म्मेधाधोबलवान्

ससंहृतन नर्वल्यादिभिर्वर्जितः निय्योत्माहसुतर्धिभिः समुदितैः सर्ल्वेहैढैटिन्द्रियेः जीवेदव्दप्रतं दृढानलबलः स्ती घ्वन्त्वयो वा • मा .

Third Leaf: Reverse.
. . . . लगुनाना कल्प उत्को मयायम् मुनिरfप च दृष्टः प्रान्तनेरेव-


जाहारमुष्टिधातूनां साम्यमारोग्यमेव च पुष्टिस्तेजस्तथोत्साइमायुस्चैवाग्रिसंभवाः च्घम्मिराहाइमूलस्तु पत्तिमूलाग्च धातवः धातुसाम्यात्तथारोग्यमारोग्य . पुप

रत्तमा पुध्या तेजस्तथोत्साहः सर्वैंतैस्य्य जीवितम् प्रागिनां बर्ज़ते तस्मादग्निमादौ परीच्चयेत् धातुसाम्यात्ममः प्रोक्तः स वै श्रेष्ठः प्रकीर्त्तितः - विषमे दाधिकं सर्षिः fिवेहा हवुषादिकम्

स्विग्धोघ्या। वर्त्तय स्चेष्टास्तथा पानाशूनानि च मन्दे तु लंघनं पूर्ब्व पस्चत्वाचनदीपनम् चूर्सारिष्ट प्रयोगाग्च हिताः fित्तकपापहा: यथासात्यं प्रयोन्तबं समे मौ भिषजामिकि - भव-

ति चान~ मन्दे तोन्दो च मृघते विनोपकरान्नृरः विषमे रोगबाजल्यं समे जीवेचिरं सुखी तस्मादोगेषु सर्बेष्यु सर्वाकालेषु बुजिमान् ग्रग्नमूला क्वाया

कार्य पस्चादामयशांतये॥ खरसेन पूंखपुष्या बाह्झो मखूकपर्fसमधुकानाम् मेधारोग्यबलार्थौं जोवितुकामः प्रयुंजोत मासेन तु मेधावो घर्मासा|्घुतधरो भवय-

जरः जीवति वर्षसहसं समा पयोगाच्छतद्यं विधिवत् खवं परतः परतः प्रयुंजमानो भवस्यजरः ॥ . . . \| $\odot$

- यवागूखड यूषेषु लेहचूर्णगगदेषु च गुडिकांजनवर्च्यास्त धूमप्रठमनेषु च पुटमाकतर्प्पयखसेटेनावमनास्य्योतनेषु च

घन्चेषु चाप्यनुत्तेषु यन भागो न कोर्तितः द्यायां समभागः स्याद्वूगुयो मधुसर्पिषी चिगुखां तु गुडं दद्यात्सिताचूथाँ चतुर्गुणाम् पेष्येषु य-

च नोदिष्टं दवन्तन जलं मतम् दधिमूनपयःसर्पिरोमप्टंगसफेषु च गब्ं प्रकल्पयेत्मर्बंं मधूनां माच्तिकोट्भवम् ॥ दाडिमत्वचया

सार्धं कटुतैलं विपाचयेत् कर्सी भगोष्ठौ लिंगग्च सर्ब्व एतेन वर्धति ॥ चिचकार्धपलं मूलाच्चवृत्मातलयोस्तथा
.. वं दन्तिमूलानiं कषषं कषं पृथकृथक् पिण्पल्याः सेन्यवाचैच तथा हिंग्वंत्नवेतसात् विंश्रविस्चाभया मुख्या

Fourth Leaf: Obverse.

- न प्रयोजयेत नान कर्चित्परीहारो वाक्कायमनसां सदा सर्व्वत्तुको नरेन्द्रयां विरेको गस्त्तिनिर्म्मितः जहाम्ट्युप्रमथनः सर्व्व्वमयविनाशूनः वृघ्यो रसायनस्चेव

मेधारोग्याभिवर्धनः नापुन्ताय प्रदातब्बो नाशिस्याय कथन्चन राजदिष्टे न दातब्यो ये चान्चे पापचारियः॥ हे पंचमूले मधुक गुडूची रास्साস्वगन्चामरदारू पाठा ल्वचं ब-

ले हे तगरन्तिलाग्य मूर्वों कुलत्यान्नलदं घनघ पुनन्न्नवां वेगुएफलत्वचं


महौषधं च दाभ्यां जिभिभर्वा बधितं सतोघमाजं पयो गयमयाविकं वा ससैन्धवं किंचिदतः सुखौव्पमास्योतनं वातदृते चिरोगे ॥ दार्युत्यूं प-

द्मकतुंगयाषामेदाम्ट्यालं मधुक्ं समंगा कालीयकं पर्पंटका लता च
 टता-

नाम् प्रपौगडरीकं सकिरातविक्तं भदप्रियं निम्बपटोलवाप्राम् हौ जीरिएा वाजे पयसि स्तिया वा स्रितान्यथाश्चयोतनमुत्तमं स्यात् सपूर्कां माच्तिकसंप्रयुन्तं पैत्ते च्ति-

रोगे रुधिरात्मके च॥ नीसूूष्यानिन निफला हरिद्रासीसजातोग्हहूमजात्यः लाच्ताथ दंतो सुरसो वचा च पाठाम्यगन्धामइदारु चाग्यम् सकट्फलैलागुरुकाट.

कारी इोष्रं कइझ्जं वृहतीं म्वद्धंघ्राम् हे चीरिया वातः सलिले प्रितानि कोष्पानि कार्यागिा ससैन्धवानि क्याय्योतनं स्लेघ्मद्थते चितोगे मधुप्रगाढं प्रवदंति संतः परूष . गमा-

तकीनन्तिडोऋवृच्ताम्न्नजंब्वाम्नकपित्थकोलैः समातुलुंगैरथ दाडि-
 सैन्धवसं . . .
. न्यासपोतोष्याद्वतं निहिंति रक्तात्मिकां ने चरुजं प्रसह्य संसर्ग्गजे सर्ब्वसमुत्यते वा हीनाधिकत्वं ज्रसमीच्य रोगे कुर्बी़ीत ं. . . . . . .

Fourth Leaf: Reverse.

- पहरी विविज्ञः ॥ एर्डामूलं सफलप्ररोहं विजर्जरं च्रोरयुतं त्व जानाम् स्याहातरक्तापह मेतदग्यमास्योतन • मुषजो वद्त॥ प्रपौडडरक मधुक हरिदा क . . . . . . . . . .

च्याप्प्योतनं पूर्क्षर्या विमिश्र पित्तानिलानित्ति विनिवर्त्तयेत॥ नतं म्वदंप्र्रा वृहती त्वचण्च छोवेरमित्येष प्रतस्वजानाम् च्रोरोदकेः सैन्धवसंप्रयुन्तमाप्य्योतनं वातकमापहं स्य .

दार्व्य मधुकं च मुख्यं गर्ये पयस्याक्वथितः स्तिया वा स्यास्यंगतनो मारुतरन्तपित्ते सपर्क्करः सद्भिषजा विधेयः ॥ चूर्सीfन सून्त्माfया फलन्नयस्य बध्वा सिते च्तौमपटैकटेपे काजे . . स्य-

गनया जले वा परिस्लुतं सर्व्वरुजापह्ं स्यात्॥ दार्व्वीं हरिद्दां चिफलां समुस्तं सपूर्कंरं माच्तिकसंप्रयुक्तम् बाप्य्योतनं मानुषटुग्धयुक्तं पित्तासवातापह्मग्यमुद्तम् ॥ एराड़मूलैस्त-

रुयौः सप习习：कर्लैरथो षष्टिकतरड़लानाम् घृताव्नुवं पावकरप्रलिमं पूर्वेया कल्प्पेन रुजापहं स्यात् ॥ खेदपुटपाकनाबनवर्प ाएवृतपानलेपपरि－ छेछान् छाप्योतन न－
 नोलोकनाश्नान् विषशो ोथापहांश्च्च व मुखलेपान्पचन्तते ॥ त्व干क्षोरियां चन्दनपद्मकौ च गुन्द्रां म्ट－

गालं घनवालकौ च मूलं कुकानां तगरैलवालुतालीसपचं नलद्ं ति－ लाग्र मसूरटूर्व्वामयवं म्टयालं इसस्य यष्टौमधुकोत्पलानाम् शैलेयमुस्तागुख

भामकघ्च स्थौनैयकैलातगरं तिलाग्च त्वक्षपक्रक्ठागुरुम्नामकघ्च मांसीं हरेगुां परिपेलवझ्च यष्टिद्रोधागुरुचन्दनज्च पुनर्न्वाद्वष्पातला लता च दूव्यर्ध－
 नरागां दोषापहान्मे पूटयु चोच्चमानान् वातामयघ्ना जलदागमोक्ताः पित्ता－

मयघ्नाः पूरटि प्रदिष्टाः ग्रीख्मोपटिष्टा रुधिरामयघ्नःः कफामयघ्नः कु－ सुमागमोक्ताः क प्पर्पसमूलान्यलतामुपीरकालीयका च्चोरवतां त्व च म्च भद्भप्रि－
．．．．कां यनाय्व वदंति वएर्यान्वय्नप्रलेपान् एतानि मून्नेया गवां प्रश्रोष्य कोलाग्न्नमूनैः सह मिस्रिता वा स्युम्मातुलुंगस्य रसे युता वा ससर्षपाः प्रोष्य

## Fifth Leaf：Obverse．

．．．．．．．．．．．．．．．．．．．कासु ल्लष्ट च दुष्ट रूधिरे च मुक्त स． वरेके विविधे च नास्ये कृता विधेया वटनप्रलेपाः त्वक्ष्पमांसीनतचन्दनं च मनःशिला व्याघ्र
२ ．．．．．．म् ．ब्लक कुष्ठ सरसे हरिदे विषापहाः स्युव्वृनप्रले पाः ॥ मूर्व्वाम्वगन्धा चिफला करजं पूोथापहः स्युर्वंदनप्रलेपाः ॥ मूब्वापि गोमून－ युतां वदंति पूोथापहं
३
号 प्वद्नप्रलेपम् ॥ मुखे प्रलिष्ने न हसेन्न रुद्यात्समंन नेवेत तथा न चाद्यात् नासौ प्रतप्येन्न च धाइयेत সुष्बं प्रलेमं वद्ने मनुष्यः स्षभीलु－ नीलीकमथापि

कुष्ठं वंगं सपिल्यं तिलकांश्य जन्तोः भाप्यंति सद्यो वद नप्रले पादृष्टिस्थ बत्राश्च भवेत्प्रसन्नम् ॥ मुखे प्रबिते हसतो ग्नतो वा स्लेया सकायुः प्रयोज्यः अम्निप्रतापादिद्रुतस्य जंतोर्हीते च मुष्के वदनप्रलेपे कभोलु-

पूर्वान्म्पवर्दंति रोगांस्तेषां यथोकां विदध्रीत पूांन्तिम् नत्तान्धतनकमयंशिरोन्त्तिदाहंं पित्तात्मिकiं चन्तुरजं सदाहाम् दोषास्तथान्ये पि सुखत्वचस्थः शाम्यन्ति सद्यो

बटनप्रले पात् ्घ्य्डोर्बिकाईे कफमारताभ्यां नस्तः ह्वते पोनसरोगियां च हनुग्रहे पूरीघसजास्तु चैव वदंति वर्ज्यान्वदनपलेपान् बंगुलस्य चतुर्भागो

मुखलेपो विधीयते मध्यमसू चिभागः स्यादन्य्य . . . . भवेत् यद्टिकरोध्रां निफला म्यालं सितोपलां कांचनगेरिकघ्घ पचत्वगेलागुरू देवदारु पुनर्न्वा ब्याघ्रनखां-

जनच्च मनः शिलालं वृती ल्वचन्च मांसीहेऐप. . पेलवं च सौवोरकं
 कफासपिणाि .
 ज्र习्च किंचिच्तु घृतेन दिग्धमयोविघृष्टामभयामथोवा त्वचं वहत्याः सममघ্ধन...

लकः सर्वर्रापहैः स्याव् गैरिकरसांजनांजनमःःशिला रोतिकुस्समसमभागःः ईूषन्मरिचसहीया हिगुएां वे . . . . . . .

Fifth Leaf: Reverse.

मरिचकुसमे च हरितं विपचेन्मृद्निना घृतसहोयम् बंजनविडालको यब्ध कुल्व वद्याम . . .॥

प्रोच्चमानं निबोधत रसदोशाघ्यवायाच पित्तप्रोगिसटूषखाव् भवत्यकालपलितं वृस्य जरसा भवेत् प्रायेया स्लेश्मला नार्यफ्काया ㅍ

निघेविखो रजो दुष्टं द्वजंति च प्रसन्नरत्तपित्रोग्माकेष्रभूमिरतः

स्तियाः न चवंति ततः केशास्तस्मादखलितः स्तियः पुंसामतो विपर्यसे र ह्नपित्तं प्रदुष्य . . . . सिनाम् पिप्पलो मारताजाजीषडीपुष्करचिन्रकःः ससैन्धवभिए्ं चूसं हितं मारतकासिनाम्

पलानि क्वाथयेत्रिंमूल्क एटकार्य जलाढके चतुर्भगगस्थिते पूते दद्या-
 संयतं ले ह्वत्पचेत् चतुर्भिरा घनोभावाच्छीते च चिपलं मधु पिप्पलोपलचूसें च दत्वा लिह्यात्तु कासनुत् ॥ दश्म मूलकषायेया भार्ग्गोंकल्कं घृतं पचेत्
. . . . . . . . . वं वातकासनुत् करटकार्या रसप्रस्थे घृतस्य कुडवं पचेत् पुनन्ऩवायः कल्कोन बत्परं वातकासनुत् भार्ग्गोंकल्कां घृतं चाथ पचेद्ध्धि चतुर्गुये

वाघोरसद्विगुणितं वात कासहूरं परम् पैचिके सर्पिषः पानं हितं स्यात्तावंवेचनम्

## Transliteration．

## First Leaf：Reverse．

1 Ôṃ ¹Dêv－arshi－siddha－gaṇa－kinnara－nâga－yaksha－vidyâdhar－âdhyu－ shita－sânur＝ananta－ratna（h）［1］puṇyas＝tripishtapa－tal（－âmbṛi）ta－ dêva－ramyah $[-ー \cup ー \cup \cup \cup ー \smile レ ー]$
2 n＝udaçrah ॥［1 \｜］Yatra sphuṭan－maṇi－sahasra－mayûkha－jâla－vikshô－2 bhitaṃ daśasu dikshu bhayât＝（pra）lînam［1］chandr－ôdra²－sûrya－ hutabhuú－nilay－îbhiśa［ñka［m］pr［â］vri［ $[\mathrm{d}-\mathrm{ni}]-$
3 śâsv＝api punar＝n＝na tamô bhyupaiti $\|[2 \|]$ Yaḥ sêvyatê muṇi－gaṇair＝ aniśaṃ sa－śishyair＝n＝naikaiḥ samit－kuśa－phal－ôdaka－pushpa－has－ taiḥ［1］svargg－ânganâbhir＝api cha pravimṛishṭa－śâkhâh
4．kumjêeshu yasya taravaḥ kusum－ârthinîbhiḥ ॥［3॥］Yatra trilôchana－ jaṭâ－mukuṭ－aika－dêśa－nitya－sthit－ôdu－pati³－dîdhiti－samprayôgât［1］ śôtan ${ }^{4}=$ divâ＝pi himavat－sphatik－ôpalâbham＝abdai－${ }^{\text {b }}$
5 ndukânta－manayah pravaram sravaṃti॥［4 ॥］Yasy＝âbda－mukta－jala－ dhauta－śilâ－talêshu kuṃjêshu naika－vidha－vî－gaṇa－nâditêshu［1］ ramyêshu pushpa－phala－da－druma－samka－
6 țêshu râtrau hutâśana－vad＝aushadhayô jvalamnti ${ }^{6}$ N［5 II］Chandr－ âṃśl－gauratara－kêsara－bhâra－bhṛidbhir＝matt－êbha－mastaka－taṭa－ kshataj－ôtkshit－âṃśaiḥ［1］siṃhaiḥ śil－ôchchaya－guhâ－vadanâ－
7 țtahâsair＝n＝na kshamyatê mbudhara－vrinda－ravô pi yatra \｜［6\｜］Tas－ min＝girâv＝avani－maṇḍala－maṇ̣a－bhûtê sarvv－âtithauv＇＝iva jagad－
＝vibhava－pradânaiḥ［1］sarvv－artu－pushpa－phalavad－druma－ramya－
8．sânâv＝êtê vidhûta－tamasô munayô vasaṃti ॥［7 \｜］Âtrêya－Hârita－ Parâśara－Bhêla－Garggoa－S＇âmba vya－Suśruta－Vasishṭha－Karâla－Kâ－ pyâḥ［1］sarvv－aushadhî－rasa－gaṇº－âkṛiti－vîrya－nâma－
9 jijñâsavaḥ samuditâh śataśaḥ prachêruḥ ॥［8 ॥］9 Dṛishṭvâ patrair＝ harita－haritair＝indranîla－prakâśaị̣ kandaiḥ kunda－sphatika－ku－ mud－êndvañśu－śaṃkh－âbhra－śubhraiḥ［1］utpann－âsthô
$10 \mathrm{~m}[\mathrm{u}]$ nim＝upagataḥ Suśrutah Kâsirájam kinnv＝êtat＝syâd＝atha sa bhagavân＝âha tasmai yathâvat ॥［9॥］${ }^{10} \mathrm{Pur}=\hat{\mathrm{a}} \mathrm{m}$ ritaṃ pramathitam ＝asur－êndraḥ svayam papau［1］tasya chichchhêda bhagavân＝u－

