

## Cosmetics and Coiffure in Ancient India by Moti Chandra

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It has been customary with human beings in all ages and climes to use cosmetics and to arrange their hair in one way or the other. A savage whose worldly possessions are few, and whose daily means of sustenance are furnished by hunting and fishing, sticks feathers into his hair, paints his body with various designs and arranges his coiffure in various fantastic forms because it gives him pleasure, raises him in the estimation of his fellow beings and has a magical significance to him. In the ancient civilizations of the world, cosmetics and ways of dressing the hair were numerous. J. de Morgan [1], in his excavations of the earliest graves at Susa, found small conical vases that once contained a green mineral paint which, by analogy with similar finds from ancient Egypt, must have been used for colouring the eyelids. Antimony for staining the eyelid was used by the women in ancient Sumer. In ancient Egypt from the earliest dynasties onwards 'Kohl' was applied to the lashes, eyelids, the part immediately below the eyebrows. The paint was obtained from numerous varieties of colours. The mineral was pounded in miniature marble mortars and kept in tubes made of alabaster, steatite, glass, ivory, bone, wood, etc. Sticks for applying the powder were made of the same materials.

In the Indus Valley Civilization, the finds of 'kohl' pots and vases tell the same story. Kohl served a beautifying and a utilitarian purpose; it protected the eyes from the merciless glare of the sun and from insects which are sources of eye-diseases in the East. Among the ancients certain colours (green for water and plants, yellow for the sun, red for blood) were looked upon as life givers; that is, they were thought to have a magical power to increase the vitality and strengthen the health of those who wore them [2]. Belief in the magical property of colours was also engrained in the ancient Hindus. Collyrium was applied to the eyes, the hands and feet were anointed at the time of sacrifices, and the articles of cosmetics, such as body- and eye-paint, comb and flowers were offered to the Celestial Serpent [3]. Today also in Hindu rituals turmeric powder and red powder (rori) are invariably used as they are supposed to propitiate the deity. Different colours, according to the *Natyasastra* and the *Vishnudharmottara Purana*, also indicate particular states of mind and body. Black, for instance, is associated with evil passion and it is supposed to be imbued with an efficacy which is powerful enough to drive away evil spirits; it is used by some sections of the Indian people to guard against the evil eye at marriages, deaths, etc. Cosmetics played an important part in the ritual while they also satisfied the vanity of men and women by artificial means. This is the purpose of various recipes and formulas for cosmetics in ancient India.

In the Indus Valley Civilization which flourished at the most conservative estimate about 2500 before the Christian era, ornaments have been found: gold, silver, copper and silver earrings, nose studs of blue glaze, and bracelets of metals, shell and pottery. Hairpins, combs and mirrors served as important articles for the make-up and the arrangement of coiffures.

Houses were provided with bathrooms with well-lined brick floors and with drains. The "great bath" at Mohenjodaro has in the centre an open quadrangle with verandahs on four sides, and at the back of these verandahs galleries and rooms. In the midst of the open quadrangle is a large swimming bath, 39 feet long by 23 feet broad, and sunk about eight feet below the paving of the court with a flight of steps on either end, and the foot of each a

platform was erected for the convenience of the bathers. The bath was filled with the water from the wells and the dirty water was carried through a covered drain [4].

Belonging to same establishment as the great bath are some ranges of small bath-rooms, to the north of it, excavated by Mr Mackay in 1927-1928. On the southwest corner of the great bath is another building connected with it which seems to have been a 'hammam' or hot-air bath. 'The part of it that has been excavated consists of a number of rectangular platforms of solid brick each the size of a small room and about five feet in height with a series of a vertical chases sunk in their sides. Between the platforms are narrow passages crossing each other at right angles, on the floor of which were found cinders and charcoal'. The platforms have been identified as solid substructures of heated rooms and the chases in their sides are taken to be the beginning of hypocaust flues which distributed the heat through the walls and under the floor of the rooms above. There is another building at Mohenjodaro, the floor of one of the rooms of which is supported by a series of dwarf walls, and in a fragment of the superstructure there are vertical flues for heating the room [5]. These hot baths may be compared with the 'jantaghar' of the Buddhists, the description of which is given in another section.

We do not know much about the implements and accessories of toilet in the bathrooms. For scrubbing the body, a barrel-shaped 'flesh-rubber' was used. The clay out of which this object was made was heavily mixed with angular grains of sand; this resulted in a very rough [6] surface. It was hollow and light and could be easily held in the hand. Two types of rasps were also in use; in the first one end is pointed and the other flat. It is hollow and is made of light red clay plentifully mixed with sand. The second type of rasp is barrel-shaped, but one side is flattened and made rasp-like by pricking it all over. It has a triangular shape and the flat base is well worn [7].

After the bath the women as well as the men must have used cosmetics, powder and perfumes, etc., as is customary in present day India. The find of kohl pots and sticks prove that women and men used collyrium or some such black substance for the eyes. Most of the taller stone jars were for toilet use. On one jar the black stains in the interior prove the presence of some pigment. Nearly all the kohl pots of Mohenjodaro have a spout-like mouth [8], and it is quite possible as Mackay observes, that the eye-paint was poured out on a palette to be mixed with water rather than kept moist and ready in the pot. This would explain the absence of stains from the jars. Kohl pots of metal were also known [9]. A little group of vases with narrow mouths shows a considerable variety of shapes. In some vases the mouth aperture is so small that it is thought that they were intended to hold some precious cosmetic. All are small in size and have inadequate bases, which suggest that they were kept on stands or in a case of some kind [10]. Some very small fayence vessels were found at Mohenjodaro. Most of them are so small that they could have hardly held anything at all, and unless they meant as votive offerings it may be conjectured that they were intended for expensive cosmetics or perfumes. They could not have been children's playthings as they are too fragile. A large and varied collection of these fayence vessels is in the Mohenjodaro museum. They were unknown in any of the other ancient civilizations except in Crete [11]. Such vessels were used until recently by Indian perfumers to supply 'attars' in small quantities.

At Chanhujodaro a number of kohl jars were found containing paint for the adornment of the eyes. Probably these jars and other articles of toilet were placed on small pottery toilet tables standing on four legs with the upper surface ornamented with simple painted lines [12].

As few copper and bronze kohl sticks have been found it may be surmised that the majority were made of wood. The length of the metal kohl sticks varies from 4.4 to 5.5 inches. Both ends are slightly rounded. This type of kohl stick is found in ancient and modern Egypt and in other countries [13].

A find of rouge in a cockleshell forms a link with contemporary Sumer where face paints in cockleshells have been found in the graves at Ur and Kish. Carbonate of lead has also been found at Mohenjodaro and Harappa where it was possibly used to whiten the face, a practice known in ancient Greece and China. There is also the possibility of its being used as eye ointment or hair-wash. Cinnabar also seems to have been used as a cosmetic at Mohenjodaro and the finding of lumps of a green substance identified as terre verte according to Mackay proves that this material was used in the manner of 'kohl' for the eyes as was malachite in ancient Egypt [14]. A small stick of rouge with one end levelled by much use surely gave colour to the lips or cheeks of some fair inhabitant of the city [15]. Galena was probably used for the preparation of eye salves or paints [16].

Women and men arranged their coiffures in various styles. The men wore short beards and whiskers with the upper lip sometimes shaven as at Summer. They also went without them. Their hair was taken back and either cut short behind [17] or coiled in a knot or chignon at the back of the head with a fillet to support it [18]. Long hair was also worn at least by some of the male inhabitants of Mohenjodaro as it is in India today. In some cases, it was coiled up in a knot at the back of the head; in others, a part was knotted and a part allowed to hang [19]. A woman's head from Mohenjodaro, [20] shows curly hair hanging down at the back of the head. There are also other figures which show that the hair was sometimes curled [21]. A male figure wears a coiffure which may be described thus: A long coil is wound several times round the head and there are two other coils on either side. This type of coiffure occurs on some figures from Babylon [22]. The famous bronze dancing girl has her coiffure coiled in a heavy mass which starts above from the left ear and falls over the right shoulder [23]. The hair was worn sometimes in a pigtail hanging down the back; it was also worn in a knot at the back was also carried in a thick rope from one side to the other [24].

Combs were used at Mohenjodaro for combing the hair and they were also worn as an ornament in the hair. A V-shaped comb found by Mackay [25] has fine teeth and Mackay draws the conclusion that perhaps it was used to remove vermin from the long hair. On the other hand, it may equally well have been used like the modern hair-slides to fasten a single lock in place. A very fine ivory comb, rectangular in shape with teeth on both sides, was also discovered among the nine skeletons that were found packed together at the western end of the long lane [26].

Blades were used at Mohenjodaro for depilatory purposes. A razor from Mohenjodaro, 2.2 inches long, has a fine curved edge; it has two holes at the back by which it was riveted to the handle [27]. Mackay excavated at Mohenjodaro various metal instruments that appear to be razors of varying shapes, some of which were probably used to remove hair from the body as well as the head. These razors have been classified under the following heads:

Double-bladed razors: These are generally of copper. The blades are very thin and the tangs are oval in section. Two edges of the blade are not of the same shape; probably each side served its own purpose.

L-shaped razor. One arm is longer and broader than the other.

Hook-shaped razor. Two examples were found. With its duck or goose-headed handle it has an Egyptian look about it. It has a sharp edge at the square end and is also edged along the outer curve to where it joins the handle.

Simple blades. They are made of copper and their edges have a square cut end whose corners are slightly rounded [28].

For the arrangement of coiffures and the application of cosmetics mirrors must have been in great demand. Three specimens, two of full size and one evidently for a child were found and described by Mackay [29]. One mirror made of bronze is slightly oval [30]. The polish has completely disappeared. The handle is rectangular in section with a hole at the end. The second [31] is also made of bronze and is oval-shaped with a long flat handle with a hole at the end. The handles were probably encased in wood.

## II

Somewhere about 1500 B.C. the Aryans entered India. Indian archaeology has not yet revealed the material aspects of their culture though they may be gleaned from the Vedas, Brahmanas, Sutras, etc. The Aryans lived in villages and were proficient in the arts of carpentry, building houses and racing chariots and in metal work. They also used gold jewellery, arranged their coiffure in various shapes and used unguents both for religious and secular purposes.

Baths formed a very important part of the daily routine of the Hindus, and one could not take part in religious ceremonies before bodily purification. Rivers, tanks and wells served as bathing places, though on special occasions such as marriage, the bride was washed with water that had been made fragrant by all sorts of herbs and choicest fruits together with scents [32]. After the bath the anointing of the body and eyes took place. In the Satapatha Brahmana (XIII, 8, 4, 7) it is mentioned that after the bath eyes and feet were anointed because "such, indeed, are human means of embellishment, and therewith they keep off death from themselves." The sacrifice was rubbed down with sweet smelling substances before he was anointed with butter [33].

At the time of the 'vidaya' ceremony when the bride took leave of her parents the bridegroom anointed the bride [34]. Ointment was also offered as present to the bride [35] and to the guest [36].

An interesting description of the costume and cosmetics of a householder is given in the Asvalayana Grhyasutra in connection with the equipment of the Brahmacharin, when after finishing his studies, he was ready to take leave of his teacher. At that time he was equipped with a jewelled necklace, a wreath, two earrings, a pair of garments, a turban, a parasol, a pair of shoes and a staff. As regards cosmetics he has powder prepared from 'karanja' seed, ointment and eyesalve [37]. He also used 'ekaklitaka' to rub his body [38]. After washing his

body with lukewarm water and having put two new garments he anointed his eyes uttering the following manatara: 'The sharpness of the stone art thou, protect my eye' [39]. After having salved his both hands with ointment a Brahmana was required to salve his headfirst [40]; a Rajanya his two arms [41]; a Vaisya his belly [42]; a woman her secret parts [43]; and persons who gained their livelihood by running their thighs [44]. After that the Brahmacerin put on a thick garland (srag) and then put on shoes, parasol, staff, necklace and turban, uttering various mantras [45].

Eye salve (anjana) is frequently mentioned in the Atharva Veda [46]. It came from Mount Trikakuda [47] and was used to anoint the eyes [48]. It is mentioned in the Aitareya Brahmana [1.3] that the priest besmeared the eyes of the sacrificer with collyrium because this 'anjana' was considered to impart lustre to both eyes. The 'anjana' is said to be the 'transformed eye' of Vrtra. In the Vajasaneyi Sam. (IV.3) it is referred to as the black pupil of the eye of Vrtra. The story of the origin of 'anjana' is given in the Satapatha Brahmana III. [1, 3, 12]. Referring to the 'anjana' it says: 'It is such as comes from Mt. Trikakud [49]; for when Indra slew Vrtra he transformed (Vrtra) into the Mount Trikakud. (Indra slew Vrtra, his eyeball fell away, it became collyrium). The reason then why (ointment from Trikakud is used) is that he thereby puts eye into eye. Should he be unable to obtain any Traikakud ointment any other than Traikakuda may be used; for one and the same indeed is the significance of the ointment". The 'anjana' seems to have been the black ore of antimony [50]. In the Vajasaneyi Sam, its colour is compared with the pupil of the eye.

Black antimony ore is found in various parts of the Himalayas even today. The region of the Yamuna is also given as its possible place of origin. Besides its use for decorative and sacrificial purposes it was also supposed to cure jaundice, 'yaksma' and other diseases [51]. Such was the importance of 'anjana' that a female ointment maker (anjani-kari) is mentioned in the list of victims in the 'Purusamedha' [52].

Scents were favourite with women and in an incantation to sleep in the Atharva Veda [53] the women of pure odour (punyagandhayah) are mentioned. Such was the importance of the articles of perfume that they were presented to the bride in the beginning of the nuptial rites along with gold of which she could make use. Below is given the translation of the couplet referring to these articles from the A.V., II. 36, 7:

"Here is gold, bdellium; here (is) 'auksa', likewise fortune; these have given thee unto husbands, in order to find one according to thy wish."

Gum 'gugul' [54], must have been used as incense in ancient times as today. An unguent named 'gauggulava' was also prepared from it [55]. 'Auksa' maybe identified with the 'gorocana', a solid yellowish substance obtained from the horn of a bull- preferred by Indians both male and female for decorating the body.

Ointment and perfumes were also used by men to win the favours of women. One of the couplets in the Atharva Veda [56] given below points to this fact:  
"Of ointment, of 'madhugha', of 'kustha' and of nard, by the hands of Bhaga, I bring up quick a means of subjection".

Anjana ointment or collyrium has already been described. Madhugha (*Bassia Latifolia* or *Jonesia Asoka*) flowers were also used for decoration. Kustha a 'costus' was used as an article of perfume though it was considered to be a cure for some diseases as well. A whole hymn in Atharva Veda [57] has been devoted to it. Costus [58] is said to be the remedy for 'takman' [59] and 'yaksma' [60]. It is said to have grown in the snowy mountains of the north and thence been taken to the people in the eastern part [61]. It still grows in the same region as mentioned in the Atharva Veda, i.e., Kashmir. The 'nalada' or nard is the root of ginger grass.

In India, certain articles of perfume, such as sandalwood, myrrh, bdellium, camphor, etc. are supposed to be endowed with magical qualities and they are used for propitiating the gods and also exorcising the devil and other evil spirits. In the Atharva Veda also the belief in magical qualities of certain aromatics is referred to. Thus, in a hymn against various superhuman foes quoted below, the Apsarases are addressed to go away to certain aromatics. 'Let the Apsarases go to the stream, to the loud (?) down blowing of the waters; 'guggulu', 'pila', 'naladi', 'auksa'gandhi' 'pramandani': so go away ye Apsarases; ye have been recognized'. (A.V.IV.37,3)

We have previously described 'guggulu', and 'auksa-gandhi'. Nalada is nard [62], 'pila' or 'pilu' [63] is perhaps greenish or brown gum obtained from *Careya Arborea*; 'pramandani' cannot be identified.

Magical property of the accessories of toilet, baths, etc. may also be traced from a reference in the Sankhayana Grhyasutra (IV.15) [64]. Thus on the occasion of the 'sraivsthas' the celestial serpents were offered water from a pot to wash (IV.15,6) [65]; a comb was offered to comb themselves (IV.15,7); paint was offered to paint themselves (IV.14,8); flowers to tie themselves with (IV.15,9) ; and the collyrium was offered so that they might anoint their eyelashes (IV.15,11).

The Vedic women wore their hair in different shapes indicated by the terms 'stuka', 'kurira' or 'kumba', besides 'opasa' and 'kaparda'. The young women wore their hair in four 'kapardas' (R.V.X.114,3). The traditional 'kapardin' style is still kept up by the Saiva devotees and by men in Orissa and south-east even now. It was a spiral coil of the braided, plaited or matted hair arranged on the top of the head at different angles. The four 'kapardas' of the women are compared with the four corners of the altar. This must have formed a crown-shaped coiffure. The 'opasa' was worn by women must have been a loose topknot. The 'kurira' must have been a horn-shaped coiffure. 'Kumba' is evidently the vernacular 'khopa' of later times, a hemispherical or pot-shaped coil at the back of the head [66]. Sometimes whole tribes were recognized by their distinctive style of hair dressing. Thus Vasisthas wore white clothes and arranged their 'kaparda' on the right side of the head [67]. In another style of 'kaparda' the hair was worn in front (pulasti) [68]. The Bhargavas probably wore their hair like a mane (kesaraprabandhah) [69].

Razors were used for depilating purposes. A whole hymn is devoted to the act of shaving [70]. The razor is 'ksura' [71]. The hair was probably wetted with hot water before shaving [72]. Combs were used to smoothen and remove dirt from the hair. Mention has been made in the A.V. [73]. of the bride combing her hair: "The artificial hundred toothed comb that is here shall scratch away the defilement of the hair of her, away that of her head."

### III

For the next period lasting roughly from the year 642 B.C. to 320 B.C. the material for the cultural history of India is abundant in Jataka stories and the Vinayapitaka. The vices and virtues of that period are related with naivety in the Jatakas.

The king's palace with its towers, pinnacles and columns, spacious courtyards, treasure rooms, with its sumptuous furniture wrought with gold and inlaid with ivory, etc. became the centre of great luxury. The gabled chamber where the king sat with his favourite queen or relatives was filled with the sweet fragrance of sandalwood. A special barber (mangalanahapita) looked after the king's toilet and dressed his hair with golden tongs and tweezers, bathed and perfumed him [74]. The king wore most luxurious robes of finest silk and wool and covered his head with a turban adorned with sparkling jewels. The chariots which he used were not of the ordinary variety as in the Vedic age but decorated with silver and ivory and adorned with paintings. The royal elephants on which the king took a turn round the city wore golden ornaments and trappings. The king of Jataka was not a paragon of virtue and human weaknesses had full play in his character. He is represented as holding great drinking festivals in the company of dancing girls; and a host of women including queens, concubines and attendants accompanied him to the royal park to enjoy water sports (udaka kilam); while he rested in the lap of his favourite dancing girls musicians gave their performance. He was also a gambler and no stigma seems to have been attached to gambling in the Jataka stories. These luxuries must have also if to a lesser extent found favour with the high officers of state. The same however, could not be said of the ordinary man in the street, an artisan or tiller of the soil. Their condition was much the same as today, and therefore in describing the toilet and its accessories in this period it should be understood that this refers to the luxurious life of the rich.

