



# CANNABIS.

*by*

*Charles. Mason - Deane.*

1862.



# *Cannabis Indica*

by

Charles. Maclen. Deane.

1862

*In lene tormentum ingenio admoves  
Plerumque duro. In sapientem  
Curas et arcanum jocosum  
Consilium regis Lyco-*

*In phem reducis mentibus anxio  
Viresque; et addis cornua pauperi  
Post te neque iratos trementi  
Regum apices; neque militum arma.  
(Virg. lib 3 ode xxj)*

The subject of this paper is Cannabis, or Hemp. It might probably be asked, why I have chosen it, since so excellent and valuable a Thesis was presented to the Medical Faculty in 1850 by Dr. A. Christison on the same subject. My reasons are two-fold; when I commenced it, and indeed until I had collected nearly the whole matter contained in this dissertation, I was ignorant at the time that a treatise had been written on Cannabis, and presented as a graduation thesis; and when I became aware of it, there was not sufficient time remaining to rechoose, and write upon something different, since the time for giving in the thesis, was fast approaching. - Secondly; I hope to be pardoned if I say the subject was chosen from motives of a selfish nature, and to gratify my own interest and curiosity. Intending at some future period to investigate it still more, I thought it behoved me to obtain all the information possible, regarding it, whilst I had the advantage of so excellent a library as that of the Edinburgh University to refer to. - - Hemp has of late years excited considerable attention not only in the medical world, but

also in the general community; for in this age of literature, when learning is cheap, and the facilities for acquiring it so easy; nothing of any moment, whatever its nature, can be discussed, without every one having ample opportunity for acquiring a thorough knowledge of it: - so it is with hemp - who has not heard of its marvellous properties?

The History of Hemp possesses considerable interest, extending as it does over a period of more than 3000 years, during the latter half of which, its use seems to have been <sup>nearly</sup> as well known as at the present day. - It is curious that nowhere in the Scriptures is any mention of it. - The celebrated historian Herodotus who lived about  $4\frac{1}{2}$  centuries before the Christian era, is the first individual who speaks of it; - and from what he says, we shall find that hemp was not only ~~only~~ used in the construction of fabrics, the manufacture of which had arrived to a very high state of perfection; but also that the properties of the plant (physiological) were also known - He informs us that the Scythians, after burials, and after having performed sundry burial rites, erect three rods in the ground, meet-

ing each other at the top, around which they closely arrange woollen cloths, and on a dish placed in the middle of the tent, they place red-hot stones." ("In this country, they have a kind of hemp, very similar to flax, except as regards thickness and height, in which respect the hemp far exceeds. It grows spontaneously; and is also cultivated:— from it the Thracians make garments resembling linen, which no one unless experienced could tell whether they were linen or hemp; also that any one who had never seen hemp, would positively assert them to be linen.") "When however, the Scythians have obtained some hemp-seed, they take it beneath the cloths, and throw it onto the red-hot stones, which, whilst it sends forth much smoke, produces such an amount of vapour, that no profuse sweating bath could excel it; and they delighted with the vapour, raise a shout, and this they do instead of washing, for they never bathe themselves with water." He also informs us that the women make a lene or epithem with the seed, pound up in water along with cypress, cedar, & frankincense, with which they besmeare their bodies and faces — — Pausanias about the same

time says that the best hemp was obtained from Elis (a country of Peloponnesus, situate in western Arcadia). Dioscorides states that by the command of Hiero second, a large ship called Syracusia had hempen ropes which came from the region of the Rhone. - Antomedon in a satirical epigram, complains of a bad dinner given him by one of his acquaintances, and compares the stringy cabbages to hemp. -

Pliny says there was a plant called hemp, which was remarkably useful for making ropes. The best hemp was obtained from Mylasa and Alabanda, (both inland towns of Caria) and a fine quality was also obtained from the country of the Sabines. The seed (he says) makes men impotent; the expressed juice will extract worms from the ear, though giving ear-ache in return; the infusion of the plant will coagulate water, hence it will stop diarrhoea in animals. A decoction will relax stiff joints, cure gout, and similar diseases; and is useful when applied to burns, provided that they be not allowed to become dry. - It would seem probable that he is confounding two different plants, not only the real hemp but also the  $\kappa\alpha\upsilon\tau\alpha\ \beta\iota\varsigma\ \alpha\gamma\pi\iota\alpha$  or

hemp mallow. Dioscorides describes two kinds of hemp the  $\kappa\alpha\upsilon\tau\alpha\beta\iota\varsigma$  ~~καυταβις~~<sup>καυταβις</sup> and the  $\kappa\alpha\upsilon\tau\alpha\beta\iota\varsigma$   $\alpha\gamma\pi\iota\alpha$ , the cultivated and the wild, of the latter I shall say nothing, as it implies the hemp-mallow, ~~which~~ is not in any way connected with hemp.

Regarding the real hemp he says, after describing its botanical characteristics, ~~that~~ that the expressed ~~seed~~ juice of the seed, when dropped into the ear, allays ear-ache. - Galen says, that hemp seed dispels flatus. - also in his article on food, that hemp-seed is difficult of digestion, hurtful to the stomach, and head; that it excels as an inebriant, and especially when largely taken, it attacks the head, and sends its vapours to it. - it also imparts a glow, and is not without medicinal properties. -

Strabo says that Colchis in addition to wax, and pitch produced hemp. - Columella says that hemp should be sown in a rich, well manured moist, flat, and well cultivated soil, and in the latter part of February, or the beginning of March.

Many authors suppose that the  $\iota\epsilon\tau\eta\epsilon\upsilon\theta\epsilon\varsigma$  of which we read (in Homer) which Helen gave to Telemachus in the house of Menelaus, to port

his troubled mind, was a compound of hemp: His certain that whatever it was, Helen obtained, <sup>it</sup> from Egyptian Thebes, a place ~~which was~~ then celebrated for the number and virulence of its plants. I as-  
 cribes the derivation of the word to be  $\nu\eta$  not, and  $\pi\epsilon\rho\theta\omicron\varsigma$  prief, and which would rather seem to in-  
 dicate a preparation than a plant: he says it is impossible to come to a satisfactory conclusion, but he inclines to the belief that it was the poppy or some preparation of it. - An extract from Dr. Paris' Pharma-  
 cologia, will help to confirm this; "it was possible that Helen mixed it with wine, and gave to the guests of Chinalaus under the expressive name of nepenthes to drive away their cares, and increase their hilarity: and this conjecture receives much sup-  
 port from the fact that the nepenthes of Homer was obtained from Thebes in Egypt, (hence the tincture of opium has been called the Thebaic Tincture)." Galen speaking of nepenthes says it is a herb which when infused in wine, dispels sadness, and induces forgetfulness of all evils. - some say it is Bugloss, others Helenium; the latter opinion seems the more probable, for nothing else can be supposed, than that Helen gave ~~her~~ threw into the wine Helenium,

\* It was a custom at Jerusalem many centuries before the Christian era, to administer preparations of hemlock to prisoners, about to suffer death -

(whose name it bore): he evidently alludes to the Tru-  
 low Helenium, or Elecampane. - I would be incli-  
 ned to think that it was either opium, or hemp, and  
 judging from the nature of the country, and many other  
 circumstances, that it was the latter. - Suppo-  
 sing it to have been hemp, then its properties must  
 have been known above 3000 years ago, before  
 the siege of Troy, at least 1200 years. (B.C.)