1 Metre of verses 1－8：Vasantatilaka．
2 Read êndra．
3 Read êndu－pati．
4 Read śrotan or sîtan．
5 Read abdê．
6 Read jualanti or jualamti．
7 Read âtithâu＝iva．
3 Read guna，as in verse 13.
9 Metre：Mandâkrântâ．
10 Metre of verses 10 and 11 ：S＇lôka．

11 ttamâṃgarṃ Janârddanaḥ ॥ [10॥] Kaṇtha-nâḍ̂̀ samâsannâ vichchhinnêe tasya mûrdhani [1] vindavaḥ patitâ bhûmâv=âdyaṃ tasy=êha janma tu $\|$ [11॥]

## Second Leaf: Obverse.

$1^{11} \mathrm{Na}$ bhakshaya[m]ty=ênam=ataś=cha viprâh sáarîra-samparkka-viniḷ12 sritatvât [1] gandh-ôgratâm=apy=ata êva ch=âsya vadaṃti sâastr-âdhigama-pravîṇâh ॥ $12 \|^{12}$ Lavaṇa-rasa-viyôgâd=âhur=ênaṃ raśû13 na (m)
2 laśuna iti tu samjñâ ch=âsya lôka-pratîtâ [1] bahubhir=iha kim= uktair=d=dêśa-bhâsh-âbhidhânaị̣ śṛịu rasa-guṇa-vîryâṇy=asya ch=aiv=ôpayôgât \| [13\|] ${ }^{13}$ Rasê cha pâkê cha kaṭụ̣ pra-

14
3 dishṭạ pâkê tathâ svâdur=udâhṛitô nyah ${ }^{14}$ [1] laghuś=cha gandhêna sa-durjjar-âśra-vîr'yệ̣a ch=ôshṇạ̣ prathitaś=cha vṛishyaḥ \| [14i॥] ${ }^{15}$ Âmbl-ôshṇa-snêha-bhâvât=pavana-bala-harah
4 prôktô muni-vṛishaiḥ ${ }^{16}$ mâdhuryât=pitta ${ }^{17}$-bhâvâd=api cha sa rasatayâ pitta-praśamanaḥ [1] aushṇyât=taikshụyât=kaṭutvât=kapha-balavijayî vidvadbhir=uditaḥ sarvân=rôgân=nihanyâd=iti
5 vidhi-vihitô dôsha-traya-harah \| [15 ॥ ] ${ }^{18} \mathrm{Pavanam}$ vinihaṃty=api ch
=âsthi-gatam kapham=apy=achirâd=uditam śamayêt [1] janayêd= api ch=âgni-balạ̣ prabalam bala-varṇ̣a-karaḥ prava-
6 raś=cha matah \|[16॥] 19Atha bahu-vidha-madya-mâmsa-sarpir-yava- 17 gôdhûma-bhujâṃ sukh-âtmakânâm [1] ayam=iha laśun-ôtsavaḥ prayôjyô hima-kâlê cha madhau cha mâdha-
7 vê cha $\|[17!1]$ 20Tyajyaṃtê kâminîbhir=jayana-samuchitâ yatra kâñchî18 kalâpâḥ hârâḥ saityân=na vakshas-tana-taṭa-yugal-âpîḍanât=saṃprayâṃti [1] kâṃtâ n=êndv-añśu-jâla-vyatikara-subhagâ-harmya-
8 prishṭ̣h-ôpabhôgâḥ kâlê tasmin=prayôjyô hy=aguru bahu-matạ̣ kuṃkum-âṃkâś=cha yatra $\|$ [18 ॥] ${ }^{2!}$ Harmy-âgrê̂shv=atha tôra-

11 Metre: Viparîtâkhânakî, alternate Indravajra (2nd pâda) and Upêndravajra ( 1 st, 3 rd and 4 th).

12 Metre: Mâlinî.
13 Metre: Viparîtâkhyânakî, alternate Upêndravajra (1st and 3rd pâdas), and Indravajra (2nd and 4th pâdas).

14 Read anyail.
15 Metre: Savadanâ.
16 This pâda does not scan; there are also other difficulties; see note to translation; it scans, if sa be omitted.

17 Perhaps read tikta.
18 Metre: Tôtaka.
19 Metre: Aapachchhandasika.
20 Metre: Sragdharâ.
21 Metre: S'ârdûlavikrîḍita.

ṇêshu valabhî-dvârêshu ch=âvishkṛitâh kand-âḍyâ laśuna-srajô virachayêd=bhûmau
9 tath=aiv=ârchchanam [1] mâlâs=tat-parichârakasya cha janasy=ârô-payêt=tan-mayîr=ity=asy=aisha vidhir=j=janasya vihitah svalpô vamânâm=atah $\|[19 \|]{ }^{22}$ Atha śuddha-tanuḥ suchir-v-vivi(kta)ḥ
10 sura-viprân=pratipûjya pâvakaṃ cha [1] laśunât=svarasaṃ paṭ-âṃta-pûtam prapivêd=ahni śubha-grah-arksha-yuktê ॥[20॥] kuḍavaṃ kuḍavâd=ath=âpi ch=ârdham kuḍavam sârdham=atô pi v= âti[mâtramı]

## Second Leaf: Reverse.

1 niyatâ na hi kâchid=atra mâtrâ prapivêd=dôsha-bal-âmayâni dṛishṭvâ ॥[21॥] ${ }^{23}$ sa-tâlavri $[n t a]-(v y a) j a n-a ̂ n i l(a i) h ~(s ́ u b h)[a i](h)(p a) v a n-~$ 22 $\operatorname{tam}=(\hat{e}) \mathrm{na}[\mathrm{m}] \operatorname{samabh}[\mathrm{i}](\mathrm{s})$ priśs $[\hat{\mathrm{e}}] \operatorname{ch}=\operatorname{chhan}[\mathrm{ai}]$ (h) [1]
2 bhavê $(d=u)^{24}$ mûrchchhâ=pi vatô pi vâ yadi sprisí̂t=tatah sîta-jalaih sa-chandanaih $\mathbb{\|}\left[22\right.$ II] ${ }^{25}$ surâ-tritîy-âṃ́á-vimûrchchhitasya gaṇḍ̂̂sham=êkaṃ prapivêd=rasasya [1] pûrvvaṃ gala-k-kr(î)ḍ(i)v(i) [dhâna]-
3 hêtôh sthitvâ muhûrttañ=cha pivêt=sa-séshaṃ ॥[23 ॥] ${ }^{26}$ tasmiñ=jîrṇ̣ê 24 kshîra-sâly-ânna ${ }^{27}$-bhuk=syât kshîr-âyôjyô jâmpgalânâṃ rasair=v= vâ [1] hṛidyair=y ûshaih saṃskṛitair=v=vaidalair=v=vâ yuktah snêhair=mâtray=aikaṇ cha
4 kâlam $\|[2411]{ }^{28}$ pivên=mârdvîkaṃ vâ madhu madhu-sam-âmsâach= 25 chla ${ }^{29}$-madirâmm arishṭạn sî̂lhuṃ vâ jagalam=agajaṃ mairêyam= api vâ [1] atô nyad=vâ madyam bhavati gunavad=yat=tat=sa-salilam pivêd=êkaikạ̣ vâ na
5 bhavati yathâ madya-vyatikarah $11[25 \|]{ }^{30}$ a-madya-pah sukh-ôdakam 26
pivêt=tath=âmbla-kâmchikam [1] Tush-ôdakam suvîrajam pivêch

28 Metre of verses 20 and 21 : Aupachchhandasika.
23 Metre: Vamśasthavila. The verse is much mutilated, and has been restored conjecturally with the aid of the metre. After chhanaih, the leaf mast have been broken off originally, before it was written on; for as the metre shows, there can have been no more writing in the first line.

2t The akshara $d u$ is not distinct; possibly it might be $t t u$ (bhavêt $=t u$ ).
${ }_{25}$ Metre: Viparîtâkhyânakî, alternate Upêndravajra (1st pâda) and Indravajra (2nd, 3rd and 4th pâdas).

26 Metre: S'âlinî.
27 Read śâly-anna.
23 Metre : Sudhâ.
29 As the metre shows, there is here one long syllable wanting. I would propose


30 Metre: Pramâṇikâ.
$=$ cha mastu yach＝chhubham［26 i1］${ }^{31}$ na guḍena kathañ－chid＝ 27 ênam＝adyân＝na tath＝âmañ＝cha jalam pivê－
6 t＝prayujan ${ }^{32}$［1］satatañ＝cha bhavêd＝ajîrṇṇa－śaṃkî na cha khâdêd＝a－ bahûni vâsarâṇi ॥［27॥］${ }^{33}$ Atha kandâñ＝ch＝chhubhêñ＝ch＝chhlaksh－ ṇân＝pishṭân ${ }^{34}=$ sarpiś＝cha tat－samam［1］khajên＝âbhipramathy＝ aitad＝êkadhyaṃ ghṛita－bhâjanê ॥［28॥］
7 Vyushṭaṃ daśâhât＝prabhṛiti bhakshayêd＝bilva－saṃmitam［1］jîrṇṇê 29
cha rasa－kalp－ôktam＝âhâra－vidhim＝âcharêt［\｜ 29 II］dvâv＝apy＝ 30 êtâv＝abhihitau kalpau prâgra－harau mayâ［1］anayôr＝yatnavâ－
$8 \mathrm{n}=\mathrm{n}=\hat{a} s f \hat{a} t=k a l p a ̂ n=a n y \hat{a} n ̃=c h=c h h r ̣ i n ̣ u s h v a ~ m e ̂ ~ ॥[30 \|] ~ 35 K a n d a ̂ n ̃=c h=~$ chhá்kh－âbhân＝apahrita－malân＝saktu－kulmâsa－chukraiḥ sarpis－ tailâbhyâṃ samita－vikritaị̣ sûpa－mâmsa－prakâraiḥ［1］maudgaiś $=c h u ̂ r n ̣ n a i r^{36}=$ haritaka－yu－
9 tair $=g=$ gandha－sauvarchchal－âḍhyair $=$ adyât＝samskârair＝bahubhir＝ aparaị̣ sâdhitân＝v＝êtarâṇi ॥［31॥］${ }^{37}$ Mâmsaiḥ sârdham sâdhayitv＝ âsya kâṇ̣̣am pûtam hṛ̣idyaṃ tạ̣ rasam pâyayîta［I］siddhaṃ tat－vat＝kshîram＝asmai
10 pradadyâd＝yûsham vâ syâd＝vaidalạ̣ tad－vimiśram ॥［32 11］${ }^{38}$ Atha33 taila－śukta－sahitam laśunaṇ nihitạ̣ yavêshu parilipya mṛidâ［1］ sthitam＝êkam＝abdam＝upayujya narah sロロiロe口i口［â］－39
11 n＝api jahâti gadân $\|_{[ }^{[33 ॥] ~}{ }^{40}$ Tri－râtram＝ushitâ tug＝aurana－nṛiṇâ ${ }^{41} \quad 34$ yadâ syât＝tadâ nrinâ＝rdham＝upakalpayel＝laś［una］［－レーーレ －］［1］

31 Metre：Aupachchhandasika．
32 Read prayumjan，as shown by the metre．
33 Metre of verses 28－30：S＇lôka．
${ }^{34}$ This is a curiosity；the final $n$ ，which should be properly conjunct with the initial $s$ of sarpis，is attached to the head of the subscribed $t a$ of pishta，because the big akshara in the line，just above，interfered with the proper writing of the con－ junct nsa．

35 Metre：Kusumita－latâ－vellitâ．
36 Here，as the metre shows，one long syllable is wanting．
37 Metre ：S＇âlinî．
33 Metre ：Pramitâksharâ．
39 Here five syllables are lost，which，as shown by the metre，should be $\cup \cup_{\text {＿}}$ The first syllable must be either su or $s a$ ；of the following three syllables the vowels（ $i, e, i$ ）are preserved ；of the 5th syllable the vowel must be â，to make up an accusative plural，ending in ân and agreeing with gadân．The phrase should have some such meaning as＂obstinate＂or＂long enduring＂（disease）；su－chire sthitan may be suggested．

40 Metre：Prithrî．
41 Read tug－Arata－nrind（for tugd arata－nrind）（？）

## Third Leaf: Obverse.

1 [ $\cup-]$ (dadhi)-ghṛitâni takkram=athav=âpi tad=brâhmaṇah prayujya vividhân=gadân=abhivijitya (śmarshmî) bhavêt \|[34 11$]$ ${ }_{42} \operatorname{Prasthân}=$ dvâtrimśal = laśuna-rasatah
2 kiṇvam=ardh-ârdham=asmât taila-prasthô vyapagata-malah pishṭataḥ shat=cha dêyâḥ [I] dadyân=nikvâthâd=api cha kalaśaṃ mêshaśrimgyậh
3 sa-sitam prasthau cha dvau punar=abhiharêt=tatra pishtasya dhîmân [ 1135 ll ] ${ }^{3}$ iti sur=êyam paṃcha-pañch-âhâd=rasa-varṇ̣̣a-gandhaiḥ samanvitâ
4 bhavati tailam nâmataś=ch=êdam=undîram ${ }^{44}=$ atyartha-kârmukam tailam=êtad=yah surâm=api vâ purushah prayumjîta yatnatah
5 pariharaṃti tam gad-ânîkâny=âjau kṛit-âstrâni ${ }^{45}$ v-êtarê $\|^{46} \mathrm{Pras}$ tham pishṭ̂â sôdhitam=êkaṃ laśunânâm yumjyâch=chûrṇnais= traiphalair=ardha-
6 palikaiḥ [1] sarpis-tailâbhyâṃ kuḍavaś=ch=êti daśâha(m) vyushṭạ̣ kâsa-śvâsa-viḍam vighnam=uśanti ॥[36n] Hanyâd=yuktô mâ(ru)tagulmam pavana-ghnaih
7 kushṭham hanyâd=yôjita-mâtram khadirêṇa [1] kâśyêshasnô ${ }^{47}$ haya-gandhâ-vyatimiśrah svaryah prôktaś=ch=aisha vimiśrô madhuyashṭâ ॥[37 ॥] ${ }^{48}$ nânâ-vidhân=êsha nihaṃti rôgân
8 nânâ-vidha-dravya-viśêsha-yuktaḥ [I] na yaṃtraṇâ kutra-chid=asti kalpê yathâ prayuktaḥ sukhibhị̣ sa kalpaḥ ॥[38 II] *9Rasâyaṇa-39 varasy=âsya prayuktasya
9 guṇâni mat [1] samâsataḥ prôchyamânân=Suśrutai ${ }^{50}$ gra-manâḥ śriṇu ॥
 praṇut vât-âsṛigdara-śûla-śôsha-jaṭhara-plîhôdar-ârśô-haraḥ [1]

42 The metre of verse 35 is a mixture of alternate Kusumitalatâvellitâ and Mandâkrântâ. I cannot discover its specific name.

43 The following appears to be prose, thought it consists of two parts, each of thirty-nine syllables.

44 Read udîrnam.
45 Read kritâstrâṇi.
46 Metre of verses 36 and 37 : Mattamayûra or Mâyâ. But the 2nd pâda of verse 36 does not scan and is short by one syllable; also the 3rd pada of verse 37 is disfigared by a clerical error.
${ }^{47}$ Read kâsaśvâsaghnô, as shown by the metre.
48 Metre : Âkhyânakhî, a combination of Indravajra (first two pâdas) and Upêndravraja (last two pâdas).

49 Metre: S'lôka.
50 Read suśrutê.
${ }^{51}$ Metre of verses 40 and 41 : S'ârdûlavikrîdita.
52 Read kriśa-bhd́s-chitra; tand bh are two consonants of very siṃilar form.

