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CHAPTER III.

THE EXISTENCE, PREVALENCE, AND CHARACTER OF THE SPONTANEOUS GROWTH.

25. The Commissioner of Excise, Bengal, says in his memorandum that Bengal. "the wild plant is found in nearly every district, and it grows abundantly in several places." The evidence enables the facts to be stated more definitely; and it will be seen that over a large part of the province the spontaneous growth is not so common or abundant that it can with any propriety be called wild.

26. The Terai region of Bengal appears to resemble that of the North-Western Provinces in having a luxuriant growth of hemp. Beginning from the frontier of the North-Western Provinces, the evidence leaves no doubt that the spontaneous growth is extremely common and plentiful in that part of the Patna Division which lies north of the Ganges. The only witness who raises any doubt on this point is Mr. Williams, Collector of Darbhanga; and he describes the growth as much less common than in Assam, though plentiful on the borders of Nepal. The evidence generally, however, cannot justify any exception being made of the Darbhanga district.

27. Eastward from Patna lies the Bhagalpur Division, the region from which the bhang supply of Calcutta is brought. A special inquiry was made in this tract, North Bhagalpur and Purnea, by Mr. B. C. Basu, Assistant to the Director of Land Records and Agriculture, at the request of the Commission. Mr. Basu does not seem to have explored the waste lands of the Terai; his inquiries relate solely to the populous parts of the country. He says that the growth as a rule "is confined to land in the immediate vicinity of raiyats' holdings. Such land is usually called *dihisar* in Purnea and Bhagalpur, and is naturally the richest in the village." He says further on that these lands are used as standing ground for the cattle, and that "the washings from them flow over the alleys and ditches in the village; and as there is little or no cultivation at any time of the year, every bit of bare ground which is otherwise suited is covered with a luxuriant mass of wild hemp as soon as the cold weather has set in." The Commission would have been glad to learn more about the lands at a distance from houses. The Collectors of Purnea and Bhagalpur, while confirming Mr. Basu's account, report that the growth springs up notwithstanding that the lands may have been flooded for 3 or 4 months in the rains. It is not confined to waste lands, but comes up with the crops which are sown after the inundations have subsided. It is specially abundant within the influence of the floods of the Kosi river. It is clear then that the growth about homesteads and cultivation is extremely plentiful; and, looking to the whole evidence, the probability is that towards the Terai the wild growth is found in less close association with man, and in great quantity in suitable positions and soils. The Collector of Bhagalpur reports that in the Banka Sub-division, which lies on the south of the Ganges, the growth is not so plentiful, and is found principally on homestead lands.

28. In the Rajshahi Division the Terai is still credited with heavy growth, and the northern parts of the Dinajpur and Rangpur districts are specially mentioned; but elsewhere evidence as to abundance has a more uncertain sound. Babu Abhilas Chandra Mukharji

(63), 2nd Inspector of Excise, says that the wild bhang grows luxuriantly all over the division. But this sweeping statement is not generally corroborated. Witnesses do not agree that the growth is abundant, though the fact that there is no licensed sale leaves no doubt that it exists in sufficient quantity to supply the people's wants. The district of Malda, which adjoins the Rajshahi district on the north-east, and is favourably situated as regards proximity to the great bhang-producing district of Purnea, does not appear from the evidence to have much spontaneous growth. It seems probable that the exceptionally favourable conditions associated with the Himalayas and Terai cease at the point where the Ganges swings round the Sonthal highlands, and that a straight line drawn from Sakri Ghât to a point on the southern fringe of the Garo Hills would mark the limit of a less abundant growth.

29. But there is evidence that the growth is still common south of this line and east of the Ganges and Bhagirathi, more so
The Dacca and Chittagong Divisions. under the Garo Hills and along the course of the Brahmaputra than elsewhere. It is hard to realize an area of wild growth quite so large as that mentioned by Babu Abhilas Chandra Mukharji, *viz.*, twenty square miles covered with long grass and hemp plants. Mr. Luttmann-Johnson, talking of this very tract, Durgapur thana, says he saw the plant growing more or less thickly over twenty or thirty acres. Babu Abhilas Chandra Mukharji mentions many other places in Dacca and Mymensingh where the plant grows abundantly, and the Collector of Dacca corroborates his evidence regarding the south-west corner of that district. It is evident that in these districts the growth is very prevalent. Sarat Chandra Das (47) says that the growth is dense in places in the Chittagong Division, but he cannot say that it is abundant in any district.

30. In the whole tract lying between the Brahmaputra and the Bhagirathi
The central part of Lower Bengal. rivers, and bounded on the north by the imaginary line from the Ganges to the Garo Hills, the evidence as to the abundance of the growth is discrepant. The growth is probably most common on the banks of the Ganges and Brahmaputra.