The idea of toilet is expressed by a stock expression in Pali [75], which includes cosmetics, perfumes, garlands as well as ornaments, etc. A list in the Nikayas which does not claim to be exhaustive [76] enumerates twenty items in the process of making one's toilet and dressing. The first eleven describe various methods of toilet and the rest are concerned with dress and other equipments.

To make the body well-developed and beautiful and to restore the proper circulation of blood, shampooing (sambahanam) and kneading (parimaddanam) of the body were employed. Shampooing seems to have been treated as a luxury and artificial means were used for producing the titillating sensation. Thus it is mentioned in the Cullavagga (X.10,2) that the steak bone or jaw bone of an ox was used by the women for scrubbing and slapping their backs, forearms, palms of the hand, calves, upper part of the feet, thighs, and gums. These practices were, however, forbidden to the nuns (bhikkunis).

Bathing and washing was a very important part of the toilet in ancient India, and both from the religious and hygienic points of view it was enjoined on every healthy member of the community to take their bath regularly. The kings' barber (mangalanahapita) besides dressing the king's hair with golden tongs and tweezers also bathed and perfumed him [77]; he was an important functionary of the state [78]. The ordinary man who could not afford the luxury of a barber or bath attendant took his bath regularly in those days as today in a river, at a well, or

in a tank. The river 'ghat' and the wells were centers of considerable activity at bathing time, and the poor people indulged in whatever luxury they could afford by way of frictioning and applying cosmetics to their bodies. As usual such luxuries were forbidden to the 'bhikkus'. The people belonging to the class of wrestlers and shampooers rubbed (uggamseti) their chest, thighs, and stomach against tree trunks with sole purpose of maintaining the freer circulation of the blood of the bathers [79]. For frictioning the body, columns (thambhe) and walls (kudde) were also used [80]. A sort of four-legged shampooing stool (attana) strewn with perfumed powder was placed on the 'ghats' and people frictioned their bodies lying down on them [81]. While bathing they cleaned their bodies with a wooden instrument in the shape of a hand which was first covered with the fragrant powder and then rubbed over the body while bathing [82]. This peg-like flesh-rubber was made from corundum powder and lac [83]. Mallaka [84] was a kind of back-scratcher made according to Buddhaghosa of the teeth of the crocodile (makara-dantaka) [85] which had previously been split. Bhikkus were, however, ordained to use 'mallaka' made of the unsplit teeth of the crocodile [86]. They could also use a twisted cloth (dukkasika) for scrubbing the body [87].

Hot baths (jantaghara) were known and though the description of the hot bath in the Cullavagga is given in connection with the monks one may suppose that hot baths were also used by laymen. This is the second evidence of the use of hot baths in ancient India, the first being the hot bath at Mohenjodaro described in a previous section.

Jantaghara was not ordinarily used for cold baths which were taken in the rivers, tanks or at the wells. Herein a kind of hot-water bath or perhaps steam bath was taken; the exact mode of taking it is, however, not certain. Several 'bhikkhus' took a hot bath at the same time though it is not certain whether they actually went into the water. They may have sat on stools close to a large fire and had water poured over them. Such a kind of bath was forbidden to the nuns. [88]

The bath-room was situated on a level ground; the basement was high, with brick, stone or wooden facing; the stairs were made of bricks, stone or wood with balustrades. The bathroom was also provided with doorsteps and lintel; the lower part of the wall was lined with bricks; it had a chimney (dhuma-nettam); the fire was made at one side of a small bath-room and in the middle of a large one. In order to protect the face from the scorching flame the face was besmeared with scented moist clay and the body was wetted. The heat escaped from the thatched roof, and therefore the roof was covered with skins and plastered within and without. The floor was made of bricks, stone or wood, to avoid swamping, and the water spilled on the floor in the course of bathing was drained out. There were stools in the bath-room. The bath itself was within a brick, stone or wooden enclosure. There was a cell (parivena) used for cooling after the steam-bath. [89]

As there seem to have been frequent quarrels about the priority of entering the hot bath-room between the younger and older 'bhikkhus' the Buddha prescribed a rule of conduct for the 'bhikkhus' in respect of the hot bath-room. It ordained that the first user of the bath-room should sweep out the ashes, and the bath-room was to be thoroughly cleaned by him. He had also to pound the scented powder (cunam), moisten the clay with water and had to pour water into the water jar. [90] Equal facilities were provided for senior and junior 'bhikkhus'. If possible shampooing was to be provided for senior 'bhikkhus' in the hot bath-room as well as in the water. [91]



When entering the hot bath-room the face was required to be smeared with wet clay and the rest of the body well covered in front and behind. The bath chair was to be removed after the bath was over and the person had to cover himself well before leaving. The last person to enter the bath-room was to cleanse the dirt, rearrange the bath chairs in their proper places, extinguish the fire, close the door and then go out. [92]

Cunam or scented bath powder was used by the women of the world in their baths. The 'bhikkhunis' were however forbidden to use it; instead of that they could make use of clay and the red powder of rice husks (kukkasam). The use of scented clay and hot steam baths was forbidden to them [93].

The sixth item in the list of cosmetics and methods of dressing in the Brahmajala Sutta [94] is 'anjanam' or using collyrium for the eyes. Anjana or antimony along with vermilion, realgar (manosila) and yellow orpiment [95] were known in the days of the Jataka stories, and there is sufficient evidence to show that they were used as cosmetics. In the Mahavagga (VI.11,1) five kinds of eye ointment or collyrium are mentioned: black collyrium (kalanjanam), 'rasa' ointment (rasanjanam), 'sota' ointment obtained from the streams and rivers (nadi-sotadisu upajjanakam anjanam; Buddhaghosa), 'geruka' (yellow or 'suvanna geruko' is meant) and 'kapalla' or soot obtained from the flame of a lamp (Buddhaghosa). These ointments were perfumed with sandalwood (candana), 'tagara', black 'anusari (a kind of dark fragrant sandalwood), 'kaliya' (black zedoary) and 'bhaddamuttaka', a perfume made from the grass of the same name. [96].

The ointments were stored in boxes and applied with sticks (anjana-salaka) which in the case of rich people, were made of gold and silver. The 'bhikkhus', in keeping with the laymen, were allowed boxes made of ivory, horn, reed (nala), bamboo, wood, lac, fruit, shells. [97]

As an aid to their natural charm the women of this age painted their bodies and used scented powders and other fragrant ointments. In the list of the Brahmajala Sutta [98] 'malavilepanam' (garlands and unguents), 'mukhacunnakam' (using face powders) and 'mukhalepanam' (anointing one's face), 'ucchadanam' (anointing the body with perfume), cover entire field of cosmetics.

The corners of the eyes were elongated (avangam karontiti, avanga-dese adhomukham lekham karonti'. Buddhaghosa); the cheeks were likewise painted with designs ('visesakam karontiti gandapadese vicitra- Santhanam visesakam karonti') [99]; the faces were anointed ('mukham alimpanti') and sometimes ointment was rubbed ('mukham ummadenti') [100]. Powder was applied to the faces ('mukham cunneti') [101] and powdered faces ('kakkupanivesitam mukham') are mentioned in the Jatakas [102] Realgar was smeared on the faces ('manosilikaya mukham lanchenti'), bodies were painted ('angaragam karonti'), and also the faces ('mukharagam karonti') [103]. These practices were forbidden to the 'bhikkhus' [104] and the 'bhikkhunis' [105]. The women also dyed the fingertips of their hands and feet with lac crimson red like copper. [106] Such was the demand for the lac juice for dyeing the hands and feet that the preparation of lac juice (lakkharasa) became an important industry. [107]

Besides the above-mentioned articles of cosmetics, the people were also fond of flowers and perfumes. Flowers yielding sweet scents were grown in large quantity and the garland makers (malakaras) made beautiful garlands and bouquets from them [108].

Perfumes and essential oils were prepared. Sandalwood from Kasi (kasikacandana) was the chief raw material and finished product. [109] Sandalwood powder ('cunna') and oil were manufactured, [110] and we are told that the ladies put sandal oil [111] on their hair, arms and other parts of the body. Among the several kinds of perfumes the one prepared from the 'priyangu' flowers was most famous [112]. A rich perfume called 'sabbasamharaka' compounded of various scents was also prepared. [113] 'Agaru' and 'tagara' were commonly used for scenting purposes. [114] Perfumes and the aromatics were sold in the market by the perfumer (gadhika) and he was so expert in his profession that he could make out from which articles the particular perfume was prepared [115]. The men used a razor (khuram) for shaving, for its sharpening and preservation hone ('khurasilam') powder prepared from 'sipatika' gum (khura-sipatikam) to prevent it from rusting, and felt sheath were used. [116] Scissors were used for hair cutting [117]. The beards were trimmed [118]. They were also grown long (massum vaddhapanti) or were worn on the chin like a goat's beard (golomikam); four-cornered beards (caturassakam) were also in fashion. Pubic hair and the hair from the breasts were shaved, and the hair on the belly was cut into figures (addharukam). Whiskers (dathikam) were also in vogue. These fashions in hair cutting were however forbidden to the 'bhikkhus'. [119] The women also arranged their hair falling in tresses on the head; they also parted their curls in the middle [120].

The artistic arrangement of the coiffure (sikhabandham) as given in the Brahmajala Sutta [121] was considered an important part of the toilet. The people wore their hair long though the 'bhikkhus' were forbidden to grow hair for more than two months. In dressing the hair it was smoothed (osanheti) by 'koccha' (comb), 'phanaka' (smoothing instrument shaped like a serpent's hood; a kind of primitive brush but without bristles) and hand comb (hattha-phanaka) or the hand used as comb with the fingers held stiff and separate passing through the hair precisely as one would hold them if one wished to imitate the hood of a cobra [122]. For making hair pomade (sitthatela) oil of bees wax (udakatela) was used [123].

To make elaborate coiffures or paint designs on the face and body mirrors were necessary. For the extremely rich people or kings golden mirrors (adasa) with a very fine polished surface were prepared [124]. Ordinary mirrors and bowls of water were commonly used for reflection [125]. Sometimes ivory handles were attached to the mirrors. [126]

It seems that the finger nails were generally worn long, and it is related that a 'bhikkhu' nearly came to grief for having long nails. [127] The Buddha forbade the dirty habit of tearing off nails, biting them off with the teeth, and rubbing them off against a wall, and allowed the use of nail cutters (nakhacchedana). The nails were also cut according to the length of the flesh. The practice of polishing the nails which seems to have been common among the laymen was forbidden to the 'bhikkhus'. [128]

'Kannamalaharani', or an instrument for removing wax from the ears was used by the laymen and the 'bhikkhus' alike. [129]

The brilliance and luxury of the Maurya court are reflected in the Arthashastra and the pages of the Greek writers. The royal palace with its hosts of servants recruited from both sexes, prostitutes, hunchbacks and the members of the wild tribes to guard the person of the king and keep the sanctity of the harem, with extensive gardens, baths, splendid halls and treasury stocked with finest textiles and rare articles of perfume, was the center of all luxuries. The pageantry of the court festival with elephants bedizened with gold and silver ornaments, chariots drawn by horses, and ox-waggons, the army in full array, the display of precious vessels of gold and silver many of them studded with gems, and the courtiers and other members of the populace vying with one another to outdo their fellows by the magnificence of their presents to the king added glamour. The king dispensed justice, transacted the business of the state, fought in the battle-field and often went to hunt accompanied by his brave amazons with their weapons gleaming in the sunshine. But in spite of many accomplishments befitting a king there was no conceivable luxury which he did not enjoy. His wardrobes were stocked with furs and skins from the Himalayas, blankets and other woollen fabrics from Nepal, Vanga, Pandya and Suvarnabhumi 'as soft as the surface of a gem' and 'as red as the sun', linen manufactured at Benares and Paundra, silk from China, and exquisite cotton fabrics from Kasi, Madhura, Aparanta, Kalinga, Vanga and other places. Pearls and precious stones from the South and elsewhere, and fragrant sandalwood, agallochum, myrrh 'gugul', etc. obtained from Annam, Southern India and from places far across the sea to serve as cosmetics for the king proclaim the luxury of the royal court. It is mentioned in the Arthashastra [130] that a host of servants in charge of the dresses and cosmetics having cleaned their persons and hands by fresh baths and having put on new garments served the king with dresses and cosmetics received under seal from the officer in charge of the harem. The duties of the bathroom attendance, washing and flower-garland making were assigned to the prostitutes [131] who along with the female slaves and actresses besides learning other arts received training in the manufacture of scents and garlands, shampooing, etc. [132] It is also mentioned that the servants along with the courtesans, while presenting to the king water, scents, fragrant powders, dress and garlands touched these things first with their glances, arms and breasts [133]. The king as mentioned by the Greek writers and also the Arthashastra was fond of shampooing, and a special hour was reserved for undergoing massage with ebony rollers. [134]

It may be surmised that hot baths must have been in vogue in this period, though they are not expressly mentioned in the Arthashastra which only says that the building inside the compound of the royal palace should be provided with cesspits, wells and bath-room. [135]

The most important section from the point of view of cosmetics and articles of perfume in the Maurya period is to be found in the chapter of Kautilya's Arthashastra dealing with the examination of the gems that were entered into the royal treasury. This section shows that the demand for aromatic woods and resins must have been very large; in view of the luxurious life of the kings and their preference for perfumes and cosmetics of all kinds; the fairly heavy consumption for incense, in temples etc., and also their use in fumigating halls, bedrooms, etc. the detailed classification of sandalwood, agallochum, etc. need not be wondered at. Incidentally, incense and sandalwood, etc. seem to have been costly materials and therefore they were classified and entered into the treasury with precious and semi-precious gems. The great distances from which these articles were brought must have involved a very high cost of transport and hence they were treated as precious articles. The aromatic woods and resins

mostly take the names of the places from where they came and enlighten us on the geographical knowledge of the Mauryan period.

The following varieties of sandalwood are mentioned in the Arthashastra:

1. 'Satana'. It smelt like the earth after the rain had fallen.
2. 'Gosirsaka'. Dark red colour ; smelt like fish.
3. 'Haricandana'. Fine old wood ; coloured like the feather of a parrot ( greenish yellow ).
4. 'Tarnasa'. Of the same colour as No. 3, i. e. greenish yellow.
5. 'Grameruka'. Red or dark red ; smelt like goat's urine.
6. 'Daivasabhayaka'. Red colour ; smelt like lotus flower.
7. 'Japaka'. The same as above.
8. 'Jongaka'. Red or dark red ; soft in structure.
9. 'Taurupa'. Of the same colour as 'Jongaka'.
10. 'Maleyaka'. Reddish white in colour.
11. 'Kucandana'. Black as aloe ; red or dark red , very rough.

It seems to have been the true red sandalwood.

12. 'Kalaparvataka' [136] It is described as having a pleasant appearance.
13. 'Kosakaraparvataka': Black or variegated black in colour.[137]
14. 'Sitodakiya' : Black and soft smelt like lotus flower. [138]
15. Nagaparvataka' [139] : Product of the mountain of the same name. It was rough and had the colour of 'saivala' (Vallineria).
16. 'Sakala' [140]: It was brown coloured. j The soothing qualities of sandalwood described above have been summarised in the Arthashastra as "Light, soft, moist, as greasy as ghee, of pleasant smell, adhesive to the skin, of mild smell, retentive of colour and smell, tolerant of heat, absorptive of heat and comfortable to the skin." [141] Agarū [142] or aloe-wood was also well stocked in the Mauryan treasury for the purpose of making perfume, incense, etc.

'Jongaka'; It is described as black or variegated black or spotted, and according to the commentary it is a product of Kamarupa (Assam). If, however, the identification of Jongaka [143] is correct then this variety of agarū came from Java or Sumatra.

'Dohgaka' : It was of black colour, and according to the commentary was the product of Assam ; but it seems possible that it was imported from the ancient Peguan district of Dong-wan. [144]

'Parasamudraka' :It is described as having variegated colours and the smell of cascus or jasmine. The commentary takes it to be the product of Assam, This variety of agallochum however as its name indicates came from the countries across the seas, i. e, Indo-China, Malaya, Java, etc.[145] The qualities of the 'agarū' are described in the Arthashastra as follows [146] : "Agarū is soft, heavy, greasy, smells to a great distance, burns slowly ; gives out continuous smoke while burning ; is of uniform smell, absorbs heat, and is so adhesive to the skin as not to be removable by rubbing."

It is apparent from the above paragraph that because aloe-wood burnt slowly and gave out a penetrating aromatic smoke it must have been used for incense and incense sticks, in the preparation of which it is still used today. Its adhesive quality made it a fit material for decorating the body, and in the later literature there are innumerable instances of body decoration with 'agarū'-oil. Aromatic resins described under the heading of 'tailaparnika' were also stocked in the royal treasury. [147] Ten kinds are enumerated, out of which many

varieties came from Assam. It is difficult to give their equivalents in Sanskrit or modern Indian languages as most of them have been named after the places from where they came. The 'jongaka' of reddish-yellow colour and smelling like blue lotus flowers or cow's urine came from Lower Burma. 'Auttara-parvataka' was the product of northern mountains, and was of reddish yellow colour and 'sauvarnakudyaka' [148] also reddish yellow and smelling like sweet lime may be identified with 'salai gugul' or *Boswellia serrata*. [149]

'Asokagramika', coloured like meat and smelling like a lotus flower was perhaps the product of Ceylon. [150] 'Grameruka' was greasy and smelt like cow's urine. [151] 'Purnadvipaka' had the smell of a lotus flower or butter. [152] 'Bhadraikiya' had the colour of nutmeg. [153] 'Paralauhityaka' which was of brown colour was imported from the regions beyond the Brahmaputra. 'Antaravatiya' which had the colour of cascus and the smell of lotus came from the banks of the river Antaravati in Kamarupa, Assam. 'Kaleyaka' which was yellow and greasy was the product of Suvarnabhumi (Lower Burma), and may perhaps be identified with the resin of 'agaru' which collects in masses here and there on the stems. These aromatic resins were used for their fragrance which lasted whether the resins were reduced to paste, boiled, burned or mixed with other substances. [154]

## V

There is every reason to believe that the luxury fostered by the Mauryas continued unabated in the Sunga-Satavahana period. The luxuries and vagaries of fashion to which the people of this period were addicted are shown in the reliefs of Bharhut and Sand. The pomp of the contemporary Indian court is depicted in a good number of scenes, which with their great wealth of attendants drawn from both sexes, dancers and musicians, ladies of the harem, courtiers etc., represent truly the court life of that age. The figures of women specially with their bodies decorated profusely with ornaments, heavy scarves covering their heads and falling down their backs, many stranded girdles on their waists with artistic 'patkas' made from different materials, convey some impression of the age to which they belonged.