10 pakshâghâta－katigraha－krimigad－ôdâvartta－mêh－âpahah tancrî－pîna－ sa－vâhu－prishṭa－pavan－âpasmâra－samsûdanaḥ ॥［40 ॥］śrî－mân＝ vêṇu－mṛidamga－valgu－ninadas＝tapt－âgra－hêma－dyutir＝m＝mêdhâ－ dhî－balavân
$11 \mathrm{~s}(\mathrm{u})$－saṃhata－tan（u）r＝valy－âdibhir＝varjitah［1］nity－ôtsâha－su－tar－ dhibhiḥ ${ }^{63}$ samuditaih sarvvair＝d＝dṛiḍair＝indriyaị̣ jîvêd＝abda－ śatam dṛiḍh－ânala－balạ̣ strîsh（v）－akshayô vâ［pu］（mâ）［n］$\|41\|$

## Third Leaf ：Reverse．

$1{ }^{54}[\cup \cup \cup \cup](l a s ́ u n a ̂) n a ̂[m]$ kalpa uktô may＝âyam munir ${ }^{55}=$ api cha 42 dṛishṭaḥ prâktanair＝êvam＝êva［1］pa［ソソソソソー——］pra－ yunktâ $[m]$ cha samyag $=[\cup \cup \cup \cup]$ वṛi $[\cup] \square$ ûロyロ $[-\cup ー ー ~$ $\cup ー$－॥ $42 ॥$ ॥
$2{ }^{56}$ Âhâra－pushṭi57－dhatûnâṃ sâmyam＝ârôgyam＝êva cha［1］pushṭis＝ 43 têjas＝tath＝ôtsâham＝âyuś＝ch＝aiv＝âgni－sambhavâh［ \｜ 43 ॥］agnir＝ âhâra－mûlas＝tu pakti－mûlâś＝cha dhâtavaḥ［1］dhâtu－sâmyât＝tath ＝ârôgyam＝ârôgy［ât］＝pu［sh］t！i］－
$3 \mathrm{r}=\mathrm{uttamâ}[\|44\|]$ pushṭyâ têjas＝tath＝ôtsâhah sarvvair＝êtaiś＝cha jîvi－ 45 tam［1］prâṇinâṇı barddhatê tasmâd＝agnim＝âdau parîkshayêt ［ 1145 ॥］Dhâtu－sâmyât＝samaḥ prôktaḥ ${ }^{58}$ sa vai śrêshṭhah prakîrt－ 46 tıtaḥ $1{ }^{\text {b9 }}$ vishamê dâdhikạ̣ sarpiḥ pivêd＝vâ havush－âdika（m） ［ 1146 II］
4．snigdh－ôshṇâ vartayaś＝ch＝êshṭâs＝tathâ pân－âśanâni cha［1］mandê 47 tu lamghanaṃ pûrvvaṃ paśchât＝pâchana－dîpanam［ 114.7 II］ chûrụṇ－ârishṭa－prayôgâś＝cha bitâh pitta－kaph－âpahâh［1］yathâ－48 sâtmyam prayôktavyam samê gnau bhishajâm＝itio9 \｜ 48 ॥］Bhava－
5 ti ch＝âtra $\|{ }^{59}$ Mandê tîkshṇê cha mriyatê vin＝ôpakaraṇair＝n＝naraḥ 49 ［1］vishamê rôga－bâhulyaṃ samê jîvêch＝chiram sukhî［॥ 49 ॥］ Tasmâd＝rôgêshu sarvvêshu sarva－kâlêshu buddhimân［1］${ }^{\text {b9 }}$ agni－ 50 mûlâ k＝kriyâ
6 kâryâ paśchâd＝àmaya－śâṃtayê ॥［50 II］60Sva－rasêna śaṃkhapushpyê 51 brâhmî－maụḍûkaparụṇi－madhukânâm［1］mêdh－ârôgya－bal－ârthî

53 Read su－vardhibhih．
54 Metre ：Mâlinî．
55 Read munibhir，as shown by the metre（of 15 instants）and the sense．
56 Metre of verses 43－50：S＇lôka．
57 Read pakiti，as shown by the context in verse 44.
58 The text had originally prôktô，which was afterwards corrected，in a lighter ink，to prôktah，a visarga being inserted and the vowel $\hat{o}$ cancelled by two strokes．

59 Here，and in three other places，the original has a mark of interpunctuation， resembling the ancient numeral figure one．

60 Metre of verses 51－53a：Âryâ．See note 62.

# jı̂vitu ${ }^{61}$－kâmaḥ prayuṃjîta［ 1151 l ］mâsêna tu mêdhâvî shaṇ－mâsâch <br> 52 ＝chhruta－dharô bhavaty＝a－ 

7 jaraḥ［1］jîvati varsha－sahasram samâ prayôgâch＝chata－dvayaṃ vi－ dhivat［॥52॥］êvaṃ paratah paratah prayumjamânô bhavaty＝a 53 jarah ॥ ．．．．\｜$\odot^{62}$［ $\left.\|53\|\right]$
$8{ }^{63}$ Yavâgû－khaḍa－yûshêshu lêha－chûrṇ－âgadêshu cha［1］gựik－âmjana－ 54 varttyâsu dhûma－praṭhamanêshu ${ }^{64}$ cha［ 1154.11 ］${ }^{65}$ puṭapâka－tar－ 55 ppaṇa－svêdênâ－vaman－âśchyôtanêshu cha［॥ 55 ॥］
9 anyêshu ch＝âpy＝anuktêshu yatra bhâgô na kîrttitaḥ［1］dravyânâm 56 sama－bhâgah syâd＝dvi－guṇê madhu－sarpishî［11 56 II］tri－guṇạ̣ 57 tu guḍaṃ dadyât＝sitâ－chûrṇaṃ chatur－guṇam［1］pêshyêshu ya－
10 tra n＝ôddishṭam dravas＝tatra jalaṃ matam［॥ 57 II］dadhi－mûtra－ 58 payaḥ－sarppi－rôma－śrimga－saphêshu cha［1］gavyaṃ prakalpayêt ＝sarvvaṃ madhûnâṃ mâkshik－ôdbhavam ॥［58 ॥］Dâdima－tva－59 chayâ
11 （sâ）rdham kaṭu－tailaṃ vipâchayêt［1］karṇnau bhag－ôshṭhau limgaś ＝cha sarvoa êtêna vardhati II［59 II］Chitrak－âr dha－palạ̣ mûlât＝60 tṛivṛit－sâtalayôs＝tatha［1］
12 Uレロm dan（t）i－mûlânâṃ karsham karsham prithak＝prithak ［॥ 60 ॥］pippalyâh saindhavâch＝ch＝aiva tathâ hiṃgv－ampla－ vêtasât［1］viṃsatiś＝ch＝âbhayâ－mukjà

## Fourth Leaf：Obverse．

1 ［ソーソー］vipâchayêt［॥ 61 II］guḍasy＝âshṭa－palât＝samyak＝kurvîta62 daśa－môdakân［1］êkaikam bhakshayêt＝tasmâd＝daśamê daśamê hani［ $\| 62$ u］dôshâụ̣̂ṇ pâchan－ârthâya jalam＝ushṇam pivêd＝anu63 ［1］virêkâṃtê tataḥ suâtvâ sâtmya－
2 ［ $\mathrm{m}=\mathrm{an}] \mathrm{n}[\mathrm{am}]$ prayôjayêt［ $\|63\|$ ］n＝âtra kaś－chit＝parîhârô vâk－kâya－ 64 manasâṃ sadâ［1］sarvv－artukô narêndrâṇâm virêkô gasti－nirm－

61 Perhaps read jîvita－kâmah．
62 This（circle with central dot）is the usual mark to denote the end of a subject． On the corresponding place of the left hand margin there are two figures，the lower of which is the numeral one，and the upper one is apparently 50 ；if so，the two together would be 51，which would seem to refer to the counting of the verses， though I coant 52 or rather $52 \frac{1}{2}$ verses up to this point．There are two points，how－ ever，to be noted ：first，the MS．inserts foar dots，which seem to indicate a lacuna； secondly，verse 51 is a regular âryâ of 30 and 27 instants，but verse 52 has two long lines of 30 instants each，and the following half verse consists of a short line of 27 instants．Of verse 53 only one－half exists．

63 Metre of verses 54－66：S＇lôka．
64 Read pradhamaneshu．
65 This verse is a fragment，two entire pâdas being lost．

## mitah［ $\|64\|$ ］jarâ－mṛityu－pramathanaḥ sarvv－âmaya－vinâśanah <br> 65

 ［1］vṛishyô rasàyanaś＝ch＝aiva3 mêdh－ârôgy－âbhivardhanah［ 1165 II ］ $\mathrm{n}=\hat{\mathrm{a}}$ putrâya pradâtavyô $\mathrm{n}=\mathrm{a}$ śsi－ ..... 66 shyâya kathañ－chana［1］râja－dvishṭê na dâtavyô yê ch＝ânyê pâpa－châriṇah ॥［66\｜］${ }^{66}$ Dvê paṃcha－mûlê madhukam gựûchî ..... 67 râsn＝âśvagandh＝âmaradâru pâthâ［1］tvacham ba－

4 lè dvê tagaran＝tilâś＝cha mûrvvâụ kulatthân＝naladạ̣ ghanañ＝cha ［ $\| 67$ ॥］punarnnavâṃ vêṇu－phala－tvachaṃ cha jîvaṃty＝ath＝ail＝68 âguru jîvakaś＝cha［1］êraṇ̣̣a－mûlạ̣ sa－phala－prarôhaṃ kuraṇ̣a－ pushpâṇi
5 mahaushadham cha［ $\|68\|$ ］dvâbhyâm tribhir＝vâ kvathitam sa－toyam ＝âjaṃ payô gavyam＝ath＝âvikạ̣ vâ［1］sa－saindhavam kiṃ－chid ＝atah sukh－aushṇam＝âśchyôtanaṃ vâta－kṛitê kshi－rôgê \＃［69 u］ Dârby＝utpalaṃ pa－70
6 dmaka－tumga－yâshâ－mêdâ－mṛị̣âlam madhukam samamgâ［1］kâlîya－ kaṃ parppaṭakâ latâ cha drâksh＝âtha kârshmarya－parûshakam cha［ $\| 70$ II］mûlâni gundrâ－naḍa－vêtasânâṃ śumgâni châ ${ }^{67}$ push－ ..... 71
pavatâṃ tṛiṇâ－
7 nâm［I］prapauṇ̣̣arîkaṃ sa－kirâtatiktạ̣ bhadraśriyam nimba－paṭ̂la－ vâśâm［॥ $71 \|$ ］dvau trîṇi v＝âjê payasi striyâ vâ śritâny＝ath＝ ..... 72 âśchyôtanam＝uttamaṃ syât［1］sa－śarkkaraı̣ mâkshika－sampra－ yuktam paittê kshi－
8 rôgê rudhir－âtmakê cha $\|[72$ II］Trîṇy＝ûshaṇâni triphalâ haridr［â］ ..... 73 kâsîsa－jâtî－gṛihadhûma－jâtyah［1］lâksh＝âtha daṃtî surasô vachâ cha pâth＝âśvagandh＝âmaradâru ch＝âgryam［॥ 73 ॥］sa－kaṭphal－ ..... 74 ail－âguru－kanta－
9 kârî rôdhraṃ karañjam vṛihatị̣ śvadaṃshṭrâm［1］dvê trị̣̂i v＝â－ taḥ salilê śritâni kôshṇâni kâryâṇi sa－saindhavâni［\｜ 74 ॥］âśchy－ ..... 75ôtanaṃ ślêshma－kṛitê kshi－rôgê madhu－pragâḍhạ̣ pravadaı̣tisaṃtah［ I$]$ Parûsha［k］－âm［r］â－
10 taka－tintiḍika－vṛikshâmbla－jaṃv－âmra－kapittha－kôlaih［ 1175 ॥］sa－ ..... 76 mâtulumgair＝atha dâḍim－âmblair＝madyaiḥ payôbhir＝d＝dadhi－ mastunâ vâ［1］dârvy－utpal－âdyaị̣ kvathitaiś＝cha s－âmblair＝ âśchyôtanam saindhava－saṃ［prayuktam］［॥ $76 \|$ ］
11 （－）nyâsa－śît－ôshṇa－kṛitaṃ nihaṃti rakt－âtmikâṃ nêtra－rujaṃ pra－ ..... 77
sahya［11］Samsargga－jê sarvva－samutthitê vâ hîn－âdhikatvam prasamîkshya rôgê［ $\|77\|$ ］kurvvî（ta）■ ṃーロrロレーソー－ ..... 78

66 From here down to verse $85 a$ ，the metre is，in various combinations，a mixture of Indravajra and Upendravajra．

67 Read râ．

## Fourth Leaf: Reverse.

$1^{63}$-pahar(î) vivijñaḥ [II] Êraṇ̣a-mûlaṃ sa-phala-prarôham vijarjaraṃ kshîra-yutaṃ tv=ajânâm [॥ 78 ॥] syâd=vâta-rakt-âpaham $=$ êtad=agryam=âśchyôtana $[\underline{̣} \operatorname{sad}] \operatorname{bh}[\mathrm{i}] \operatorname{shaj}(\hat{o})$ vada $[\underline{m}] \mathrm{t}[\mathrm{i}] \|$ Prapauṇar $[\hat{1}] \mathrm{ka}[\mathrm{m}]$ madhuka $[\mathrm{m}]$ haridrà $[\tilde{n}]$ chha $\cup$ - - ソ $--\left[\begin{array}{lll}\| 9 \\ 79\end{array}\right]$
2 âscchyôtanaṃ sarkkarayâ vimiśraṃ pitt-ânil-ârttiṃ vinivarttayêtall 80 Nataṃ śvadaṃshṭrâ-vṛiliatî-tvachañ=cha hrîvêram=ity=êsha ṣritas=tr=ajânâm [ 1180 n] kshîn-ôdakaih saindhava-samprayuktam= âśchyôtanaṃ râta-kaplı-âpahaṃ syâ( $t$ ) [1] ( $--\cup$ )
3 Dârvyâ madhukaṃ cha mukhyaṃ gavyê payasy=ât=kvathitah striyâ vâ [॥ 81 ॥] âśchyôtanô mârnta-rakta-pittê sa-śarkkaraḥ sad-bhi82 shajâ vidhêyah $\|$ Chûrụ̣âni sûkshmậui phala-trayasya badhrâ sitê kshauma-pat-aika-dêśê [॥ 82 ॥] àjê [payas]y[=am]-
4 ganayà ${ }^{69}$ jalê vâ pariplutaṃ sarvva-ruj-âpahaṃ syât ॥ Dârvvị̣̂ haridrâṃ triphalậ̣ sa-mustaṇํ0 sa-sarkkaraṃ mâkshika-samprayuktam [\| 83 ॥] âśchyôtanaṃ mânusha-dugdha-yuktaṃ pitt-âsra-vât84 âpaham=agryam=uktam \| Êranḍa-mûlais=ta-
5 ruṇaiḥ sa-pattaiḥ kalkair=athô shashṭika-taṇ̣ulânâm [\| 84 ॥] ghṛit85 âplutaṃ sầva-kara-praliptaṃ pûrvvêna kalpêna ruj-âpaham syât ॥ $\left[\begin{array}{lll}85 & 11\end{array}\right]{ }^{71}$ Svêda-puṭapâka-nâbana-tarppaṇa-ghṛitapâna-lêpa-pari86 shêkân [1] âschyôtana-
6 nirddishṭair=dravyair=êtaih prakalpayîta bhishak ॥[86 ॥] 72Ritu87 vyâdhi-hit-âbhîlu-vyaṃga-nîlîka-nâśanân [1] visha-shôth-âpahậ̣ $=\dot{S}=c h=a i v a$ mukha-lêpân=prachakshatê $\|[8711]{ }^{73}$ Tvak-kshîriṇậ̣ ${ }^{74}$ 88 chandana-padmakau cha gundrâṃ mrị-
7 ṇâlạ̣ ghana-vâlakau cha [1] mûlaṃ kuśânậ̣ tagar-ailavâlu tâlîsapatraṃ naladaṃ tilâśscha [ $\boldsymbol{\|} 88$ ॥] masûra-dûrvv-âma-yavaṃ mṛi-89 nâlạ̣ rasaś=cha yashṭ̂̀madhuk-ôtpalânâm [1] sailêya-must-âguru 8 jhâmakañ=cha sthaunaiyak ${ }^{75}$-ailâ tagaram tilâśscha [ 189 ॥] tvak-patra-kushṭh-âguru jlâmakañ=cha mâmsị̣̂ harêṇụ̣ paripêla-

[^25]vañ=cha [1] yashṭihva-rôdhr-âguru chandanañ=cha punarnnavâ kṛishṇa-tilâ latâ cha [ $\|90\|]$ ity=ardha-
9 rûpair=v=vadana-pralêpaih ${ }^{76}$ kâlêshu gharm-âdishu samprayôjyahạ ${ }^{76}$ । nidarśitâ dṛishṭi-hitâ narậâạ̣ dôsh-âpahân=mê ṣriṇư7 ch=ôchyamânân [ $\| 91$ ॥] Vât-âmaya-ghnâ jalad-âgam-ôktâh pitt-â-
10 maya-(ghnâ)h śaradi pradishṭâh [1] grîshm-ôpadishṭâ rudhir-âmayaghnâh kaph-âmaya-ghnâh kusum-âgam-ôktâh [॥ 92 ॥] Karppâsa-mûlâny=alatâm=uśîra-kâlîyakâ kshîravatâm tvachaś=cha [1] bha-draśri-
11 [ya] [-ソ৩]kaṇ yavaśścha vadạ̣ti varṇyân=vadana-pralêpân [ $\| 93$ ॥] êtâni mûtrêṇa gavâṃ praśôshya kôl-âmbla-mûtraih saha miśritâ vâ [1] syur=m=mâtuluṃgasya rasê yutâ vâ sa-sarshapâh ŝôshya

## Fifth Leaf: Obverse:

 dushṭ[ê] rudhirê cha mukt[ề] [1] (s)n[êhê] v[i]rêkê vividhê cha nâsyê kritầ79 vidhêyà vadana-pralêpâḥ [\| 95 ॥] Tvak-patra-mâ96 ṃsî-nata-chandanaṃ cha manaḥ́silâ vyâghra-
 vish-âpahâh syur=vadana-pralêpâh n[96 11] Mûrvv-âśvagandhâ 97 triphalâ karañjaṃ sôth-âpahah ${ }^{81}$ syur=vadana-pralêpâh ॥ Mûvv ${ }^{88}=$ âpi gô-mûtra-yutâṃ radaṇti sôth-âpahaṃ
$3[\mathrm{~s}] y[\hat{a} d]=\mathrm{va}(\mathrm{d})$ ana-pralêpam $\|[97 \mathrm{n}]$ Mukhê praliptêna hasên=na rud98 yât=svapnaṃ na sêvêta tathâ na ch=âdyât [1] n=âgnau pratapyên= na cha dhârayêta śushkaṃ pralêpaṃ vadanê manushyaḥ [ $\| 98$ ॥] Abhîlu-nîlìkam=ath=âpi
4 kushṭham vyaṃgam sa-pilpaṃ ${ }^{83}$ tilakâṃ=ś=cha jantôh [1] sàmyaṇti sadyô vadana-pralêpâd=dṛishțiś=cha baktrañ ${ }^{87}=$ cha bhavêt=prasannam ॥[99॥] Mukhê praliptê hasatô śnatô vâ slêeshmâ sa-chhâyuḷ̣ ${ }^{85}$

76 Read pralêpâh and sanِprayôjyâh.
77 The text originaily had only $n u$; the syllable śri was afterwards inserted interlinearly in a lighter shade of ink.