31. In the Patna and Bhagalpur Divisions south of the Ganges, and in the
South-Western Bengal bounded by the Ganges and Bhagirathi. Burdwan, Orissa, and Chota Nagpur Divisions, the spontaneous growth is evidently very scanty. The plant is only found where its existence can be accounted for. In this respect the area resembles the southern fringe of the North-Western Provinces.

32. The Tributary States of Chota Nagpur and Orissa are included in this
The Tributary States of Orissa. description. Regarding the Garhjat, Mr. Worsley, Commissioner, reported in 1889: "I think it is very doubtful if ganja grows wild to any extent in the Tributary Mahals." And again Mr. Hopkins, Officiating Commissioner of Orissa, wrote in April of the same year: "The prevailing impression that ganja grows wild in the Tributary Mahals appears to me to be wrong." It is true that the Board of Revenue and the Government of Bengal declined to accept this opinion, but it is confirmed by the information gathered by the Commission. The Officiating Superintendent, Tributary Mahals, says indeed in his report that hemp grows in all parts of the Tributary States, but in his oral evidence he says he feels sure that the plant does not exist except in the enclosures of houses.

33. Regarding the Chota Nagpur States, the evidence of the Commissioner, Mr. Grimley, does not describe any but a very occasional and sparse growth in certain places, and even this is not corroborated by any local witness. There will be found on the contrary distinct statements that the wild plant does not exist. The reports from the Seraikela and Kharsawan States in the Chota Nagpur Agency do not mention the existence of the wild growth.

The Political States of Chota Nagpur.

34. The memorandum of the Kuch Behar State reports that wild hemp grows spontaneously in most parts of the State. The State lies within the belt of Sub-Himalayan growth.

Kuch Behar.

35. The report from Hill Tippera makes no mention of the wild growth. It states at the same time that there is no cultivation of the plant. This is incorrect, for there is evidence of some cultivation as well as smuggling from the State, and the wild hemp is frequently referred to in connection with it. The evidence of smuggling comes from Assam as well as Bengal. It is probable that the wild growth is not very extensive, and the information is not sufficient to warrant a decided opinion as to whether the plant sows itself or merely springs from chance seeds dropped near the homesteads.

Hill Tippera.

36. The hemp plant grows spontaneously and in considerable quantity in all parts of Assam, including the Brahmaputra and Surma Valleys and the Hill Tracts. One witness states that the wild plant used to grow in Assam before the ganja shops were established, and this would appear to be the fact, because the plant is cultivated on the Himalayan slopes overhanging the Brahmaputra Valley; it is found growing without cultivation in the hill ranges, and in the Naga Hills it is looked upon as a jungle product.

Assam.

The wild growth existed before ganja shops were established.

37. The Excise Commissioner, Mr. Driberg, has served in the province for thirty years. In his written answers he passes in order over all the hill ranges within and surrounding the province, and concludes by saying that they are all ganja-producing tracts. And referring more particularly to the plain country, he says: "The hemp plant grows with equal abundance in all the districts of the province, and in the semi-independent hills beyond the frontier. It is never seen in forests or other lands remote from villages, but always near villages or on abandoned village sites In the interior, remote from tea gardens and the settlements of foreigners, it is not found. So in regard to fields, it is found chiefly where there are foreigners." On the other hand, Dr. Macnamara (20) states that he has found the plant in Assamese villages far away from places where there are foreigners; but it would be difficult to get a place in Assam very far from the gardens. Mr. McCabe, Deputy Commissioner of Kamrup, being questioned about efforts that may have been made to control this spontaneous growth, says that no attempt has been made to exterminate the plant in the hills or in unoccupied lands, but any officer seeing a plant in occupied land is bound to cause it to be uprooted and to prosecute—presumably if there is any appearance of the plant having been cultivated,—and that there is now practically no growth in occupied lands. He is of course speaking of his own district. He says further that the quantity of growth

in waste lands is very small and has a tendency to decrease with the spread of occupation, and that active measures of extermination are not necessary. In face of other evidence, it is questionable if this can be accepted as a correct picture of the state of the spontaneous growth in the plains. It is certain that the weedy growth in yards and enclosed ground as well as in the waste places connected with habitations, present or past, is extremely common even in Kamrup. Mr. Gait, Director of Land Records and Agriculture, after appearing before the Commission, has sent notes with reference to Mr. McCabe's statements, in which he writes that he found the plant growing luxuriantly round the Kamalpur rest-house and within a mile of the one at Tambulpur, which were two of the four camps he stayed at since he entered the district; and he was beginning to think that, if properly looked for, it would be found in almost every village in Kamrup. From the fact that he always found it close to *basti* land, he was inclined to think that, if it was not actually planted, it was very actively tolerated. Dr. Mullane also says that "in the Kamrup district the hemp plant springs up spontaneously in almost every patch of cultivated ground." Without accepting Mr. Gait's opinion that the growth is fostered by the villagers, the Commission think from the body of the evidence that his description of the prevalence of the growth in Kamrup is not far from the truth, and that with but slight modification it will apply to every plain district of Assam. Regarding the Surma Valley, confirmation of this view is found in the evidence of Mr. Luttmann-Johnson (Bengal, 6), an officer of long experience in Assam.