This life of luxury required the services of a trained class of female attendants who were adept in the art of toilet preparation. The attainments of a trained maidservant are enumerated by Draupadi, who under the assumed name of Sairandhri went to Queen Sudesna, the wife of king Virat. On being questioned about her qualifications as a toilet expert she said that she was expert at arranging coiffures (*kesan kartum janami*); she could also prepare delicate unguents and she could wreath beautiful garlands of various shapes and designs (*grathayisye vicitrasca srajah paramasobhanah*) [155] The life of luxury demanded scented oils, perfumes, powders, aromatic resins, sandalwood, etc. In the Mahabharata [156] the preparations of unguents, cosmetics, incenses, etc., are mentioned under five heads. (1) Powder or paste was prepared by pounding fragrant leaves and flowers. (2) Pastes of sandalwood, 'wla' pine, aloe-wood (*agaru*), etc., which formed the most important requisites for anointing the body after the bath or at any time of the day or night in ancient India, were obtained by rubbing the wood with the help of water on a smooth stone slab. (3) Aromatic woods such as 'devadaru' (*Pinus devadaru*), 'agaru' (aloe-wood), Brahmala and sandalwood, were used for fumigating the living rooms. (4) Aromatic resins obtained from oleander, wood-apple (*vilva*), 'tilaka', etc., served the purpose of incense. (5) Animal products such as musk, etc., were also used to a considerable extent in the preparation of cosmetics. We have already spoken in a previous

section about various designs which the women used for decorating themselves. In this period as well these designs appear on the faces of women represented in the reliefs of Bharhut. These designs were taken by Cunningham to be tattoo marks [157] on the analogy of the aboriginal tribes of India including the Kols, Sabars, Oraons and Gonds among whom it is a universal practice that no female goes without some tattoo marks, and as the people living near Bharhut are of Kol descent—according to Cunningham in all probability even in those days the country must have been populated by Kols the ethnic type represented in the Bharhut sculpture must be Kol. This explanation seems far-fetched, as the civilization depicted at Bharhut can by no stretch of imagination be Kol. It is the fully developed civilization of northern India as depicted in Pali literature and there is no proof that the Kols or any other aboriginal tribe had attained the degree of civilization of the Aryans of the north. Wherever such tribes are described in literature their material culture is shown to be inferior to those of the Aryans. The so-called tattoo-marks of the aboriginals in the Bharhut sculpture are nothing but ‘visesakas’—mentioned in the Jataka stories and Vinayapitaka—which were the favourite designs painted on their faces by the women in ancient India. The designs found on the faces of the female figures at Bharhut are an invaluable source of information as literature in ancient India makes only casual references to them without going into detail. The sun and moon are on the cheekbones of Yaksini Canda and several flowers on her cheeks and chin. One of the female busts has a single ‘ahkusa’ or elephant goad-like mark on one of the cheeks. The goddess Sirima has a single star or flower on her left cheekbone. But other figures are much more profusely ornamented. [158] One of them has a small bird or ‘trisula’ above each breast and another on the upper arm, also an ‘ankusa’ with two straight lines and a small flower on each cheekbone, besides two elaborate cheek ornaments. Another has the cheekbones decorated with the sun and moon, while each cheek is literally covered with a dense mass of small ornaments.[159] The ways of arranging the coiffure are not many in the Bharhut sculptures, though the coiffures as represented in the terracotta figurines are innumerable. The women in the Bharhut sculptures arranged their hair in the following styles. The loose hair is allowed to fall at the back and then the end is looped and knotted [160]. The hair is arranged in a top-knot when the women wear a turban [161]. The hair falling down the back is divided into two equal halves and then each half is further subdivided into two parts and plaited [162]. The men invariably wore their hair long and tied in a top-knot around which the folds of the turban were arranged.[163]

In the sculptures of Sanchi the women either plait their hair as at Bharhut [164] or they coil the hair round the head, this mode of wearing the hair being specially favourite with the ascetic women [165]. The hair is coiled in a top-knot [166] which reminds us of the coiffure of Burmese women. Certain women wear looped and knotted hair at the back as at Bharhut [167], while in a few cases the loose hair is fastened together by an ornament [168]. These two styles are specially favoured by the village women. The men generally wear their hair in top-knots and are clean-shaven. The ascetics however wear beards [169] and their long hair is wound round the crown in a cone-like fashion [170] or allowed to hang loose. [171] Musicians in a procession [172], charioteers [173] and soldiers [174] wear their curled locks on their necks. These fashions of the coiffure naturally presuppose the use of oil, combs, etc. Collyrium was also known and the collyrium sticks, pots and unguent vases from various archaeological sites datable in the first and second centuries B, C. prove that the demand for cosmetics had in no way diminished.

The places from which aromatic woods were obtained for the purpose of cosmetics and fumigation, etc. are indicated in certain passages in the Sabhaparva of the Mahabharata. The aromatic woods seem to have been fairly costly, as these along with certain precious materials formed a part of the presents consisting mostly of the products of the conquered countries which the princes offered to the Pandava brothers. Thus Bhimasena after the conquest of Assam' [175] received sandalwood and aloewood (agaru) as presents. Duryodhana, while describing the presents made to Yudhisthira at the time of the Rajasuya sacrifice by the Kiratas living in Assam, mentions along with the precious jewels, skins, gold, the sandalwood (candana), aloewood (agaru), the loads of zeodary (bharan kaliyakasya ) and heaps of aromatics ( gandhanaru caivarasayah ). [176]

It is evident therefore that Assam in this period as also in the Mauryan age was the chief source of supply of aromatics to the rest of India. Southern India also supplied aromatic woods. Sahadeva after his conquest of the South received along with resplendent ornaments, sandalwood, and agallochum. The Colas and Pandyas presented the products of their countries such as fragrant sandalwood, oil kept in golden vessels and loads of sandalwood and agallochum ( agaru ) from the Malaya and Dardura mountains along with brilliant and precious jewels and thin golden cloth. [177] Aloewood does not grow now in southern India, the wood being obtained from Assam, Burma and Sumatra. It is quite possible that the southern prince presented to Sahadeva the imported agallochum.

The period under review extending roughly from the first century A. D. to the advent of the Guptas is marked by the arrival of a new power. The Kushanas, members of the Yue-chi tribe, originally occupied a part of north-western China. Driven from there about 165 B. C. they first occupied the country of the Saka nomads and later on took possession of Bactria about 10 B. C. Kanishka the greatest of the Kushana kings made Purusapur (Peshawar) his capital. He patronised the poet Asvaghosa and the physician Caraka. Being a devout Buddhist he sent Buddhist missionaries to the distant lands of Tibet, Mongolia and Khotan. With the advent of the Kushana power in the north the rule of the Satavahana kings became confined to the Deccan. Castana was made the governor of the Kushanas at Ujjain but later on his possessions were annexed by the Satavahanas. Rudradama, the grandson of Castana who gave his daughter in marriage to the son of the Satavahana king inflicted two severe defeats on his relative and by 150 A. D. he was able to establish his rule over Sindh, Marwar, Kach, Saurashtra, Gujarat, Malwa and Northern Maharashtra. But later on other Satavahana kings were able to recover some part of their lost dominion. By the end of the second century the kingdom of the Satavahanas began to disintegrate. The Abhiras carved out a separate kingdom in south-east Gujarat ; the Cutu Satavahanas reigned for a century more over northern Maharashtra and Karnataka with their capital at Vaijayanti ( modern Banvasi in northern Kanara ) and the Ikshvaksu reigned over the Andhra country with their capital at Nalmalai ( Nalmalai hills south of the Krishna, Guntur district ). In the north the Bharasivas drove out the Tukharas and the republics of the Malavas and Yaudheyas became powerful. Later on after the downfall of the Bharasivas, Vindhyasakti ( A. D. 248-284 ) founded the line of the Vakatakas. His son Pravarasena ( A. D. 284-344 ) was the most powerful prince of the line. At the beginning of the Christian era Tamil land was governed by the three powerful kingdoms of Cera, Cola and Pandya, and wars among these kingdoms were frequent. The most powerful ruler was Karikala Chola ( about 70-100 A. D. ) who defeated king Gajabahu of Ceylon. He established his capital at Uraiyur ( modern Trichinopoly ) and built the famous port Kaveripattinam at the mouth of the river Kaveri. Another famous king of the south was

Chera Senguttevan who ascended the throne about 140 A. D. and ruled till 192 A. D. He defeated the confederacy of the nine Colas and the high culture of his reign is reflected in the famous Tamil classic Silappadikaram. In the above paragraphs we have tried to summarise the political state of the country from the beginning of the first century A. D. to the end of the third century. These three hundred years of Indian history however were neither centuries of constant warfare, nor can its latter part (150 A. D. to 350 A. D) be called the dark period of Indian history, as considerable light has been thrown on it by Jayaswal.

Whatsoever may be said about the political history of this period it is evident from literature, the accounts of Pliny and the Periplus and from archaeological evidences both in this country and in Greater India including Central Asia and extra Gangetic countries that this period was one of great activities in the spheres of art and literature, foreign trade, shipping and colonisation. In the first century of the Christian era Indian states were established in Indo-China, Annam, Cambodia, Java, etc. Eastward expansion of the Indians brought them into contact with China, and the commerce between the two countries grew. In the first centuries of the Roman Empire a profitable commerce was established and developed between these two great regions of the earth, the Mediterranean countries and India. Indian jewels, spices, perfumes, the famous myrrhina vases for which the Romans paid fabulous prices—that made Pliny lament the fate of those Romans who held India in hand in order to be drunk [178] and fine muslins formed valuable articles of commerce. This commerce in luxury goods caused a balance of trade in favour of India, and steadily the Roman gold flowed into the coffers of Indian merchants. Peace and plenty encouraged the growth of luxurious habits. Indian sculptures both in the north and the south show scenes of utmost voluptuousness and luxury. On the railing pillars of the Kusan art of Mathura one may see representations of scenes with which the pots of the age have acquainted us, women standing under blossoming Asoka trees touching the trees with their left foot in the belief that this act caused the trees to blossom ; a woman picking flowers with outstretched hands from the branches overladen with flowers, her gambolling eyes turned towards the spectator ; women engaged in their toilet, women wringing water from their long tresses, a motif common in Rajput painting fifteen hundred years later ; women holding mirrors in their hands to arrange their ornaments ; and women playing ball or bathing under waterfalls in mountainous scenery. These scenes are full of a sense of abandon and luxury. They throw light on the life in India nearly two thousand years ago and show the carefree spirit of the Indians described in the epics of Asvaghosa and in the Kamasutra of Vatsyayana.

To help in the elaborate toilet of the ladies of the palace the services were required of a host of female attendants well-versed in the art of preparing cosmetics. In the 'Saundarananda' a glimpse into the lives of these attendants is given : one of the maid-servants in the palace prepared the unguents, another fumigated the wearing apparel, some were engaged in preparing the requisites of the bath and a few others wreathed the fragrant flowers into garlands. The luxury of the south Indians in this period compared most favourably with the habits of their compatriots in the north. Their love of beautiful ornaments, scented garlands, delicate perfumes, sandal and 'agaru' pastes, fragrant powders, thin muslins and silks both figured and- otherwise, is beautifully described in Tamil classics of this period. That they did not merely poetically exaggerate is proven by the scenes of Indian life depicted in the reliefs of Amaravati, Nagarjunakonda, and Golli.



Here one sees sumptuous court scenes with kings and their attendants seated on beautifully carved couches and thrones witnessing music and dancing performed by women dancers of exquisite grace exhibiting their charms unhindered by an overabundance of clothing, their coiffures arranged in various shapes and decorated with flowers. Here also one is afforded glimpses into toilet scenes. One may see a lady taking her bath, with toilet requisites and cosmetics, unguent vases, lying on the ground surrounded by a number of female attendants holding ornament caskets water-pots, mirrors, etc. In one of the medallions from Amaravati in the foreground a woman is represented seated on a bath-stool in a bath tub, attended by three women pouring oil and holding unguents, etc. On the left music is in progress and witnessed by two women. In the background a man and two women riding an elephant are shown. There are also women attendants carrying articles of toilet including a mirror. Luxury and gaiety are the two key notes of Indian life as depicted in Amaravati and Nagarjunakonda sculptures. This luxury was stimulated by the trade of South India with the countries as far as China in the east and with Rome and the Mediterranean countries in the west ; it brought wealth, the root cause of all luxuries into the country. Moreover sandalwood and agallochum with which many delicate perfumes, pastes and unguents were prepared, were within easy reach and hence comparatively) cheaper here than in the north where they had to travel great distances. But it was first merely luxury which prompted the use of costly cosmetics and indulgence in various toilet requisites but also a desire to 'reserve the body against maladies.' Indian medical works without exception enjoin the use of cosmetics, massage, etc. to make the body strong and healthy. Susmta, who can be assigned to the Kushana period, in chapter XXIV of his work, entitled Cikitsasthana, enumerates twenty-four rules about the toilet and use of cosmetics for persons desirous of keeping good health. A man as soon as he got up cleaned his teeth with the toothbrush, washed his mouth and eyes thoroughly, applied collyrium to his eyes and chewed a few betel leaves. At the time of his bath he anointed his hair with oil (sirobhyanga ), and anointed his body, thoroughly massaged and rubbed it ( udvartana, utsadana and udgharsana ),[179] took physical exercise and finally took his bath, after which he combed his hair. The next step in his toilet was to anoint the body (anulepana ) with scented paste and then he put on gems, flowers and clean clothes, after which he put scent ( alepa ) on his face. When going out he wore shoes and a turban, took a stick and umbrella, or if he was to take up the duties of a soldier he put on armour ( vanavara ). Shaving and paring the nails was also a common practice. To get rid of fatigue and restore the circulation of the blood he took recourse to shampooing (samvahana). Vatsyayana in his Kamasutra gives us some detailed information about the toilet and its accessories, of a citizen in affluent circumstances in the early centuries of the Christian era. When the citizen in affluent circumstances woke up from his sleep in the morning he found the requisites of toilet placed on a table-or elevated shelf for his use. These consisted of ointment ( anulepana ), a basket of garlands ( siktha-karandaka ), scent-box ( saugandhika-putika ), skin of the citron fruit ( matulungatvacah ) and betel-leaf. [180] After attending the call of nature he cleansed his teeth and then proceeded to the other details of the toilet. At first he applied sandal [181] paste or any other ointment to his body ; the paste had to be in proper quantity neither more nor less than desired ; then he fumigated his cloth in the fragrant smoke of the incense, put on a garland and applied collyrium to his eyes and lac-dye to his lips, and after looking into the mirror and being satisfied that his toilet was in perfect order he chewed a few betel-leaves and proceeded thereafter to attend his business.[182] After having attended his business the citizen took his bath. Every alternate day his body was massaged and shampooed ( utsadana ) ; every third day he cleaned his body with a soap-like substance which yielded lather ( phenaka ). He had his chin and lips shaved every fourth day and more detailed depilatory

operations were carried out on the fifth day or tenth day. This was supposed to be conducive to long life. [183] Men not only used perfumes, pastes, ointments, but also applied collyrium to their eyes and lac-dye to their lips. By every method of toilet the secrets of which were handed down from time immemorial, and others which were the direct outcome of the luxuries of the age, they strove to make their body attractive and beautiful. Women of this age with their natural desire to make themselves attractive even surpassed men in their toilet. The royal ladies, their attendants, courtesans, women in ordinary circumstances, all used to decorate their persons according to the means at their disposal. This inherent love of ornament and decoration in the Indian women was made legitimate and compulsory by the Sastric injunction that a faithful wife desirous of the longevity of her husband must not forego turmeric (haridra), saffron (kumkuma), red lead (sindura) and collyrium (kajjala) to decorate her person. The use of a bodice (karpasaka), auspicious ointments (mangalyabharana), bangles and earrings, dressing the hair (kesasamskara) and arranging the coiffure (kavari) were also enjoined upon them. [184] Vatsyayana advises a wife never to present herself before her husband without some ornament on her person.[185]

Both men and women used fresh and fragrant dowers and, besides applying pastes and perfumes they painted beautiful designs on their cheeks. It was, however, in the matter of hairdressing that the women gave fullest vent to their fancy. They braided and plaited their hair and arranged it in a chignon or top knot, over which they wore ornaments or flowers. Besides the routine of the daily toilet, special toilet prescriptions were followed in the different seasons. Thus in winter oil, saffron, musk and also aloewood smoke were used. [186] In the spring the body was painted with a paste prepared from camphor, sandal, aloewood and saffron. [187] Vagbhatta gives a beautiful description of the toilet performed to ward off the summer heat. In the summer a man passed his time in a house from which the ingress of hot wind had been stopped. He slept on a bed decorated with plantain leaves and fragrant flowers and he frequented the shower bath (dharagrha). At night he wore a light garment, camphor garlands and necklaces scented with sandal paste, [188] and sat with his wife on the open terrace bathed in the moonlight, listened to the twittering of his pet birds and fanned himself with a palm-leaf fan moistened with water. In the rainy weather clothes were fumigated with sweet-smelling woods and aromatic resins. [184] Sandalwood, 'usira' (the fragrant root of the plant *Andropogon muricatus*), camphor, pearls, garlands and white garments formed part of toilet, dress and ornaments.[185]

The Tamil country in this age was famous for its cosmetics and both men and women indulged in perfumes. Fragrant oils and a variety of red or yellow colours were used; the women painted their eyelids with collyrium, and in the houses aromatic resins and woods were burnt. Unguents and cosmetics were used on all occasions. Thus it is mentioned that at the marriage ceremony of Kannaki and Kovalan "women with fully developed breasts and glowing tresses took with them sandal paste, frankincense, perfumes and powders" [186] which must have been used in the bridal toilet and offering to the gods and guests. Such was the demand for cosmetics that "in the streets of Kaveripattinam the hawkers went about with paints, bathing-powders and cool-pastes, flowers and incense and fragrant scents". [187] Cosmetics were also sold at the seashore. [188] The Tamils were sea-faring merchants and their harbours were emporia of all kinds of goods including aromatic woods and resins from distant lands. Thus it is mentioned that in Tondi, a Pandyan port, the ships brought different kinds of incense, silks, sandalwoods, scents and camphor.

[189] The demand for exotic perfumes seems to have developed to an appreciable extent and we know on the testimony of Pliny and the Periplus that India imported myrrh and frankincense from south Arabia and Somaliland and the costliest ointments for the use of kings.

Hitherto we have been giving a general description of the toilet and cosmetics in the early centuries of the Christian era. In the following pages we shall take the articles of toilet one by one and try to show how much light the literature and archaeology of the period throw on this subject.