78 Perhaps fill up with mukhê vidhêyâh.
79 Read kritê.
80 The lacuna may be filled up with harênum ; compare verses 105 and 106, where also we have vyâghranalhân and harệun.

81 Read sôth-âpahâll.
82 The letters look rather like myavâpi. The fact is, the original writing was muvvâpi, which was, rather clumsily, corrected to mûvzapi. But read mâroudp (mûrveâ api).

83 Or perlaps sa-pilpú.
${ }^{84}$ Read vaktrañ = cha.
${ }^{85}$ Read sa-vayult.

5 svapatah prakôpaḥ［1］yâty－âśu tasmâch＝chhirasô virêkâh snêhâś＝cha dhûmâśscha punaḥ prayôjyâh［ $\| 100$ II］Agni－pratâpâd＝vidrutaśs 101 ＝cha jaṃtôr＝dhṛitê cha śnshkê vadana－pralêpê［1］abhîlu－
6 pûrvvân＝pravadaṃi rôgâṃ＝s＝têshâm yath－ôktâṃ vidadhîta śântim
$\left[\begin{array}{lll}\| & 101 & 11\end{array}\right]$ Nakt－ândha－taimirya－śirô－rtti－dâham pitt－âtmikâṃ 102 chakshu－rujâṃ sa－dâhâm［1］dôshâs＝tathâ＝nyê pi mukha－tvacha－ sthâḥ śâmyanti sadyô
7 vadana－pralêpât［ $\| 102$ II］Akshṇôr＝v＝vikârê kapha－mârutâbhyâm 103 nastaḥ－kṛitê pînasa－rôgiṇâṃ cha［1］hanu－grahê sîrrsha－rujâsu ch ＝aiva vadaṃti varjyân＝vadana－pralêpâı［ 1103 II $]^{86}$ Amgulasya 104 chatur－bhâgô
8 mukha－lêpô vidhîyatê［1］madhyamas＝tu tribhâgah syâd＝anty ${ }^{87}$ ーーーンー bhavêt［॥104॥］${ }^{88}$ Yashṭihva－rôdhrâṃ triphalâ mrị̣â－ 105 laṃ sit－ôpalâṃ kâṃchana－gairikañ＝cha［1］patra－tvag＝êl－âguru dêvadâru punarnnavâ vyâghranakhâṃ－
 harê［！̣］u［ṃ pari］pêlavaṃ cha［1］sauvirakam gairika－katphalañ＝ cha syâch＝chhârivâ śarkkarayâ vimiśrâ［॥ 106 ॥］ity＝ardha－rûpaiśs 107 ＝chaturaḥ pradishṭâh kaph－âsra－pi（tt－ânila）－
10 rôga－śântau［1］viḍâlakais＝tair＝n＝nayanaṃ samantâd＝ê pakshma－ malât＝pradihêd＝bahir＝v＝vâ［llllll Rôdhrañ＝cha kiṃ－chit＝tu 108 ghṛitêna digdham＝ayô vighب̣ishṭâm＝abhayâm＝athô vâ［1］tvachaṃ vrihatyâḥ samam＝añjana［ñ＝cha viḍ̂â］－
11 lakaḥ sarva－ruj－âpahaḥ syât［॥ 108 II］${ }^{89}$ Gairika－rasâṃjan－âı̣̣jana－ 109 manaḥśilâ－rîtikusuma－sama－bhâgâḥ［1］îshan－maricha－sahîyâ dvi－ guṇaṃ ロê［ $[\cup \cup \cup \cup \cup \smile ー ॥ 109 \|]$

## Fifth Leave：Reverse．

1 Maricha－kusumê cha haritaṃ vipachên＝mṛidv－ag̣ninâ ghṛita－sahîyam 110 ［1］aṃjana－viḍâlakô yañ＝cha ku［r］vv（vakshyâma）－－ ［॥110॥］［90－ーーーソーーソ।ーーーーソーソー॥ーーーーソー－111 VI］
2 prôchyamânam nibôdhata［ 1111111 ］Rasa－dôshâd＝vyavây âch＝cha 112 pitta－sôṇita－dûshaṇât［1］bhavaty＝akâla－palitam vṛiddhasya jarasâ bhavêt［॥ 112 ॥］Prâyêṇa ślêshmalâ nâryâśs＝chhâyâ śa［ーソー 113 $\cup-1----]$

[^26]3 nishêvị̣yô rajô dushṭam srijaṃti cha［ $\| 113$ ॥］Prasanna－rakta－ 114 pitt－ôshmâ kêśa－bhûmir＝ataḥ striyâḥ［1］na chyavaṃi tatah kếâs
 rakta－pittam pradushya［tê］［1］—－
$4 \mathrm{n}=$ kêśa－mûlâni khalatiṃ kurutê śirah $\boldsymbol{1 1}[115 \mathrm{II}]$ Nishkêśaṃ tâmra－ 116
 sâddhyan＝tu navam samyag＝upâcharêt［ $\| 116$ \｜］Khâlitya－palitê 117 pûrvvam bahuśô vêdhayêt＝sirâḥ［1］
5 dushṭa－śôṇita－śuddhasya vaman－âdi－kriyâ hitâ［॥117॥］yath－ô ${ }^{92} \cup-118$ ソー paśchâch＝chhuddha－kôshṭhah prayôjayêt［1］taila－yôgâṃ＝ ś＝cha vividhân＝kéśa－râgâm＝s＝tath＝aiva cha［॥ 118 II］kêśa－saṃ－ 119 jananâṃ＝ś＝ch＝aiva tathâ saṃvardhanâni cha［1］
6 prakshâlanâśscha kêśânâm yathâ dôsha－harâ hitâḥ ॥［119 ॥］©（॥） Svâdv－ambla－lavaṇ－ôpêtair＝ghṛitair＝mâruta－kâsinam［I］s－ânnair 120 ＝upâcharêd＝dhîmân＝kêvalair＝v＝vâ yathâ－balam［॥ 120 ॥］Grâmy－ 121 ânûp－ôdaka－rasaị̣ sa－guḍaiḥ sa－pa－
7 lâṇ̣̣ubhiḥ［1］ambla－snigdh－ôshṇa－madhurair＝bhôjyâ＝gôdhûma－ś（â）－ layaḥ［॥ 121 II］surâṃ sa－maṇḍạ̣ gharm－âmbu－rasân＝vâ＝pi 122 prakâmatah［1］vâta－kâsê bahu snêham sa－guḍạ̣ vâ payah pivêt ［॥ 122 II］S＇rimgavêra－shaḍ̂î－drấ－
8 kshâ－śṛimgî－pippali－bhârggibhiḥ［1］guḍa－taila－yutô lêhô hitô mâru－  ..... 124 ［1］sa－saindhavam＝idaṃ chûrụ̣aṃ hitam mâruta－kâsinâm［ 1124 ॥］
9 Palâni kvâthayêt＝trimśat＝kaṇtakâryâ jal－âḍhakê［1］chatur－bhâga－125 sthitê pûtê dadyâd＝guḍa－palâny＝agê［ $1125 \|$ ］chûrṇṇair＝n＝nâgara－ 126 bhargy－êlâ－pippalî－shaḍi－chitrakaị̣［1］ghṛita－taila－palaiś＝ch＝âpi
 vâch＝chîtê cha dvi－palam madhu［1］pippalî－pala－chûrṇ̣̣am cha datvâ lihyât＝tu kâsa－nut ॥［127 II］Daśamûla－kashâyêṇa bhârggî－ 128 kalkaṃ ghṛitam pachêt［1］
11 ［－ソーソソーーーーソー m ${ }^{93}$ vâta－kâsa－nut［॥ 128 ॥］Kanṭakâryâ 29 rasa－prasthê ghṛitasya kuḍavaṃ pachêt［1］punarnavâyâh kalkêna tat＝paraṃ vâta－kâsa－nut［॥ 129 II］Bhârggî－kalkam ghṛitaṃ ch＝ 130 âtha pachêd＝dadhni chatur－guṇ̂e［1］
12 （v）［y］âgh［r］î－rasa－dvi－guṇitam vâta－kâsa－haram paraṃ［॥130॥ paittikê sarppishaḥ pânam hitaṃ syât＝sa－virêchanam［॥ 131 ॥］

91 Or perhaps chhir－ôtthitam．
92 Supply perhaps yath－ôchit－ásanann．
93 Supply daksha－tittiri－niryûhê tat＝param from the Chakradatta，formula 70 on p． 216.

Translation.
(Verse 1.)—Om! The summit of boundless wealth, inhabited by companies of Dêvarshis and Siddhas, by Kinnaras, Nâgas, Yakshas and Vidyâdharas, the holy pleasure-ground of the immortall gods that inhabit heaven, [all].........overtopping;
(Verse 2.) Where, scattered in every direction by reason of the multitude of the rays of thousands of protuberant gems, and dissolved by fear, darkness, being apprehensive of the abode of the Moon, Indra, the Sun and Fire, does not venture to approach even in the nights of the rainy season ${ }^{2}$;
(Verse 3.) Which is incessantly worshipped by numerous companies of sages accompanied by their disciples, carrying wood, kuśa-grass, fruits, water and flowers ; in whose groves the trees have their branches examined ${ }^{3}$ by the celestial maidens in quest of flowers ;
(Verse 4.) Where, under the magic of the rays of their lord, the moon, who has his permanent abiding-place on the crest of matted hair of the Three-eyed-one (i.e., S'iva), the two gems, talc ${ }^{4}$ and the moon-stone, even by day, let flow a mighty stream, ${ }^{5}$ just as if they were ${ }^{6}$ glacier-ice;
(Verse 5.) In whose beautiful groves, crowded with flower and fruit bearing trees, resounding with the voices of swarms of various kinds of birds, and having their rocky ground washed by the water emitted from the talc ${ }^{7}$, the medicinal plants glow at night like sacrificial fires;

I The reading ambrita (for amrita) is doubtful. But I can make nothing better of the mutilated letters.

2 The suggestion of the reading prâriḍ-niśas $s=a p i I$ owe to the Pandit of the Asiatic Society.

3 Or: touched.
4 The MS. reads $a b d a$, lit. ' clond.' As this is a synonym of abhra, which means both ' cloud ' aud 'talc,' I take abda also to mean ' talc.' It is not given, with this meaning, in any Sanskrit dictionary accessible to me; but the context clearly requires two minerals which should be both transparent and of a whitish or bluish white colour. Both talc and moonstone possess these qualities. The difficulty, however, is that mica or tale is not exactly a mani or gem. Another difficulty is, that both abda and indukânta are said to have the moon for their lord. This is trae of the moon-stone, but I am not aware of its being ever ascribed to talc. Yet I do not know what else $a b d a$ could be but talc.

5 The MS. reading ŝôtan gives no sense. I conjecture śrôtan, i. e. ̧́rôtam 'current', accusative of śrôta, or sîtan (i. e., ŝîtam) 'water.'

6 The original has upaläbham which, in this sense of 'resembling,' has not yet been noted in any Sanskrit dictionary. Literally it means 'catching up', 'reaching up to '.

7 The original has abda-mukta, which admits of a double meaning : ' emitted from talc' or ' pearl-like talc '.
(Verse 6.) Where the lions, with thick manes brighter than the rays of the moon, and shoulders besmeared with the matter oozing from the sides of the heads of elephants in rut, do not brook even the thunder of masses of clouds, but roar with mouths like mountainous caverns;
(Verse 7.) On that mountain, which is, as it were, the cream of the whole earth and, through its gifts of the riches of the world, the benefactor of all creatures,-on its summit, delightful with its trees bearing flowers and fruits at all seasons, there dwell the following Munis of enlightened mind:
(Verse 8.) Âtrêya, Hârita, Parâśara, Bhêla, Garga, S'âmbavya Suśruta, Vasishṭha, Karâla and Kâpya. Hundreds of times they used to roam about, in company of one another, enquiring into the tastes, properties, ${ }^{8}$ forms, powers and names of all medicinal plants.
(Verse 9.) Having observed a plant with leaves dark-blue like sapphire, and with bullbs white like jasmin, crystal, the white lotus, moonrays, conch-shell or mica, and having his attention aroused thereby, Suśruta approached the Muni Kâśirâja with the enquiry, what it could be. Then that holy man replied to him as follows:
(Verse 10 and 11.) "Of yore the lord of the Asuras himself drank the forth-churned nectar; his head the holy Janârdana (Vishṇu) cut off. (11.) The pharynx remained attached to the severed head; from it drop fell on the ground, and those were its (garlic's) first origin.

8 I propose to read guna (as in verse 13). The MS. reading gana yields no satisfactory sense. Guna refers to the five elements: earth, water, fire, air and ether, which are the constituents of all material objects, and after which, according as one or the other predominates in an object, the latter is named. See Suśruta I, 41. Vîrya or 'power' is that quality by which a drug produces its effect, According to some, vîrya is of two kinds: heating and cooling; others enumerate eight kinds : ushma or heating, sîta or cooling, snigdha or emmollient, ruksha or drying, viśada or clearing, pichchhila or lubricating, mridu or mild, and tîkshna or sharp. Rasas or 'tastes' are said to be five: madhura or sweet, ambla or acid, katu or acrid, tikta or bitter, kashâya nr astringent, lavana or saline. See Suśruta I, 40, 41, 42. The following table shows the reducing effects of the $2 \hat{\imath} r y a s$ and rasas on the three humours according to the Snśruta :-

| Humour | reduced by virya | or rasa. |
| :---: | :---: | :---: |
| Wind | ushma, snigdha | madhura, amla, lavana. |
| Bile $\quad$, | ŝîta, pichchhila, mridu | madhura, tikta, kashâya. |
| Phlegm | ushma, ruksha, viśâda, tîkshṇa | katu, tikta, kashâya. |

It will be observed that the effects mentioned in verse 15 agree with this taklo.

## Second Leaf: Obverse.

(Verse 12.) Hence Brâhmans do not eat it, because of its having originated from something connected with a living body; its evil smell also the learned in sacred lore declare to be due to the same cause.
(Verse 13.) Because of the absence of salty taste they call it 'Raśûna';' and its designation of 'Laśuna' is well-known among the people. What need to mention the many names by which it is called in the languages of different countries? Hear only its tastes, properties, and powers on account of their importance for its medicinal use.
(Verse 14.) Its taste, when eaten as well as when digested, is declared to be pungent; but when digested its taste is said by others ${ }^{10}$ to be sweet; it is of light digestion: ${ }^{11}$ as shown by its smell, and hot, as shown by its blood-invigorating power, and it is famed as an aphrodisiac.
(Verse 15.) By the foremost Munis it has been declared to be, on account of its sour, hot and oily nature, a means of reducing the strength of the windy humour, and, ${ }^{12}$ on account of its sweet and bitter nature, also to be, through its juiciness, a means of abating the bilious humour. On account of its hot, sharp, and pungent nature it is said by the learned to be a subduer of the strength of the phlegmatic humour. It was appointed by the Creator a means of removing the defects of these three humours ${ }^{13}$, in order that it should kill all diseases.

9 Raśûna, according to popular etymology, derived from rasa 'taste' and una 'without', which would properly produce rasôna. Or the intended etymology may be from ra (for la, abbreviation of lavaṇa) 'salt' and śâna ( $=$ śĺnya) 'destitute of.'