By some commentators it is supposed to have been  
 the active ingredient in the potion offered to our Saviour,  
 immediately before his crucifixion, and this supposition  
 is to a certain extent borne out by others. - It would  
 appear, that two different drinks were used on the  
 occasion of his death, one given offered him when  
 about to be crucified, and the other immediately  
 before he expired: We know that it was an ancient  
 custom for individuals who had to undergo an ag-  
 onizing death, to obtain either from friends or secret-  
 ly some ingredient whereby they might deaden their  
 sensibility, and thus render them<sup>selves</sup> less sensible to  
 pain, and it is not unlikely, judging from this  
 circumstance and from others about to be related,  
 that the former preparation might have been pre-  
 pared by kind friends, in order to stupify him, &

that so he might not feel the pangs of the fearful  
 mode of death he was about to suffer. This prepa-  
 ration (using St Charks account of it) was composed  
 of wine mingled with myrrh: (now the word ~~the~~  
 myrrh in the original, does not only signify the sub-  
 stance known by that name but also anything bit-  
 ter) again we are told that he tasted it not, co-  
 incidently, because he intended to bear the whole in-  
 fliction, and that it should in no degree be lessened.  
 We might apply to this custom the 6<sup>th</sup> verse of  
 the 21<sup>st</sup> Proverb - "Give strong drink unto them  
 that perish." - Of the second preparation (which  
 was given him by means of a sponge fixed on a  
 long rod, whilst he was on the cross, and immedi-  
 ately after he had called out, which occurred a  
 few instants before he died) he tasted, in order  
 that the prophecy might be fulfilled; "They gave  
 me also gall for my meat and in my thirst  
 they gave me vinegar to drink." This last prepa-  
 ration is entirely different from the former one, ~~and~~  
~~it was given not by friends as the first but by~~ consisting  
 of something really nauseous, and bitter, given him  
 not by friends, but by enemies, and revilers, as the  
 last and unmitigated insult they could inflict.

upon his still live body— That the properties of hemp were known at a very early date may be inferred from the following, which is an interpretation of an extract from a Chinese work, entitled Kow-kin-i-tung (published in the 16<sup>th</sup> century) ~~and~~ which is a review of the oldest Chinese records in medicine and surgery &c - translated from the Chinese into French by Stanislas Julien - It is relative to Hoa-tho who flourished under the dynasty of Wei, about 220 or 230<sup>th</sup> year of our era "If it was found expedient to employ acupuncture, he applied it in two or three different places: he did likewise with the moxa, if it was indicated by the nature of the disease he had to treat. If the maladies were situate in those parts on which the needle, the moxa, or other fluid medicines could not act, as in the bones, or their medulla, in the stomach or intestines, he gave a preparation of hemp (Ma-yo) and at the expiration of a few moments, he became as insensible as if he had been intoxicated or deprived of life" (Note "The expression "Ma-yo" signifies literally a drug (a preparation of hemp) it was precision and clearness. Fortunately we found in the later annals of Han (Biography of Hoa-tho)

\* (P.S.) Hemp is also mentioned by Oribasius, Paulus A-  
gineta, Aetius &c - they ascribe properties to it si-  
milar to those described by other old writers, as follows  
| & Dioscorides -

that the medicine was taken in wine, a powder called "Mafo-sau" (literally a distilled preparation of hemp powder) that is to say, a powder containing the narcotic principles of hemp obtained by long boiling and distillation) "Then according to the case he made openings and incisions, performed amputations, and removed the sources of the mischief: at the expiration of a few days, the patient found himself reestablished without ever having felt the slightest pain during the operation."

Hemp has been known from time immemorial to many nations, especially among the Egyptians, the Chinese, Hindoos and Arabs - it was even known to the Romans, and it is said to have been a common custom for their prisoners to use it when about to suffer death. - In comparatively modern times this plant was used to a considerable extent by the Hindoos, Chinese, and Arabs as an intoxicating and medicinal agent. In nearly all the printed old printed works on botany, and pharmacy mention is made of it; in some of them the plant is accurately described. In the Hortus Malab. it is discussed under two heads, the male and the female. The former was called by

\*: See Memoirs  
of Banks page.

the Brammins "Banggi, and this when dried along  
 with the leaves is said to stop diarrhoea, strengthen  
 a weak stomach, cure the endemic disease Pitao,  
 moderate the bile, and the powder even when smo-  
 ked possesses intoxicating properties; - mixed with  
 tobacco and applied as an epithem, <sup>it</sup> cures hernia,  
 "cuncta foeta genitalia pennis in concubitu inhi-  
 bent" &c. The latter plant (female) is called by them  
 Ijjada Banggi - the leaves of both plants when  
 largely taken, affect the mind, causing inebria-  
 tion. - An elaborate article is contained in Rumphius  
 "Herbarium Amboinense" - It is spoken  
 of as Cannabis Indica, Gungi and herba stal-  
 forum "It may be considered as the repentness of  
 India, because it is used for driving away sad-  
 ness and bringing joy". He relates the story of a  
 Sultan, who when desirous of making a long  
 journey, took doses of a preparation called "cha-  
 jock" which consisted of Bangue mixed with  
 various condiments, in order that he might tra-  
 vel sleeping - he says it was used by some peo-  
 ple as a remedy in gonorrhoea, Asthma &c. -  
 At the present day, hemp is used to a surpris-  
 ing extent by a considerable portion of the habi-

-table globe; - it is to some nations especially the Hindoos and Arabs what alcohol is to us, or opium to the Turks. - Its use may be said to be almost entirely Oriental, and it would seem to supply the place of alcohol, since it is chiefly employed, where alcohol is forbidden by law, as among the Moham<sup>m</sup>etans, or where its use is comparatively unknown as in the East Indian continent. - The Mohammetans would seem to indulge in it to the greatest extent, and it forms their chief companion, whether travelling mid and plains, or attending to their duties at home. - Squatting "tailor-like", beneath some stunted shrub, or reclining in the shade of some parched rock, they yield themselves to its influence; and throwing aside for the moment dull care, they indulge in the happiness it affords. - Nor are their princes and men in high places to be excluded, for they seated on gorgeous carpets, amid the splendor of an Eastern palace, surrounded by the beautiful denizens of the Harem, charmed by the lascivious dances of graceful forms, lightly treading, to the sounds of delicious music, thus entranced - and aided by the imagination exciting drug, have glimpses of that paradise which

to them seems the one to be enjoyed after leaving this earth - a paradise of unlimited sensuality! - It seems curious that wherever man is found, one great effort should be to find some exhilarating substance; and that nature in her boundless goodness should not only give him wherewith he may be clothed, and fed, and healed, but also means, each adapted to its own peculiar circumstances and conditions, whereby he may be comforted, cheered, and life made easier to him; not that they shall be abused, and used in excess, but in moderation, and in that quantity which he only absolutely requires.

