Proceedings of the Madras Government, Revenue Department, 5th March 1869.

No. 112. Read the following letter from the Secretary to the Government of India (Home Department—Public,) to the Secretary to the Government of Madras, dated Fort William, the 19th January 1869, No. 341:—

Letter from Inspector General of Hospitals, Indian Medical Department, Upper Provinces, No. 277, dated 5th October 1868.
Memorandum by Surgeon-Major T. Farquhar, M. D., dated 6th October 1868.
Demi-Official letter from Surgeon-Major Ross, to Dr. Farquhar, dated 5th October 1868.
Endorsement from the Government of Bengal, No. 5,944, dated 19th December 1868.

1. I am directed to forward the accompanying copy of the papers marginally noted, relative to the cultivation of the Ipecacuanha Plant in India, and to request that under the Orders of His Excellency the Governor in Council, such measures as are practicable may be taken with the view of introducing the plant into the Madras Presidency.

2. I am also to request that reports of all such experimental measures, and of the success attending them, may be submitted for the information of the Government of India.

From the Inspector General of Hospitals, Upper Provinces, to the Private Secretary to the Viceroy and Governor General of India, Simla,—No. 277, dated Simla, the 5th October 1868.

1. The success which has attended the introduction of the cultivation of Chinchona in India leads to the desire for the introduction of other valuable medicines, the product of similar climates to that in which Chinchona is found.

2. Ipecacuanha is the most valuable medicine in the cure of dysentery. It was originally introduced in Europe in 1684, as a specific against dysentery, and has been used in India since 1830. It is the medicine in which I have placed most confidence since 1833, in dysentery, and in many children's diseases, where calomel was formerly used, and in the earliest stages of acute inflammation of the liver.

It is equally valuable in the treatment of the diseases of Europeans and Natives, and there is no indigenous substitute of equal power grown in India.

3. Ipecacuanha is expensive, but it is liberally supplied to the Hospitals of the European and Native Troops, to the Jails, and also in a more limited manner to the Charitable Dispensaries.

4. The exhibition of the remedy of late years in very large doses has been found of the greatest advantage in dysentery and hepatitis, and its more general use is to be anticipated, but a deficiency of the supply may be anticipated, or at least an increase in the price, as it is stated by Pereira* "that as no care is taken in the cultivation of the plant in Brazil, it has become scarce around the principal towns."

* Pereira's Materia Medica, vol. 2, page 56.

5. The plant grows wild in low, shady places, in a hilly tropical climate in Brazil. It belongs to the same family as Chinchona and coffee. These plants are found to flourish in India, and there can be no doubt but that a suitable habitat exists in many parts of India for the allied plant—Ipecacuanha

6. I would beg to submit to the consideration of Government, whether it would not be desirable to introduce the cultivation of Ipecacuanha in an analogous manner to that of Chinchona. It would lessen the expense of the supply now required by Government, and it would render a most valuable remedy available to the Natives all over India in the same manner as Quinine it is hoped soon will be, whose expenditure has hitherto been limited by the expense.

Memorandum on Ipecacuanha, dated Simla, the 6th October 1868.

It is hardly necessary to say, that one of the severest and most fatal diseases met with in India, as in most tropical climates, is undoubtedly dysentery, the successful treatment of which was, until lately, one of the most difficult tasks set before medical men in the East.

2. The powdered root of Ipecacuanha, a small shrub grown in Brazil, and imported *viâ* Europe into India by Government, has long been used by English Medical Officers in the treatment of dysentery in Civil and Military Hospitals here.

3. Its full value, however, has only of late years been understood, for though originally (200 years ago) given in large doses of 30 or 60 grains, it was used in very much smaller doses, till in 1858, Assistant Surgeon Docker, a Medical Officer of the British Army serving in Madras, re-introduced the use of 30 grain, or half-drachm, doses.

4. This has caused quite a revolution in the treatment of dysentery, which, when of the ordinary form, and seen early in the attack, can be cured with as much certainty as ague can by Quinine.

5. The terribleness of the disease for which Ipecacuanha is so useful in India, may be imagined from the fact that, during the last ten years, 31,804 English soldiers have been attacked with this disease in Bengal, of whom 2,655 died; while in England, during the six years ending in 1861, only 739 cases occurred in an army double the size, and only 10 deaths.