38. Neither is there any reason to doubt that the plant grows without cultivation in the hill tracts within and bordering on the province. It is cultivated in the Bhutan Hills, and cannot but run wild there, as it does in other places which are thoroughly congenial. Mr. Driberg speaks of not only the Himalayas, but all the hill ranges within and bordering Assam, as ganja-producing tracts, and it is highly probable that the plant has to a greater or less extent run wild in all of them. Mr. Luttmann-Johnson knows it grows wild in the Naga Hills and Bhutan, but thinks it must be from seed accidentally sown. He has seen it wild in the Khasi Hills and in the Mymensingh jungles, presumably at the foot of the Garo Hills. Mr. Godfrey (1) believes it grows wild in the Khasi Hills. Mr. McCabe (5) has seen it wild in the lower ranges of the Naga Hills. It may be doubted if the smuggling which is carried on from the hills in all parts of the province to the plains can be of the *wild* ganja as stated in the Excise Commissioner's memorandum, for the produce of the wild plant is of very inferior quality, and it can be got in the plains. The smuggled plant must have been to some extent cultivated, but its existence in the hills is a decided corroboration of the evidence that the wild plant is found there also.

39. It is difficult then to avoid the conclusion that Assam, including both the Brahmaputra and Surma Valleys, with the hill ranges which form part of the province, ought to be classed with the Himalayas and the Terai as a region in which the spontaneous growth has run wild.

40. There is only one Manipur witness, and he says nothing about the spontaneous growth. Mr. Driberg classes the State as a ganja-producing tract, whence the drug is surreptitiously brought down to the plains. No other witness gives direct evidence

about Manipur; but the prevalence of the spontaneous growth in the hills bordering the State on the Assam side, which is taken to be proved, justifies the inference that the growth must also be common in the State itself.

41. The Government of the North-Western Provinces caused enquiry to be made about the growth of bhang in the year 1883. The Excise Commissioner then reported as follows: "The hemp plant grows wild, and is made into bhang in the fourteen districts marginally* noted. The hemp plant is cultivated, and the cultivated hemp is made into bhang in the three districts marginally† noted."

North-Western Provinces.
The official account of the wild growth.

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| * 1. Dera Dun. | 8. Pilibhit. |
| 2. Saharanpur. | 9. Gorakhpur. |
| 3. Muzaffarnagar. | 10. Terai. |
| 4. Bijnor. | 11. Naini Tal |
| 5. Budaon. | (Kumaon). |
| 6. Moradabad. | 12. Kheri. |
| 7. Bareilly. | 13. Bahraich. |
| | 14. Gonda. |

† Farakhabad, Garhwal, and Hardoi.

In the memorandum furnished to the Commission by the present Excise Commissioner, Mr. Stoker, the districts of Muzaffarnagar and Budaon are omitted from the list of districts in which the wild growth is found, and Basti and Garhwal take their place. It is stated, however, that the produce is considerable in Muzaffarnagar, Shahjahanpur, and Meerut. In connection with the cultivation in Hardoi and Fatehgarh, the Excise Commissioner remarks: "It is supplemented to some extent by self-grown plants produced about wells or houses and on small waste patches and head lands." Mr. Stoker then refers to the accidental growth in other parts of the province in these words: "Beyond these districts the hemp plant flourishes widely, though it is not produced in sufficient quantities to render it of any commercial importance. I would not venture to assert that it is always of purely indigenous growth, though its wide diffusion leads me to believe that this is the case. It may be seen growing about wells and temples, and in such places it is, no doubt, the produce of seeds scattered by travellers and fakirs who use hemp drugs. It is also found in and about houses and in gardens, where it is either introduced in the same way or deliberately sown. In all these cases I think the plants, if not the result of cultivation, are knowingly permitted to grow, and are subsequently used by the people who live in those places. The plant may also be seen springing up in a scattered way in waste places and low lands." It has been shown in the previous chapter that there is no *purely indigenous growth* of hemp, and that this description cannot be correctly applied either to the plant in the area of wild growth or to that in the tracts with which Mr. Stoker is dealing when he uses the expression. But the distinction must not be lost sight of between the area in which the plant is so prevalent as to deserve the character of *wild* and the reputation of propagating itself, and that in which it is more scantily distributed and springs from seed sown accidentally by man. The former area comprises the Himalayan regions and the districts lying immediately below the mountains. The following observations of Mr. Stoker include the latter area: "In some districts the amount produced by these forms of sporadic growth is considerable, and the constant source of complaint by the drug contractors who have the monopoly of the vend. These conditions obtain, broadly speaking, to a greater or less extent in all parts of the province lying north and east of the Jumna."