Its Botanical Characters - *Cannabis Sativa* and *Indica* belong to the *Diccia Pentandria* (Linnæus) and *Urticaceæ* (Natural Classification). Suborder *Cannabineæ* or hemp-wools - *Cannabis* is a dioecious annual plant, very rarely monoecious, attaining in this country a height varying from three to four feet on an average, and in hot climates from six to twelve and even fourteen feet - Its Root is whitish, fusiform, and contains a large amount of strong fibrous tissue - Its Stem is erect, irregularly angular, and bran-

-ched — The Leaves are opposite and alternate, on long slender petioles, digitate and composed of five to seven small lanceolate, narrow, rough and serrated leaflets, having subulate stipules — The Male Flowers occur in racemose clusters, axillary, with tubulate stipules — The perianth is reflected and five parted; — the essential organs consist of five innate stamens, with short filaments, and large 2 celled anthers, which open longitudinally — The Pistilliferous or female flowers occur in racemose spikes, enclosed in bracts — each flower is surrounded by a one leaved acuminate perigone which is rolled around the ovary and having a slit on one side — it is persistent and ventriculate at the base — The Ovary is single (containing a single suspended ovule), rounded, subobovate, one celled, having one short style with two stigmata — The Fruit consists of a single, ovate achanium of a gray or nutmeg color, smooth, shining, spotted, and marked with a colored hilum — no albumen — embryo curved upon itself — There seems to be no essential difference between the *Cannaris Indica* and *C. Indica* beyond this, that in the

former the plant does not branch for some distance from the ground, whilst in the latter, the branches commence immediately; in fact all authorities seem to agree that both plants centre in one species - Roxburgh in his *Flora Indica* states that he has found the leaves both opposite and alternate and sometimes both male and female flowers on the same individual, and even hermaphrodite - The whole plant has a peculiar smell, and a clammy feel. - It is remarkable for the strength and durability of its fibre, which renders it commercially valuable, and when grown in hot climates for a peculiar resinous substance, which is exuded from the plant. -

Hemp seems to have been a native of either India, or Persia, more probably the latter judging from the Etymology of the Greek word  $\kappa\alpha\upsilon\tau\alpha\beta\omicron\varsigma$  or  $\kappa\alpha\upsilon\tau\alpha\beta\omicron\varsigma$ ; these words are derived from the word  $\kappa\alpha\upsilon\tau\alpha\beta\omicron\varsigma$  which signifies foul stream; and the latter word from  $\kappa\alpha\upsilon\tau\alpha$  a reed. - the word which signifies hemp in Persia is *canna* and the Arabic, *Kanneh Kinnut* or *Kinnab* these latter words being derived from the <sup>word</sup> *kanab* to mow. - I have also appended as far as I could

the etymology of the English word hemp, and also the chief names by which hemp is known in various countries.

Persic, Canna, Beng, or Buni.

Arabic; Kanneh, Kinnub, Kinnat, <sup>[Dawamese. K-</sup> esraw, assial. ~~K-~~

Turkish | Haschiok, hachioh, hatschick Bequitic madock,

Greek Cannabis.

(Sanskrit Goni, ganika, pana, phanapu, Baija)

Latin Cannabis, - herba stultorum

Italian Canapa,

Spanish Cannapnon.

Danish Kanneh, or kinneh.

Erse Canaib.

Galic Cannait, Cnait.

Lithuanian Kanapes,

French Chanvre.

Scandinavian Hampr.

Swedish Hanipa.

German Hanf.

Anglo-Saxon Kaneh, canabis, heneh.

English Hemp.

Hindee Bhanghie, Bang, ganyah, subje, sidhee

Hottentot Dacha, Dakka, damba.

Chipaul Chero, Churus, Chomes. -

The distribution of hemp may have taken the course pretty nearly in the <sup>order the</sup> words follow each other down the column except the three last viz the Hindes, Hottentot, and Sippaul.

Hemp is chiefly cultivated in Persia, Caucasus, Himalayas, Sippaul, the greater portion of British India, China, both European and Asiatic Turkey, in Russia as far north as Archangel, in the southern countries of Europe, especially Italy, south of France, to a small extent in Holland, Germany, and Spain in Africa from north to south ~~and~~ly in Egypt, <sup>and</sup> a region of Zaïre river: In America. &c. — Dr Boyle says it is extremely abundant in the Himalayas at elevations of 6000 and 7000 feet — and it grows so luxuriantly, that it rises to a height of 10 and 12 feet. And Wisset states that near Bischoffler in Alsace, are found hemp plants which at the bottom of the stalk, ~~have~~ have a diameter of more than three inches; and which the strongest man is unable to pull up. — Hemp is endowed like many other plants with a wonderful power of adapting itself to soil, and climate, and it seems capable of flourishing in any climate which man can

easily bear - Of course in ~~this~~ paper we shall only speak of the plant as regards its cultivation for the peculiar resinous matter it affords, and not its fibrous qualities. Hemp when grown in hot climates in addition to fibre, produces a peculiar glandular secretion, and this substance can only be produced under certain conditions: for although many attempts have been made in this country, by various means, to produce this resin, all have hitherto failed. Among the most careful experiments, and observations upon the growth of this plant, may be considered those of Dr. A. Christison, assisted by Professor Balfour, and also observed by Dr. Christison. From these, he (Dr. A. Christison) came to the following conclusions:

i<sup>o</sup> That the minute glands under favorable circumstances, would act vigorously in producing the active principle resin, which in this case was in very small quantities.

ii<sup>o</sup> That a certain climate which we cannot imitate in this country is essential for this action.

iii<sup>o</sup> That the *Cannabis Indica*, and *C. Sativa* are identical.

11. That the hemp plant possesses a peculiar balsamic minty odour of considerable strength, which is not sufficiently insisted upon in the standard works of Materia Medica and Botany. The active principle of hemp, as previously stated, can only be produced by the plant under certain conditions, for although growing and arriving at full maturity in this country, no one has obtained the resinous matter in any notable amount, and this would seem to reside in something peculiar to the climate in which it produces it. - Many attempts have been made to explain it; as that the plant requires to be subjected to great heats in summer, and cold in winter: that there is a difference of Species & - and which appear to me in no way to account for it; for placing the plant under conditions as closely as possible resembling a tropical climate; for instance in a well constructed and regulated hot-house we fail to produce the resin to any extent, and should the little be experimented <sup>upon</sup> (that may happen to be produced) it does not produce the actions upon the animal economy, which the Indian variety does, for it is minus the narcotic properties. That as regards it being due to

great cold in winter; witness the countries in which hemp produces the resin in the greatest quantities; where is the severe winter? ~~where~~ does their winter produce ice the thickness of this paper? take for instance India or other like countries whose winter at the most consists almost entirely of continued rain - Others say it requires a moist climate, I do not think India, or Arabia ~~a moist climate~~ ones, at least at the time when the plant has arrived at maturity, and commencing to flower; at which time the resin is said to be most actively secreted. Again that it cannot be due to a ~~moist~~ atmosphere might appear evident from this, that the air of hot-houses although tropical as regards heat, is loaded with moisture, derived in part from the soil and from the transpiration of the contained plants, and which is kept ~~in~~, as in a fern case, by the glass coverings. I would rather attribute it to this circumstance, that at the time of the flowering of the plant, when the resin is being secreted in the greatest quantities, the heat is most intense, the atmosphere during the day, is as it were, panting for moisture, and these circumstances stimulate the plant to

give forth the liquid resin, the watery portion of which is carried off by the dry atmosphere leaving the solidified resin behind - Another fact which may assist in explaining it, that in conjunction with the former circumstances, the plants receive at that time no nourishment from rain, but from the dew, which during the night is very plentiful. The Indian variety of hemp has a very peculiar, heavy narcotic odour which to some is not unpleasant. It is said, that ~~with~~ some persons it produces headache and giddiness occasionally nausea, should they traverse a hemp field -