10 I propose to read anyaih. The MS. reading anyah yields no satisfactory sense.

11 Digestion is said to be of two kinds : guru or heary (or brisk) and laghu or light (or sluggish). Drags in which earth and water predominate (see note 8) cause heavy, while drugs in which fire, air and ether predominate, cause light digestion. In the latter urine and foeces are obstructed (baddha-vinmutra), while in heavy digestion they are abandant or loose (srishṭa-vinmutra). Pargative drags, accordingly, are said to contain an abundance of earth and water, while emetics have more of air and fire. In light digestion the tendency is said to be upwards, in heary, downwards. See Suśruta I, 40, 41.

12 The following line does not scan in the original, unless $s a$ is omitted. I am doubtful as to what is intended to be said. Sa-rasatay $\hat{a}$ mignt also be read as one word, bat would mean the same: 'throagh its having jnice'. Another difficulty is pitta-bhâva. There is no taste called pitta, so far as I am aware. I have translated ' bitter,' taking pitta to be a clerical error for tikta.

13 Dôsha, lit. 'defect', is a name for the three humours : vâta or vâyu or pavana 'wind', pitta 'bile' and kapha or ślêshman 'phlegm'. They are called so, because they are (as the Charaka, p. 254, explains) the 'weak points' of the bodily system, inherent in it by nature (pralriti-bhrita), bnt as natural constituent elements of the body, they belong ta the supports of the body (sarîr-ôpakarika), and ouly become troublesome when they are in a state of derangement (rikrita).
(Verse 16.) It kills also the windy humour when it has got into the bones, and rectifies also the phlegmatic humour when it (i. e., its defect) is not of any long standing; it also greatly stimulates the digestive power, and may be considered an excellent means for restoring vital power ${ }^{1 /}$ and colour.
(Verse 17.) Now by those who want to enjoy in comfort many sorts of liquor, flesh, clarified butter, barley and wheat, the following festival of the garlic is to be observed in the winter season as well as in the months of Madhu and Mâdhava. ${ }^{16}$
(Verse 18.) When trimmed girdles, fit for the conquest of men, are given up by the women, and necklaces are not worn by (lit., do not approach) them on account of the cold that distresses their bosoms, and when the husbands do not enjoy themselves on the roofs of the houses of their wives in the full light of the rays of the moon, at that time it should be observed, also when Aguru (fragrant aloe) is highly priced and things coloured with Kumkuma (saffiron).
(Verse 19.) Then on the house-tops, gate-ways and upper windows garlands of garlic richly set with its bulbs should be displayed, and on the ground itself one should have worship performed. One should also canse the people of one's household to wear chaplets made of the same (garlic). This is the procedure (for observing the festival) appointed for the people; it is short, as needed for the lower classes. ${ }^{16}$
(Verse 20-27.) Now the first formula: with a cleaned body and removed from light, after having worshipped the gods, brâhmans and fire, the patient should drink, on a day marked by an auspicious planet or constellation, of the fresh juice of garlic, strained through a piece of cloth: (21.) either one kuḍava ${ }^{17}$ or half a kuḍava or one and a half kuḍava or even more ;

[^27]there is here no fixed measure; let him dirink in proportion to the strength of his humours and to his disease. ${ }^{18}$ (22.) While it is clarifying, he should slowly blow on it soft carrents of air with fans made of palm leaves; and when it boils up or is being spoiled, ${ }^{19}$ he should sprinkle it with cold water mixed with powder of sandal. (23.) Of this decoction, fortified by one third part of spirit of rice, he should sip a mouthful, ${ }^{80}$ and first stopping a moment to let it play in the throat, he should drink it together with the rest. (24.) When this is digested, he may eat milk with rice ; or milk may be taken with the addition of the broth of game or with dainty decoctions of pulses or with oleaginous substances ${ }^{21}$; but he should take these moderately and only once a day. (25.) He may drink mârdvîka, or madhu, or madirâ and madhu in equal parts, or arishṭa, or sîdhu, or jagala, or agaja, or mairêya, ${ }^{32}$ or whatever other strong liquor there may be; but he should drink these with water, or one at a time, lest there be intoxication. (26.) If he is not used to drinking liquors, he may drink warm water or sour lânchika; or he may drink tushôdaka or suvîraja, ${ }^{23}$ or fresh whey. (27.) He should never take it with treacle, nor should he ever drink unboiled water, while using this prescription; otherwise he will always be in danger of indigestion, nor will he be able to eat properly for a few years.
(Verses 28 and 29.) Now the second formula: Having crushed small fresh bulbs of garlic, and, together with an equal quantity of clarified butter, stirred them well with a churning-stick in a vessel used for clarified butter, one may, after having let the mixture stand for ten days or longer, eat it together with an equal quantity of bel-fruit (Aegle

[^28]marmelos) ; and when it is digested, one should observe the diet prescribed in the case of the use of the decoction. ${ }^{84}$
(Verse 30.) The two formulas, above set forth by me, are the principal. If thou art not willing to make use of either, hear other formulas from my mouth.
(Verse 31.) The third formula. After cleaning bulbs of garlic till they are as bright as a conch shell, they may be eaten with flour of parched grain, kulmâsa and chukra, ${ }^{25}$ well cooked with clarified butter and oil, after the manner of broths and meats, accompanied with mashed beans and green vegetables, well seasoned with some aromatic substance ${ }^{26}$ and sonchal salt. Or they may be eaten prepared in many other ways. Such others ${ }^{27}$ are as follows :
(Verse 32.) The fourth formula. Having boiled one and a half bunches of stalks of garlic with meat, one may give this savoury broth to drink, after it has clarified; one may add to it an equal quantity of boiled milk, either pure or mixed with a decoction of pulse.
(Verse 33.) Now the fifth formula : garlic together with oil and sukta ${ }^{25}$, placed in a quantity of barley, should be plastered round with clay and allowed to stand for a year ; a person partaking of this will get rid of diseases even (if of long standing). ${ }^{28}$
(Verse 34.) The sixth. If by an apathetic man tugâ (manna of bamboos) is allowed to stand for three nights, then half of it should be caused by that man to be prepared with garlic ......

## Third Leaf: Obverse.

............... curdled milk and clarified butter or also butter-milk; using this a brâhman may overcome various diseases and become of a sound body. ${ }^{99}$

24 The rasa or decoction is that prescribed in verses 20-27.
25 Kulmâsa and chukra or sukta are two kinds of soar gruel. As to the latter see Dr. Dutt's Mat. Med., p. 12. See also note 23, above.

26 Gandha is the name of several aromatic substances: valerian, sandal, myrrh, aloe-wood, camphor, saffiron, etc.; hence the term gandhâshṭaka or 'the eight fragrant substances.' I do not know which of these may here be intended, or whether any particular aromatic is intended.-On sonchal see Dutt's Mat. Med., p. 85.

27 I thus translate the itarani of the text, supplying sâdhanani. But I am not sure about the meaning of the phrase. The same phrase occurs in the prose portion after verse 35, below, where kalpâh may be supplied with itarê. Possibly itarâni is an instance of false concord with sâdhitên (see introductory remarks), and śriṇushva mê should be understood: "hear from me the following other preparations made in many other ways." The sense remains the same.

28 This portion is lost in the original. See footnote there.
29 I can make nothing satisfactory of śmarshmî. I take it to be connectod with
(Verse 35 and Prose.) The seventh. Thirty-two prasthas ${ }^{17}$ of the juice of garlic, one quarter as much of yeast, one prastha of oil free from all impurity, and six prasthas of flour should be taken. A wise physician will further add one kalaśa of Mêshaśringî (Asclepias geminata) boiled in water, and once more throw in two prasthas of flour. (Prose) This liquor will always, after five days, become ready endowed with taste, colour and aroma; as an oil also it is excellent and most effective. If a person uses it with a purpose, whether as an oil or as a liquor, hosts of powerful diseases will relinquish him. Other formulas are the following:
(Verse 36.) The eighth. Having crushed one prastha of cleaned garlic, one should mix it with half a pala ${ }^{\text {L7 }}$ of powder of the three myrobalans ${ }^{30}$, and a kuḍava of clarified butter and oil, and then allow it to stand for ten days. This makes an agreeable remedial paste against cough and asthma.
(Verses 37 and 38.) Joined with remedies against wind, garlic cures abdominal tumours caused by the windy humour ; and if joined with Khadira (Acacia catechu), it at once cures skin diseases. Mixed with Hayagandhâ (Physalis flexuosa), it is a remedy against cough and asthma; and mixed with liquorice, it is declared to be good for the voice. (38) It cures various kinds of diseases, when joined with various kinds of substances. There is no limitation in the way of administering it ; for thus was its administration in vogue among the sages.
(Verses $39-41$.$) Hear from me with an attentive mind, O Suśruta,$ as I set forth briefly its virtues, when applied as an alterative tonic. (40) It cures skin diseases, loss of appetite, abdominal tumours, cough, leanness, and weak digestion. It removes rheumatism, mœnorrhagia, abdominal pains, consumption, morbid affections of the bowels, enlargement of the spleen, and hœmorrhoids. It banishes hemiplegia, sciatica, worms, iliac passion, and urinary disorders. It cures lassitude, cold of the nose, rheumatism of the arms or back, and epilepsy. (41) Venerable Sir, with a voice beautiful like that of a tabour or flute, with a complexion clear as molten fine gold, strong in memory and mind, with a well-knit body, free from all wrinkles etc., with all your senses steady, collected and constantly increasing in vigour, you shall live for a hundred years, with a well-regulated digestion and inexhaustible virility.
(Verse 42.) Thus far the administration of garlic has been explained by me, even as it was taught by the sages of old, ............ and one should accurately observe it
sman 'body.' I may have failed to read it correctly, though the letters seem distinct enongh.
${ }^{30}$ I. e., the chebnlic, the emblic and the belleric myrobalans. See Dr. Dutt's Materia Medica, p. 161.
(Verses 43-45.) Food, digestion, the normal condition of the elements, health, plumpness, spirits, energy and long life are all dependant on the digestive faculty. (44.) The digestive faculty is set in activity through food; and the resultants of digestion are the elements; health depends on the normal condition of the elements; plumpness on health; (45.) good spirits and energy on plumpness; and through all these the life of living beings is prolonged. Hence one should first of all examine the state of the digestive faculty. 31
(Verse 46-48.) When the digestive faculty conduces to the normal condition of the elements, it is said to be (normal or) regular, and this is justly considered its best state. When the digestion is (abnormal or) irregular, one should drink things made of curdled milk or clarified butter or habush and the like; (47.) oily and warm applications ${ }^{32}$ also are useful ; afterwards food and drink may be taken. When the digestion is weak, one should fast at first, and afterwards use medicines to promote appetite and assist digestion ${ }^{33}$; (48.) the use of powders and medicated liquors (arishta) also is advantageous as removing defects of the bilious and phlegmatic humours. When the digestion is regular, the physicians should prescribe whatever is agreeable to the system. ${ }^{34}$

## Further it may be observed :-

(Verses 49 and 50.) When the digestion is weak or too active, a person dies, unless he receives proper treatment; when it is irregular, all sorts of diseases arise; when it is regular, he lives long in comfort. ${ }^{35}$ (50.) Hence a wise physician will at all times in all diseases first direct

31 Compare with this the opening statements in $I, 35$ and 46 of the Suśruta, which appear to inculcate a different view. - According to the Suśruta the dhatus or 'elements' of the body are seven (see I, 15) : rasa chyle, rakta blood, mâmsa flesh, medus fat, asthi bones, majjâ marrow, and śukra semen.-Sâmya or 'equilibrium' is the exact quantity required of each element to constitute a healthy body.

32 I do not know the exact meaning of the term vartayah here. Neither "pill" nor "bougie" seems quite applicable. Perhaps snigdhôshn̂a should be separated from vartayah, and the plurase translated: "oily and warm remedies and vartis (whatever the latter may be) are usefnl."

33 On pâchana and dîpana see Dr. Dutt's Hindu Mat. Med., p. 5.
34 On sâtmya see Suśrnta I, 35 (verse 35).
35 With varses $46-50$ should be compared the statements in Suśruta I, 35. There four kinds of digestion are enamerated: regular, irregnlar, weak and too active. These four kinds are referred to in our verse 49. But verses 46-48 mention also a different classification into two kinds only : regular and irregnlar ; and for the latter kind curdled milk and clarified butter are prescribed. Bat in the Suśrata these are prescribed for a too active digestion. Moreover the Suśruta prescribes oily (snigdha, Dr. Datt's transl. 'cooling'?), acid and saline remedies for irregular digestion, while our verse 48 prescribes oily and warm remedies.
his treatment to the proper regulation of the digestive faculty, afterwards paying attention to the relief of the sickness.
(Verse 51-53.) He who desires a good memory, health and strength, and wishes for a long life, should make use of the fresh juice ${ }^{〔 6}$ of the Sankhapushpî (Canscora decussata), Brâhmî (Herpestis Monniera), Maṇḍ̂kaparṇî (Hydrocotyle asiatica) and Madhuka (liquorice). (52.) Within one month he will obtain a good memory, and within twelve months he will be able to reproduce from memory whatever he hears once only, without any decay. (53.) With the same treatment, he will live for a hundred years or for two hundred years, if administered in proportion; and if he goes on continually repeating the treatment, he will enjoy undecaying life.
(Verses 54-58.) In the case of gruels, khada (medicated buttermilk), and decoctions; of electuaries, powders (chûrna) and antidotes; of pills, ointments and suppositories; of fumes and sternutatories; (55) of pĥtapâka (roasted drugs), refrigerants, sudorifics, emetics and eye-lotions; and in the case of any other medicaments, not named, when the proportion is not mentioned, (56) the portions of the ingredients should be equal ; of honey and clarified butter, there should be a double portion; but of treacle one should take a threefold, and of ground white sugar a fourfold portion. (57) In the case of powders ( pêshya), when no liquid is prescribed, water should be understood to be taken. ${ }^{37}$ In the case of curdled milk, urine, milk, clarified butter, hair, horn and hoof, (58) one should prescribe all these to be taken from the cow, so also in the case of all honeys, to be taken from the common bee. ${ }^{38}$

36 On svarasa see Dott's Mat. Med., p. 9.
37 On these medicaments see Dr. Datt's Mat. Med., p. 9. For a pûtapâka vegetable drugs are made into a paste, and tied up in the form of a ball in leaves of the Eugenia jambolana or Ficus Bengalensis, after which the ball is covered with a layer of clay and roasted in a cowdung fire. When the clay becomes brick-red, the roasting is completed. The roasted drug is now taken ont, and given oither in the form of a pill or powder or its juice is expressed and given with honey or other adjancts. - Khada is said to be batter-milk boiled with acid vegetables and spices.

33 With this compare Suśruta's directions on honey, and urine in I, 45. He only, says, that the honey of the common bee is the best (pravaram), bat allows seven other varieties. He makes a similar remark with reference to cow's urine, that it should be used by preference, as being the most effective (mutra-prayôga-sûdhyêshu gavga-mûtramn prayôjayêt) ; bnt he also permits the ase of the urine of other domestic animals. The only reference to other animal substances that I can find occurs at the end of I, 37, were the following are mentioned: blood, hair, nails, milk, urine and foeces; bat there is nothing to limit them to products of the cow.
(Verse 59.) With Dâdima (pomegranate) and Tvacha (cinnamon) one should boil one and a half portion of pungent (Indian mustard) oil ${ }^{39}$ : this causes the growth of the ears, and of the female and male genital organs.
(Verses 60-66.) One should boil half a pala of the root of Chitraka (Plumbago zeylanica), likewise of Trivṛit (Ipomœea turpethum) and Sâtalâ (Stereospermum suavolens) ; (60) and one karsha ${ }^{17}$ each of the roots of Dantì (Baliospermum montanum) and ........., and likewise of long pepper, rocksalt, asafoetida and sorrel, (61) and fore-most twenty (karsha?) of chebulic myrobalan $\qquad$

## Fourth Leaf: Obverse:

From these one should carefully prepare ten boluses with eight pala ${ }^{17}$ of treacle, (62.) and take one of them on every tenth day. After it one should drink warm water for the purpose of correcting the defects of the humours; (63.) then, after the purgative has taken effect, one should bathe and may then return to one's ordinary diet. 40 There

[^29]should never be any hesitation with regard to this remedy, either in word or deed or thought. (64.) It is a purgative composed by Agasti, fit for princes, and which can be used in all seasons. It prevents old age and death ; it cures all diseases ; (65.) it also acts as an aphrodisiac and alterative tonic, and increases memory and health. It should never be administered to any one who has no son nor disciple; (66.) nor should it be given to an enemy of the king, nor to any other sinful liver.
(Verses 67-69.) Both Panchamûla (the five drugs) ${ }^{41}$, Madhuka (liquorice), Guḍûchî (Tinospora cordifolia), Râsnâ (Vanda Roxburghii), Aśvagandhâ (Withania somnifera), Dêvadâru (Pinus deodâra), Pâthâ (Stephania hernandifolia), Tvacha (cinnamon), the two Bala ${ }^{42}$, Tagara (Tabernaemontana coronaria), and seeds of Tila (sesamum); Mûrvâ (Sanseviera zeylanica), Kulattha (Dolichos uniflorus), Nalada (Indian spikenard) and Ghana ${ }^{43}$; (68.) Punarnarâ (Boerhaavia diffiusa), and the fruit and bark of Vênu (bamboo) ; Jîvantî4, also Êlâ (cardamom), Aguru (aloe), and Jìvaka ${ }^{45}$; root of Êranda (castor-oil plant) together with its fruit and sprouts, flowers of Kuraṇda ${ }^{16}$, and Mahaushadha ${ }^{47}$ : (69.)