The Excise Commissioner then describes an area of very scanty spontaneous growth: "In Bundelkhand and most of Mirzapur—in fact, in all the country in and adjoining the hill system of Central India—the plant is much more rarely found. But that it can be grown, and with some perfection, in this tract also is shown by the occasional presence of plants and by the existence of

considerable cultivation in Gwalior and in some of the Bundelkhand Native States which interlace with British territory." Thus the belt of hilly country along the south of the province is still less favourable to the spontaneous growth than the plain north and east of the Jumna.

42. The evidence tendered to the Commission confirms this description generally; but it may be noted that not a single witness speaks to spontaneous growth in the districts named in the margin, all of which, except Jhansi and Hamirpur, lie north and east of the Jumna. This absence of mention does

1. Bulandshahr.	9. Fatehpur.
2. Mathra.	10. Hamirpur.
3. Agre.	11. Allahabad.
4. Mainpuri.	12. Jhansi.
5. Etawa.	13. Benares.
6. Etah.	14. Azamgarh.
7. Budaon.	15. Unao.
8. Cawnpore.	16. Rai Bareli.

not prove that the spontaneous growth does not exist, but it justifies the conclusion that in the central belt it is certainly not such as to deserve the character of *wild*, and that Mr. Stoker's description gives it as much of that character as it deserves. This central belt is approximately bounded on the north by a line drawn through Muzaffarnagar, Moradabad, Bareilly, Shahjahanpur, and Sitapur to Bahramghat on the Gogra, and thence following the course of that river. Throughout the country lying beyond this line, including the mountains, the spontaneous growth is abundant. It is bounded on the south and south-west by the Jumna river, beyond which the spontaneous growth is rare.

43. The State of Garhwal Tehri comprises the Himalayan region west from British Garhwal, and there is no reason to suppose that its circumstances as regards the spontaneous growth of the hemp plant differ in any way from the latter district. The Diwan of Tehri gives 2,500 to 4,000 feet as the elevation at which the plant flourishes. Other evidence shows that it grows freely beyond these limits.

44. The Rampur State stretches south from below the Terai district. The Revenue Member of the Council of Agency writes that the spontaneous growth is found in the north and north-eastern part of the State. There is nothing to differentiate Rampur from the British districts lying east and west of it in respect to this growth.

45. The hemp plant grows spontaneously throughout the Himalayas, and in a broad belt along the foot of the mountains. The growth is so free and vigorous that it may without impropriety be called *wild*, and it does not appear to differ in extent and character from that of the similar region in the North-Western Provinces. Its prevalence seems to be most notorious in the districts of Hoshiarpur, Gurdaspur, and Jullundur, because the bhang contractors draw their supplies from these districts; but witnesses, many of them of high authority, such as the Commissioner of Rawalpindi, speak to its existence in greater or less profusion throughout the submontane districts from Peshawar to Umballa. Contradiction may occasionally be found regarding the density and abundance of the growth, but about its frequent occurrence in this stretch of country there can be no doubt. It has been seen that in other provinces it is the habit of the plant, when it finds itself established in a suitable home like the Terai, to grow very densely and in patches of considerable size, and the Commission are inclined to accept the evidence of those whose statements are in agreement with this knowledge.



Survey of India Offices, Calcutta, August 1894.

THE SPONTANEOUS GROWTH OF BHANG IN THE PUBLIC GARDENS, AMRITSAR.

23RD APRIL 1894.

46. The growth decreases in frequency very rapidly as the Himalayas are left behind. It appears, however, from the evidence to ^{The limits of the submontane belt of wild growth.} maintain its hold in the Amritsar, Lahore, Karnal, and Shahpur districts further south than in others. As regards three of these districts, special reasons for this persistence may be suggested. Shahpur is watered by the Jhelum, which appears to carry an exceptionally heavy growth on the banks of its upper reaches. Amritsar is not only the great market for bhang as well as charas, but it is the head-quarters of the Sikh religion, and the former drug is largely consumed by the followers of that faith. It seems to be a regular drink or refreshment with the visitors to the Golden Temple. When members of the Commission visited the city, a dense growth of bhang flourished over a large area in the outlying parts of the public gardens and countless plants in the hedgerows surrounding the city. The seeds discarded from the large quantity of bhang that is daily consumed in the city sufficiently account for this growth, and it is probable that the ways leading to Amritsar from the country round are sown with hemp in the same way. The plant is probably propagated in the same manner, but to a less degree, around Lahore, the capital town of the province, and the head-quarters of the Administration. East of Umballa and Karnal the bhang-bearing belt appears to widen out, and its southern boundary would probably pass across the Karnal district.