The Resinous matter is the substance sought after, and it is collected in various ways in different countries - but in all it serves one purpose, viz to produce intoxication - a property which it possesses to a remarkable degree and to cause which, various preparations are used both of the plant itself and of the resin -

The resin is collected in Central India (as Dr. Schaw-  
-nery states) when clad in leather dresses run through the hemp fields, brushing through the plant with all possible violence: the soft resin adheres to the leather and is subsequently scraped

off, and kneaded into balls; a finer kind is collected ~~with~~ the hand; in some instances the leather attire is dispensed with, and the resin is gathered on the skins of naked coolies" - In Nepal according to Captain Smith it is collected thus, to quote an extract from his work "The most remarkable drug to be found in Nepal is the Churrus, the offspring of the plant *Jecia*, it is chiefly raised in the north part of the kingdom. The plant differs in no respect from the hemp except in the odour of its leaves, which is of a most overpowering strength. The Churrus is extracted from the shrub when the plant is in flower and its seeds on the point of maturity, it being material to the purity of the extract, that the leaves should not be parched or dry. The manipulation consists in rubbing the leaves gently between the hands, until these have become sufficiently charged with the juice which adheres to the palms in the form of a dark viscid and tolerably consistent substance: this being removed with a spatula or knife is made into balls or lumps" and in an unclarified state sold as Churrus "The Clarified Churrus is called *Nimea*,

(from its resemblance to wax) and burns with the brightness of a resinous flame."

Dr M'Kinnon says it is collected on the skins of naked coolies—

The resin is thus found to be a glandular production of the plant and when seen in mass will of course ~~be~~ consist of innumerable small particles mixed together; it contains all the active principles of the plant. It has a very dark dull green color not unlike what is called "invisible-green cloth", an aromatic narcotic odor, a bitter, acid and slightly balsamic taste; it is highly prized even in the countries in which it is produced; and in this country its genuine sample of the resin is still a curiosity. *Shomea* is said to remain soft even after drying it possesses a fragrant ~~and~~ narcotic odour, which becomes much stronger on applying a little heat to it. One of the most powerful varieties of this drug is said to be the *Churru*, a kind of Herat.

The next preparations of which we shall speak are *Guinjah*, and *Bang*, which consist of the plant itself—*Guinjah* or *haschich* as found in the Bazaars of Calcutta consists of the stems ~~leaves~~

and the leaves and flowers agglutinated together by the resinous matter, or by the small quantity which remains after the bulk of it has been removed.

It is sold in the form of bundles about  $2\frac{1}{2}$ , to 3 feet long, and from  $2\frac{1}{2}$ , to 3 inches in diameter; these bundles generally contain about 24 plants; they have a greenish color inclining to black; a feeble narcotic odour, and a slightly bitter taste. - *Gurjah* is chiefly used for smoking; *Bang*, *Surjeh*, or *Sidheh*, &c is said to consist of the leaves and capsules without the stalks, or at least only the very slender ones; this is chiefly used for smoking, and also for making intoxicating beverages, &c. In a letter from M. C. Muller to Dr. Hooker in 1853 he says "That in India there are two varieties of intoxicating drugs prepared from hemp, and sold in the Bazaars, one called *Ganja*, the other *Bhang*. In this part of India (Patna) *Gangi* is procured from the region of *Rajshahye*, (n of Calcutta). *Bang* comes chiefly from the district of *Sirkoot*, *Sarun*, and *forichpoo*. In external appearance they differ considerably: *Gangi* is sold in the form of stalks 3 or 4 feet long with the inflorescence attached; the whole having been

dried and pressed flat. The color is a dirty brown, odor strongly aromatic, and heavy; very resinous to the touch. This variety is highly intoxicating, accounted for by the abundance of resin (the Chirrus of Nepal and other parts) sold retail (deprived of stalks) at 200 rupees per maund, (80 lbs avoirdupois); the high price being due to the weight of the tax imposed upon it by government. Bhang is in the form of dried leaves with only fragments of stalks, and abounds in the dried inflorescence, apparently female. Color dull green, not much odor, and is greatly deficient in resinous matter; possesses slight intoxicating properties. Ganja is smoked like tobacco, its continual use brings on Asthma. Bhang is not smoked, but is ground up into a pulp, and mixed with other ingredients, so as to make a thick drink called *Subjee*, reputed to be cooling, and highly conducive to health." A very interesting account of the use of hemp in Africa, by Mr. Clarke, Surgeon to the Army of Sierra Leone, in *The Hooker's Journal of Botany* for 1851. He says "The *Djamba* plant (*Cannabis Indica*) is considered to be

indigenous in various situations in the interior or western Africa near the Congo or Zaire river. A story is told of its discovery by a huntsman, who observed a number of antelopes, who had browsed on the Diamba, to be stupefied and having informed his neighbours of the extraordinary circumstance, they repaired in a body to the spot. The approach of the people and the firing of the muskets had no effect in rousing the animals to a sense of their danger, and accordingly they were all quickly dispatched. It is well known to the Portuguese on this coast - its seed was brought to Sierra Leone by Congoes captured by one of our cruisers, and is now distributed over the colony, and is grown by the Akroos, Uboes, and many of the other liberated African tribes, and also by the Maroons, Settlers, and Coolies. Average height of this bushy annual shrub, is from 6 to 7 feet, but in fertile soils, to 12 or 13 feet and some of the larger plants occupy a space of 20 feet in circumference - sown in April or May: flowers in August &c - The flowers are slowly dried by fire or sun, and mixed

with seed from the drug Maconie - The leaflets are also used but are apt to produce violent head-ache: called Makiah; is smoked in a large wooden pipe called Am-do, also in a calabash or clay pipe; used as a soothing luxury by the Africans and Creoles - When used, the pipe is handed from mouth to mouth and soon produces the desired effect, the smoke is drawn in, is there detained, and a large portion swallowed; as it slowly passes off by the nostrils. Most agreeable sensations soon follow, and the excitement displays itself by heavy bursts of laughter, loud exclamations, droll exhilarating conversation; but as the debauch proceeds, its full effects follow; temporary frenzy seizes the smokers, and they issue from their haunts, singing and shouting as they reel and stagger to their homes. Intense and maddening head-ache, accompanied by stupor is often the result of these orgies, and the latter consequence generally lasts for twelve hours. One pipe charged with this drug is enough to produce in four persons this most delight-

-ful exhilaration without injury, and is much esteemed by the natives for coughs, pains in the chest, and stomach. Diamba is vended under the names of chaconie and chakiah, the former being made up into very small packets which are sold at a halfpenny each."