6. But the statistic that speaks in favor of Ipecacuanha is the decreased death-rate since its use, in its most efficient form, viz., in large doses in India.

7. From tables prepared by Dr. H. Macpherson, Deputy Inspector of Hospitals, on the vital statistics of the European Army for eight years ending 1853-54, there were 21,221 cases of this disease (dysentery) in the then comparatively smaller army in Bengal, with 2,198 deaths.

In acute dysentery 91·8 per 1,000.
In chronic dysentery 172 per 1,000; or about one in six.

Deaths from Dysentery.	
Year.	No. of deaths.
1856	1,148
1859	562
1860	229
1861	165
1862	114
1863	121
1864	66
1865	83
1866	59
1867	66

8. This gives a proportion of about 103 deaths per 1,000 treated, that is to say, of more than one out of every 10 men attacked, died. Again, in the first half of the past 10 years, the men died at the reduced rate of 93 per 1,000, or less than one in 10. This last, was while a knowledge of the use of Ipecacuanha was gaining ground among the Medical Officers of the English Army. When, however, the remedy came into much more extended use during the last five years of the decade, the death-rate was reduced to 57 per 1,000; that is, one man in about 20 only died when attacked with dysentery,—a most gratifying improvement on the former death-rate of more than one in ten.

9. No doubt, part of this improvement is to be attributed to the invaliding of sick soldiers to England for change of air, as the highest death-rate in former years was from the *chronic* form of the disease. The rapidity of cure effected by the "Ipecacuanha" prevents, however, the acute disease from running into the chronic form, which is now comparatively rare.

10. With Natives, the success of these large doses, in ordinary uncomplicated dysentery, is equally certain and complete, and they too suffer severely from the disease from one end of the Empire to the other.

11. Those of them cared for by Government, as the Native Army and Prisoners, are freely supplied with Ipecacuanha, but except at the Government Dispensaries, the mass of the population has no opportunity of benefitting by its use.

12. It would, therefore, be a most valuable boon to the country if a number of plants were imported, and its cultivation spread, as has been done with Chinchona. It is quite a jungle plant in Brazil, and may be expected to be the same in India, so that little expense need probably be incurred in its propagation; and when it finds its way into the hands of the Native Physicians and Druggists, its market value will secure its being sufficiently cared for.

T. FARQUHAR, M. D.,
Surgeon-Major.

Proceedings of the Madras Government, Revenue Department, 5th March 1869.

Demi-Official.—From Surgeon-Major P. W. ROSS, Surgeon to the Commander-in-Chief, to Surgeon-Major T. FARQUHAR, M. D., dated Simla, the 5th October 1868.

1. Considering that Quinine and Ipecacuanha are both indigenous to South America, and that the Chinchona tree has been introduced into India with much success, it seems extraordinary that it should not have occurred to any one before, to have introduced the Ipecacuanha Plant also.

The great saving of life under dysentery attacks in recent years must shew the presence of some active remedy in the treatment of the disease. Such a remedy is the administration of Ipecacuanha in large doses. From my knowledge, I should say, that even now the remedy is not used in India as efficiently and completely as it might be, especially by Officers new to the treatment of the complaint in this country; but its use by those who have studied its action has manifestly affected the average of the annual death-rate.

Professor Maclean, in a recent Article on dysentery, says that "mortality among Europeans from dysentery in Bengal, during the 42 years from 1812 to 1853-54, amounted to 88·2 per 1,000. During 1860, when large doses of Ipecacuanha were given to the almost exclusion of other methods of cure, the mortality was 28·87 per mille." Again—

"In the Madras Presidency, under the old treatment, the mortality from the disease during 17 years was 71 per 1,000 treated; but when Ipecacuanha was largely used, it fell to 13·5 per mille."

Dr. Ewart, in the 16th No. of the Indian Annals of Medicine, calculates that the decrease of mortality attributable to the substitution of large doses of Ipecacuanha, in the treatment of tropical dysentery, amounts to no less than 46·60 per 1,000 to treated.