47. The Excise Commissioner reports that "the supply of bhang is derived from the wild hemp plant which grows within the province in the submontane tracts under the Himalayas and the Suleiman Range." ^{The supposed wild hemp of the Suleiman Range.} The evidence, it has been seen, corroborates the statement as regards the Himalayan tract. But it does not do so for the Suleiman region. The existence of the wild growth is not mentioned in Kohat or the Derajat Division. Witnesses (60) and (19) make statements which need explanation. The former says, speaking of the Dera Ghazi Khan district: "In the hill tracts of my *ilaka* the wild hemp grows here and there to a small extent, but no one consumes it. Sometimes budmashes, however, administer it from evil motives to another person without his knowledge." And again—"The wild hemp is known in this country by the name of '*kohi* bhang,' and cultivated hemp is called bhang only." The statement itself is open to doubt for two reasons: it is unlikely that the true hemp, though growing wild, should not be consumed, and the uses to which the *kohi* bhang is alleged to be put point to a much more potent drug. The explanation will be found in the answer of Mr. Dames (9), whose experience has been gained especially in the Derajat. He writes: "There is a plant known as *kohi* bhang found along the beds of torrents in the Suleiman Hills, the leaves of which are said to possess strongly intoxicating properties. This plant is certainly not a *Cannabis*, but I am unable to state what its genus is. It looks like a *solanaceous* plant. Its growth is scattered, and it is not found in great abundance anywhere." There can be no doubt that this is the plant to which witness (60) refers. It is in all probability the same as the *akoe* of Sind, which is proved to be *Hyoscyamus muticus* of the *solanaceous* order. The same plant is referred to by witness (36) in his oral evidence as *kuyi*, growing in a valley 50 miles west of Dera Ismail Khan. Witness (19) is not a very exact observer, and when questioned in detail about his knowledge of the wild plant travels away to the Umballa district. Witness (24), an Excise officer, mentions the *kooi* (*i. e.*, *kohi*), doubtless the same *Hyoscyamus*, as being imported from Kabul and Kandahar.

The same witness gives the name of another hemp plant as *badal*, saying that it is known to grow in the Waziri Hills about 50 miles to the west of Dera Ismail Khan. He describes its leaf as being as broad as that of the *madar*, which shews that this also is not the true hemp.

48. Witness (41) mentions the wild plant as growing scantily on the banks of
Spontaneous growth in the plain country. canals and in waste places in the Delhi district, and its occurrence in one tahsil of the Ferozpur district is stated by another witness. These statements may very well be correct, but they do not imply a growth which can properly be called wild in the sense in which the word is now being used, but only a casual and accidental growth. One or two witnesses talk in a general way about spontaneous growth in all districts.

49. It will be a safe conclusion to say that the wild growth is only to be found
Area of wild growth defined. in the Himalayas and in a belt of country under those mountains which is very narrow at Peshawar, and gradually widens as it approaches the North-Western Provinces. Self-sown hemp plants may be found elsewhere, but there is no tendency for them to run wild outside the above tract.

50. The wild growth occurs in the Himalayan States, and those of which any
Punjab States. part lies within the Sub-Himalayan bháng-bearing belt. No State shows any peculiarity in the capacity for growing wild hemp. The Hill States are numerous, and need not be named. Kapurthala and Patiala are the only States in the plain country from which the spontaneous growth is reported, and it will doubtless be found in those parts of the States which fall within the Punjab tract of wild growth. Patiala has a considerable area of territory in the Himalayas, where the wild growth will be found to exist. The Bahawalpur witnesses say that occasional plants are found in graveyards—a not unlikely locality for such growth when there is sufficient rainfall—as there are generally *takias* in connection with them to which fakirs resort.

51. There are only two witnesses in the Central Provinces who depose to
Central Provinces. having seen the hemp plant in spontaneous growth.
The wild growth does not exist. One is Mr. Lowrie, Deputy Conservator of Forests, and he can only name one village. The other witness (52), Malguzar and Honorary Magistrate, saw it when ganja was allowed to be cultivated in his neighbourhood. Several witnesses make general statements, more or less of a hearsay character, that the plant springs up on heaps of village refuse from seed accidentally dropped. Mr. Drake-Brockman and many non-official and official witnesses, who ought to know, including Mr. Robertson, who has charge of the Nimar district, where ganja is cultivated and the escape from cultivation would be likely to occur, make more or less positive statements that the spontaneous growth is not to be found. The growth observed by Mr. Lowrie is the same kind of stray growth which is reported by other witnesses without having been actually seen. It was not in the jungles, and had probably sprung directly from seed thrown out of the houses. It is evident that in the Central Provinces the spontaneous growth does not occur, except very occasionally, as a weed in the neighbourhood of villages from seed accidentally dropped in suitable soil, and that there is no tendency for this spontaneous growth to reproduce itself.