Tooth brushes and pastes : The majority of the Indians used twigs obtained from the 'babul', 'nim', or some other trees. Tooth powders and pastes must have also been used as several have been prescribed in Indian books of medicine. According to Susruta the best tooth paste was obtained from honey, 'trikatu' ( fruits of Terminalia chebula, T. bellerica and Phyllanthus emblica ), 'trivarga' ( cinnamon, cardamom, and the leaves of Laurus cassia ), 'tejovati' ( Scindapsus officinalis ), salt and oil.[190]

Eye and mouth washes :

After cleaning the teeth, the eyes and mouth were washed with a specially prepared decoction. According to Susruta this wash was obtained from the bark of the 'ksira tree'[191] mixed with milk or with 'bhilodaka' ( Symplocos racemosa ), or emblic myrobalan ( amalaka ). These were soaked in a large quantity of water and then the strained water was used for washing the eyes and mouth. [192] Many people in modern India use 'triphala' as eye and mouth washes.

Oils:

Anointing the body with scented oil or unguent before the bath was and is still a common practice both in ancient and modern India ; the works on Indian medicine wax eloquent over the beneficial effect of massaging the body with oil. According to Susruta, "anointing the head with oil makes the hair grow luxuriously and imparts to it thickness, softness and glow. Pouring oil into the cavities of the ears is highly efficacious in case of headache and earache. Anointing the body imparts a glossy softness to the skin".[193] Small vases which carried oil or unguents in ancient India have been found in all archaeological sites. They are generally simple in shape though sometimes they imitated the shape of some fruits. [194] That such flasks were carried by the man of fashion is proved by the figures of certain Bodhisattvas in the Gandhara sculptures. [195]

The ordinary scented oil was obtained from sesame seeds which were previously scented with flowers. The oil took the fragrance of the flower with which the sesame was perfumed. [196] Scented oil of a richer variety was also obtained. Cinnamon ( tvaca ), saffron, myrrh ( mura ), 'analada' ( name of various plants, Plumbago, Rosea, Semicarpus anacardinus ) and 'valaka' ( a kind of Andropogon ) weighing half the quantity of the oil yielded a scented oil which had the fragrance of lotus. [197] 'Tagara' when added to the oil double in quantity yielded a scented oil emitting the fragrance of 'jati' flowers ( Jasminum grandiflorum ). The same fragrance could be obtained by mixing the powder of 'vakula' flowers [198] ( Mimusops Elengi ). A scented oil was also obtained by mixing Indian madder, 'tagara' 'cola' ( probably some aromatic wood from south India ), cinnamon, 'nakha' ( Unguis odoratus ), and 'vyaghra-nakha' ( Tithymalus or Euphorbia antiquorum ) with any ordinary oil.[199]

Bath :

The majority of the Indians took their bath at wells, in rivers or in open tanks, but there were also bathrooms attached to the houses ; shower baths were also known. The kings and well-to-do people used scented water for bathing to remove bad odours from their bodies. Various formulas have been prescribed for preparing scented bath water. It is mentioned in the Divyavadana that milk, saffron, camphor and various aromatic herbs were used to perfume the water.[200] The water was also perfumed with the leaves of wood apple, 'bela', 'mango' or oleander ( karavira ) with a little admixture of musk.[201] At another place fourteen aromatics namely, cinnamon, 'nadi' ( a kind of bent grass ), nutmeg ( phala ), oil ( taila ), saffron ( kurnkuma ), 'granthiparva', benzoin ( saileya ), 'tagara' ( Tabernae montana coronaria ), a kind of solanum ( kranta ), 'cola', camphor ( karpura ), 'mansi' ( Nardostachys jatamansi ), myrrh ( mura ) and costus ( kustha ), are mentioned ; any of these three mixed with musk and then added to the water yielded scented bath water.[202]

At the time of bath the skin was rubbed with a flesh rubber to cleanse it of all dirt and impurities. Flesh rubbers were generally made of terracotta and sometimes they were decorated with incised linear and other patterns on all sides.[203]

Pastes, perfumes, powders, collyrium, etc. : Sweet perfumes, powders and pastes obtained from aromatic woods. Resins, flowers, etc. were used both by men and women for removing body-odour. [204] Sandal and aloe-wood, powders, frankincense and myrrh were used for fumigating the rooms and also the garments, etc. An unclean body or clothes smelling of sweat or dirt were greatly detested, and according to the Agnipurana ( CCXXIV, 20-21 ), to remove bad odour from the body a man washed himself ( saucam ), gargled ( acamanam ), wore beautiful garlands, heated the body ( bodhanam ) so that free perspiration cleaned the pores, used incense-sticks ( dhupanam ), fumigated his clothes and body ( vasanam ), and anointed his body with scents and perfumes. The scented pastes were also supposed to possess medicinal properties. Thus it is mentioned in the Cikitsasthana [205] that anointing the body with scented pastes ( anulepana ) removed fatigue and perspiration, produced a sense of pleasure, improved the 'ojas', the strength and complexion of the body, enhanced the beauty and glow of the frame and gave it a lovely appearance. Application of scented pastes ( alepa ) to the face imparted steadiness to the eyes, brought on a graceful contour of the face, cheeks and the mouth, produced a glow like that of a lotus flower and prevented its disfigurement by pimples, moles and such like growths and eruptions.[206] Perfumes, scented powders, etc. were also used in beautifying and decorating the houses and streets at auspicious occasions. Thus it is mentioned in the Divyavadana [207] that the streets of Sopara at the time of the supposed visit of the Buddha were sprinkled with sandalwood water ( candanavari ), fumigated with aromatic gums and woods burning in incense pots ( dhupa-ghatilm ) and strewn with flowers. In Bhadrasila the fragrance of agallochum, sandalwood and flowers permeated the air. [208]

Sandalwood paste was the most important material with which men and women anointed themselves. 'Gosirsa' sandal [209] was a superior class of sandalwood, and a bundle of 'gosirsa' sandalwood brought as much as one hundred 'karsapanas', and this was considered to be a bargain price. It seems to have been sold in powder form ( curnaka ) and was difficult to get, at least in western India, as it is mentioned that the Raja of Sopara did not possess it

and had to buy it from Purna at a very heavy price. In south India the sandalwood of the southern mountains, the Podiyal hills [210] was very famous.

In south India the soft mixture made of the black 'akil' paste, the fragrant 'kumkuma' flowers, civet-musk, the excellent sandal paste and the paste made from the musk of deer" were preferred as perfumes. It is also mentioned that the Brahmanas in south India painted their breasts with a paste made from the unblossomed 'vattihai', the bright dust of 'vannikai' ( sandal ) and 'kottam'. [211]

Perfumes were kept in small bottles. There were also sprinklers. One such sprinkler was found at Balahisar [212] in which the base is perforated with a number of small holes and the mouth is narrow enough to be closed with a finger tip. Another narrow-necked earthen flask with seven small holes in the base was found at Sirkap, Taxila. This was also possibly a sprinkler. [213]

Aromatic powders were also used for dusting the face and the body, and the powders obtained from agallochum ( agaru ), sandalwood and 'tagara' are mentioned. [214] These powders besides being used as cosmetics were also showered on distinguished personages.

Collyrium was used both by men and women for staining their eyes. It alleviated the burning and itching sensation, removed local pain, increased the range of vision, [215] and it also furthered the growth of beautiful eye-lashes, cleansed the eyes by removing the unhealthy secretions, made the eyes more wide and graceful, and also imparted a brilliant lustre to the pupils. [216] Ordinary lamp black must have been used by the common people for staining the eyes as today, but in the period under review 'kotonjana' or antimony which was found in the vicinity of the river Indus was considered to be the purest of the 'anjanas. [217] The [218] collyrium must have been applied to the eyes with the fingers as today, but antimony rods found at various archaeological sites [219] prove the existence of collyrium pots from which some antimony was taken on the rod and then applied to the eyes.

Besides staining the eyes with collyrium, the lips and teeth were also stained. Clean white teeth were preferred, but their brilliance was increased by staining. Beautiful young women kept their teeth either pearl white or stained them red comparable with the hue of the petals of red lotus flowers. [220] The lips were stained with red mineral ( asmaraga ) or lac-dye. [221]

In this age as also in the centuries preceding the Christian era women were also very fond of painting their faces and shoulders with simple colours and artistic designs. The art of painting patterns on the cheeks was so much in fashion that Vatsyayana included it in his list of the sixty-four arts. [222] The designs ( bhakti ) were painted with lac-dye ( alaktaraga ) in its natural shade, or ' in a shade resembling the colour of the shoot of the Asoka tree. [223] The women in the Kamasutra painted patterns ( visesaka ) also using many cut out designs from betel and 'tamala' leaves, papyrus, etc., ' on the forehead and cheeks. [224] The designs were drawn on the face with a paint stick ( patrariguli ). [225] Sometimes a part of the design was cut out from the fresh 'tamala' leaf and stuck to the cheeks and the rest of the design was picked out in red this method of making designs on the cheeks and forehead is being still adhered to in the district of Mathura at the time of marriage. Decorative designs were also drawn on the shoulders. Thus it is mentioned that Kovalan, the hero of Silappadikaram, amused himself by painting on the broad shoulders of his lady-love the sugar-cane and 'valli'

( 'kamavalli' or heavenly creeper ).[226] At another place it is mentioned that the breast of the Pandya king was painted with a pattern in the form of a garland in Podyial sandal-paste.\*

For staining the lips, cheeks, etc., rouge was also used. At Sirkap, Taxila, a miniature casket of slate containing rouge was found. [227] The feet were dyed' with lac as today. [228] In the south the breasts were sometimes painted with vermilion paste. [229] Ghee mixed with some colouring material [230] ( varnagharta ) and turmeric were used for painting the body. [231] The body was also sometimes painted with unadulterated earthy particles in soft grassy grains (mrdubhihsaikataihsnigdhaih ) made yellowish with the sprinkling of saffron (kesarastara-pandubhih ).[232]

Flower garlands:

We have already referred to the love of Indians for flowers and garlands. The art of making beautiful garlands was taken to be an accomplishment and two of the sixty four 'kalas' namely 'malyagrathanavikalpa' and "sekharakapidayojana' refer to the art of making garlands." [233] Five kinds of garlands have been referred to by Bharata"[234]: 'cestita' ( set in motion ), 'vitata' ( large ), 'sainghatya [235] ( cluster ), 'grathima' ( knotted ) and 'pralambita' ( hanging ). On the Kamasutra it is mentioned that a woman wore flower garlands hanging from the neck, or chaplets (apida ) on the head. Flowers were also simply stuck into the hair. Elaborate ornaments for the ears ( karnapura, karnapatra ) were also made with flowers, [236] and 'karnapatrabhanga' or making flower ornaments was considered an art ( Kamasutra, I. 3, 16 ).

In south India flowers played an important part in the decoration of both men and women. Garlands wreathed of particular flowers were worn by the Tamil kings as a distinguishing mark. Thus the Cola kings wore garlands of Bauhinia racemosa, the Pandya and Cera kings wore the garlands of margosa [237] and the palmyra [238] respectively. 'Patalai' garlands interspersed with the segments of tender lotus stalks, lotus flowers and blue flowers were preferred. [239] Flowers were also used for decorating and perfuming the bed. [240]

Incense, fumigation of garments, etc.

Frankincense and various other aromatic resins and woods were used for the fumigation of the clothes, living rooms, etc. It seems to have been a custom with the members of higher society to perfume their clothes. Thus the fragrance of Carudatta's apparel assured Vasantasena that though he was impoverished he was not unmindful of the toilet befitting a member of higher society. [241] In the Saundarananda [242] maidservants are shown perfuming the garments.

A list of twenty drugs and aromatic woods and resins is given in the Agnipurana [243] which were used for the fumigation of rooms, clothes, etc. They are: 'nakha' ( unguis odoratus ), costus ( kustha ), 'ghana' ( the bulbous root of Cyperus hexastachys communis ), nard, sprk ( Trigonella corniculata ), benzoin, saffron ( kuinkuma ), shellac ( laksa ), sandalwood, agallochum, 'nidada', pine resin ( sarala ), devakastha ( Pinus devadaru ), camphor, 'kanta', myrrh ( vala ), olibanum ( kundaruka ), bdellium ( guggula ), 'srinivasaka' ( resin of Pinus longifolia ) and 'sarjarasa' ( the resin of Vatica robusta ).

Any two of the above substances powdered and moulded with honey and mixed with resin, incense ( pinyaka ), 'nakha' ( Unguis odoratus ) and sandalwood yielded a good incense. A fragrant powder made of sandalwood, agallochum and 'kalanusari' ( a fragrant substance ) was also used as incense.[244] Incense tablets ( gandha-vatika ) were also burnt. That the practice of burning incense was fairly common in this period is proved by the discovery of incense-burners from various archaeological sites. [245]

Perfumed pills: [246] Betel leaf was used for removing bad odour from the mouth and was taken after bath, meals, after anointing the body and after getting up from sleep. It was prepared with spices including cloves, camphor, nutmeg, 'kakkola', 'lata-kasturi', etc. [247] Certain perfumed pills (gutika ) were also used for perfuming the breath. Camphor, saffron, 'kranta', musk, 'harenu' ( a sort of drug or perfume ), 'kakkola' ( a berry, the inner part of which is waxy and aromatic ), cardamom, nutmeg ( jatikosa ), 'latakasturi' ( musk creeper, a kind of aromatic medicinal plant ; according to some, Hibicus moschatus ), cloves and mace were all powdered and moulded with catechu and the juice of mango leaves into pills weighing one 'karsika'. These pills were supposed to be an effective remedy against the bad odour of the mouth.[248] Betelnut was soaked in water in which the five 'pallavas' ( the aggregate of five sprigs or shoots of 'amra', 'jaipbu', 'kapittha', 'bija-puraka and 'bilva' ; according to others of 'amra', 'asvattha', 'vata', 'prakati', and 'yajnodumbara' ; or of the 'panasa', amra, 'asvattha', Vata' and 'bakula' ; or of the spondias, roseapple, bel or marmelos, citron and wood apple ) had been soaked previously, and then scented with the above mentioned articles,—mentioned in connection with the perfumed pills—served the same purpose.[249] 'Katuka' ( Trichosanthes Dioeca ) and 'danta-kastha' ( various trees the woods of which are used for cleaning the teeth ) soaked in the urine of the cow and scented with the aromatics abovementioned, were also an effective medicine for removing bad odour from the mouth.[250] The women attendants in the palace in order to suppress foul breath and also to impart it the fragrance of 'nagavalli' ( Piper betel ) kept a special preparation in their mouth prepared from a half part of camphor and one-fourth part each of cinammon and 'pathya' ( Terminalia chebula or citrina ).[251]

Coiffure, care of nails, etc:

In this age the art of hair dressing was cultivated specially by the women, and in the sculptures and the terracottas of the period we find innumerable types of coiffures. Bharata in his NatyaMistra (XXIII, 64-67 ) has something to say about the different types of coiffures worn by the women in various parts of the country. Thus the young women from Malwa ( Avantiyuvatinam ) wore curled locks ( sirah salaka-kuntalam ) the women from Gauda as a general rule wore their locks in a top-knot ( sikha ), or braided and plaited the hair ( pasa-venikam ). The Abhira women wore their hair in two plaits ( dvidenidharam ) which were sometimes wound round the head ( sirah parigamaprayah ).[252] The women of the north-eastern parts of India arranged the tufts of hair in well drawn up positions of the women of southern India wore their hair arranged in the shape of a water vessel held together with an ornament ( kumbhipadakasamyuktam ) or the locks of hair were turned backwards from the forehead ( avarta-lalaticam ). [253] The latter refers to the half-plaited hair of the Tamil women mentioned so often in the Tamil literature of the period.

The Tamil women divided their hair into five parts twisted or plaited separately, and tied up the five tufts allowing the ends to hang down the back in a graceful manner. Such was the preference for this kind of coiffure that the young girls allowed their hair to be closely cropped leaving five tufts with a good space in between each other; later on when the girls grew up they extended the tufts till they covered the whole surface of the head. [254]

The Tamil women were also very fond of perfuming their hair. Thus it is mentioned that Madari, one of the women characters in the 'Silappadikaram' ( VI, p. 126 ) "bathed her fragrant black hair soft as flowers till it shone, in the perfumed oil prepared by mixing up ten kinds of astringents, five spices and thirty-two herbs soaked in water ; she dried it in fuming incense, and perfumed the different plaits with the thick paste of the musk deer." The perfuming of hair with some sort of paste made from musk is also referred at another place. [255]

The Gandhara sculptures have retained the varieties in the arrangement of coiffures as which Indian men and women inhabiting the north-western part of the country preferred during the early centuries of the Christian era. Generally, the men wore their hair long and tied it in a knot at the top of the crown [256] At other times the hair was arranged in a top-knot, but few side-locks were curled [257]. In the third type the hair was gathered in a top-knot, but a few curled locks were allowed to fall on the shoulders.' [258] The Indian 'upasaka' did not wear any headdress but wore a hair lock arranged at the top of the crown in the shape of a bow [259]. Sometimes a part of the hair was arranged in a top-knot and the rest of it in schematic curls [260], In some cases curled locks fell on the forehead [261]. The hair was sometimes arranged in a top-knot and the curled locks fell on the forehead [262], In another variation of the same style the curled locks fall on the forehead, sides and the back. [263] The hair was also sometimes taken up from the forehead, sides and back and then knotted [264], In some cases the hair, the ringlets of which were pinned to the head, was gathered in a knot at the crown of the head.[265] Sometimes the hair was also worn in ringlets falling down the neck and held together by a fillet.[266] The children had generally their heads close shaven except three locks or tufts, which were sometimes combined with a chignon. In some cases children wore their hair cropped. [267] The comedians sometimes shaved the sides of their heads in the shape of irregular triangles, leaving two side locks and a forelock [268].

As a general rule the women in Gandhara wore their hair in the shape of a spiral at the top of their head' [269] or in top-knot". In some cases a part of the hair was arranged in a top-knot and a few curled locks were allowed to fall on the back' [270]. The hair was also plaited in a single pigtail and allowed to fall on the back' [271] or braided into a looped knot.' [272] This pigtail was often decorated with a net made of pearls and rosettes' [273].

The chaplet usually worn round the head affected the form of a laurel fitting closely to the hair and tying at the back' [274] . India seems to have been famous for the manufacture of chaplets. Pliny has noted that in the period under review there was a demand for chaplets imported from India, made of nard leaves on fabrics or else of silk of many colours steeped in unguents. Such was the pitch to which the luxuriousness of Roman women had reached, and made Pliny bewail the fate of his country. [275] The wearing of such chaplets seems to have been a universal custom in north-western India.