41 Ou these pancha-mûla or "five drugs" see Dr. Dutt's Hindu Mat. Med., pp. 145, 146. They are distingnished as the lesser (hrasva) and the greater (vrihat). The former comprise the S'âlaparn̂̂ (Desmodiam Gangeticum), Préśniparn̂̂ (Uraria lagopodioides), Kantakâr̂̂̀ (Solanum Jaquinii), Vrihat̂̂ (Solanum indicam), and Gôkshara (Tribulus terrestris). The latter include the Vilva (Aegle marmelos), Syônaka (Calosanthes indica), Gambhârî (Gmelina arborea), Pâtala (Stereospermum snaveolens), and Ganikarik̂̂ (Premna spinosa). Both sets are together known as the daśamûla or ' the ten drugs' or the dvi-pañcha-mâlî.

42 This is the Sida, of which, however, Dr. Dutt in the Hindu Mat. Med., p. 120, mentions four kinds : cordifolia, rhombnidea, rhombitolia, and alba. The two Balâ here referred to are probably the Balâ or Sida cordifolia and the Atibalâ or Sida rhombifolia. See the 5th list in Suśruta I, 39.
${ }^{43}$ The text has ghana, which may simply mean 'much', qualifying Naladam 'spikenard'; but it seems preferable to take it as the name of a separate drug; it is said to be the same as Musta or Cyperas rotundus ; see the Glossary to the Bibliotheca Indica edition of the Aśvavaidyaka.

44 Jîvant $\hat{\imath}=$ Caelogyne ovalis, in Dutt's Mat. Med., p. 301, bat according to Watt's Econ. Prod., pt. v, p. 85, it would seem to be the Cimicifuga foetida. It is mentioned in the 17 th list of Suśruta I, 38, where the commentary of Dallana Mishra says that it has a fruit with a milky juice, resembling the fruit of Latârka, and that it is popularly known as Dôdikáa.

45 The Jîvaka is also called Kûrcha-sîrshaka, but its identity is no more known. It is one of the drugs which formed part of the group known to the ancients as the ashṭa-varga or 'gronp of eight drugs.' See Suśrata I, 38 (transl., p. 157).
${ }^{46}$ I. e., Corchorus antichorus, according to Watt's Econ. Prod., pt. v, p. 97, but the dictionaries seem to identify it with Kuranta, which is Barleria prionitis according to Watt, ibid., p. 53. See also the 2nd list in Suśrata I, 38 (transl., p. 138).

47 This lit. means 'great drag', and is the name of various plants, such as
two or three of these drugs should be boiled in the milk of goats or cows or sheep mixed with water, and then, with the addition of a little rocksalt, the mixture may, in a tepid state, be applied as a lotion in eye diseases caused by the windy humour. ${ }^{48}$
(Verses 70-72.) Dârvî (Indian barberry), Utpala (blue lotus), Padmaka, Tunga, Yâshâ, Mêdâ, Mṛiṇâla (leaf-stalk of the lotus) ${ }^{49}$, Madhuka (liquorice), Samangâ (Mimosa pudica) ; Kâlîyaka (yellow sandal), Parpaṭaka (Oldenlandia herbacea) and Latâ ${ }^{50}$, also Drâkshâ (raisins), Kâshmarya (Gmelina arborea) and Parûshaka (Grewia asiatica) ; (7l) roots of Gundrâ (Panicum uliginosum), of Naḍa (Phragmites karka) and of Vêtasa (Calamus rotang), and calyxes of flowering grasses ${ }^{51}$; Pra-
ginger, garlic, long pepper, etc. I do not know which of them may be intended here.

48 In this formula there is a curions mixture of nominative and accosative cases. If the words from Guḍ̂ch $\hat{\imath}$ down to $T v a c h a \underline{n}$ be read as forming one compound, all the names may be taken as accasatives, except Til̂̂́s-cha, Jîvant̂̂, Elâ and Jîvakaścha. The form Kulatthan, which is undoubtedly an accasative plural, would show that the whole series is intended to be in the accasative case, with which is to be understood some verb like dadŷ̂t or kalpayêt, "he shonld take". Tilấs-cha is a nominative plaral, bat might be easily turned into an accusative, by reading Tilâm (Tilân) = $\dot{s}=c h a$, the omission of the anusvâra being a clerical error. Bat the difficulty cannot be got over in a similar way in the case of Jîvantî, Elâ and Jîvakaś-cha. It is more probable, therefore, that the whole series is intended for nominatives.

49 Mrinala is the leaf-stalk of the true lotas, Nelumbiam speciosum.-Tunga is the name of several things, bat is probably here the stamens of the flower of the true lotns, otherwise called Padma-kếsara or Nalina-kếsara (Suśrata I, 38, lists 20, 22).-Padmaka is said to be "a sort of fragrant wood broaght from Malva or Soathern India" (Dr. Datt's Mat. Med , p. 312); it is mentioned in lists 17, 19, 25 of Suśruta I, 38, where the commentary of Dallana Mishra identifies it with padma-kâshṭha; bat it appears to be a drug of uncertain identity, and looking to the connection in which the name appears (among other terms referring to the lotus) and to the form of the word itself, it may be suggested that padmaka refers to some part of a padma or lotus. The root of the Nymphaea odorata or sweet-smelling waterlily is used to prepare " $a$ kind of liniment of a cooling and fragrant natare by which the Native Indians sometimes anoint themselves " (W. Ainslie's Materia Medica of Hindoostan, p. 118).-Utpala is the same as Nilôtpala or the blue lotas, Nymphaea stellata, a waterlily, but not the trae lotas which is the Nelumbium speciosum.-The identity of Mêda is no more known; it occurs in the 17 th list of Suśrata I, 38 ; it is said to be one of the eight drugs constituting the ashṭavarga, see note 45 . - Yáshê I cannot find anywhere mentioned; perhaps it is the same as $y \hat{a} s \hat{A}$ or $y$ avâs $\hat{\alpha}$, generally masc. yâsa or yavâsa, Alhagi Manrorum.

50 I cannot identify this Latâ ; it is the name of various plants.
51 Perhaps the "grasses" here referred to are those constituting the trinasañjñaka or 'group of five grasses' (Suśrata I, 38; transl., p. 174). They consist of the Kuśa (Poa cynosaroides), Kâśa (Saccharum spontaneum), Sara (Saccharum sara), Durbha (Imperata cylindrica) and Kandêkshu (Saccharam officinarum). They are
paundarîka (root-stock of the lotus) and Kirâtatikta ('Chireta' or Ophelia chirrata), Bhadrásî̀ (sandal), Nimba (Azadirachta indica), Paṭ̂̀la (Trrichosanthes dioica), Vâśâ (Justicia adhatoda) : (72) two or three of these may be boiled in milk of a goat or a woman, and then, with the addition of sugar and honey, will make a very good lotion in eye diseases caused by bile and defects of the blood.
(Verses 73-75a.) The three acrids ${ }^{52}$, the three myrobalans ${ }^{30}$, Haridrâ (turmeric), Kâsissa (sulphate of iron), Jâtî (jasmin), Gṛihadhûma ${ }^{53}$, Jâtîit ; also Lâkshâ (lac), Dantì (Baliospermin montanum), Surasa (Tulsî or Ocimum sanctum) and Vacha (Acorus calamus) ; Pâṭhâ (Stephania hernandifolia), Aśvagandhâ (Withania somnifera), best Dêvadâru (Pinus deodara) ; (74) also Kaṭphala (Myrica sapida), Êlâ (cardamoms), Aguru (aloe), Kaṇ̣akârî (Solanum jacquinii), Rôdhra (Symplocos racemosa), Karañja (Pongamia glabra), Vṛihatì (Solanum indicum), S'vadamstra ${ }^{55}$ : two or three of these may be boiled in water, and when cooled down to moderate warmth, (75a) they may be used, mixed with rocksalt and honey, as a lotion in eye diseases caused by phlegm : so the sages declare.
(Verses 75b-77a.) Parûshaka (Grewia asiatica), Âmrâtaka ${ }^{56}$ (hogplum), Tintiḍika (tamarind), Vṛikshâmla (hog-plum), Jambu (roseapple), Âmra (mango), Kapittha (wood-apple), Kôla (jujube), (76) boiled with liquor of citron or tamarind or pomegranate or with various kinds of milk or with curdled milk or whey; also Dârvì (Indian barberry), Utpala (blue lotus) and the other above mentioned drugs, boiled with sour substances, make a lotion for the eyes, (77a) which, cooled down to moderate warmth by standing, and mixed with some rocksalt, will thoroughly cure any disease of the eyes caused by defects of the blood.
(Verse 77b-78a.) Having ascertained the exact circumstances ${ }^{57}$
said to remove disorders of the bile. However, according to Datt's Mat. Med., p. 266 , it is the roots of these grasses that are used.

52 Also called tryushana or trikatu; they are ginger, black pepper and long pepper.

53 I cannot identify this plant; I do not find it explained anywhere. Could it be the Gharikîn (Agaricus officinalis or igniarias) mentioned in Dr. Watt's Econ. Prod. of India, pt. v, p. 17 ?

5t I do not understand why $j \hat{d} t \hat{\imath}$ is mentioned twice. It is the name of several plants; but two different plants would hardly be indicated by the same name in the same formala.

55 According to the Petersburg Dictionary: Asteracantha longifolia; according to others : the same as Gôkshura or Tribalus terrestris (Ainslie, p. 94, Datt's transl., p. 157).

56 The text is here mutilated ; Amrâtaka is the only word that occurs to me as suiting the traces left.
${ }^{57}$ Literally : the less and the more.
of a disease with regard to its being due to a particular assignable cause or its having arisen from the general condition of things ${ }^{58},(78 a)$ an intelligent physician should determine his line of treatment.
(Verse 78b-79a.) The tender ${ }^{59}$ roots of Êraṇda (castor-oil plant) with its fruit and sprouts, added to the milk of goats, is an excellent lotion which cures any disease caused by vitiated wind and blood: so good physicians declare.
(Verse 79b-80a.) Prapauṇḍarîka (root-stock of the lotus), Madhuka (liquorice), Haridrâ (turmeric) ..................., mixed with sugar, make a lotion which stops any disease due to vitiated bile and wind.
(Verse 80b-81a.) Nata ${ }^{6 n}$, S'vadamsṭra ${ }^{55}$, Vṛihatî (Solanum indicum), Tvacha (cinnamon) and Hrîvêra (Pavonia odorata) : these, boiled in goat's milk and water, and mixed with rocksalt, make a lotion which cures any disease due to vitiated wind and phlegm.
(Verse 81b-82a.) ...... Dârvî (Indian barberry) and best Madhuka (liquorice), boiled in the milk of a cow or a woman, and mixed with sugar, may be applied by a grood physician as a lotion in any disease due to wind, blood and bile.
(Verse $82 b-83 a$.) The three myrobalans ${ }^{30}$, finely pulverised and tied up in a piece of white linen and soaked in milk of a goat or a woman or in water, are a remedy in diseases caused by all the humours together.
(Verse 83b-84a.) Dârvî (Indian barberry), Haridrâ (turmeric), the three myrobalans ${ }^{30}$, Musta (Cyperus rotundus), mixed with sugar and

58 I have noticed the term samsarga-ja in Suśrata I, 24 (transl., p. 111), where it forms, together with âkasmika, the two divisions of the diseases due to daiva-bala or preternatural causes. As the commentary explains, these diseases may be due either to an offence against a god or to the curse of a saint or such like, i.e., to some distinct, assignable canse, in which case they are called samsarga-ja or 'due to concatenation'; or, on the other hand, they may be dae to karma, i. e., to some sin committed in a pre-existent life, i. e., practically to no known cause, in which case they are said to be âkasmika or 'accidental.' I take samsarga-ja to have here this technical meaning: 'due to an assignable cause'; and in contradistinction, I take sarva-samutthita to mean 'due to (no particnlar assiguable canse, but) to the general condition of things', to all the surroanding circamstances. I may note, here, that the Suśruta (I, 24) distinguishes between diseases that are samsarga-ja and those that are upasarga-ja. The former are those that are dae to some assignable preternataral cause ; the latter are those that are due to an assignable natural cause, i. e., they are such diseases as arise in complication with others, e. g., a disease that arises in complication with fever.

59 Vijarjara is in the smaller Petersbarg Dictionary said to mean, "morsch", " mürbe" (rotten, decaying.) ; but it is rather the opposite of jarjara, 'old ', 'decayed', and therefore means 'young' or 'tender.'

60 This is said to be the same as Tagara (T'abernaemontana coronaria).
honey and infused in human milk, make a lotion which is said to be a capital remedy for diseases due to defects of the bile, blood and wind. ${ }^{61}$
(Verse 84b-85a.) Young roots and leaves of Êraṇda (castor-oil plant), and paste of Shashṭika rice, steeped in clarified butter, and applied by the hand of a young child, ${ }^{62}$ is a remedy against the same diseases as mentioned in the case of the preceding prescription.
(Verse 86.) With the same drugs as are prescribed for the lotions, a physician should prepare sudorifics, puṭapâkas ${ }^{37}$, sternutatories ${ }^{63}$, refrigerants, potions of clarified butter, plasters and baths.
(Verse 87.) Plasters on the face are declared to be suitable for complaints of the seasons, to remove abhilla ${ }^{76}$, freckles and blue-marks, and to be remedies against poisons and swellings.
(Verses 88-91.) (I) Tvach (cinnamon), Kshîrị̣̣̂̂4, also Chandana (sandal) and Padmaka ${ }^{49}$, Gundrâ (Panicum uliginosum), Mṛịàla (leaf-stalk of the lotus), also Ghana ${ }^{43}$ and Vâlaka ${ }^{65}$; (II) roots of Kuśa grass (Poacynosuroides), Tagara (Tabernaemontana coronaria), Êlavâlu ${ }^{66}$, leaves of Tâlisa (Pinus Webbiana), Nalada (Indian spikenard) and Tila (sesamum) seeds; (89.) (III) Masûra (Vicia lens), Durvâ (Cynodon dactylon), Ama-yava (uncooked barley), Mṛinâla (leaf-stalk of the lotus) and juice of Yashṭimadhuka (liquorice) and Utpala (lotus) ; (IV) S'ailêya ${ }^{67}$, Musta (Cyperus rotundus), Aguru (aloe), and Jhâmaka ${ }^{63}$, Sthauṇêyaka ${ }^{69}$, Êlâ (cardamoms),

61 Verse $84 a$ is found, word for word, in the Vangasêna, on eye diseases, p. 788.
62 Or perhaps : 'by a dead hand', by the hand of a corpse. I do not understand the direction.

63 Nâuana or nâbana is given in the smaller Petersburg Dictionary, as meaning 'sternatatory.' I have met with the word in the Vangasêna, p. 789, in a similar juxtapposition with tarpaṇa and âśchyôtana. A tarpana is a refrigerant drink made of flour of parched grain mixed with water.
$6 \pm$ The reading seems to be corrupt. I cannot find a drag Kshîrind. There is Kshirini $\hat{\imath}$ which is the name of several plants. There is also Tvakkshir $\dot{\hat{a}}$ a name of Tugâ or Tabashir.

65 Apparently the same as Bâlaka (Sida cordifolia), mentioned in the 11th list of Suśruta I, 38 (transl., p. 164).

66 Elavâlu is now unknown. It is mentioned as Elavâluka in the 6th list of Suśrnta I, 38 (transl., p. 161), where Dallana Mishra's commentary explains it as a reddish powder (hari-vâluka), resembling that of the seeds of the Krishṇagandhâ (Krishnagandhikaphala). The latter is the same as the Sigru or S'ôbhâñjana (Moringa pterygosperma), of which there exists a red variety (Datt's Mat. Med., p. 118).

67 I cannot identify this. It is said to be the same as Tâlaparn̂̂ (Anethnm graveolens) ; also a kind of lichen (Datt's Mat. Med., p. 315) ; also several kinds of minerals. Here some plant is probably intended.

68 Jhâmaka is probably the same as (i. e., a prâkritized form of) Dhyâmaka, which is mentioned in the 11th list of Suśruta I, 38, where Dallana Mishra's commentary identifies it with Kattrina, popularly called Rôhish. The latter is said to be "a fragrant grass" (Dutt's Mat. Med., p 304), bat its identity appears to be unknown.