52. There is no evidence that the plant grows spontaneously in the Feudatory States. The spontaneous growth, however, probably exists just as it does in the Province proper.

53. It seems clear that the spontaneous growth does not prevail in any part of the Madras Presidency to such an extent as to have led to the idea that the plant is wild. The Government memorandum states that nothing is known about the extent of the wild growth; and Mr. Benson, Deputy Director of Agriculture, has only seen some references to its existence in the northern district. The Commissioner of Salt, Abkari, and Separate Revenue, replying to the direct enquiry of the Commissioner of the Orissa Division on this subject in his letter No. 529-Mis., dated 11th May 1887, was unable to say whether the hemp plant grew wild. This is remarkable because the plant has always been cultivated as a regular field crop in various parts of the Presidency; the desultory cultivation in yards is common in certain localities; there are highlands in all parts of the Presidency which would apparently be suitable to its growth without cultivation; and the use of the drugs among the jungle people and the coolies of coffee and tea gardens is by no means unfrequent. The want of official knowledge of it is a fairly strong indication that the wild growth does not exist, or exists only in inconsiderable quantity.

54. It is only in the hill regions, such as the zamindaris of Ganjam and Vizagapatam, the Javadi Hills, the Shevaroy and other ranges in the Salem district, the Nilgiris and Wynaad, and the Palni Hills, that there is any reason to suspect spontaneous growth on at all an extensive scale. And the suspicion is not strong, for it has only been possible to elicit from one witness a description of the growth which agrees in any degree with what has been learnt about it in Northern India. This witness is Mr. William Robinson, Missionary, and his evidence must be discounted by the admission that "I am singularly deficient in the power of differentiating plants, but the smell of the hemp plant is well known to me." On the whole it is probable that the growth which this witness saw in the Shevaroy Hills was really hemp, but that he has frequently been deceived by other weeds, of which there are several, which bear a certain general resemblance to it. As to the abundance of the growth in the Shevaroy Hills, he is to some extent corroborated by witness (189), who appears to be a practical man, and to speak from personal observation. But his observation is not recent and his statement is not in a convincing form. Other witnesses talk of the spontaneous growth as abundant in the Ganjam Hill Tracts and the South-East Wynaad, and even in the Ceded Districts; but there are equally good witnesses on the other side. The District Forest Officer of North Malabar, who appears to be of a careful and observant habit, says he has seen the spontaneous growth in the Travancore and Tinnevely Ghâts and in the Wynaad, but it was always in the neighbourhood of cultivated plants. He says distinctly: "I have never seen the plant wild where there was no cultivated plant near." He describes the situation which appears to be suitable to the wild growth, and the growth itself as scattered. This is probably the best witness in Madras on this subject. Mr. Long (149) says that he has sometimes seen a few plants growing together which people told him had sprung up spontaneously; but

the most important of such patches of growth appeared to him to have been cultivated.

55. The general conclusion must be that the dense and widespread growth does not exist in the Madras Presidency, but that throughout the Presidency the chance and scattered growth on refuse heaps near villages or in other exceptionally favourable situations, such as old cattle-folds or coolie lines, may occasionally be found, and more commonly in the hill tracts than in the low country.

The chance growth of the Presidency is not wild.

56. There is information from Travancore that "in some hilly tracts where the seed was once sown by Kanikars, hillmen, a succession of plants appears to have been kept up without fresh plantation. This, however, is not strictly wild or spontaneous growth." The District Forest Officer of North Malabar has also spoken of the spontaneous growth in the Travancore Hills. This is all the available information on the present subject regarding this State. It seems certain that such spontaneous growth as does exist is not extensive; that it is intimately associated with cultivation, past or present; and that, though it may possibly succeed in occasionally reproducing itself, there is no marked tendency for the plant to run wild.

Travancore and Cochin.

57. There is no information about spontaneous growth in the minor Madras States. Their conditions are not in any way different from those of the Presidency generally, and the same extent of spontaneous growth may be expected to exist.

Sondur, Banganapalle, and Pudukottai.

58. The spontaneous growth is found occasionally in the districts where the plant is cultivated, especially Ahmednagar. It is said by one or two witnesses to occur also in the highlands of the Southern Maratha Country. But in no place does it appear to be either dense or frequent, being represented only by scattered plants on the refuse heaps about villages. Many intelligent witnesses, who have evidently bestowed great care on their inquiries, state positively that the spontaneous or wild growth does not exist, or are silent on the subject. Mr. Dodgson and Mr. Cumine mention its occurrence in the Dangs, but only as occasional plants. This is a country of forests and hills and scattered hamlets far removed from observation, and having a copious rainfall. The same description applies to the whole of the Western Ghâts, and the plant might be expected to run riot in these regions if it were inclined to do so. The Excise memorandum reports that the spontaneous growth does not exist.