Various liquid preparations are made of bang, by boiling it down in water along with spices, and other substances, to increase its power, or to add their own special properties, as musk, cinnamon, cloves, nutmeg &c &c. One of the important of all the Oriental preparations is made by the assistance of some fatty substance - it is done in the following manner. The leaves are taken and boiled in water along with spices &c - the infusion is then filtered, and to the filtered product is added butter or other fatty material, it is then boiled down to the consistence of syrup, and the fat which has taken up the whole of the active principle is collected, to it is then often added musk and attar of roses. This fatty preparation is extremely active, and is capable of acting most energetically upon

The animal economy, even acting as a powerful aphrodisiac - It is capable of being kept for years without ~~undergoing~~ any diminution in its effects; - the only change seems to be that the fat occasionally becomes rancid - it is chiefly used by the Turks - The following is an extract from the Journal de médecine et de Chirurgie Pratiques for 1857 which appeared in in the British and Foreign Med. Review - it is said that "the Orientals make a deplorable use of preparations of Indian hemp, which they smoke under the name of kiff or Haschick or tek howri; sometimes they fry the leaves in fat, butter, or honey, so as to extract the active resinous portion; this preparation termed Maadjann or towomese they eat. The smokers and eaters of haschick are called haschichins, whence the word assassin is said to be derived. The Algerine choors besides using Indian hemp in the ways described above sometimes add to it opium or tobacco for smoking; sometimes they eat it mixed with fat, sesame, cloves, cannella or ginger and when insensible to its effects from long use from long use, they add new

ronica, and this for a time succeeds in procuring a state of stimulation which soon ends in insanity."

Dr Gibson of Bombay says that in many provinces, as in Scinde, a draught of the infusion of the leaves forms a prelude to the daily dinner, amongst the better classes. The Stimulus has a champagne-like transience, and is said to whet the appetite and improve the digestive process. The continual use of Cannabis as practised by many at all periods of the day, speedily breaks down the system: the lungs, generative power &c all yielding to its influence." - - - - -

"The celebrated traveller M. Sylvestre, appears to have made it pretty plain that our word assassin is derived from the Arabic name of the Indian hemp" - "It is well known that it was originally employed in Syria to designate the followers of the "old man of the mountain" who were accustomed to devote themselves with blind obedience to the execution of his orders, however barbarous their character. These followers according to the old traveller Marco Polo, were selected from the most

robust young men of the country, which was under this singular domination: their education tended in every way to impress upon them the duty of blind obedience, in return for which they were promised after death all the sensual pleasures they could imagine: and a foretaste of these was now and then given to them by intoxicating them with hachish in the midst of scenes in which everything was provided to gratify their senses: In this manner a sort of fanaticism was gradually induced, which made the Hachichius (from a corruption of which name the word assassin was formed) ready to sacrifice either themselves or others at the discretion of the chief, without the slightest hesitation."

There are many other preparations of herbs, but I do not intend to comment upon any of them, except the extract, which is the preparation chiefly made use of in this country. Those made abroad, (as far as I can make out) are made by boiling down an infusion of the leaves, to which rum is occasionally added, to the consistence of an extract. That made

in this country is by steeping the resinous tops in alcohol or rectified spirit, filtering the spirituous solution and evaporating to the form of an extract. The spirit must be highly rectified, in which the resin is exceedingly soluble: gum-jak is said to yield one fifth of its weight to alcohol when boiled in it. The resin is precipitated instantly on the addition of water to the tincture. The genuine extract has a dark dull green or brown color and a rather pleasant aromatic narcotic odour which is peculiar; the taste is bitter pungent slightly acid, and aromatic. Proff Scroff obtained a preparation at Bucharest, which was called *Pirimini-gi*, and which was taken in 10 grain doses to produce laughter. he says it was in the form of cakes, very tough and difficult to break; externally it was nearly black, and dull; a section through its middle was of a dirty grey-green color; had an uneven fracture, the taste was insipid rather than bitter aromatic. By long chewing, the tough masses were gradually dissolved, leaving behind a small quantity of a hard crummy substance: Long chewing produced

irritation of the throat.

Dr Polli of Chilaw lately obtained some haschish from Dr. Rosa of Damascus he says  
 "It was in a cylindrical form and of a dark brown color: it looked like a dry extract, had a slight smell: it was readily soluble in water, but much more so in Ether, from the solution a black resinous substance separated itself, having all the characters of Cannabina. A gramme of this haschish contained a  $\frac{1}{4}$  of a gramme of resinous matter, and burnt, it left behind half a gramme of ash, in which was evident the presence of oxides of Iron, lime, silica and Carbonic and Sulphuric acids."

The seeds of Hemp is also used on account of the large amount of oil it contains.

The oil is used by the Russians, as an article of food. it is employed by painters as a drying oil, and it is said to make a valuable varnish when boiled - A large amount of soft soap is made from it - it is burnt to a limited extent in lamps, but from a considerable amount of resinous matter it contains, it is apt to clog the wick - Bird fanciers

use the seed for feeding cage birds on account of its  
 t nutritious properties - it possesses according to  
 Burnett "the singular property of changing  
 the colour of the plumage of bull and gold-  
 finches from yellow and red to black if  
 they are fed too long on it or in too large a  
 quantities - I have seen cage-birds fed on hemp  
 seed and yolk of egg almost entirely, for ~~months~~  
 without noticing any perceptible change in  
 color.

Chemistry of Hemp The active principle is  
 due to a substance which has been called Can-  
 -nabine and which is found in the resin. it  
 is said to be a soft neutral resin, which is  
 soluble in alcohol and ether; also in the fixed  
 and volatile oils. it is not soluble in proof  
 spirit but in rectified spirit - partially soluble  
 in alkalis, insoluble in acids. it is preci-  
 pitated from the solution by water and falls  
 down in the shape of a whitish precipitate.  
 when heated it gives off a strong aromatic  
 odour, and it has a warm balsamic taste.  
 Chevre Smith of Edinburgh who made some  
 elaborate experiments with it, says that it

resembles Jalapine: except in respect of this, that it remains soft even after repeated drying, and in its taste and smell. From the resin a volatile oil has been obtained, but as yet little or nothing is known regarding it. The fixed oil of hemp when freshly expressed has a greenish yellow color, a pungent odour, but not a disagreeable taste. (Its specific gravity is .9276 at 52°F, readily soluble in boiling alcohol and it freezes at -170°F (Pareira))

Buchholz analysed the seed and found it to contain the following (Pareira)

Fixed oil	19.1
Resin —	1.6
Sugar with Extractive	1.6
Gummy Extract	9.0
Soluble Albumen	24.7
Woody fibre —	5.0
Husk — — —	38.3
Loss — — —	0.7
<u>Total</u>	<u>100.0</u>

Dr Kane made a ~~some~~ careful <sup>analy-</sup> ~~exam-~~ <sup>ses</sup> ~~ments~~ of the plant which led him to the following conclusion "it is plain (say he) that by the quantity of Nitrogen, Phosphoric Acid

Magnesia and Lime which hemp attracts from the soil, it must be as experience proves it a highly exhausting crop!" The following are his analyses.