The hairdresses both of men and women as represented in the Mathura sculptures of the Kusana period are varied, and if the terracotta figurines are also taken into account, almost endless. The men generally wear their hair tied in a knot at the top of the crown. In rare instances the forelock was tied in a knot in the middle of the forehead and the rest of the hair was curled [276]. In rare instances the hair in ringlets covered the neck with some locks falling on the shoulders. [277]

The women, however, wore their coiffures in many ways. Some women wore their hair in a single pigtail. [278] Sometimes the hair was plaited and braided into two pigtails joined together by their tips. [279] The commonest way of wearing the hair was to part the hair at the sides [280], The roundness of the middle parts is due to artificial means. It is possible that perfect curves were obtained by a depilatory process, or the superfluous hair was removed by some sticky paste, a practice still followed by women in Marwar. The sides, sometimes instead of being rounded were made angular [281] Sometimes, to give a more decorative effect, while parting the hair on the sides, two tiny curled locks were left stuck to the scalp possibly with some pomade [282]. The women also parted their hair in the middle. [283] The hair on both sides of the parting was sometimes arranged in zig-zag to give the coiffure a decorative effect. The coiffure was also arranged in a spiral at the top of the crown. [284] In rare instances the hair falling down the back was looped and knotted. [285]

Women of southern India are noted for their beautiful, soft, and glossy hair of which they take great care. We have already given references from Tamil literature about the coiffure of the women from Tamil land in ancient times. Men also arranged their hair in various ways, but these were confined to certain well-defined types. In the sculptures of Amaravati and Nagarjunakonda there are overwhelmingly many varieties of coiffures. From these confusing varieties, however, it is possible to establish certain well-defined types out of which many subsidiary types were evolved by the individuals by arranging their hair at angles of their own choice and by giving their coiffures twists and turns which lent them individuality.

The men generally wore their hair in a top-knot at the top of the crown [286] ( Fig 47 ). In another type a part of the hair was knotted at the back while the forelock is passed through a cylindrical ornament attached to the head in a slanting position with the strands of the hair taken out from the upper end [287] ( Fig. 48 ). In another type the hair was arranged in two knots at the top of the crown [288] ( Fig. 49 ). In another type two stiffened locks going beyond the confines of the forehead curled round the sides of the headdress [289] ( Fig. 50 ). Short hair parted in the middle and covering the neck was also worn [290] ( Fig. 51 ). A part of the long hair was gathered on the right side of the head, looped and knotted ; the rest of it was coiled at the top [291] ( Fig. 52 ; Longhurst, *The Buddhist Antiquities of Nagarjunakonda*, Pl. XXI, b ). The hair was also gathered at the top of the head, looped and coiled [292]. The cowherds and elephant drivers had their hair curled, as also the soldiers.

Ordinarily the women from the south arranged their hair in pigtails. A part of the hair was coiled at the back of the head and five thin plaits were allowed to hang down the back ( Fig 54 ). This mode of wearing the hair has been referred in the Tamil classics and seems to have been favourite with all class of women. Sometimes the hair was arranged in a single plait [293] ( Fig. At times the end of the plait was looped and knotted [294] ( Fig. 56 ). In some cases two plaits were made to hang on one side of the head and a chaplet was worn round the head as in Gandhara [295] ( Fig 57 ). The hair was sometimes not tied but taken out from an

aperture in a cap and allowed to hang loose on the back [296] ( Fig. 58 ). The hair was tied in a knot at the back [297] ( Fig. 59 ). In this very style the hair falling on the front was arranged in a zig-zag [298] ( Fig. 60 ). The hair was parted in the middle and a plait was made to hang on the left side [299] ( Fig. 61 ). The hair was also simply parted in the middle with a knuckle-bone shaped ornament at the top [300] ( Figs. 62-63 ). Sometimes the hair was not parted, and a few curled locks stuck to the head were left to enhance the beauty of the coiffure [301] ( Fig. 64 ). The hair was also sometimes divided on the sides and the top of the crown decorated with a round knobbed ornament [302] ( Fig. 65 ). The hair was divided into three parts gathered at the back and then looped and coiled ( Fig. 66 ). [303] There were some complicated coiffures. In some cases the hair was so parted in the middle that a part of the hair triangular in shape was left over the scalp and then two side-locks were taken back [304] ( Fig. 67 ). The hair was also arranged on the top of the crown in a dome-like manner [305] ( Fig. 68 ). In another style part of the hair was arranged on the top of the head in dome-like manner and two side locks were taken back so as to cover the ears ( Fig. 69 ).

To clean the hair and scalp brushes and combs were used and artistically shaped combs have been found at various archaeological sites. The combs were often fashioned out of ivory and decorated with incised busts of a male and female on one side and a duck on the other. One such comb was found at Taxila [306] ( Figs. 70-71, p. 112 ). Ordinary ivory and bone hair combs decorated with small incised circles were also found at Sirkap, Taxila. [307] Forceps, perhaps used in hair-dressing was also known [308] ( Fig. 72, p. 112 ).

For the purpose of decorating the face with painted designs or to see that the ornaments on face, ears and forehead were fixed properly and artistically, the help of the mirror was of utmost importance. Excavations at various archaeological sites have yielded copper mirrors. One such mirror, circular in shape, with a projection for handle, was found at Sirkap, Taxila. [309]

It may be assumed that ordinarily wooden handles were attached to these mirrors, but the rich people attached ivory handles to their mirrors. An ivory handle of a mirror decorated with incised linear patterns was found in the excavations at Sirkap ( Fig. 73, p. 112 ) another ivory handle decorated with raised bands and hatchings was found at Sirkap, Taxila. [310]

The care of nails and ears :

It is mentioned in the Kamasutra [311] that the 'nagaraka' was very particular about his finger nails which were carefully pared and sometimes dented. Special attention was paid to the finger nails of the left hand. The nails were required to be well-set, smooth, bright, scrupulously clean and glossy in appearance. Great care was taken of the nails because the 'nagaraka' used them in impressing marks on the body of his beloved in amorous dalliance. Ear picks were used for removing the ear wax, and bronze ear picks with rounded ends were found at Sirkap, Taxila [312] ( Figs. 74-75, p. 112 ).

## VII

The Gupta age, some aspects of whose cultural heritage stayed till the end of the 7th century, witnessed such national prosperity and unhampered development of art and literature that it is truly called the Golden age of Indian history. Starting from a small kingdom the fame of the chivalrous arms of Samudra Gupta, Chandra Gupta II and Kumara Gupta reached the farthest

corners of India, and states after states bowed down before their powerful army. The conquest however, was not sullied by lust of power or wealth. The purpose of the Gupta kings was to bring the warring states under their control so that the country might flourish. The Gupta emperors were Hindus who worshipped [313] Siva and Visnu and erected temples in their honour, but they were no narrow sectarians. Such was their spirit of toleration that Jains and Buddhists followed their beliefs with perfect equanimity. Under the patronage of the court Sanskrit literature flourished. Kalidasa, the greatest of the immortal bards of India sang the glories of that courtly religious culture which finds visual expression in the paintings of Ajanta [314] and Bagh. In the sphere of art the earlier exuberance and spontaneous simplicity are brought under the constraint of reason, and art becomes more formal, self conscious and complex. The images are marked with a sense of detachment and contemplation hitherto unknown, and art gained in qualities which appealed to the conscious intellect and to the subconscious aesthetic sense.

There was an all round improvement in the standard of life in the Gupta period, and the luxuries in this age knew no bound. The works of Kalidasa, and later on of Bana and Dandin reflect a kaleidoscopic view of the life of the people high and low, while the paintings of Ajanta serve as a dictionary of the manners and customs, dress and ornaments of the age. The dignified royal personages wearing 'dhoties' and ornaments and tiaras of very complex patterns, accompanied by their queens decked in all their fineries and surrounded by their attendants, some clothed in sewn garments, others in very light garments ; women performing their toilet while looking into mirrors ; dancers accompanied by musicians giving performances, their bodies swirling in exquisite rhythmic movements ; the royal procession with their elaborate paraphernalia ; soldiers wearing tunics and holding arms ready to strike, are some of the aspects of Indian life which are depicted in the paintings of Ajanta. On comparison of the descriptions of Indian life in literature with those depicted in the paintings we are struck at once by the power of observation of the painters and the authors alike.

In this section an attempt has been made to throw some light on one aspect of the luxurious life in the Gupta period, i. e., how men and women decorated themselves and the cosmetics they used ; the various modes in which they arranged their coiffures, etc. In the matter of cosmetics, perfumes, etc., constant allusion to the contemporary literature has been made. Coiffures have been illustrated from the contemporary sculpture and paintings.

Cosmetics, perfumes, flowers, unguents, etc., were used both by men and women from the point of view of personal hygiene. They were also used to add charm to their supple bodies. Collyrium not only increased the eyesight, according to ancient Hindu belief, but also increased coquettishness of the eyes. To gain some knowledge as to how ancient Indians, both men and women, effected their toilet one must go through the literature of the period, specially the pen-pictures of Bana, both in 'Kadambar' and 'Harsacarita'. The truthfulness of the pen-pictures of men and women in the seventh century as portrayed by Bana, can be verified from the paintings at Ajanta. [315]

The morning bath of the king Sudraka is described by Bana as follows : The king proceeded accompanied by a host of 'caranas' to the 121 . bathroom ( *snanabhumi* ) where there was a golden bath basin ( *jaladroni* ) filled with perfumed water, with a crystal bathing stool ( *sphatikasnanapitha* ) resting in its centre, and where there were lying water vessels ( *snana-kalasa* ) filled with fragrant water.[316] When in the bath the women attendants

besmeared his head with 'amalaka' paste and the water which they poured over him was scented with saffron and sandal.[317] Let us now turn to Ajanta where a king's bath is depicted ( Fig. 76 ).[318] The bathing place is a pillared verandah. On the right the king is seated on a high-backed stool. His head is uncovered, and he is clad in a simple loin-cloth. On his right stands a maid-servant with a tray holding pastes and unguents. Behind the king stand two attendants, their hair tied with a cloth, pouring water over his head from the water vessels ( gharas ). Two 'cauri'-bearers stand towards the left. On the same side stand a water-carrier wearing a striped loin-cloth carrying the water-pot on his left shoulder, an old man wearing a tunic and reclining on his staff,—he is probably a 'kamcukl',—an attendant carrying an unguent bowl and another attendant who is quite naked, reclining to take a bowl from the hunch-backed woman standing on the staircase which leads to the verandah. There is a striking resemblance between the scene of a king's bath as described in the 'Kadambari' and the Ajanta [319] frescoes and this should further strengthen the belief that Bana's descriptions of persons and things were obtained from first hand knowledge and were not merely the outcome of poetic fancies.

After the bath the king worshipped the deities and then proceeded to the toilet room ( vilepana-bhumi ) where he besmeared his body with sandal paste mixed with musk, camphor and saffron. [320] Afterwards he took his meal, smoked the 'dhupavarti' ( paripitadhupavartih ) and chewed betel-leaf. Then he proceeded to a room whose cold mosaic floor was sprinkled with water scented with sandal-wood. The covering of the bed on which he sat was scented with the smoke of aloe-wood and incense and with the sweet fragrance of flowers. [321]

Even when the king started on a military expedition he did not forget his toilet. It is mentioned in the Harshacarita [322] that king Harsa when he started for battle anointed his body and even his bow with sandal paste, put a chaplet of white flowers on his head and drew to the region of his ear a fresh 'gorocana -spotted 'durva' spray. [323]

The young men of those days did not lag behind in their toilet. In the Harshacarita, a typical youth from high society is described with the ornaments he wore and the toilet he affected. From his top-knot hung a wreath of 'malati', his hair was wreathed in clusters of crisp curls adorned with a coiled cornet of white 'bakula' buds, his forehead was besmeared with red arsenic ( manah-sila-panka-pihgalena ). [324] His mouth breathed the fragrance of mango, camphor, 'kakkola' fruit, cloves and coral trees ( ati-surabhi-sahakara-karpura-kakkola-lavahgaparijataka-parimalaruca ), his arms were decorated with painted designs in the shape of 'makara' in scented civet powder ; his breast was powdered with camphor dust. [325]

Even a Brahmana, who was not expected to affect fashions owing to his spiritual calling, did not forget his toilet when approaching the king. Thus it is mentioned that Bana while starting on his journey to meet Harsa decorated himself with white unguents ( suklangaragah ), wore white garlands, adorned his ears with 'girikarnika' flowers fastened with the ends of durva grass covered with the yellow 'gorocana' paint ( rocanacitra-durvagra-pallavagrathita-girikarnika-kusumakrta-karnapurah ) [326]

Officers of the state were also not immune from the fashions of the day. The reader Sudrsti painted his sectarian marks at the end of his bath in 'gorocana' and clay from a sacred pool.

His hair was made sleek with oil and myrobolan. A thick bunch of flowers 'kissing' his stout top-knot added a touch of spruceness. The glow of his lips was heightened by several applications of betel and brilliance was imparted to his eyes by the use of collyrium stick. The chamberlain also used sandal-wood paste to heighten the effect of his toilet. [327]

Women of this age, however, excelled men in the intricacies of their toilet. In the Dasakumara-carita' ornaments consisting of anklets ( nupura ), girdles ( mekhala ), bracelets ( kankana ), bangles ( kataka ), earrings ( tatanka ), —fine linen garments ( ksauma ) and collyrium ( kajjalam ), formed appropriate articles of decoration for the women. The varieties of their coiffures in the paintings of Ajanta are amazing and their love of flowers, colours and ornaments gave them ample opportunity to bedeck themselves as they pleased. Their feet were coloured with clotted lac and stained with saffron on the upper surface ( pindalaktakena pallavitasya kurnkuma-pinjarita-prsthasya carana-yugalasya ), their loins were painted with sandal, [328] their face was decorated with a round pattern, black as 'tamala' bark and dispensing a fragrance of civet ( tamalasyamalena mrgamadmodanisyaandina tilakabinduna ) and their tresses hung loose from careless fastening and swaying at their back ( prsthaprenkha-danadarasanyamanasithila jutikabandha ). [329]

Not only the queens and the ladies in affluent circumstances made themselves attractive by the use of cosmetics, perfumes, etc., but women from the lower grades of society such as maid-servants, etc., were also fond of decorating themselves. It is mentioned that the women attending on Harsa had their foreheads blackened by the darkness produced through the ornamental black of the black agallochum being melted by the drops of perspiration ( srama-jalavilina-bahala-krsnaguru-pahka-tilaka-kalahka-kalpitena kalimna ), [330] their breasts were decorated with ;the wreaths of Bakula flowers ( vikata bakulavali-varataka-vestita-mukhah ), and beautiful lotus flowers hung from their ears. [331] The dancing girls whose profession was to attract persons by their charms indulged in an exquisite toilet. They wore wreaths round their brows ( samunda-malikhah ) and chaplets round their ears ( sakarnapallavah ) ; sandal marks decorated their foreheads ( sacandana-tilakah ). They besmeared their bodies with saffron ( kumkuma-pramrstikayah ). Big garlands of amaranth hung on their round hips ( nitarnba-bimbambivikata-kurantaka-sekharah ). Their faces were marked with a row of vermilion spots , ( sinduraccha cchurita-mukha-mudrah ). They were dusty with camphor and perfumes scattered in handfuls ( mustiprakiryamana-karpura-patvasapamsula ).[332] Even the 'candala' women, the most despised of Hindu untouchables, did not forget their toilet. Thus the 'candala' girl visiting Sudraka had a yellow mark in 'gorocana' on her forehead, and her feet were stained with lac-dye ( ati-bahala-pindalaktaka rasa-raga-pallavita-pada-pamkajarn ).[333]

At the time of marriage the bride affected a special toilet. The bridal toilet of a lady in high position is beautifully described in the person of Parvati in the 'Kumara-sarnbhava'. After the bath the oiliness of the skin was removed with the paste of 'lodhra' ( Symplocos racemosa ; lodhra-kalkena hrtanagatailam ), then the 'kaleyaka' unguent which dried up quickly was applied to the body ( asyanakaleyakrtangaragam ). Her hair was perfumed with the smoke which dried the hair, and she wore a yellow garland of 'madhuka' flowers. [334] Ornamental designs ( patravibhaktam ) were painted in 'suklaguru' and 'gorocana'. [335] The oiliness of

her cheeks was removed by the 'lodhra' paste and it looked fairer by the decoration in 'gorocana' ( gorocana-bhedanitantagaure ). Her eyes were painted with collyrium. [336] In the end the bride's mother with her two fingers besmeared with the auspicious unguent made from yellow orpiment ( haritala ) and realgar ( manahsila ) imprinted the marriage 'tilaka' on her daughter's forehead. [337]

The auspiciousness of cosmetics, perfumes, etc., at the time of festivities and at the marriage ceremony was emphasised. It is mentioned in the Harshacarita [338] that the women proceeding to the royal palace to attend the birth festivities were followed by servants bearing garlands ( sumanasrajah ) in wide baskets ( parijanena prthukaranda-parigrhitah ) with bath powder sprinkled on the flowers ( snaniya-curnavakirna-kusumah ), dishes laden with bits of camphor clear as crystal granules, jewelled caskets of saffron scents ( kumkumadhivasa-bhanji-bhajanani ca manimayani) ivory boxes [339] (danta-sanhnikapi) studded with rows of areca nut painted with sandal paste and tufted with slim 'khadira' fibres dripping mango oil, and vermilion and paste boxes and bowls ( sindura patani ca pistaka-patrani ca) [340] ) red and pink, and also 'parijata' perfumes. At another time when the queens came to attend the marriage ceremony of Rajyasri manufactured cosmetics compounded of saffron paste clotted by 'balasana' essence ( balasana-ghrta-ghani-krta ), and face unguents ( mukhalepanani ) added distinction to beauty, and also strings of cloves ( lavahga-mala ) mingled with 'kakkola' fruit ( kakkolamisrah ) containing also nutmegs ( sajatiphalah ) and large bright lumps of camphor threaded in the intervals ( sphurat-sphata-sphatika-karpurasakala-khacitantarala ).[341]

Luxury had reached to such a height in this age that the women were not contented with a particular method of toilet or certain perfumes. They wanted variety, and therefore effected their toilet and used different kinds of cosmetics according to the climatic conditions. In the summer they favoured shower-baths (jalayantra-mandiram ) and sandal paste they wore light garments ; the flower garlands were painted with sandal paste ; the hair was perfumed with the fragrance of bath powder ( snanakasaya ) ; their feet were dyed with lac-dye ( laksarasa-raga-ranjitaih ) [342] their breasts [343] were painted with sandal paste and they also wore sandal lines on their foreheads [344] ( candana-likhita-lalatika-pundrakaih ). The women on their part slept away the day grey with sandalwood applications,[345] and both men and women to quench their thirst drank water perfumed with the strong scent of trumpet flowers.[346] In the rainy weather the women decorated their hair hanging down the back with fragrant flowers and their breasts with chaplets.[347] They painted their bodies with sandal-wood and black agallochum pastes ; their hair locks were decorated with flower ornaments ; on the forehead they wore the chaplets of 'malati' and the half-blossomed buds of jasmine, and they wore earrings of newly blossomed 'kadamba' flowers.[348] In the winter they decorated the ringlets of their dark black hair with the newly blossomed 'malati' flowers and blue lotus hung from their ears'[349] and their breast orbs were encircled with the chaplets painted with sandal paste." In the end of the winter ( hemanta ) they painted their bodies with zeodary paste, decorated their faces with painted designs, and on their foreheads they wore chaplets perfumed with the smoke of black agallochum.' Some young women, holding away their black and thick hair smelling of flowers and bending their bodies, engaged themselves in arranging their coiffures.[350] In 'sisira' ( January to March ) they chewed betel-leaf, used unguents and garlands, fumigated their rooms with incense and black agallochum,[351] decorated their hair with flowers,' stained their breasts yellow with saffron, perfumed their hair with the fragrant smoke of incense and black agallochum. Spring is the

season par excellence in India as the joyous festival of Holi falls in it. The women in the Gupta age in the spring wore 'saris' dyed in 'kusumbha' flowers, and bright red silk bodices with their colour effect enhanced by saffron covered their breasts.[352] The fresh flowers of 'karnikara' served as ear ornaments, 'asoka' flowers decorated their curled locks, and they also wore floral ornaments made from jasmine flowers to enhance their beauty.[353] On their breasts dangled necklaces painted white and painted patterns adorned their faces.[354] Their breasts were stained with the unguents prepared from 'priyahgu', zeodary and saffron ; their bodies were anointed with sandal paste mixed with musk.[355] They wore light garments and stained their bodies sometimes with lac-dye and perfumed themselves with the fragrant smoke of black agallochum.[356] Coloured water was thrown in the Holi festival or some other festive occasion. It is mentioned in the Kadambari that the women threw saffron-coloured water with their hands which stained their bodies. The lac-dye coloured water turned the garments to red, and the water drops perfumed with musk changed the colour of the sandal-wood decoration. It is also known from this description that the women used golden syringes ( kanakasrngakosa ) for throwing coloured water.