69 I cannot identify this. It occurs in the 11th list of Suśruta I, 38, whero

Tagara (Tabernaemontana coronaria), and Tila (sesamum) seeds ; (90). (V) Tvak-patra (bark and leaves of cinnamon),Kushṭha (Saussurea auriculata), Aguru (aloe), and Jhâmaka ${ }^{63}$, Mậ̣sî (Nardostachys Jatamamsi), Harêṇu (Piper aurantiacum) and Paripêlava ${ }^{70}$; (VI) Yashṭihva (liquorice), Rôdhra (Symplocos racemosa), Aguru (aloe) and Chandana (sandal), Punarnavâ (Boerhaavia diffusa), black Tila (sesamum) seeds and Latâ ${ }^{50}$ : (91.) the six face-plasters, severally described in the foregoing half-verses as beneficial to the eyes of the people, should be applied in the summer and the other seasons, according as they remove in them the defects of the humours. Now listen to me as I explain this.
(Verse 92.) In the rainy season they are said to cure diseases due to derangement of the wind; in the autumn they are held to cure diseases due to derangement of the bile; in the summer they are held to cure diseases due to derangement of the blood; in the spring they are said to cure diseases due to derangement of the phlegm. ${ }^{11}$
(Verses 93-94.) Roots of Karpâsa (cotton-plant), Alatâ, Usíra (Andropogon muricatus), Kâlîyaka (yellow sandal), and the bark of plants with a milky sap, Bhadraśrî (white sandal), ........., Yava (barleycorns) : these are said to make plasters for the face beneficial to the complexion. (94.) These should be dried and then mixed with the urine of a cow, or with Kôla (jujube), tamarind and urine, or they may be dried and mixed with the juice of Mâtulunga (citron) and mustard, (and thus applied to the face). ${ }^{72}$

Fifth Leaf : Obverse.
(Verse 95.) if the blood becomes painful or vitiated or emitted, face-plasters should be applied, at the same time that some

Dallana Mishra's commentary explains it by Ghuṇ̂raka, and Dr. Datt translates it (p. 164) by "a sort of gall caused by an insect." 'The smaller Petersburg Dictionary, however, makes it to be "a kind of aromatic plant." Its identity would seem to be now unknown.

70 I cannot identify this. The smaller Petersburg Dictionary says it is some plant allied to the Cyperus rotundus, which is the Musta.

71 With this compare Suśruta's statements in Sûtrasthâna, chapt. 6 (p. 20, transl., p. 27). There six seasons are mentioned, each consisting of two months. The six seasons form three sets: 1, late rains and autumn, 2 , winter and spring, 3 summer and early rains. Diseases due to bile arise and come to a head in the late rains and autumn, and are relieved in the winter (in our MS., in the antumn) ; diseases due to phlegm arise and come to a head in the winter and spring, and are relieved in the summer (in our MS. in spring) ; diseases due to wind arise and come to a head in the summer and early rains, and are relieved in the late rains (in our MS. in the rainy season). Disease due to deranged blood are not referred to at all in the Suśrata.

72 I do not quite understand this formula: Alatâ I cannot identify; nor do I know whether ámbla 'tamarind ', or ambla 'sorrel', or amla 'vinegar' is intended.
oleaginous substance is given as a purgative and various secretories administered to the nose. $7^{73}$
(Verse 96.) Tvak-patra (bark and leaves of cinnamon), Mâṃsî (Nardostachys jatamansi), Nata ${ }^{60}$ and Chandaua (white sandal), Manaḥśilâ (realgar), Vjâghranakha ${ }^{74}$, Harêṇu (Piper aurantiacum) ; Âmbla (tamarind ?), Kushṭha (Saussurea auriculata), the two Surasâ (Tulsi-plant), and the two Haridrâ (turmerics) ${ }^{75}$, applied as a face-plaster, act as remedies against poison.
(Verse 97a.) Mûrvâ (Sanseviera zeylanica), Aśvagandhâ (Physalis flexuosa), the three Myrobalans ${ }^{30}$, Karañja (Pongamia glabra), applied as a face-plaster, act as a remedy against dropsy.
(Verse 97b.) Mûrvâ, mixed with cow's urine, and applied as a faceplaster, is said to be a remedy against dropsy.
(Verse 98.) While a plaster is applied to the face of a patient, he should not laugh, nor weep, nor enjoy sleep, nor should he eat. Nor should he warm himself at a fire, nor let the plaster become dry.
(Verse 99.) Abhîlu and nîlîka ${ }^{76}$, moreover skin-diseases, freckles, and suppurating77 eruptions of a person are instantly cured, and the eye and face relieved, through the application of a face-plaster.
(Verse 100.) If one laughs or eats while a plaster is applied to his face, his phlegm as well as his wind will be deranged, and if he sleeps, they will quickly grow to excess: in such a case secretories should be applied to the head, oleaginous substances also should be administered and fumes inhaled..$^{78}$

73 See note 78.
74 Vyâghranakha is mentioned in the eleventh group of drugs in the Suśrata I, 38, p. 141. Dr. Dutt, in his translation (p. 164), says that it is "a fragrant substance like a nail, the operculum of Purpura and Murex." Dallana Mishra's commentary (p. 309) identifies it with Vrihannakha or Vrihannakhi.

75 On the two Surasâ (Ocimam sanctam) see Dallana Mishra's commentary to Suśruta I, 38 (8th list) ; also Datt's Mat. Med, p. 219. They are the white and black varieties of the Tulsî-plant. On the two Haridra (Curcuma longa) see Dutt's Mat. Med., p. 256: "The term haridra-dvê, or the two Tarmerics, signifies turmeric and the wood of Berberis Asiatica. They are often used together ..., and their properties are said to be analogotis."

76 Abhîlu and nîlîka I cannot find in any dictionary. As the remedy is both for the eyes and the face, they wonld seem to denote two different kinds of eyediseases, while the following group comprises various kinds of skin-diseases of the face.

77 This is conjectural; the MS. has sa-pilp $\hat{a}$ or perhaps sa-pilpann. I cannot find the word pilpa noticed in any Sanskrit dictionary. Hindî has a word $p \hat{\imath} p$ or $p \hat{\imath} b$ meaning 'suppuration,' 'pus,' and a verb pîbiyân $\hat{a}$ 'to suppurate.' Pip might go back to a Prâkrit form pippa, and this to Sanskrit pilpa.

78 The śirasô virêka or śiro-virêchana, 'secretory applied to the head' is one of the nâsya or applications of medicated substances to the nose. Its. object is to cause
(Verse 101.) If through the heat of a fire the face-plaster of a patient has melted, or if he has allowed it to become dry, then abhîlu ${ }^{76}$ and the other above mentioned diseases are said to brealk out. These should be relieved in the manner above explained.
(Verse 102.) Night-blindness, dimness of the eyes, inflammation of the head, inflammation of the eyes caused by deranged bile, moreover any other evils affecting the skin of the face, are instantly relieved through the application of a face-plaster.
(Verse 103.) In the case of any disorder of the eyes due to derangement of the phlegm and wind, in the case of the application of a secretory to the nose ${ }^{78}$ of people suffering from catarrh, in the case of lock-jaw, and in the case of diseases of the head, it is said that faceplasters should be avoided.
(Verse 104.) A face-plaster should be made of the thickness of a quarter angula; the middle sort should have the thickness of a third of an angula, and the thickest should measure (half an angula ? ${ }^{79}$.
(Verses 105-107.) (I) Liquorice, Rôdhra (Symplocos racemosa), the three myrobalans ${ }^{30}$, leaf-stalk of the lotus, candied sugar, Kânchana (Bauhinia variegata), and red ochre; (II) Leaves and bark of cinnamon, cardamoms, aloe-wood, Deodar, Punarnavâ (Boerhaavia ditfjusa), Vyâghranakha74, and galena; (106)(III) Realgar, orpiment, Vṛihatî (Solanum indicum), and cinnamon, Mâṃsî (Nardostachys jatamansi), Harệ̣u (Piper aurantiacum), and Paripêlava ${ }^{70}$; (IV) Galena, red ochre, Kaṭphala (Myrica sepida), and S'arivâ ${ }^{80}$ mixed with sugar: (107.) the four mixtures, severally described in the foregoing half-verses, relieve diseases. caused by the derangement of phlegm, blood, bile and wind; or they may be applied externally as pastes all about the eye up to the roots of the eye-lashes.
(Verse 108.) Rôdhra (Symplocos racemosa), iron smeared with a little clarified butter and finely powdered, or chebulic myrobalan, cinna-
a flow of secretion from the nose and thas to relieve cerebral congestion. Medicated oils applied for a similar purpose are called Vrinhana. In affections of the head, eyes or nose, the fumes are drawn in through the nose. See Dr. Datt's Hindu Mat. Med., pp. 17 and 20.

79 This verse occurs, almost verbally the same, in the Vangasêna, in the chapter on the treatment of minor diseases (kshudra- $\hat{r} \hat{\mathrm{o}} \mathrm{g} a$ ), p. 715, verse 44 . Its second halfline there rans thus: madhyamas=tu tri-bhâgall syâd=uttamo='rdh-âmgulô bhavêt. There is also a warning given there against patting on or keeping on dry plasters, corresponding to verse 101 of our manuscript.—An 'angula' is $\frac{3}{4}$ inches or 2 centimeters. The thickness of the ordinary plaster accordingly should be $\frac{3}{10}$ of an inch or $\frac{1}{2}$ centimetre; that of the thickest would be $\frac{3}{8}$ of an inch or 1 centimeter.

80 There are two different plants called by this name. Here the Ichnocarpus frutescens is probably intended ; see Dr. Dutt's Hindu Mat. Med., p. 196.
mon, an equal quantity of Vṛihatî (Solanum indicum) and galena, made into a paste, may be used as a remedy in all diseases.
(Verse 109.) Red ochre, rasôt, ${ }^{81}$ galena, realgar, calx of brass in equal parts, mixed with a little black pepper, a double portion of

## Fifth Leave: Reverse.

(Verse 110.) With pepper and calx one should boil Harita ${ }^{82}$ on a slow fire together with clarified butter. This will make an ointment and paste for the eyelids. ${ }^{83}$
(Verse 111.) Listen to (the treatment of the hair and its diseases) as it is being explained by me ......
(Verse 112.) Derangement of the chyle, indulgence in sexual intercourse, and vitiation of the bile and blood cause premature grey hair, and in the cause of an old man it is due to old age.
(Verses 113-115.) The constitution of a woman is generally phlegmatic ; lying ..................... enjoying, they discharge the vitiated menstrual blood. (114) Hence their scalp becomes relieved of the heat of their blood and bile, and thus they do not loose their hair, and therefore women are not bald-headed. (115) On the contrary the blood and bile of men become vitiated; (this destroys) the roots of their hair, and the head becomes bald.
(Verse 116.) Baldness, consisting in the entire loss of hair or in its becoming copper-coloured, if it is long established on the head, cannot be removed. But if it is of recent origin, it may be remedied and should be carefully attended to. ${ }^{84}$

[^30](Verses 117-119.) In the case of baldness or grey hair one should in the first place have frequent recourse to blood-letting; the application of emetics also is advantageous for the purification of the vitiated blood; (118.) afterwards, when the stomach is clear, (suitable food) should be taken. Also different kinds of oil and hair-colouring substances should be applied, (119.) and also drugs that cause the production and growth of hair. Frequent washings of the hair too are beneficial, because they remove what is injurious to them.
(Verse 120.) A wise physician should administer clarified butter, mixed with sweet, sour and salty substances, to a patient suffering from cough caused by derangement of the wind, either in his food or by itself, according to the state of his vital power.
(Verses 121 and 122.) Wheat and rice may be eaten, with the broth of the flesh of water-animals, marsh-animals or domestic animals, and with treacle and onions and any other sour, oleaginous, pungent or sweet things ${ }^{85}$. (122.) Spirit of rice with cream, or warm water and syrup may be drunk at will, when one is suffering from wind and cough, also plenty of oleaginous substances with treacle, or milk.
(Verse 123.) An electnary prepared from ginger, Shaḍ̂̀ (Curcuma zedoaria), raisins, S'̣̣inigî (Rhus succedanea), long pepper and Bhârgî (Clerodendron siphonanthus), mixed with treacle and sweet oil, is beneficial to sufferers from cough caused by derangement of the wind. ${ }^{86}$

85 A similar direction occurs in the Charaka, p. 735 (bottom), and in the Chakradatta, p. 210, No. 1. The latter explains that by the grâmya or domestic animals are meant such as the cock (kukkuta), by the anupa or marsh animals, such as the hog (súkara), by the udaka or water-animals, such as the tartle (kachchhapa). This does not, however, seem to quite agree with the classification of the Suśruta. That work (p. 198, transl., p. 259) divides the animals into 6 classes: jalê-śaya (water), anûpa (marsh), gramya (domestic), kiravya-bhuja (carnivorous), êka-sapha (one-hoofed), jângala (wild). Of these the three first-named classes are those mentioned in our MS. The Suśruta adds another division into only two classes : the $j$ ängala, including the four last-named of the above six classes, and the anipa, comprising the two first-named. The jaingala class of this second division is subdivided into 8 sub-classes, among which there is a vishkira (bird) and also a grâmya sub-class. Here the cock (kukleuta) does not belong to the gramya, bat to the vishlira; bat perhaps in the original classification into 8 classes, it would have been counted among the grâmya. To the grâmya, as a sub-class, belong only quadrupeds, such as the horse, cow, goat, sheep, etc. The ânupa class of the second division has 5 sub-classes, among which there is a kôla-chara (shore-walker) and a kośa-stha (sheath-clad) sub-class. To the former belongs the hog (varâha or śukara), to the latter, the turtle (kurma or kachchhapa). Herein the Chakradatta agrees with the Suśruta.

86 The identical formula occurs in the Vangasêna, p. 260, verse 14, and is quoted in the Chakradatta, p. 210, No. 2, (Dutt's Mat. Med., p. 140). Bnt in these works, the first half-line is differently arranged and runs as follows: Bhârg $\hat{\imath}$ drâkshâ
(Verse 124.) A powder made of long pepper, Mâruta, Ajâjì (Nigella sativa), Shaḍî (Curcuma zedoaria), Pushkara and Chitraka (Plumbago zeylanica), and mixed with rocksalt, is beneficial to sufferers from cough due to derangement of the wind. 87
(Verses $125-127$.) One should boil thirty pala ${ }^{17}$ of Kanteakârî (Solanum jacquinii) in one âdhaka of water, till it has been reduced to onefourth of its quantity ; and when it has clarified, one should add an equal number of palas of treacle in a waterjar: (126.) then with powders of Nâgara (dry ginger), Bhârgî (Rhus succedanea), cardamoms, long pepper, Shaḍî (Curcuma zedoaria) and Chitraka (plumbago), and with four palas of clarified butter and sweet oil, one should boil it, (127.) till it attains to the consistency of an electuary, and when it has become cold, one should add two palas of honey and one pala of powdered long pepper, and then lick it as a remedy against cough. ${ }^{88}$
(Verse 128.) One should boil a paste of Bhârgì (Rhus succedanea) and clarified butter with an infusion of the Daśamêla (or Ten-drugs) [in the broth of a cock or a partridge]. This is an excellent remedy against cough due to derangement of the wind. ${ }^{89}$
sat̂̂ छ́rinĝ̂ pippal̂̂ vishvabhêshajaih. Somewhat similar formalas are those of the Vañgasêna, p. 260, No. 13 and p. 261, No. 15, and those of the Charaka on p. 733 (bottom), commencing with durîlabhênn and duhsparsậm. In fact Vangasêna No. 15 is identical with the Charaka's durâlabhêm, etc -The drug, called shaḍ̂ in our MS., appears to be the same as what is usually called śntề.

87 This formula I have not been able to trace anywhere else. Two of its ingredients I cannot identify. Mâruta would seem to be the same as Katphala (see Watt's Economic Prod., pt. v, p. 188), the S. Indian name of which is Marutamtoli or Marudampatai. Pushkara appears to be unknown at the present day. See Dr. Dutt's Hindu Mat. Med, p. 314, who says: "this root is not available; the root of Aplotavis auriculata (Kushtha) is substituted for it. See, however, Watt's Econ. Prod., pt. v, p. 232, Saussurea Lappa. Ajâĵ̂̀ is the same as kâlûjâĵ̂ or krishna-jîraka.

83 With this formula may be compared a somewhat similar, though much shorter one, in the Charaka, p. 732, which is quoted in the Chakradatta, p. 219, No.77. It runs as follows: kantakârî-gudûchâbhyânn prithak trionǵáat=palâd-=rasê prasthal. siddhô ghritád=vâta-kâsa-nud=vahni-dîpanah.