Composition of Stem of hemp (dried at 212° F)		Composition of Leaves (dried at 212° F)	
Carbon	39.94	Carbon	40.50
Hydrogen	5.06	Hydrogen	5.98
Oxygen	48.72	Nitrogen	1.82
Nitrogen	1.74	Oxygen	29.70
Ashes	4.54	Ashes	22.00
<u>Total</u>	<u>100.00</u>	<u>Total</u>	<u>100.00</u>

Composition of Hemp plant were found to consist of		Composition of hemp Extract (dried at 212° F)	
Potash	7.48	Carbon	28.28
Soda	.72	Hydrogen	4.16
Lime	42.05	Nitrogen	3.28
Magnesia	4.88	Oxygen	15.08
Alumina	.37	Ashes	49.20
Silica	6.75	<u>Total</u>	<u>100.00</u>
Phosphoric Acid	3.22	If ashes excluded the organic part consists of	
Sulphuric "	1.10	Carbon	55.66
Carbonic "	31.90	Hydrogen	8.21
Chlorine	1.53	Nitrogen	6.45
<u>Total</u>	<u>100.00</u>	Oxygen	29.68
		<u>Total</u>	<u>100.00</u>

Analysis of the leaves (dried at 200 F) *Schlesinger*

Bitter extract	1 . 25
Chlorophyll soluble in ether	4 . 75
" " " Alcohol	9 . 375
Green resinous extractive	5 . 0
Coloring matter -	10 . 15
Gummy extract	19 . 45
Malate of lime with extractive	6 . 775
Extractive	6 . 875
Vegetable albumen	8 . 0
Lime Magnesia and Iron	9 . 5
Lignine	12 . 0
Loss -	6 . 875
Total -	<u>100 . 000</u>

Locheppes analysis of the leaves of *Can. Sativa*

Chlorophyll }  
Gluten } green fecula

Phosphate of Lime

Brown Extractive

Sweetish bitter extractive

Brown Gum

Lignine

Soluble albumen

Salts of Ammonia Potash lime & Magnesia

Alumina and silica -

Its Physiological Actions - The actions of hemp upon the healthy body, are very remarkable, and peculiar; consisting generally of a series of phenomena which succeed each other - but this is not always the case, for often one or more of these phenomena may be entirely absent, or new and anomalous ones may be produced in their stead. Hemp in one respect is very like alcohol, for its effects are most intimately connected with the temperament and habit of the individual; - perhaps no drug more so - Its actions may be described as the following, & in the majority of cases, they occur in the order given - at first and especially if the dose be small as a diffusible stimulant, if large, as an exhilarant, inebriant, phantasmatic, and narcotic, and it would seem, at any rate, in hot countries, to act as a cataleptic.

I will endeavour to illustrate these various actions by a few well marked cases in which the drug has been taken or given for experiment -

The following are the effects as described by Sesti to Dr Polli de Melina (which are given in the Brit. & Foreign Medical Review for 1800) of a very large dose - "There is at first a sensation of great vacuity and at the same time a fullness in the brain with

without any anxiety or illuep; there is a whistling in  
 the ears, which changes to a bubbling; the vault of the  
 cranium appears to be raised, and there follow great  
 exacerbations of heat, which rise to the head and  
 color the face: then there is fulluep and vivacity of  
 the eyes, very quickly the pound in the ears ceases,  
 and there is set up sudden laughter: efforts are  
 made to speak, but what would be said is forgotten:  
 the words and the ideas are perplexed, and a tremen-  
 dous burst of laughter breaks up the sentence begun;  
 in a few ~~minutes~~ this inordinate laughter be-  
 comes irrepressible; after a certain time a sort of  
 soft languor takes possession of the patient and the  
 powers of movement are impeded, the limbs feel as  
 if separated from the body, all seems to be embellished  
 around: a splendid light appears to inundate,  
 yet with blinding sensation; the most ordinary  
 faces appear terrific: ideas flow one into the other,  
 and the subject abandons himself with so much re-  
 lidity that an age appears to have been lived  
 in a minute. These faculties of the mind, which  
 in the normal state are most exercised are those which  
 are most exercised during the inebriation. There are  
 excited no amorous propensities (!) very rarely, how-  
 ever the haosiot may bring on melancholic

symptoms of delirium. After some hours the exaltation declines and sleep succeeds: sometimes terror - ygmie and nausea or stitch occur: a copious diarrhœa relieves the symptoms: the desire of going to bed becomes irresistible, and sound sleep ends this insubriation, which resembles nothing else in results and effects. He further states that while the subject is under the influence of hashish he does not feel pain from blows and the mind becomes quite docile, yielding readily to the orders of a companion"

Mr Taylor (in Pereira's Mat. Med.) describes the effects upon himself, he says; "The sense of limitation - of the confinement of our senses within the bounds of our own flesh and blood - instantly fell away. The walls of my frame were burst outward, and tumbled into ruin; and without thinking what form I wore - losing sight even of all idea of form, I felt that I existed through a vast extent of space \* \* \* \* It is difficult to describe this sensation, or the rapidity with which it mastered me. In the state of mental exaltation in which I was then plunged, all sensations as they rose suggested more or less coherent images. They presented themselves to me in a double form: one physical and therefore to a certain extent tangible; the other spiritual and

therefore revealing itself in a succession of splendid me-  
 taphors \* \* \* My curiosity was now in a way of  
 being satisfied: the spirit (demon, shall rather not  
 say?) of Hasheesh had entire possession of me. The  
 Thrills which ran through my nervous system  
 became more rapid and fierce, accompanied  
 with sensations which steeped my my whole be-  
 ing in unutterable rapture. I was accompanied  
 by a sea of light, through which played the ~~pure~~  
 harmonious colors that are born of light. While  
 endeavoring in broken expressions to describe my  
 feelings to my friends, who sat looking upon  
 me incredulously - not having been affected  
 by the drug. I suddenly found myself at  
 the foot of the great pyramid of the Cheops. The  
 tapering courses of yellow limestone gleamed  
 like gold in the sun, and the pile rose so high,  
 that it seemed to lean for support on the blue arch  
 of the sky: I wished to ascend it, and the  
 wish alone placed me immediately upon its  
 apex, lifted thousands of feet above the wheat-  
 fields and palm-groves of Egypt. I cast my  
 eye downward and to my astonishment, saw  
 that it was built not of limestone, but of huge  
 square plugs of Cavendish tobacco \* \* \* The

most remarkable feature of these illusions was, that at the time I was most completely under their influence, I knew myself to be seated in the tower of Antonios' Hotel in Damascus, knew that I had taken hashish and that the strange gorgeous and ludicrous fancies which possessed me were the effect of it."