Bombay.

There is no wild growth.

59. The plant does not grow spontaneously in Aden according to the report of the Political Resident.

Aden.

60. The plant does not grow freely from self-sown seed in any part of the Kathiawar Agency. A few plants may be found occasionally in fields or gardens or near irrigated crops. They seem to be generally more or less tended where they do exist. They are said to occur sometimes in grass preserves, but the evidence is of the weakest kind.

Kathiawar.

61. Cutch lies between Sind and Kathiawar. As there is no spontaneous growth in either of the latter provinces, it is unlikely that there should be any in Cutch. The Political Agent's report mentions none.

62. The report of the Chief Minister of Palanpur, the principal State in the Palanpur Superintendency, states that "wild hemp is found to a very insignificant extent in this State." There is clearly no extensive growth, that which is referred to being probably the few plants that spring from chance seed. This description may be held to apply to the whole Agency.

Mahi Kantha.
Rewa Kantha.

63. No spontaneous growth is reported from the Mahi Kantha or Rewa Kantha Agency.

64. The Diwan of Kolhapur reports that "the wild plant is not grown in that State." In the smaller States of the Agency there is some cultivation, but no wild growth. There may be a rare spontaneous growth from chance seeds, but nothing more.

65. The only native territory in which the hemp plant is definitely stated to grow wild is the Dangs, and there only a few isolated plants. The language used by the Diwan of Cambay is ambiguous, but it at all events leaves no doubt that the spontaneous growth is quite unimportant if any exists; and the Superintendent of Police says that the wild plant is not found in the State.

66. The spontaneous growth is not reported to occur in the valley of the Indus, Sind. Many witnesses speak of a plant called *ekoi* or *akoe* occurring in the hills on the western frontier of Sind as wild bhang. Specimens of the plant have been submitted to Dr. King of Calcutta and Mr. Woodrow of Poona, and pronounced by both to be *Hyoscyamus muticus*. It is said to be very much more potent than hemp, containing the alkaloid hyosyamine, an isomeride of atropine. Under the name of *kohi* bhang, "hill bhang," its intoxicating properties are well known to the natives, and it is stated to be smoked like ganja, and sometimes used in the same way as dhatura to facilitate robbery; and its use has occasionally been suspected in the Punjab and Baluchistan, where it is common (*Pharmacog. Indica*, Vol. II, page 631). The statements describing it as wild *hemp* are made in confident language, and often with some circumstance as to the manner in which it came to be accidentally sown in the hills. The words *ekoi* and *akoe* are probably short forms of *bhang-i-kohi*, or "bhanga of the hills," which is the name used by some persons in the Punjab as well as in Sind. The Commissioner in Sind doubted the existence of the wild growth in the Baluchistan Hills as reported to him, and himself submitted specimens of *ekoi* to Mr. Woodrow with the result stated.

67. It is doubtful if the spontaneous growth occurs anywhere in the province, because the rainfall of the Indus Valley is extremely light and the mountains on the western frontier are very arid. Even growth on the rubbish heaps near houses is unlikely on account of the want of water. It is probable that the almost total absence of rain counteracts the favourable conditions which might from the experience of Upper India be supposed to exist in the periodical floods and irrigation from the Indus.

68. The hemp plant does not appear to grow spontaneously in the Khairpur State.

Khairpur.

69. Under the regulations in force in Berar, the village officers are held responsible that all ganja of spontaneous growth is uprooted, and the cultivation of the plant is only allowed after license has been obtained. By these arrangements the spontaneous growth appears to be successfully kept under; for only one witness out of 38 can be found to say that it exists, and it may be doubted if he refers to the same plant.

Berar.

70. There appears from the memorandum of the Commissioner, Ajmere-Merwara, to be no spontaneous growth of any importance —“ Here and there a few plants grow spontaneously.” The witnesses do not speak of any such growth. Plants that spring up in this way are up-rooted or made over to the contractor. There is evidently no dense growth of a wild character.

Ajmere-Merwara.

71. The Commissioner of Coorg is “ doubtful whether wild hemp is actually found, but hemp springs up in the coffee gardens, near coolie lines, and near the huts of the wild tribes, and no one owns to its cultivation. A coolie in weeding the coffee will try to avoid pulling up the plant unless his master happens to be looking.” The evidence of two witnesses describes a growth round about huts whose spontaneous character is doubtful, for it seems to be generally tended. A few chance plants may spring up of themselves in such places as are indicated above, but there is no wild growth of the dense character known in the north of India.