So far we have been dealing with the general aspect of toilet cosmetics, perfumes, flowers, etc. In the following pages an attempt will be made to describe in detail some parts of the toilet.

Bath;

The bath was an important part of Indian toilet. A special room or verandah was reserved as bathroom ( snana-bhumi ) Shower baths were used in summer.[357] Water was at times perfumed with all kinds of spices, fruits, shoots and flowers (sarvausadhi-kusumaphala-kisalayanathaih ).' Certain formulas for perfuming the water are also given by Varahamihira. In one formula pine resin, lotus (srivasaka-), incense, 'vala', cinnamon and 'kisarjarasa' were used. [358] Before the bath the body was thoroughly cleansed and then perfumed with oil, etc., (marsti, marjana, ma ) [359] and then just before the bath the body was chafed ( udvartana ) and rubbed and kneaded or cleaned with unguents ( utsadana ).[360] After the bath the body was besmeared with unguent so that the perfumes washed away in bathing were restored ( carca, carcikya, sthasaka, prabodhana, anubodha)

After the bath was over both men and women, specially the latter, "painted their faces and made use of cosmetics. Their lips were painted with lac dye (birnbadharalaktakah ) and the designs on the face and forehead were painted in black, white and red ( visesakam [361]syamavadatarunam ). The 'tilaka' was painted on the forehead and the eyes were painted with collyrium. [362] Sandal paste and musk were generally used for painting the designs.[363] The body was besmeared with sandal paste and then the designs were made in black sometimes the designs were also painted in white agallochum and 'gorocana' 'Krsnaguru',[364] saffron/ realgar and red lead [365] were also used for painting designs. The designs were painted on the arms, [366] temples,' breasts, [367] etc. Coming to the patterns we know that 'makarika' was one of the designs. In the Harsacarita [368] the crocodile embellishments on the faces of Yama's wives are mentioned ( puramandana-patrabhanga-makarika ). In the 'Amarakosa' [369] two varieties of face and breast decorations, namely, 'patralekha' and 'patranguli' are given. 'Patralekha' probably connotes the flowers or foliage drawn on the face with the help of a brush, while 'patranguli'

indicates either the designs painted with the help of the fingers or with the help of a paint stick. Four varieties of the patterns painted on the forehead, namely, 'tamalapatra', 'tilaka', 'citfaka', and 'Visesaka' are given." 'Tamalapatra' seems to indicate either the mark painted on the forehead with the juice of the 'tamala' fruit ( *Xanthochymus pictorius* ), or as is more probable, some sort of pattern cut from 'tamala' leaf and stuck to the forehead. The patterns cut from green leaves serve the purpose of decorating the forehead and face even today in Rajputana and in the country round about Mathura at the time of marriage. 'Tilaka' indicates the round mark in sandalwood, musk, red lead, etc. on the forehead. 'Citraka' perhaps indicates the pattern painted in more than one colour on the forehead. 'Visesaka' is applied as a generic term for all kinds of distinctive forehead marks. At another place the youth whom Sarasvati saw had his arms decorated with painted designs in the shape of makara of scented civet powder." Sometimes a wheel in white agallochum and other designs in 'gofocana' were painted. [370] The Creeper pattern was also favoured. Thus it is mentioned that king Tarapida's white garment received an imprint of the dark creeper painted on the breasts of the ladies of his harem ( *ullasita-kuca-krsnaguru-patralatanikitapracchadapatam* )? At another occasion king Tarapida enquired from his queen as to why she did not decorate her breasts with creeper designs. [371] The 'deva' descending from the moon to take the lifeless body of Pundarika had his shoulders marked with the crimson of the creeper painted on his beloved's breasts. The 'tilaka' or round mark on the forehead was at times black as 'tamala' bark dispensing a fragrance of civet. [372] 'Gorocana', [373] red lead, realgar and black agallochum were also used for marking 'tilaka'. Sometimes the breasts were painted with sandalwood. Above them unguent was applied. [374] In the army of Sri Harsa an array of gallants employed thick unguent to draw circular lines of camphor on their persons. Sometimes lines of thick sandal paste decorated the arms. [375] Sometimes elaborate designs ( *citravitana* ) were painted on the cheeks of the ladies. [376]

The women sometimes painted their foreheads with particular designs in sandal known as 'lalatika', and 'visesaka' with the drops of sandalwood paste. [377] The whole body was at times marked with different kinds of colour drops ( *pulakabandha* ). [378] Sandal, agallochum, musk, camphor and saffron served the purpose of anointing the body. Camphor powder ( *karpura* ) and saffron ( *amsavak* ) and saffron unguent were used as perfumes. The 'sarvatobhadra' scent [379] was prepared from 'nakha', 'tagara' and olibanum ( *turuska* ) mixed in equal parts and then treated with mace, camphor, musk and 'guda'. Another perfume known as 'yaksakardama' was compounded of camphor, agallochum, musk and 'kakkola'. [380] Besides there were perfumes in the form of ointment, oil, etc. 'Gatranulepani' was a fragrant unguent smeared on the body ; 'varti' was any cosmetic prepared from various fragrant substances in the form of sticks or pills ; 'varnaka' was a fragrant ointment and 'Vilepana' was any kind of fragrant oil for anointing the body. Various powders obtained from many fragrant substances ( *curna*, *vasayoga* ) were used for perfuming the body ( *bhavita*, *vasita* ). [381] Scenting oneself, putting on flower garlands and perfuming the body were known as 'adhivasana'. [382]

The collyrium was applied to the eyes with a collyrium stick. In the 'Kumarasambhava' [383] a woman—in order to see Siva's marriage procession having applied collyrium to the right eye ( *vilocanam daksinamanjanena* ) quickly proceeded to the window holding the collyrium stick ( *salaka* ) in the vicinity of the left eye. The application of the collyrium with a collyrium stick is also referred in the 'Harshacharita'. [384]



For cleaning and perfuming the hair at the time of bath a paste obtained from cinnamon, costus, 'renu' ( Piper aurantiacum ), nard ( nalilm ), 'sprkka' ( Trigonella corniculata ), rasa ( a species of amaranth ), tagara , and 'vala' ( Pavonia odorata ) in equal quantity, mixed with saffron filament yielded a delightful hairwash. [385]

Oil :

Scented oil was used for the hair and the body was massaged with it. A powder obtained from Indian madder, 'vyaghranakha' ( Unguis odoratus ), pearl, cinnamon and costus when mixed with oil kept in the sun, took- the sweet scent of the 'campaka' flower.[386] Another kind of oil was obtained from the powder of mace, olibanum, 'vala' ( Pavonia odorata ) and 'tagara' in equal quantity mixed with the oil and prepared in the abovementioned way. If 'vyama' ( Costus speciosus or Arabicus ) and 'katu' ( Michelia campaka ) were added the oil gave out the fragrance of 'bakula' ; costus imparted the fragrance of lotus ; sandalwood imparted the fragrance of 'campaka' and the mace, cardamom and coriander imparted the fragrance of 'atimuktaka' . [387]

The importance of flowers as an accessory in the toilet of the Indians has been noted by the poets and also depicted in the paintings of Ajanta. The use of garlands wreathed from the fragrant flowers, of chaplets and sprays stuck into the hair seems to have been an universal practice in ancient India. In south India flowers still play an important part in the toilet of the women. In the 'Meghaduta' it is mentioned that the women wore 'mandara' flowers in the hair, and pieces of 'patra' creeper and golden lotuses in the ears. [388] At another place it is mentioned that the women held lotus flowers in their hands to sport with, 'kuhda' flowers were wreathed in their hair, their faces were rendered yellow by the pollen of the 'lodhra' flowers, a fresh 'kurabaka' flower was stuck on their top knots and a fine 'sirisa' flower to their ears, and at the parting of the hair was a 'kadamba' flower. [389] The garlands ( malya, mala, srag were worn on the neck by all classes. Attendants wearing wreaths of 'bakula' flowers are mentioned. [390] Wreathed chaplets worn on the hair were known as 'garbhaka'. [391] Sometimes women wore 'malati' flowers in the ringlets of their hair. [392] Strings of flowers falling from the back of the hair were known as 'prabhrastaka', and those falling in front as 'lalamaka. [393] 'Pralamba' and 'rjulamba' were the chaplets falling on the forehead, [394] and the garland worn across the chest under the right arm and over the left shoulder was known as 'vaikaksika'. The chaplets worn over the top-knots were known as 'apida' and sekharaka. [395] In the 'Kadambari' it is said that Mudraka wore a chaplet made from fragrant 'malati' flowers. [396] Flower crests were also worn. Thus it is mentioned that Kumaragupta wore a crest of 'amalataka' flowers. [397] The mountaineers often tied their hair with a band of 'syamalata', creeper. [398] The earrings were also made from flowers and leaves. A woman named Malati wore a pendant on her right ear made from leaves and 'ketaki' flowers. [399] Another woman wore earrings made from Asoka shoots. [400] Ear chaplets of 'sirisa' [401] flowers and 'saivala' [402] were also in fashion. Garlands of cloves mingled with 'kakkola', nutmegs, camphor, etc. were used at the ceremonial occasions. [403]

Incense, aromatic woods and resins were used for perfuming the hair, cloth and living quarters by their smoke. Fumigation of the hair with the smoke of incense is referred by Kalidasa. In the Meghaduta [404] the incense smoke escaping from latticed windows used by

the women of Avanti for perfuming their hair is referred. The perfuming of the hair with the smoke of incense is also mentioned in the Ritusamhara. [405] Various formulas are given in the Brhatsamhita [406] for making incense, Satpuspa' ( Andropogon acienlatus ), and frankincense a quarter part each, 'nakha' ( Unguis odoratus ) and olibanum half part ; added to these one part of sandalwood and 'priyangu' yielded good incense. In the second formula 'guggula', 'valaka' ( Pavonia odorata ), lac, musta ( Cyperus rotundus ) and sugar were mixed in equal proportion. In the third formula nard ( mansi ), 'valaka' ( Pavonia odorata ), olibanum, 'nakha' ( Unguis odoratus ) and sandalwood were mixed in equal parts. Two formulas for the incense par excellence are also given. [407] Yellow myrobolan, 'sankha' ( Unguis odoratus ), 'ghana' ( the bulbous root of Cyperus hexastachys communis ), 'guda' ( Euphorbia antiquorum ), 'utpala' ( Costus speciosus ), benzoin ( saileya ), 'musta ( Cyperus rotundus ) ; each succeeding article increased by oneninth part over the previous one yielded a most pleasant incense. One fourth part of benzoin and 'musta' ( Cyperus rotundus ), two parts of the resin of 'kisarja' ( Vatica robusta ), 'nakha' ( Unguis odoratus ) and bdellium mixed with camphor and moulded with honey yielded an incense named 'kopacchada'. For smoking the clothes especially cinnamon, 'khasa' grass and 'patra' ( Laurus cassia ) taken in equal parts, with cardamon powder in half the quantity, mixed with musk and camphor were the ideal incense.

Betel leaf was used as it was supposed to help digestion and also as it imparted redness to the lips. A female attendant was specially entrusted with the task of carrying betel leaf ( tambula-karanka-vahini ). [408] Or the betel-leaf-bearer was a man apparently of some position, as Bana had among his friends a betel-leaf bearer ( tambula-dayaka ). [409] The betel-leaf-bearer along with other maidservants ( anganajanena ) holding clothes ( vasana ), ornaments ( abharana ), flowers, perfumes ( patavasa ), fans ( tala vrmta ), unguents ( angaraga ) and water vessels ( bhrmgara ) attended upon the king in the palace.' [410]

An important section in the Amarakosa is devoted to the various denominations of aromatic woods and resins, saffron, camphor, etc The denominations applied to certain aromatics Sometimes tetray their sources of origin as well. The saffron had eleven names, namely, ( 1 ) 'kumkuma', ( 2 ) 'kasmirajanma', ( 3 ) 'agnisikha', ( 4 ) 'vara', ( 5 ) 'vahlika', ( 6 ) 'pitana', ( 7 ) 'rakta', ( 8 ) 'sankoca', ( 9 ) 'pisuna', ( 10 ) 'dhira', and ( 11 ) 'lohitacandana. [411] No. 2 denotes that saffron came from 'Kasmira' where it is still grown, and No. 5 denotes that Bactria was also an important source of saffron. There were also six kinds of lac-dyes [412] ( 'laksa', 'raksa, jatu. 'kliba', 'yava', 'alaktaka', and 'drumamaya' ). Cloves were known by three names ( 'lavanga', 'devakusuma', 'srisamjna' ). [413] Zeodary was known by three names ( 'jayaka', 'kaliyaka', 'kalanusari' ).[414] 'Agaru or agallochum which had innumerable uses in the preparation of perfumes, pastes, unguents. etc had six names ( 'vamsika', 'aguru', 'rajarha , loha , krmija , and 'jongaka\* ). [415] In this list 'loha' ( literally metallic and hence heavy ) may be identified with 'ud gharki' in Persian ; 'krmija' may be identified with the highly aromatic resin, the outcome of the insects eating through the aloe-wood ; and 'jongaka', as we have already pointed out in a previous section, came from Burma. Then there was black aloe-wood with two names ( 'kalaguru', 'aguru' ). [416] The resin of Shorea Robusta used in the preparation of ointment and incense had six names ( 'yaksadhupa', 'sarjarasa', 'rala' 'sarvarasa', 'bahurupa y Pine resin had two designations ( 'vrkadhupa', 'krtrimadhupa' ).[417] Olibanum ( 'turuska' ) had four designations ( 'turuska', 'pinmka', 'silha', 'yavana' ). The first and fourth names clearly indicate that these were brought from outside the country, possibly from Arabia.

The resin and turpentine obtained from 'devadaru had five sanies ('payasa', 'kivasa', 'vrkadhupa', 'kivesta', and 'saraladrava') [418] used chiefly in the preparation of incense, joss sticks, etc. Musk has a very important place in the preparation of cosmetics and medicines had three names ('mrganabhi', 'mrgamada', and 'kasturi'). The aromatic fruit of clerodendron used in perfuming water, making scents, etc. had three names ('kolaka', 'kankolaka', and 'kosaphala'). Camphor which had untold uses in the preparation of cosmetics and medicines had five names ('karpura', 'ghanasara', 'sitabhra', and 'himavaluka'. Sandalwood the uses of which in ancient India one need not emphasise, both in cosmetics and medicine, had four names ('gandhasara', 'malayaja', 'bhadraiki' and 'candana'). [419] 'Malayaja' was the product of the Malaya mountains in southern India. The best variety of fine old sandalwood had three names ('tailaparnika', 'goMrsa', and 'haricandana') } The red sandalwood had five names ('tilaparni', 'patranga', 'ranjana', 'raktacandana', and 'kucandana'). [420] Nutmeg which had many uses in scenting the water, betel-leaf, etc., had two names ('jatikosa' and 'jatiphala'). [421]

Assam, in this period of Indian history as also in the preceding centuries, was an important source of aromatic woods, resins, etc. The presents from the king of Assam brought to king Harsa by Harnsavega consisted among other things of thick bamboo tubes fenced round with sheaths of 'kapotika' leaves containing mango sap and black aloe oil.[422] The agallochum trees growing in Assam, according to Kalidasa served as posts for tying the elephants of Raghu, [423] Harnsavega also brought to the court of Harsa bundles kept in sacks of woven silk ( pattasutra-sevakarpitansca ) containing jet black pieces of black aloe wood 'gosirsa candana' efficacious in inflammations, camphor, cool, pure and white as bits of ice, 'kasturikakosa' of musk oxen, 'kakkola' sprays, clove flower bunches and nutmeg clusters bristling with masses of ripe fruits. [424]

Indians, both men and women were very fond of beautiful, soft and long hair made sleek with the help of cleansing pastes and oil. The hair was also dyed with Indian madder.' The hair had various names ('cikura', 'kuntala', 'kaca', 'kesa', 'siroruha'). The mop of curled hair was 'kaisika' and 'kaisya'. Curled hair had two designations, 'alaka' ( curled lock ) and 'curnakuntala ( curly ringlets ),' the latter being the favourite manner of dressing the hair in the Gupta period. The forelock or the lock of hair falling on the forehead was 'bhramaraka', [425] and the sidelocks or the locks of hair falling on the sides were 'sikhandaka'. [426] The chignon in which Hindu women tied up their hair was known as 'kabari' and 'kesavesa.[427] The braid of hair tied with strings of pearls, etc was 'dhammilla'. [428] 'Sikha' or the hair lock worn by Hindu men on the top of the head or scalp had two other names, 'cudra' and 'kesapasi'. [429] Braided hair or the hair plaited and braided in chains were 'Veni' and 'praveniv [430] Long, clean and untangled hair was known as 'sirsanya' and 'sirasya'." In the Visnudharmottara Purana' [431] the following varieties of coiffures have been enumerated : 'kuntala' ( hair on the head ), 'daksinavarta' ( curls turned to the right ), 'taranga' ( wavy hair ), 'simhakesara' ( manelike hair falling on the neck ), 'vardhara' ( intertwined ), 'juta' (chignon ), and 'tasara' ( silky ).