Dr. O'Shaughnessy describes some cases in which a catalepsy of the most perfect kind was produced by it. <sup>after having lifted the patient's arm</sup> He observes, "The professional reader will judge of my astonishment when I found that it remained in the posture in which I placed it. It required but a very brief examination of the limb, to find that the patient had by the influence of this narcotic been thrown into that strange and most extraordinary of all nervous conditions, — into that state which so few have seen and the existence of which so many still discredit; — the genuine catalepsy of the misologist. We raised him to the sitting posture, and placed his arms and limbs in every imaginable attitude. A waxen figure could not be more pliant, or more stationary in each position, no matter how contrary to the natural influence of gravity on the part. So all impressions he was meanwhile insensible." Another case in

which it had been given " On a sudden he uttered a loud peal of laughter, and exclaimed that four spirits were springing with his bed into the air. In vain we attempted to pacify him; his ~~thoughts~~ became momentarily more and more uncontrollable. We now observed that his limbs were rather rigid, and in a few ~~minutes~~ more his legs and arms could be bent, and would remain, in any desired position. He was removed to a separate room, where he soon became tranquil; his limbs in less than an hour gained their natural condition, and in two hours he expressed himself perfectly well and exceedingly hungry."

The following are cases in which poisonous effects have been produced. " Dr. Heinrich, who had in previous experiments conducted by Prof. Schroff had manifested no remarkable susceptibility to the influence of haschisch, took on May 6<sup>th</sup> 1857, at half past 5 P.M., 10 grains of the preparation described before (page of this thesis). He chewed it gradually: and soon felt irritation in the esophagus, heart-burn, slight malaise, and dryness of the throat. in 1½ hours he began to chatter nonsense, and everything that he saw assumed

a ridiculous aspect. He was violently agitated: his face and eyes were red; and his body felt ~~very~~ hot; he felt light in his movements. This state continued about 20 minutes, and was followed by great depression: everything seemed too narrow for him; his sight was lost; his face pale; he had a feeling of flow of blood towards the head; and when he was lifted up he experienced a sensation of pressure in the pit of the stomach; his pulse was very small, and sometimes could not be felt for a considerable time. His conviction was that he was about to die. The symptoms increased; frightful images appeared before him, and his consciousness was greatly obscured. As consciousness returned, the images became less horrible: but the patient could not restrain the tumultuous stream of ideas which passed before him, so that he was obliged to speak constantly until he again lost consciousness for a few minutes. When Dr Schreff saw the patient at a  $\frac{1}{4}$  past 8; the latter recognised him at once. He lay in bed; his countenance of a healthy red color, but somewhat sunken; the pupils were moderately dilated; the iris was sensitive to light; the eye was easily moved; the brightness of the eyes was unchanged; the conjunctiva of the

bulbs of the eyes was somewhat injected; the forehead was cool; the pulse in the temporal, & carotid ~~and radial~~ arteries was weak and less frequent than normal; the heart's beat was very feeble, sometimes scarcely perceptible, the pulse at the wrist sometimes could not be felt for a minute or more; then it would become more distinct, and rise to 78 (the patient's normal pulse being from 58 to 60) The variations in the pulse recurred several times within an hour. The breathing was light and regular; the abdomen was somewhat enlarged, but painless; the limbs were cold, somewhat trembling, easily moved and obedient to the will; the skin was not tender to the touch; the urine was passed involuntarily. The patient was able to sit up and drink. The senses were normal, with the exception of the cutaneous sensibility which was dull; The idea that he must die returned several times, and was always in direct ratio with the fall of the pulse. The characteristic symptoms of this case of poisoning were the great and lasting depression of the heart's action, accompanied by the fear of death, after a short stage of excitement. The case differs from others of poisoning by husschick in the

absence of inclination to sleep, but agreed with them in the absence of convulsions. It also supports the idea, that Indian Hemp and its preparations exercise over the imagination a power which is possessed by no other agent; and shews the great diversity in the symptoms, according to the individual".

The next case appeared in the British and Foreign Med. Chirurg. Review, extracted from the Journal de Médecine et de Chirurgie Pratique. 1857. "A few months ago a Moor, named Soliman, aged about twenty, residing near Algiers, was tried for murdering and attempting to murder several Jews, under the following circumstances. On August 22<sup>nd</sup> after having several times drunk wine flavoured with aniseed, he entered about noon, into a Moorish Café, and remained there until 3 o'clock smoking hashick, which is by the Algerines called kiff. On leaving the Café he quarrelled with two Jews, whom he compelled to accompany him: one of these he attempted to strike, but was restrained by a passer by. Soliman then ran home, armed himself with a cudgel, and returned to the place where he had left the Jews, but they had disappeared. He then re-entered the Café, where he began again to smoke kiff, and to eat maadjam (a pre-

-paration of Indian hemp) In a furious state, he left the Café about 14 o'clock. The day was the Jewish Sabbath; and according to their custom, the women of the nation were standing before the doors in their holyday clothes. This sight no doubt recalled to his mind the quarrel in which he had lately been engaged; for suddenly and without any provocation, he madly assaulted all the Jews in his way until some French-men attracted by the cries of his victims, disarmed him. Several persons were more or less dangerously injured, "one of whom soon died."

Another example of the effects of hemp is given by M. Aubert. He says; "I was engaged in conversation when I felt a prickling sensation in my feet and in my head, a stricture which gave way suddenly and my skull seemed empty. - Every object wore a new aspect; my companions faces assumed a grotesque expression: I burst out laughing, and continued to laugh for almost an hour. The merest trifle renewed my mirth. Meanwhile the most varied and whimsical ideas coursed swiftly through my mind. I experienced the most perfect sense of comfort. For me there was no longer past, present, or fu-

ture; the fleeting moment limited my whole existence. Then followed a calm, and sleep stole over me. The whole night was but one long delightful dream. On awaking, I remembered all that had taken place, and my head was not heavy, nor my mouth dry as it would have been after a debauch in opium or wine!!

Dr Christison took a large dose of it for tooth-ache. It caused in a very short time complete cessation of pain, a pleasant numbness in the limbs, giddiness, a rapid succession of unassociated ideas, impossibility to follow a train of thought, frequent intervals of sleep and slight increase in the force of the pulse: at the same time he felt quite conscious that the tooth-ache was present, although there was no pain. On the following morning he had an ordinary appetite but experienced much torpidity, great defect and shortness of memory; the protraction of time was much marked: There was nothing remarkable in the articulation, or other effect.

The effects upon different individuals vary so much, that to give instances of each, (were it possible that it could be done) would occupy more time than

I am ~~am~~ at the present time able to afford for the purpose. As regards examples I will merely add that occasionally, instead of producing effects such as have been described previously, hemp acts as a direct sedative, and produces very unpleasant symptoms. It acts so on myself, I took one day, a very large dose, and it produced a very unpleasant state of depression which lasted for a considerable time, and which I could not remove by taking any of the ordinary stimulants.

I tried it a second time, when suffering from a slight attack of influenza, and also, <sup>from</sup> dyspepsia - instead of increasing my appetite it took the little I had away, and caused a most curious & nasty depression, which continued for two or three days. I may add that smoking tobacco often produces it, but then it lasts only for a comparatively short time, and is much milder than that produced by the hemp it is also much different in kind.

I intend concluding the physiological action, by giving an extract from one of the reviews, which I think admirably portrays them.