Coorg.

72. No wild or spontaneous growth is reported from any part of Baluchistan.

Quetta-Fishin.

The witnesses do not know of its existence.

73. Ganja was made contraband in Lower Burma in 1872-73. In that year large seizures of ganja illicitly brought from Upper Burma were made, and witness (19) states that Upper Burma was the chief source of supply in those days. This being the case, with the known tendency of the plant to run wild, the apparent suitability of Upper Burma to the growth of the plant, and the fact that the ganja-supply has by no means totally ceased notwithstanding the prohibition, it is remarkable that the evidence of the existence of the spontaneous growth should be so uncertain as to make it doubtful if it is to be found in any of the settled districts except as a very occasional weed.

Burma.

Absence of wild growth remarkable.

74. The Deputy Commissioner of Mergui alone mentions any extensive growth, and there are internal reasons for distrusting his statements. He no doubt made the acquaintance of the plant during his service in Kumaon, but he seems to have left that district over fifteen years ago, and his memory may not have served him. He talks unscientifically of the *indigenous* wild plant, which shows that he cannot claim to have made any study of the plant. The Burmese name he gives to the plant, “pi-san-bin,” the literal translation of which is apparently “net-rope plant,” is not used by any other witness. A rich alluvial loam, a climate hot and damp, and a low level are not, as far as the information given to the Commission teaches, conditions favourable to the spontaneous growth of hemp or to the development of its fibre. In his second paper he writes that the Siamese use the

Evidence regarding wild growth.

cultivated variety of hemp, which suggests that he is talking of some plant in which the distinction between wild and cultivated forms is more marked than is the case with *Cannabis*. He was unable to procure specimens of the plant in June in reply to the request of the Commission reporting that the plant was not in growth at that season. Under these circumstances, this evidence must be regarded as falling far short of proof. The Commissioner of Pegu (2) had the plant pointed out to him growing outside three villages in Upper Burma among the rubbish heaps. He would not have known the plant if it had not been pointed out to him. The Commissioner of Akyab mentioned the scanty and scattered growth in his division of a plant which the Chittagonians call *boil ally*, and which he supposed to be a species of wild hemp. He has kindly sent specimens of the plant in answer to a request from the Commission, and they are found to belong to two species of *Sida*, viz., *Sida spinosa*, L., and *Sida carpinifolia*, L. These plants have no narcotic properties. The Commissioner of the Eastern Division, Upper Burma, who has been at some pains to make enquiries, and the Deputy Commissioner of Mandalay can give no information of the wild growth, though both have apparently come across cultivation of the plant. The Deputy Commissioner of Toungoo mentions the wild growth as existing, though not abundant, in Prome and Shwebo. The Inspector-General of Police in an expedition north-east of Bhamo found that his men were getting some kind of ganja from the Kachins, who gathered it in the jungles. A specimen of the ganja from these hills has been examined, and consisted merely of leaves and tops of the plant rolled into balls, and showing no signs of cultivation or preparation. A District Superintendent of Police states that in Upper Burma the plant is often seen growing near villages.

75. The evidence cannot be accepted as showing more than a casual growth in the neighbourhood of villages, which could easily be accounted for. It can neither be extensive in any particular case, nor can the cases be very numerous. No wild growth in the settled districts, but probably exists in the northern mountain ranges. Except the doubtful report from Mergui, there is no evidence of any tendency in the growth to reproduce itself and spread. These remarks apply to the settled districts only. The plant probably has run wild in the Kachin country and in the mountain ranges adjoining China, Assam, Manipur, Lushai, and Tippera.

76. The report of Mr. McDonnell, Special Assistant Excise Commissioner, Mysore, shows that hemp sprung from chance seed is often found in all the eight districts of the Mysore State; but it does not appear to be abundant anywhere or more frequent in one district than another. The seed thrown away on dust heaps finds its way with the manure into fields and gardens. It is reported both from Mysore and Bangalore that when such plants are discovered they are uprooted, and that prosecutions are instituted if there is evidence of their having been cultivated. One informant states that abundant growth is to be found in three districts; but, with this exception, the official account is generally confirmed, and may be accepted as correct.

77. Memoranda have been received from the States of the Rajputana Agency named in the margin. The wild hemp is only mentioned as occurring in four of them, viz., Jhallawar, Jeypore, Kishengarh, and Alwar, and that in very small quantity. The information leaves a decided impres-

Rajputana.	
Kerowli.	Kotah.
Alwar.	Jhallawar.
Dholpur.	Jeypore.
Jaisalmir.	Kishengarh.
Jodhpur.	Bikanir.
Bundi.	Tonk.
Serohi (only table).	Shahpura.