The varieties of the coiffures in the Gupta period as represented in the sculptures, terracottas and last but not least in the paintings of Ajanta and Bagh are overwhelming. It would be impossible to bring together all the exquisite examples of hair dressing in the Gupta period

within the small compass of an article. We are, however, attempting to describe in the following pages the leading fashions in hair-dressing of men and women.

The following varieties were preferred by men:

( 1 ) Men in the Gupta age delighted in wearing their hair in a wig-like fashion. Coins, sculptures, terracottas and paintings, all show the partiality of Gupta men to this particular style known as 'curnakuntala'. The curled hair was generally parted in the middle and the curls allowed to fall down the back [432] ( Fig. 77, p. 137 ). In another variation of the same style the locks were allowed to fall on the shoulders—the typical example of the 'sikhandaka' style [433] In another variation of the same style the hair was parted on the left and held in place by a head band.

( 2 ) Wig-like arrangement of the hair ; a few locks coiled at the top of the crown. [434]

( 3 ) The hair was also arranged so that the curled locks fell on the forehead, and the curled side locks arranged in skeins ended a little above the shoulder [435]. In another variation of the same style, however, the locks were scattered over the shoulders [436]

( 4 ) The hair, curled or otherwise, was combed back and a knotted lock left on the top of the crown [437]; this particular mode of hair dressing was known as 'sikha'.

( 5 ) The hair was combed back covering the neck.

( 6 ) Sometimes short hair was worn with a pearl string serving as a head band. [439]

( 7 ) The sides were parted, and the middle part was arranged in a dome shape with two pearl strings encircling the crown.

( 8 ) The hair was sometimes neither curled nor parted but combed back resembling bobbed hair. [441]

( 9 ) The hair was massed on the left side' in a hemispherical dome-like manner. The artistic nature and love of decoration of the women of the Gupta period manifest themselves in the various arrangements of their coiffure. Not only was the hair arranged in various styles but also decorated with flowers and ornaments which enhanced its beauty. Often the women wore tiaras over the hair or decorated the hair partition with pearl strings. Hair bands were also used.

The main types of the coiffure of women are noted below:

( 1 ) The hair was combed back and tied with a band in a neat bun [442] In this instance the hair is not perfectly fixed. But elsewhere the hair is perfectly sleek and neatly combed with the hair band running all round the forehead and the bun [443] The bun was often fixed not with the band but with a sort of garland [444] or an ornament or a hairpin [445] The size of the bun depended on the length of the hair—the longer the hair the bigger the bun [446] Lotus and jasmine flowers were also used to decorate the bun [447]

( 2 ) The hair was combed back and coiled into two rounds [448]. The hair was either taken straight back or parted in the middle [449]

( 3 ) The hair was parted in the middle and coiled at the back with a few curls falling on the right shoulder. A hair band ran round the forehead, in the hair parting and round the coil at the back [450]

( 4 ) The hair was coiled on the head towards the right and covered with a hair net with its end tied in a looped knot on the left side [451]

( 5 ) The hair was also coiled at the top of the head [452]

( 6 ) The hair was loosely coiled at the back but a few ringlets were allowed to fall freely on the back [453]

( 7 ) The hair was tied in a neat coil at the back, but a few curls were allowed to fall on the forehead [454] covering the full forehead; sometimes there were only a few curls falling on the sides of the forehead.

( 8 ) The hair was also arranged in a sausage-like roll lying horizontally on the top of the head covered with a hair net.

( 9 ) The hair was coiled at the back leaving two curled locks falling artistically on the shoulders.

( 10 ) The hair was also arranged in a wig-like manner reaching to the shoulders.

( 11 ) The loose hair was made to fall on the back held together by a band.

( 12 ) Hair braided with ribbon and held together with a flower chaplet.

( 13 ) The hair falling down the back entwined with the hair band.

( 14 ) The hair was parted in the middle. The right half was braided and the left half fell freely on the left shoulder.

( 15 ) The hair was combed back straight.

( 16 ) The hair combed back was lightly twisted allowing a few ringlets to fall on the left shoulder. The whole coiffure was profusely decorated with flower chaplets and flowers.

( 17 ) The hair was parted in the middle allowing a few ringlets to fall on the right half of the forehead ; the hair taken back fell in curls on the shoulders.

( 18 ) The hair was combed back and a part of it arranged in a spiral shape on the right shoulder. The whole coiffure was profusely decorated with a chaplet, flowers and leaves.

( 19 ) A sort of bobbed hair plaited with bands.

( 20 ) The hair was parted in the middle with tiny curled locks falling on the forehead and the right shoulder.

( 21 ) The same style as No. 20 except that the curled locks fell on both the shoulders and the cheeks.

( 22 ) Fluttering curls falling on the back.

( 23 ) The hair partly curled and partly straight hanging down on the back.

( 24 ) Bobbed hair parted in the middle.

( 25 ) A portion of the hair curled and parted on the right, and the left part coiled in an apple-shaped knot'.

( 26 ) The curls on the head arranged in well pressed skeins falling on the back in a spiral-shaped lock".

( 27 ) A part of the hair combed to the right with a ringlet falling on the cheek ; some part of it plaited and hanging on the back.

- ( 28 ) A part of the hair coiled at the top of the head ; the rest of the bobbed hair falling on the neck.
- ( 29 ) The hair parted in the middle with the side locks falling on the shoulders.
- (30 ) Hair parted in the middle ; the left curled side-lock falling on the shoulder , the right one was plaited and fell down the back.
- ( 31 ) The hair combed back straight was coiled with a few ringlets falling on the shoulders.
- ( 32 ) The hair parted in the middle with perfectly set skeins tied at the back in a knot.
- ( 33 ) The hair parted in the middle ; the plaited right half falling on the back ; the left half falling on the chest.
- ( 34 ) The hair parted in the middle ; coiled and twisted braids falling on the shoulders.
- ( 35 ) The hair parted in the middle ; the knotted right braid with a free curl falling on the chest, the twisted left braid falling on the shoulder.
- ( 36 ) The hair parted on the left side with the braid tied in a knot ; the coiled braid on the right decorated with flowers.
- ( 37 ) The hair was parted in the middle leaving a few curls ; the left half was tied in a knot at the back and the right half was plaited and braided.
- ( 38 ) The hair was massed at the top of the crown and held together by a hair net.
- ( 39 ) The hair was parted at the left ; the right side was so parted as to form a recurving shape on the forehead.

Notes:

1. Patrick Carleton, 'Buried Empires' pp. 35-36. London, 1930
2. Ibid. p. 36
3. Sankhayana Grhyasutra, IV. 15, 6-11.
4. Marshall. Mohenjodaro and the Indus Valley Civilization, I, pp. 21-25.
5. Ibid. Vol. I, p. 26
6. Marshall, loc.cit., II. p. 467.
7. Mackay, 'Further Excavations at Mohenjodaro, Vol. I, p. 467.
8. Ibid.p. 323
9. Ibid. p. 450.
10. Ibid. p. 195.
11. Ib. pp. 319-320.
12. A.S.I. Ann. Rep., 1935-36, p. 43
13. Mackay, loc. cit., p. 475.
14. Mackay, The Indus Civilization, pp. 119-120
15. A.S.I. Ann. Rep., 1935-36, p. 43
16. Marshall, loc. cit., Vol. II, p. 691.
17. Marshall, Mohenjodaro and the Indus Civilization, Vol. III, Pl. XCVIII
18. Ib., pp. 33-34, Pl. XCIX, 5, 6, 8 & 9
19. Ib., p. 362.
20. Ib., Pl. XCIX, 1-3
21. Marshall, loc.cit. Vol. I, p. 362, Pl. XCIX, 4-6.
22. Ib., p. 343
23. Ib., p. 34.Pl. XCIV, 6, 7, 8.
24. Mackay, Further Excavations at Mohenjodaro. Vol. I. p. 264, Pl. LXXVI, 21.

25. *Ib.*, p. 541
26. *Ib.*, p. 542
27. Marshall, loc. cit. Vol. II, p. 500.
28. Mackay, loc. cit., Vol. I, pp. 468-9.
29. *Ib.*, pp. 477-478
30. *Ib.*, Vol.II, Pl.CXIV, 1.
31. *Ib.*, Vol. II, Pl. CXXX, 25.
32. Sankhayana Gr. Sutra I, II, 2.
33. Sat. Brahmana 8, 3, 16
34. San. Gr. Sutra I.12, 4.
35. A.V.XIV.1,6.
36. A.V.IX.6,11.
37. As. Gr. Sutra, III, 8,1.
38. *Ib.*, III.8,8.
39. *Ib.*, III. 8, 9.
40. *Ib.*, III. 8, 11.
41. *Ib.*, III. 8, 12.
42. *Ib.*, III. 8, 13.
43. *Ib.*, III. 8, 14.
44. *Ib.*, III. 8, 15.
45. *Ib.*, III. 8, 19-21
46. IV. 9 ; VI. 102, 3; IX. 6, 11.
47. A.V. IV.9, 10; XIX. 44, 6.
48. A.V.IV.9,1.
49. Mt. Trikakud has been identified with modern Trikota, a lofty mountain in the north of Punjab and south of Kashmir containing a holy spring. Vedic Index, I, p. 329.
50. A black ore of antimony, a tersulphide, also called 'surma' occurs in various parts of the Panjab. The ore is imported from Kandahar and Isfahan but is also obtained in great abundance in the Himalayan range. It is often confused with galena imported from Kabul and Bokhara.  
Watt, Dictionary of the Economic Products of India, Vol. I, p. 270-271.
51. A.V. XIX, 44. 1.
52. Vaja. Sam. XXX, 14.
53. IV. 5,3.
54. Also known as 'kausika'. The gum is obtained from a small tree, 'mukul', found growing in the arid zones of Sindh, Kathiawar, Rajputana and Khandesh. The gum is of brown or dull green colour. It is sometimes used as cheap substitute for myrrh.  
Watt, loc. cit., I, pp. 366-367.
55. Tandy Brahman., XXIV.13, 4.
56. VI.102, 3.
57. V.4.
58. This is the root of *Saussurea lappa*, a tall perennial growing on the open slopes of the valley of Kashmir and other high valleys of that region. In the Roman Empire it was used as a culinary spice entering into many of the ointments. It was used also as one of the ingredients of anointing oil of the Hebrew priest (Exod. XXX, 24). See Schoff, *Periplus of the Enrythrean Sea*, 39, pp. 168-169.
59. V.4, 1.

60. V.4, 9.

61. V. 4, 8.

62. Nard (the root from the low lands, as distinguished from spikenard, the leaf or flower from mountains, a totally different species). This is the root of ginger grass, native in western Panjab, Baluchistan and Persia. From the root of this grass was derived an oil which was used in Roman commerce medicinally and as a perfume and as an astringent in ointments. Schoff, loc. cit., 39, p. 170.

63. Careya Arborea. Frequently growing in the Sub-Himalayan regions from the Jamuna eastwards, and in Bengal, Burma, Central, Western and Southern India, ascending to 4500 feet in altitude.

Watt, loc. cit., Vol. II. p. 157.

64. Sarkar, Some Aspects of the earliest Social History of India, p. 71.

65. Ib., p. 72.

66. Ib., p. 73.

67. R.V. VII. 33, 1; 83, 8.

68. Vaj. Sam. XVI, 43.

69. Sarkar, loc. cit., p. 71.

70. A.V.VI, 68

71. A.V.VI, 68, 1.

72. Ib.

73. XIV. 2, 68.

74. Jataka I. pp. 137, 108; III, p. 451; IV, p. 365; V, p. 177, 187 ; VI, p. 144.

75. Khuddaka Patha (P.T.S.), pp. 1, 37.

76. Brahmajala Sutta, Vol. 1, p. 7.

77. Jataka. I. pp. 137, 138; III, 451; IV, p. 365; V, pp. 177, 187; VI, p. 144.

78. Fick, Die Soziale Gliederung, etc., pp. 287-88.

79. Cullavagga, V. 1, 1.

80. Ib. V. 1, 2.

81. Ib. V. 1, 3.

82. Ib.

83. Rahula Sankrtyayana, 'Vinaya-pitaka' (Hindi translation), p. 419, fn. 2.

84. Cullavagga, V. 1,4.

85. Cullavagga, V. 11, 6 and VI. 3,2.

86. Ib., V. 1, 4.

87. Ib., V. 1, 5.

88. Cullavagga, X. 27, 4.

89. Ib., V. 14, 2-5

90. Ib., VII. 8, 2.

91. Ib.

92. Ib., VIII. 8, 2.

93. Ib., X. 27, 4.

94. Ib. X. 27, 4.

95. Vol. I, p. 7.

96. Anjana-manosila-haritala-himgulaka', J.V. p.416.

97. Mahavagga, VI. 11, 1.

98. Ib., VI. 12, 1-4; also see Cullavagga, V.28, 2.

99. Vol. I, p. 7.



100. Cullavagga X. 10, 4.
101. Ib., V. 2, 5.
102. Ib.
103. J.V. p. 302, G.37; VI, 232. G. 1024 (kuddamukhi); cf. J.B.O.R.S., XII, p. 440.
104. Cullavagga, V.2,5.
105. I., V. 2, 5.
106. Ib., X. 10, 3.
107. J.V.P. 204, G. 43; 215, G.65 (tambanakha); 302, G. 39; VI, p. 456, G. 1617.
108. J.I. pp. 179, 319; III. p. 41, etc.
109. J.I. pp. 95, 120 (puppharamas); II, p. 321; IV, p. 82, etc.
110. J.I. p. 331; V, p. 302, G. 40.
111. J.I. pp. 129, 238; II. p. 372, etc.
112. J.V. pp. 215. G. (bahamudu candanasara-litta), 302, G. 38-41 (kese thane: sonim-mudu-candanasara-litta).
113. J.VI. p. 336
114. Ib.
115. J.VI.pp. 530, G. 2025; 535, 82, G. 2074, etc.
116. J. I. p. 290 – ‘gandha- dhupa-cunna-kapuradini’; IV, 82, ETC.
117. Cullavagga, V. 27, 3.
118. Ib., V. 27, 5.
119. J. III.p.11; V. pp. 131, 309, 510; Cullavagga, v. 27, 4.
120. J.V. pp. 156, G, 115, 203, G. 34 (dvedhasiro sadhu-vibhatta-rupo).
121. Vol. I. p. 7.
122. Cullivagga, V. 2, 3.
123. Ibid., IV. 2, 3.
124. J. II, p. 297; IV, pp. 7, 270, 335, 440, etc.
125. Cullavagga, V. 2, 4.
126. J.V. p. 302, G. 37; VI. 223, G. 964.
127. Cullavagga, V.27.
128. Ibid., V. 27, 2.
129. Ibid., V. 27, 6.
130. Kautilya, Arthasastra (tr. by Sama Sastri), p. 42. 3rd. ed.
131. Ib., p. 42.
132. Ib., p. 139.
133. Ib., p. 43.
134. Megasth, Frags.17; Strabo, XV, C. 710.
135. Arthasastra, p. 56. 136. Kalaparvata or Kalapabbata, from where this particular variety of sandalwood was obtained is also mentioned in the Jataka stories Vol. VI; 265 ; see also 'Mahavastu II; 300 where it is described as a mountain in Himavant which was situated in the table-land of Manosila ; it is mentioned in the Jatakas as a mountain near the Anottata lake in the Himavant ( J, I, p. 232 ; III, p. 379 ; V, pp. 392, 423 ) The realgar which is named manah-sila\* in Sanskrit and ‘mainsil’ in Hindi has taken its Sanskrit designation from the name of the place of its origin. Realgar is native in Yunnan, Kwei-chaw and Eansut. Pure massive realgar in the collection of the Indian Museum, Calcutta, was obtained from Munsiri in the northern part of Kumaon from where it is brought in small quantities by the Bhutias for sale at the Bagesar fair. (Watt, ‘Dictionary of the Econ. Products of India, IV, Part I, p. 399 ; Ball, ‘A Manual of the Geology of India’, Part II I, p. 162 ). The modem Munsiri

which seems to be the corrupt form of 'manahsila' may therefore be identified with the Manosila of the Jataka stories. If our identification of Manosila be correct then Kalaparvata should be located in Kumaon. Ibn Batuta also speaks of the mountain which was situated at a 10 days journey from Delhi. Prof. Hodivala takes it to be the mountains of Garhwal and Kumaon, "the outer range of the tertiary hills which runs parallel to the foot of the Himalayas, separated from it by valleys or dunes\*'. In other words it is the sub-Himalaya of the modern geologists. Prof. Hodivala, however, rejects the literal meaning of Karachal which means 'black mountain and instead derives the name from Kurmacala, the ancient Hindu name for Kumaon or from Gargacala ( Prof. S. H, Hodivala, 'Studies in Indo Muslim History' pp. 294-295, Bombay 1939 ). No sandalwood trees to our knowledge are grown now in the sub-Himalayan region.

137. It was supposed to be the product of the 'bowl-shaped mountain' which I am unable to identify.

138. This variety of sandalwood came from the vicinity of Sitodaki, a river in the extra-Gangetic country. The exact location of Sitodaki or Sitoda river is given in a 'sloka' of the 'Katha-saritsagara', XVIII, 4, 233-234. The couplet gives us two points about the location of this river; it should be located in some country across the Bay of Bengal; and secondly, it was in the vicinity of a city named Karkotaka. Prof. Rhys David in 'The Questions of King Miiinda', p. XLII, has Karkota on the coast of India as the probable place corresponding to Takkola which occurs in VI, 21 of the 'Milinda-Panha', and this is also philologically possible in view that 'Takkola' and 'Kakkola\*' are two forms of the name of one city (Bagchi-Pre Aryan & Pre-Dravidian in India, p. 98 ). Gerini, however, identifies Karkota with Takola of Ptolemy, which was an important port on the ship route to the east between Bengal and China. Gerini locates the mart of Takola in the neighborhood of present Ranong and at the mouth or inside of Fak-chan inlet, because the Pak-chan estuary forms a splendid harbour which must have been used by ships from a very early period since it was the terminus of a much frequented land-route across the Kralsthmus, while Un ore abounds in the vicinity, at Mali van, Ranong and all over the country. If Gerini's identification of Takola mart with Karkota is correct then the river Pak-cha may be Identified with bitoda or Sitodaki. But one cannot be absolutely certain of this identification as several ports with name of Takola exist on the western coast of the Malay Peninsula, First or Takkula near the present Ayetthema (Ayetthim) in the Sittong sub-division of the Kakkola Shwegyin district identified by Gerini (Gerini, loc. cit., pp. 85). if locate Takkola or Kakkola in Lower Burma, then the river Sittong becomes our Sitoda or Sitodaki river.