"One of the first appreciable effects of the hashish is the gradual weakening of that power of volun-

rarely controlling and directing the thoughts which  
 is so characteristic of the vigorous mind.  
 The individual feels himself capable of fix-  
 -ing his attention upon any subject: his thoughts  
 being continually drawn off by a succession  
 of ideas which force themselves (as it were into his  
 mind, without his being able in the least to trace  
 their origin. These speedily occupy his attention,  
 and present themselves in strange combina-  
 -tions, so as to produce the most fantastic and  
 impossible creations. By a strong effort of the will,  
 however, the original thread of the ideas may  
 still be recovered: and the interlopers may be  
 driven away, their remembrance however being  
 still preserved like that of a dream recalling  
 events long since past. These lucid intervals, how-  
 -ever, become of short duration and can be less  
 frequently procured by a voluntary effort: for  
 the internal tempest becomes more violent, the tor-  
 -rents of disconnected ideas are so powerful as  
 completely to arrest the attention, <sup>and</sup> the mind is  
 gradually withdrawn altogether from the contem-  
 -plation of external realities, being conscious <sup>of</sup>  
 -ly of its own internal workings. There is al-

-ways preserved however, a much greater amount of self consciousness than exists in ordinary dreaming; the condition rather corresponding with that, in which the sleeper knows that he dreams, and if his dream be agreeable makes an effort to prolong it, and is conscious of a fear, he should by awaking cause the dissipation of the pleasant illusion. It is another characteristic of the action of *hachish* that the succession of ideas has not at first less of coherence than in ordinary dreaming, and the ideal events do not so depart from possible realities: and the disorder of the mind is at first manifested in errors of sense, in false convictions, or in the predominance of one or more extravagant ideas; these ideas and convictions are generally not altogether of an imaginary character, but are rather suggested by external impressions: these impressions being erroneously interpreted by the perceptive faculties and giving origin, therefore, to fallacious notions of the objects which excited them. It is in the stage of the *fantasia* which immediately precedes the complete withdrawal of the mind from external things, and in which the self consciousness

and power of the will are weakened, that this perverted impressibility becomes most remarkable; more especially as the general excitement of the feelings causes the erroneous motives to have a powerful effect in arousing them. (The error of perception is remarkably shewn in regard to time and space - minutes seem hours, and hours are prolonged into years, and at last all idea of time seems obliterated, and the past and present are confounded together.) We become the sport of impressions of the most opposite kind; the course of our ideas may be broken by the slightest cause; we are turned by every wind. By a word or a gesture our thoughts may be successively directed to multitudes of different subjects, with a rapidity and a lucidity which are truly marvellous. The mind becomes possessed with a feeling of pride corresponding with the exaltation of its faculties, of whose increase in energy and power it becomes conscious. It will be entirely dependent on the circumstances in which we are placed, the objects which strike our eyes, the words which fall on our ears, whether the most lively sentiments

of gaiety or of sadness shall be produced, or passions of the most opposite character shall be excited, sometimes with extraordinary violence; for irritation shall rapidly pass into rage, dislike to hatred, and desire of vengeance; and the calmest affection to the most transporting passion. Fear becomes terror, courage is developed into rashness which nothing checks, and which seems not to be conscious of danger, and the most unfounded doubt or suspicion becomes a certainty. The mind has a tendency to exaggerate everything; and the slightest impulse carries it along."

Therapeutical Actions - For the benefit of Indian hemp in medicine we are indebted to Dr. O. Shaughnessy, who published in 1829, an elaborate work on the uses &c. of ~~hemp~~, and it is on account of this that it was brought before the profession - Hemp is an anodyne, narcotic, antispasmodic &c. It has been much used for rheumatism, both acute & chronic, and ~~being~~ curing the disease, when all other remedies have failed - Dr. O. Shan-

nessy relates several instances, and it has been applauded by many others - It has proved of signal service in tetanus especially traumatic, if not curing the disease at any rate alleviating the horrible tortures which the patient suffered - It has been tried in several cases of hydrophobia, but with no decided advantage, unless with the alleviation of the symptoms - I am not able to find a single marked case in which this disease was cured by it - Dr Polli d'Abulan, tried haschisch in a case of hydrophobia but with out avail - (On the 2<sup>nd</sup> of May 1860) He states that although 3 grammes were taken, it merely masked the hydrophobic delirium with a quiet delirium - The patient at once became docile, good, and confiding; but the dysphagia continued, and after the convulsions a general paralysis succeeded. It has been of service in chorea, infantile convulsions &c. - Dr Meligan has derived excellent effects, from its administration in nervous depression and palpitation of persons addicted to the inordinate use of opium, in which other stimulants and narcotics have failed - Mr Fairbank of Calcutta speaks of it as producing in a case of poisoning contracted pupil, pale clammy

countenance and stupor. As a medicine it seems more uncertain than opium, but stronger. It prevailed in chronic bronchitic affections and asthma with decided advantage - Dr. Brian gave the Indian Hemp with evident advantage in one case of anasarca, and in two cases of general dropsy: the dose being 20 drops of the tincture every 24 hours. The effect was a marked diuresis, with more or less diminution of the dropsical fulness. In the two cases of general dropsy, this effect was not produced until the kidney had been acted upon by other diuretics: and therefore it is to be inferred that the Hemp acted by keeping up an action already begun. The collective effects of the remedy were, improvement of the appetite, relief of pain, and improvement of the spirits. Any more special action upon the nervous system (owing probably, to the brunt of the action falling upon the kidneys) was absent. Dr. Parry used it with great advantage in spirit drinkers, and he succeeded in producing sleep whether other means had failed. It has been used as an Oxytocic, and it would certainly seem, in some cases to increase uterine contraction. Dr. <sup>Parry</sup> ~~Parry~~ & Nairne tried it in 16 cases.

in nine of which there was no perceptible increase of uterine action but it succeeded in seven, very well. Dr. A. Christison tried it, and with success. I have tried it in several cases, but from what I have seen, I should only attempt its use, when other means have failed. I think it decidedly inferior to ergot of Rye - and when ergot disagrees with the patient or its use is contraindicated, it is well to try hemp - also if ergot of rye should fail to produce uterine contraction, we may even then have recourse to the hemp. I think I have seen good derived from it in gonorrhoea. I tried it, by giving it internally and also by injection - It certainly relieves the inflammatory symptoms, and the pain attendant upon micturition.

Upon the whole Hemp seems inferior to opium and many of the other active remedies. There are two great objections to the use of Hemp, viz, Its action is exceedingly anomalous, and varies with the peculiar temperament &c of the individual and secondly, Its uncertainty of action. If we could have a certain and reliable preparation it would merit much more of our confidence. One great advantage it possesses, that it does not cause

constipation, nausea or destroy the appetite, neither does it seem to lessen the various secretions. In conclusion, I would merely say, that, who can tell, but that at some future date, this poor drug which is at present, confined to the apothecaries shelves, may be used as a general inebriant, when all sorts of Permissive laws (as temperance people call them) shall have banished alcohol and its allies from public sale: it was thus with alcohol, it began as a remedy -

I had intended going much more fully into the physiological, and Therapeutical actions of hemp, but lack of time prevents me.

Charles. Chasler. Deane -