89 This formula is found, verbally the same, in the Vaingasêna, p. 261, verse 16, where it is called the "daśa-mull-âdyang ghritam." It is also quoted in the Chakradatta, p. 216, No. 70. The only difference is, that these two works read daśamûlîkashâyêna, According to the Charaka, p. 20, there are five kinds of kashấya or 'extracts': 1, the svarasa or the 'simple juice' squeezed out of some substance ; 2, kalka or a 'paste' made of a pounded substance and its juice; 3, śrita or the 'decoction' of a substance; 4, sîta or a 'cold infusion', obtained by allowing a substance to soak for a night; 5, phanta or 'hot infusion', obtained by throwing a substance into hot water and squeezing it. See also Dutt's Mat. Med., pp. 9, 10. From the wording of the formula it is not clear which kind of kashâya is here intended; bat the commentary in the Chakradatta interprets it as being the srita or kvâtha, i.e., a decoction over fire.
(Verse 129.) In a prastha of the juice of Kantakârî (Solunum jacquinii) one should boil a kuḍava ${ }^{17}$ of clarified butter with a paste of Punarnavâ (Boerhaavia diffusa). This is an excellent remedy against cough due to derangement of the wind.
(Verse 130.) One should boil a paste of Bhârgî (Rhus succedanea) and clarified butter, mixed with an equal quantity of the juice of Vyâghrî (Solanum jacquinii) ${ }^{90}$, in four parts of curdled milk. This makes an excellent remedy for cough due to derangement of the wind. 91
(Verse 131a.) In the case of a bilious cough the drinking of clarified butter together with the use of purgatives is beneficial.

90 Vyâghr̂ is another name of Kuntakarı̂; see e. g., the formula No. 3, on p. 220 of Dutt's Mat. Med.

91 This formula is found, verbally the same, in the Vangasêna, p. 261, verse 17, where it is called the " bhârgy-âdi-ghrita." The second half-line reads here bhârĝ̂rasam dvigunitam, but this is certain to be a false reading for vyâghrî-rasam, as the bhârĝ̀ is already included in the first part of the formula. The traces 'vâgh $\hat{\imath}$ ' are quite distinct in our MS. The phrase vyâghr̂̂-rasa-dvigunitan, lit. 'doubled by the jnice of Vyâghri", I take to mean "Vyâghrî juice equal in quantity to the other two ingredients"; but it might also mean "two parts of Vyâghrî"; and this latter wonld be the only meaning of the reading (rasam) in the Vangasêna. Practically, however, it makes no difference, whichever translation is adopted.

## I N D E X

TO

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OOINS




COINS of the CHAGHALTAI MOGHALS.


COINS of the CHAGHALTAI MOGHALS.


Relićs from the Boria or Lakha Medi Stúdea nuar Junagap̣h.


[^0]:    * [Vasu Deva reigned from about $122-176 \mathrm{~A}$. D. ; the Gupta rule commenced about 319 A. D. Ed.]

[^1]:    * [This photograph, together with a description of the medals, was pablished in the Proceedings of the Society, for April 1887. Ed.]

[^2]:    * Regarding mint Utrár see J. R. A. S., Vol. XX, Part I, page 86.

[^3]:    * [Continued from Vol. LVII, p. 7, of 1888. Ed.]

[^4]:    ${ }^{1}$ Name of a Tibetan bird not known.
    2 An omission in MS.

[^5]:    * Mr. Hodgson published (Essays, London reprint, 1874) a short list of Lepcha words, and several words are to be fonnd scattered throngh Colonel Mainwaring's Grammar of the Rong (Lepcha) Language; bat these are quite insufficient for the present enquiry.

[^6]:    * The Nepalis prononnced the word 'Lapche' which is the true pronunciation. It is said to be a contemptuous term, and is possibly derived from the Parbatiyá lab $+c h e=$ 'the vile speakers.' The Lepchas, unlike the Limbas and other neighbouring tribes of apparently cognate origin did not adopt the Parbatiyá language.
    + And their explanation is, that they were originally given this conntry by God to take care of. It is unlikely that this name is derived from the Tibetan rong, 'a valley,' as the word does not seem exotic. It is probably related to their legend of Mount Ten-dong, $q \cdot v$.
    $\ddagger$ Mainwaring, loc. cit., p. x.
    § Hodgson believes that the Tibetans derived the namo of their country from the Sanskrit appellation through the early Indian Buddhist missionaries.-The Language Sc. of Nepal and Tibet, p. 22. This, however, is doubtful.

[^7]:    * Him. Journ. II, p. 198.

[^8]:    ＊This condition is now satisfied by disallowing the residence of priests＇wives within the precincts of the monastic establishment．

[^9]:    * In some instances the difference appears due to preservation of ancient forms of speech rather than a new development, or corrupt dialect.
    + This name is not at all likely to be related to Skt. शेक, sek, to wet or moisten, for the climate of Sikhim does not appear to be more moist than that of the adjoining portion of Eastern Nepal. Nor does the conjecture seem tenable that it is a Parbatiyá translation of one of the valgar forms of the Bhotiya name for the country, viz., 'Demo-jong' or 'the happy country' from तुखी sukhi, happy; as the name is never spelt or pronounced with $u$, and the country was, and still is, a most inhospitable one.

[^10]:    * Vide detailed definitions at p. 60.
    $\dagger$ To be pablished apparently in the Vienna Oriental Journal.

[^11]:    * The following Nos. belong to this class : Nos. 4, 10, 16, 19, 20, 22-37, 42, 43, $46-54,58-61,63,65,67,70-72,74,76$.

[^12]:    * "S"áradá" is the name of a small group of alphabets, the varieties of which differ a little according to locality (Káshmír, Chambá, etc.) or period or material of writing, etc.; bat the essential unity of the group is well known, and it is usual to call it S'áradá.

[^13]:    * In the old Kanarese, where it mach resembles the later Nepalese form with the ringlet attached to the left prong (see p. 85). See, e. g., the Eastern Chalukya inscription of 1134 A. D., in the Ind. Ant., vol. XIV, p. 50, or the Kákatiya inscription of 1162 A. D., ibid, XI, p. 9. It has now passed into the various modern cursive forms of the Soath-Indian alphabets.

[^14]:    * See, e. g., the inscription No. 8, in the Ind. Ant., vol. IX, p. 171.
    $\dagger$ The transitional form is here used with a somewhat modified and more ornate shape.
    $\ddagger$ The intermediate forms occurs twice in this inscription, in yena, 11.6 and 11 , curiously enough, with the vowel $e$, on which see page 89.

[^15]:    * The "Wartu" characters exhibit in all test points the characteristics of the North-Western alphabet. This shows, what I have already observed (supra, p. 82), that the North-Eastern alphabet, which was once current in Magadha, was there in very early times displaced by the North-Western alphabet. It is said, however, that Sambhoṭa only "partly" adopted the "Wartu" characters for his Tibetan alphabet (Journal, ibid., p. 41). This explains the fact that the "Wartu" or cursive form of ya does not appear in that alphabet. For the letter ya that sage appears to have drawn on the North-Eastern alphabet, which he must have known from Nepál, where (as I have shown) it maintained its gronnd from two to three centuries longer than in Magadha.

[^16]:    * A similar case, with regard to the development of the letter $m$, is noted by Mr. Fleet in his volume on the Gapta inscriptions, p. 3, footnote.

[^17]:    * This instance was also noticed by Mr. Fleet (p. 270, footnote 4). It is the identical form that occurs in the Bower MS.
    $\dagger$ This is a very good instance for comparison, becanse in bhurayo yena the two forms stand in immediate juxtaposition.
    $\ddagger$ In these cases the peculiarity of the form is also noted by Mr. Fleet, p. 106.

[^18]:    * Probably it would also be used with the vowels ai and au; though no instance happens to occur in the existing inscriptions.

[^19]:    ＊See ante，p． 79.
    $\dagger$ As shown in the Indian Antiquary，Vol．VI，p．44，column 4.

[^20]:    * See Prof. Bühler's Report on the Search of Sanskrit MSS. in Kashmir in Journal, Bombay As. Soc., Extra Number for 1877, pp. 29, 30.

[^21]:    * I. e, either pure Indravajra or varions combinations of Indravajra and Upêndravajra.

[^22]:    * The corresponding passage in the Suśrata is much shorter. It occurs at the end of the 2nd chapter of the Sûtrasthâna, and runs as follows: "Hanters, fowlers, onteasts and sinners (pâpakûin) should not be treated." (See p. 7, transl., p. 9). There is not mach resomblance here, except perhaps in the term papakârin, for which our MS. las pâpachârin. In the Hârîta Samhitâ the corresponding passage is ontirely different: "The Âyarvêda should not be given indiscriminately to any one; it may not be given to unbelievers, nor to fools, nor to the low." Sce Binod Lal Sen's ed., p. 3.

[^23]:    * This appears from the statement at the end of the book: Agasti-samhit=êyam prîk=khyât̂̂ maj-janmatas=tataḥ 1 Gadâdhara-grihê janma-labdhâ mê punah saņskritâ \| Vangasêna iti nûmnû vikhyâtas=tad-anantaram $\mid$ grauth $\hat{o}=$ 'yann sarva-siddhânta-sûrah. Síghra-phala-daḥll According to this statement Vangasêna was a son of the (physician) Gadâdhara. The Vangasêna has been pablished by Nandakumar Gosvami, a Baidya of Bêrî, District Rohtak, in 1889, at 57 Cotton Street, Calcutta. I owe the loan of my copy to the kindness of Pandit Hara Prasada Shastri.
    $\dagger$ The versions in the Vangasêna and Suśruta are practically identical ; but differ a little from the version in our manuscript, see footnote to the translation. I have noticed other coincidences between those two works. For example, the whole of the remarks of the Vangasena on urine (pp. 1103, 1104) and a portion of its remarks on liquors (p. 1103) are found verbally the same in Suśrata I, 45 (p. 187, 191). Again the prescription against pittâbhishyanda or opthalmia, given in Suśruta VI, 10 (p.680, verses 2-5), is found in the Vangasêna in the chapter on eye-diseases, p. 789, verses $86-88$. In this case, though the ingredients are the same, they aro given in a different order.

[^24]:    ＊In the Vangasêna the verse runs as follows：nimbasya patraily parilipya lôdhram svêâ－âgninû̂ chûrnam＝ath＝êpi kalkam I áśchyôtanam mânusha－dugdha－miśraṃ pitt－âsra－ vât－ûpaham＝agryam＝uktam．

[^25]:    68 Here four syllables appear to be omitted, for which I can discover no place either at the bottom of the obverse, or at the top of the reverse of the fourth leaf.

    69 The matilated phraso must, I think, be payasy=anganay $\hat{a}$ ' in the milk of a woman'; though the correct form would be anganay $\hat{a}$; the short $a$ is probably due to the exigencies of the metre.

    70 The text originally had sa-mustâm, which by a later hand is corrected to sa-mustam.

    71 Metre: Âryâ. 78 Metre: S'lôka.
    73 Metre of verses 88-103 : either Indravajra, or some combination of Indravajra and Upêndravajra.

    74 Read kshîrin̂̀m. 75 Read sthaunêyaka.

[^26]:    86 Metre：S＇lôka．
    
    s8 Metre of verses 105－108：combinations of Indravajra and Upêndravajra．
    89 Metre of verses 109 and 110：Âryâ．
    90 Metre of verses 111－131a：S＇lôka．

[^27]:    14 On bala or 'vital power' see Suśruta I, 15. It is the resultant of the seren dhatus or 'constituent elements of the body', and is also called têjas or ôjas. See verses 43-45.

    15 That is in spring, of which Madhu or Chaitra (i.e., March-April) and Mâdhava or Vaiśâkha (April-May) are the two first months.

    16 I am not satisfied as to the correctness of the translation of the last sentence, the original text of which is very obscure.

    17 On this and other measures see Colebrooke's Essays, vol. II, p. 533ff. A kudava is said to be a cubic measure of either $3 \frac{1}{2}$ or 4 fingers (angula), holding 2 double handfuls (prasriti, a quantity held in both hands by a man of common size). 4 kudavas make one prastha, 4 prasthas make one $\hat{a} d h a k a$, and 4 adthakas make one drôna or kalasa; accordingly 64 kudavas $=16$ prasthas $=1$ kalaśa. A kuḍava holds 4 palas, a pala being a 'handful' (mushṭi) or half a prasriti, or 2 palas $=1$ prasriti. As measures of weight 2 tôlâ make 1 karsha, 4 karsha $=1$ pala, 8 pala $=1 \mathrm{sê}, 2$ sêr $=$ 1 prastha, 4 prastha $=1$ adhaka, $4 \hat{a d h a k a=1 ~ d r o ̂ n a . ~ S e e ~ D r . ~ D u t t ' s ~ H i n d u ~ M a t . ~}$ Med., p. 8.

[^28]:    18 It might also be translated: 'in proportion to the state of his hamours, his vital power and his disease.'

    19 Original murchchh $\hat{a}=p i$ vatô $p i$ yadi; I do not know the exact meaning of vata.

    20 Original gandusha, a term ased with gargles; see Dr. Datt's Mat. Med., p. 18 .

    21 Snêha, 'oleaginous sabstance' is said to include the following: taila or oil, ghrita or clarified butter, vasa or fat, and majjâ or marrow.

    22 Regarding the identity of these liquors see Dr. Datt's Hindu Mat. Med., pp. $13,266,272,273$, also Suśruta I, 45 (transl., pp 239-243). The only variety that I cannot identify is agaja. In the dictionaries it is said to be 'bitamen.'

    23 The suvirraja of the text is probably the same as what is called sauvîraka in Suśruta I, 45. All three drinks are kinds of sour grael, produced by the acetuous fermentation of a decoction of different sorts of unhusked grain : tushôdaka or tushâmbu is made with the hasks of a kind of palse, suviraja or sauviraka, with unhasked barley, and kânchika or kanjika or dhânyâmla with unhusked rice. On their preparation see Suśruta I, 44 (transl., pp. 209, 210, 246) ; also Datt's Mat. Med, p. 12.

[^29]:    39 I. e., oil of the Brassica juncea or Sinapis ramosa, largely used by Indians as an article of food as well as an unguent, and known as kaduvad or karuvâ têl 'pungent oil', as distinguished from mîtha têl, the sweet oil of the Sesamum indicum.

    40 Compare with this the formula in Suśrata I, 44 (p. 166). There are fewer ingredients and the proportions are different, bat the chief ingredients are the same; they are also to be made ap in boluses of 8 pala of treacle and one bolus to be taken every tenth day, with warm water after it. It seems also to be the same with the gudâshtuaka or "eight treacle" formula of the Bhâvaprakâsa, quoted in Dr. Dutt's Mat. Med., p. 231. The quantity of treacle is to be equal in weight to the other ingredients. This agrees with the formula in our MS., according to which there are $\frac{1}{3}$ pala each of Chitraka, Trivrit and Sâtalâ ( $=1 \frac{1}{2}$ pala), one karsha or $\frac{1}{4}$ pala each of the other 6 ingredients ( $=1 \frac{1}{2}$ pala), and 20 karsha or 5 pala of Myrobalan, total 8 pala, equal to the 8 pala of treacle. The Suśruta formula, I suspect, is wrorgly translated by Dr. Chatterjea (p. 211). It runs as follows : gudasy=ûshtapalê pathyâ viṃ́satih syuh palam palam I dantî-chitrakayôh karshau pippal̂̂-trivritôr= daśa II kritv=aitûn=môdakân=êkam daśamê 'hani I tatah khûdêd=ushna-tôya-sêv̂̂ niryantranâ $s=t v=i m e ̂$. This would seem to mean: "In 8 pala of treacle there should be (mixed), pala for pala, 20 karsha of Pathyâ, two karsha (i. e. one karsha each) of Dantî and Chitraka and ten karsha (i. e. 5 karsha each) of Pippalî and Trivrit. Of this mixture make boluses and take one every tenth day, with warm water after it. This is an unlimited remedy." Here the ingredients consist of $20+2+10$ karsha, i. e., $5+\frac{1}{2}+2 \frac{1}{2}$ pala, total 8 pala, equal to 8 pala of treacle. -I take Satala to be the Stereospermum suavolens; it is mentioned as a purgative in the second list given in Suśrata I, 39, where Dr. Datt translates it (p. 176) with Jasminum sambac. In the third list ( p .177 ), also of purgatives, however, he translates it with Stereospermum suavolens, and as a synonym of Pâtalâ which also occurs in the second list. I may add that in his Mat. Med. (p. 190) the Jasminum sambac is not described as a pargative drag.

[^30]:    81 On rasôt or rasânjana, an extract of Berberis Asiatica, see Dr. Dutt's Hindu Mat. Med., p. 107.

    82 Harita is the name of gold, also of several plants, especially Phaseolus mungo. I do not know what may here be intended.

    83 On vidâlaka see Dutt's Hindu Mat. Med., p. 18.
    ${ }^{84}$ Compare the Charaka, p. 798, where also three defects of the hair are mentioned: khálitya 'baldness', palita 'grey hair', and hari-lôman 'red hair.' The latter corresponds to the tâmra-bala of our MS., and is called indra-lupta in the Suśruta and Vangasêna. The latter two works have identical remarks on the subject; see Suśruta II, 13 (p.288, verses 209, 30) and Vangasêna, p. 724 (verses 134, 135). They call the three diseases indra-lupta, lehâlitya and palita, and explain the former two kinds as two forms of loss of hair (prachyâvati rômûni), and palita as making the hair grey (kêŝ́n pachati). I imagine the disease, intended by támra-bala, to be the "scald-head" (Porrigo declavans), which canses the formation of a yellowish or reddish scurf on the scalp and a partial loss of hair.