139. The sandalwood grown on Nagaparvata. There is a hill between Ajmir and Pushkar known as Nag-pahar but it is doubtful whether sandalwood was ever grown there. It is more possible that the Nagaparvata which grew sandalwood was situated in the Naga Hills of Assam, which is a hilly district In Eastern Bengal and Assam. Assam as mentioned in the Mahabharata and the later literature was one of the most important sources of aromatic woods and resins.

140. This variety of sandalwood came from Sakala, the modern Sialkot.

141. Arthashastra, loc. cit., p. 79.

142. A large evergreen tree of Sylhet and Tenassarim ; distributed to the Malaya Peninsula and Archipelagos. According to Roxborough this much prized wood is obtained from Eastern

India and from the forests to the south and south-east of Sylhet extending through Manipur, Chittagong, Arakan to Mergui and Sumatra. From India it finds its way to China and from Cochin China it was first re-exported to Europe ; hence in all probability the association of the plant with that country.

143. See note on Jongaka, a variety of sandalwood.

144. In the history of the Tang dynasty a state named J'o-yiiian or Nou-t'o-ylian, is mentioned which sent an embassy to the Chinese court between 627 and 649 A. D. Depending on the old Chinese pronunciations of T'o-yiiian, Gerini suggests the identity of T'o-yuan with the ancient Peguan town and district of Dong-wan, better known in European publications as Dong-wun or Dun-wun. Less probable guesses are Dagon ( Rangoon ), Dong-yin, Taungu and Tavoy. ( Gerini, loc. cit., pp. 830-831 ).

145. Eaglewood is the chief product of the kingdom of Kumar located by Gerini from Kampot to ( Khmau ) ( Gerini, loc. cit., p. 202 ff. ; Ibn Khurdadbih expressly states the Qumari aloe-wood in Arabia was so called because it came from Qumar a country three days' journey from Sanf, i. e. Champa ( Journal Asiatique, 1865, 1, p. 291 ) quoted by Hodivala, loc. cit., p. 8. Eaglewood forms one of the principal products of Champa to this day in the Bin-thwon district where the last remnants of Cham are found. The care of gathering this product is confined to certain Villages, the hereditary chiefs of which-called 'masters of eaglewood'-when entering on their duties offer worship to the deities of the agallochum trees on certain sacred hills. That the hill-tract of Chan-Ch'ing grew scented wood is further supported by Ma Tuan-liu. ( Quoted by Gerini, loc. cit., p. 278 ).

146. Ibid., p. 80.

147. Ibid., p. 80.

148. Ibid., p. 80.

149. Arthasastra, p. 80. fn. 1

150. Ib.

151. Ib. ; Purnadvipa may be identified with modern Purnea in Bihar.

152. Different commentators have assigned different meanings to the word ; some take it for camphori some for Takkola, some for orlvasa, and others for red sandalwood and so on. Arthashastra p. 80, fn. 6

153. Ib., p. 80.

154. Mahabharata, IV, 8, 16. Bhandarkar Oriental Institute Ed.

155. Santi Parva, quoted by the Sabdakalpadruma

156. Cunningham, The Stupa of Bharhut, pp. 39-40

157. Cunningham, loc. cit., PL LII, fig. 1,

158. Ibid.

159. Barua, Bharhut, Vol. III, PL XXIII, 19 top.

160. Barua, Ib., PL XXX, 23 left side

161. Barua, Ib., PI, XXXIX, 34.

162. Barua, Ib., PL XXX. 23.

163. Fergusson, Tree and Serpent Worship, PI. XXY. fig. i.

164. Ib., PI. XXXII, fig. 2.

165. Ib.

166. Ib, PI. XXXII, 2.

167. Ib., PI. XXXV, fig. 2.

168. Ib.

169. Ib., PI. XXV, fig. 1.

170. Ib.

171. *Ib.*, Pl. XXXII, fig. 1.
172. *Ib.*, Pl. XXXIV, fig. 2.
173. *Ib.*, Pl. XXXIV, fig. 1.
174. *Ib.*, Pl. XXXIV, fig. 2.
175. Mahabharata, II. 30, 28. ( Poona edition)
176. *Ib.*, II. 52. 10. 2.
177. *Ib.* II. p. 52, 33-34
178. Warmington, 'Commerce between India and the Roman Empire, p 238,.
179. *Ibid.*
180. Kamasutra, 1. 4, 8.
181. Kamasutra, 1. 4, 8 (Benares edition, V. S. 1956 )
182. *Ib.*, 1.4, 16.
183. *Ib.*, L4, 17.
184. Markandeya Purana, quoted by B. L. Mitta in 'Indo Aryans' Vol I p 279
185. Kamasutra, IV. 1, 13.
186. Vagbhata, 'Astanga-hrdya', III, 11.
187. *Ib.*, III, 20.
188. *Ib.*, III, 33-41.
189. *Ib.*, III, 47
190. Vagbhata, *Ib.*, III, 53.
200. Silappadikaram, I, p. 90. Tr. by V. R. Raraachandran Dikshitar, Madras, 1939.
201. *ib.*, v, p. 110
202. *Ib.*, VI, 126
203. *Ib.*, XIV, p. 204, fn. 1.
204. Susruta, 'Cikitsasthana', XXIV, 4. Tr. by Kunja-lal
205. It is difficult to identify the 'ksira' tree as the name was applied to *Aaclepia rosea*, *Mimosa kanki*, 'gigantic swallow wort, *Euphorbia*, etc
206. Susruta, loc. cit., p. 8.
207. *Ib.*, 31.
208. *Ib.*, 33.
209. Divyavadana, p. 403, 1. 25
210. Agnipurana, CCXXII, 21-22.
211. Susruta, loc. cit, 13.
212. A. S. I, Ann. Rep.. 1902-3. p. 184.
213. Grunwedel, "Buddhist Art in India", p 186. Fig. 132
214. Agnipurana, GCXXII. 21-22
215. *Ib.*, 27- 29.
216. Flesh rubber excavated at Sirkap. A. S. I., Ann, Rep., 1915-16, p. 15, Pl. VIII.
217. The Perfumer was known as 'gandharika', and a whole story in the Divyavadana is devoted to the perfumer Gupta and his sons.
218. Susruta, loc. Cit., p. 39.
219. Susruta, *Ib.*, 40-41.
220. Divyavadana, p. 215, 11. 27-29.
221. Divyavadana, p. 315, 11. 13-16.
222. *Ib.*, pp. 30-31.
223. The perfumer was known as 'gandhika' and a whole story in the 'Divyavadana' (XXVI) is devoted to the perfumer Gupta and his sons
224. Susruta, loc., cit., p.39.

225. Susruta, Ib., 40-41.
226. Divyavadana, p. 215, 11. 27-29
227. Divyavadana, p. 315, 11. 13-16.
228. Ib. pp. 30-31.
229. Silappadikaram, IV, p. 107, fn.4.
230. Ib., XIII, p.195.
231. Ib., XXII, p.256
232. A. S. I., Ann. Rep.,1902-3, p.184.
233. A. S. I. Ann. Rep. 1928-29, p.52.
234. Divyavadana, p.158, 1.15.
235. Susruta , loc. cit., 9-11.
236. Ib., 41-42
237. Ib., 9-11
238. Antimony rods with incised cross hatchings from Bala-Hisar, A.S.I., Ann. Rep., 1902-3, p.153; antimony rods from Dharmarajika stupa, Taxila, A.S.I., Ann.Rep.,1915-16, p.10; from Sirkap, A.S.I., Ann. Rep., 1914-15, p.17, Pl. XXIV, 33, also p.23, Pl. XXIV, 26; antimony sticks found at Besnagar, A.S.I., Ann.Rep.,1913-14, p.218.
239. Bharata, Natyasastra, XXIII, 28-33, Ed. by Batuknath Sarma and Baladeva Upadhyaya, Benares, 1929.
240. Ib., XXIII, 30-31.
241. Kamasutra, I, 3, 16.
242. Saundarananda, IV. 20.
243. Kamasutra, II. 5,19.
244. Saundarananda, IV. 13-16
245. Ib., IV. 20
246. Silappadikaram, II, p.93.
247. Ib. XVII, p.234.
248. A.S.I., Ann. Rep., 1928-29, p.52.
249. Silappadikaram, VI, p.126.
250. Ib., I. 58-80.
251. Saundarananda, I, 7.
252. Kamasutra, I, 3, 16.
253. Bharatiya Natya-Sastra, XXIII, 11.
254. Kamasutra, II. 5, 19.
255. Silappadikaram, p, 77.
256. Ib., p.78
257. Ib., fn. 4.
258. Ib, IV, p. 108.
259. Ib., IV, p. 107
260. Bhasa, Carudatta, I, 26. Trivandrum Sanskrit series
261. IV, 25.
262. CCXIV, 23-25
263. Ib., CCXXIV, 26.
264. Lalitavistara, p. 343, 11, 7, 8.
265. Ib., p.226, L.1.
266. Sirkap, Taxila, A.S.I., Ann. Rep, 1914-15, p. 16, Pl. XX, 2; also Ib., p.22, Pl. XX, 1.
267. Susruta, Cikitsasthana, XXIV, 12.
268. Agnipurana, CCXXIV, 34-37

269. *Ib.*, 39.
270. *Ib.*, 40.
271. *Ib.*, CCXXIV, 41.
272. *Natyasastra*, XXIII, 64.
273. *Ib.*, XXIII, 65.
274. *Ib.*, XXIII, 66.
275. *Ib.*, XXIII, 67.
276. *Silappadikaram*, VIII, p.147.
277. 'Kaliththokai', ss. 32, 55: also Kanakasabhai, "The Tamils Eighteen Hundred Years Ago", p. 118
278. *Silappadikaram*, II, p. 95.
279. Foucher, *L'iconographie Bouddhique du Gandhara*, II, fig. 392.
280. *Ib.*, II, fig. 395.
281. *Ib.*, II, fig. 385.
282. *Ib.*, II, fig. 358.
283. *Ib.*, II, fig. 360.
284. *Ib.*, II, fig. 361
285. *Ib.*, fig 362.
286. *Ib.*, fig. 363
287. *Ib.*, fig. 357.
288. Marshall, 'The Stupa and Monastery at Jaulian'. Pl. XX,f, k;n ; XXI g-i.
289. *Ib.*, Pl. XXI, s.
290. *Ib.*, p. 29.
291. Foucher, loc. cit., II, fig. 310.
292. *Ib.*, I, figs. 162,244.
293. *Ib.*, II, 318-319.
294. *Ib.*, II, fig. 385.
295. *Ib.*, figs. 378, 179, 447.
296. *Ib.*, figs. 179, 447
297. Vogel, 'La Sculpture de Mathura', Pl. XLV.
298. Foucher, loc. cit. II, figs. 377, 382-385.
299. Schoff, 'The Periplus of the Erythrean Sea', p. 191.
300. V. S. Agrawala, *Handbook of the Sculptures in the Curzon Museum of Archaeology, Muttra*, Pl. XI.
301. *Ib.*, Pl. XVI, fig. 32, to the left, top panel.
302. Vogel, 'La Sculpture de Mathura'. Pl. LXVI, h.
303. Smith, *The Jain Stupa...*, Pls. XXXIV and XXXV.
304. Agrawala, loc. cit. Pl. XIV.
305. *Ib.*
306. Vogel, loc. cit., Pl XIX, a.
307. Agrawala, loc. cit., Pl. XI.
308. Vogel, Loc. cit., Pl. XVII.
309. Smith, Loc. cit, Pl. LXI.
310. Fergusson, *Tree and Serpent Worship*, Pl. LXXIV.
311. *Ib.* Pl. LXXIV.
312. *Ib.*, Pl. LXXIV.
313. *Ib.*, Pl. LXXXIV.
314. *Ib.*, Pl. LXXIII, fig. 2.

315. *Ib.*, Pl. LXXIV.
316. Fergusson, loc. cit.
317. *Ib.*, Pl. LVII.
318. *Ib.*, Pl. LXVI.
319. *Ib.*, Pl. LXII.
320. *Ib.*, Pl. LXXI.
321. *Ib.*, Pl. LXXII, fig.2.
322. *Ib.*, Pl. XXXV.
323. *Ib.*, Pl. LXXII, fig. 2.
324. *Ib.*, Pl. LXXII, fig. 2
325. *Ib.*, Pl. LXXXV.
326. *Ib.*, Pl. LXXII, fig. 1.
327. *Ib.*, Pl. LXXII, fig. 1.
328. *Ib.*, Pl. LXXIV.
329. *Ib.*, Pl. LXXIII, fig. 1.
330. Longhurst, loc. cit. Pl. VII (a)
331. Fergusson, loc. cit. Pl. LXXIV.
332. *Ib.*, Pl. LXXII, fig. 2.
333. A.S.I., Ann. Rep., 1928-29, p. 51, Pl. XXI, 13-14.
334. A.S.I., Ann. Rep., 1926-27, p. 119.
335. A.S.I., Ann. Rep., 1914-15, p.20. Pl. XXIV, 29. From Sirkap, Taxila
336. A.S.I., Ann. Rep., p.16, Pl. IX, 101.
337. A.S.I., Ann. Rep., 1915-16, p.17, Pl. IX, 3.
338. *Ib.*, p.20, Pl. XV
339. II, 4
340. A.S.I., Ann. Re., 1914-15, p. 17, Pl. XXIV, 34; *Ib.*, p. 23, Pl. XXIV, 28.
341. Kadambari, p. 31, Ed. by M.R. Kale, Bombat, 1928.
342. *Ib.*, p.32.
343. P. 137; Lady Herringham, 'Ajanta Frescoes', Pl. XII.
344. Kadambari, loc. cit., p.34.
345. Harsacarita, p. 198. Tr. by Cowell and Thomas, London, 1897.
346. *Ib.*, pp. 16-17.
347. *Ib.*, p.17.
348. *Ib.*, p.41.
349. Meghaduta, II, 38.
350. *Ib.*, II, 71.
351. Amarakosa, II, 6, 135.
352. *Ib.*, LXXVI, 6.
353. Harsacarita, p. 11.
354. Amarakosa, II, 6, 135.
355. *Ib.* II, 6, 136.
356. *Ib.*
357. Kadambari, p. 20. Ed. Kalw, Bombay, 1928.
358. Harsacarita, p. 124.
359. *Ib.*, p. 230.
360. *Ib.* p. 262.
361. *Ib.* p. 96.
362. *Ib.*, p. 115, Sakuntala, IV, 18.

363. Kadambari, p. 320. Bd. by Parab.
364. Harshacarita, p 124.
365. Ib, 34.
366. IV, 5; V, 12.
367. Brhatasamhita LXXVI, 8-9.
368. Ib., LXXVI, 10-11.
369. Harsacarita, p. 263.
370. Ib., p. 32.
371. Kadambari, p. 154.
372. Amarakosa, II, 6, 123- 124.
373. Ib., II, 6, 125.
374. Ib., II, 6, 125.
375. Ib., II, 6, 125- 126.
376. Ib., II, 6, 125- 126.
377. Ib., II, 6, 127.
378. Ib., II, 6, 127-128/
379. Ib., II, 6, 128.
380. Ib., II, 6, 128-129.
381. Ib., II, 6, 130.
382. Ib., II, 6, 131.
383. Ib.
384. Ib., II, 6, 132.
385. Ib., II, 6, 132.
386. Harsacarita, IV, 1.
387. Raghuvamsa, IV, 1.
388. Harsacarita, p. 214.
389. Kadambari, p. 142.
390. Amarakosa, II, 6, 95.
391. Ib.
392. Ib, II, 6, 96.
393. Ib.
394. Ib.
395. Ib., II, 6, 97.
396. Ib.
397. Ib.
398. Ib, II, 6, 98.
399. Ib.
400. III, 37, 38.
401. Herringham, 'Ajanta 'Frescoes', Cave I, Pl. X (12).
402. Ib., Cave I, Pl. XII (14).
403. Ib., Cave XVII, Pl. III (4).
404. A. S. I. Ann. Rep. 1911-12, Pl. XXVI, 76; Ib., Pl. XXVII, 84.
405. "The Bagh Caves", Pl. H.
406. Ib., Pls. D and E
407. Herringham, loc, cit., Cave XVII, Pl. XXIV (26)
408. Ib., Cave XVII, Pl. III (4).
409. Ib., Cave I, Pl. XI. 13
410. Ib., Cave XVII, Pl. I, 1.



411. IB., Cave XVII, Pl, XXIV (26)
- 412.A. S. I., Ann. Rep., 1911-12, Pl. XXVII, 99.
413. Herringham, loc. cit, Cave I, Pl. XXXVIII (45)
414. Ib. Pls. D and E.
415. Herringham, loc. cit., Cave XVII. Pl. II (2)
416. "The Bagh Caves", Pls. D and E.
417. Herringham, loc, cit, Cave I. Pl. X (12).
418. Ib., loc. cit, Cave XVII, Pl. VI (7)
419. Ib., Cave XVII, Pl. II (3)
420. Herringham, loc. cit., Cave XVII, Pl. XVII (19).
421. 'The Bagh Caves'. Pls. D and E.
422. Ibs, Pls. D and E.
423. Herringham, loc. cit., Cave XVII, Pl. XXXVII (44).
424. Ib., Cave XI, Pl. XXRVII (42)
425. Herringham, loc. cit. Cave I, Pl. XIII (15).
426. Ib., Cave i, Pl. XIV (16)
427. Ib. Cave XVII, Pl. V. (6)
428. Ib. Cave I, Pl. XIV (16)
429. Ib., Cave XVII, Pl. V (6).
430. Ajanta, Cave I. From the line drawing in the Prince of Wales Museum, Bombay.
431. Ib.
432. Herringham, loc. cit., Cave XXV (27)
433. Ib., Cave I, Pl. XII (14).
- 434 Ajanta Cave I. From the line drawing in the Prince of Wales Museum.
- 435 Herringham, loc. cit., Pl.XXVIII (31)
436. Ajanta Cave II.
437. Herringham, loc. cit., Pl. XXV (27)
438. Ib., Cave XXVII (29).
439. Ib.
440. Ib.
441. Ib.
442. Ib.
443. Ib., Cave I, Pl. XV (17).
445. Ib.
446. Ib. Cave XVII, Pl. XXXV (39)
447. Ib., Cave XVII. Pl. III (4).
448. Ib., Cave XVII, Pl. XXXIX (48)
449. Ib., Cave XVII, Pl. XXIV (26)
450. Ib., Cave XVII, Pl. XXIV (26)
451. Ib., Cave I, Pl. XIII (14).
452. Ib.
453. ASI., Ann. Rep., 1911-12, Pl, XXVII, fig. 100.
454. Ib., Pl. XXVI, 67.