The 3rd Annual Sanitary Report for Bengal (1866), reviewing the recent history of dysentery, states—"the death-rate to cases treated has been reduced to less one-half of what it was. In 1859, it was 8·60 per cent.; in 1866, it had fallen to 4·19" (41·90 per mille).

I first learnt to use the remedy in large doses, and properly guarded so as to ensure its retention on the stomach, from a report of the Surgeon of the 7th Fusiliers at the Mauritius, written about 1855; and since 1858, I may say I have had large experience of its efficacy in the treatment of British Officers, Soldiers, women and children.

I consider Ipecacuanha, in the treatment of dysentery as it occurs in the North-West Provinces and in the Punjab, to be quite as much a specific as Quinine is for the treatment of all malarious attacks; and from its being the agent for combating and subduing more rapid and mortal complaints than are caused by malaria, it may be said to be of more importance than Quinine in the diminution of mortality. When it does fail to act thus specifically, it is either from there being organic complications, which must of themselves in the end prove mortal, or that the remedy has been administered without proper knowledge or precautions.

The use of Ipecacuanha can fortunately never be so extended as that of Quinine, for there are fewer occasions in which its application is called for; but I think it is nevertheless quite as important that its cultivation should be introduced into India.

From the Officiating Under Secretary to the Government of Bengal, to the Superintendent of the Botanical Gardens, and in charge of Chinchona Cultivation in Bengal,—No. 5,943, dated the 19th December 1868.

I am directed to acknowledge the receipt of your letter No. 135, dated 8th instant, and in reply to state that, the Lieutenant-Governor considers that the successful introduction of the Ipecacuanha Plant would be a valuable benefit. I am, therefore, to request that you will take every means in your power to develope it, as suggested in paragraph 6 of your letter.

No. 5,944.

Copy of the above letter, and of the one to which it is a reply, forwarded to the Government of India, in the Home Department, for information, with reference to Endorsement No. 4,245, dated 23rd October last, from that Department.

From the Superintendent, Botanical Gardens, to the Under Secretary to the Government of Bengal.
—No. 135, dated the 8th December 1868.

In reply to your Endorsement No. 5,221, dated the 31st October 1868, I have the honor to state that it appears to me advisable that the cultivation of the Ipecacuanha Plant should be encouraged in India. The memoranda by Drs. Mackay, Parkinson, and [illegible], which form the correspondence sent to me for perusal, prove how valuable Ipecacuanha is in the treatment of the most prevalent and fatal of the diseases of tropical climates. Last year (1867) I received information from London that the drug is rising in value in the London market, where its wholesale price is nine shillings per pound. The drug (the root) is collected from plants growing wild in the Brazilian forests, and is nowhere cultivated as an article of trade. Thus the already high price is likely to increase. The plant is also becoming scarce from indiscriminate destruction, and by the greatly increased consumption of the medicine which has occurred within the last four years. My attention had been directed to the introduction of the Ipecacuanha Plant into the Botanical Gardens of Calcutta, for some years, but I was unable to procure any plants until April 1868, when one plant was sent to me by the overland route by Dr. Hooker, Director of the Royal Gardens, Kew. I am indebted to the care bestowed on the plant by Dr. George King, Assistant Surgeon of the Bengal Medical Service, during the voyage to India, for its having arrived in Calcutta in good health.

2. The Ipecacuanha Plant is so well known, that it is not necessary to give a full account of it. For the purpose of this report, it will probably be sufficient to say, that the plant belongs to the same sub-group of the natural order of plants called Rubiaceæ, in which the Coffee tree is placed by Botanists. In habit, the plant is, however, very different from the Coffee. It grows in a diffuse semi-decumbent manner. It is found in moist, shady valleys of the mountains of Brazil, and extends from 8° to 20° south latitude. The only part of the plant used in medicine is the annulated root. The appearance of the plants in the Botanical Gardens agree with this description, and the plant evidently loves shade and moisture with considerable heat, and, like most mountain plants, dislikes stagnant moisture in the soil in which it grows.

3. The plant of Ipecacuanha originally introduced into the Botanical Gardens in 1866, is dead, but I now possess nine plants in this garden, which have been artificially propagated from the original one, besides five growing at the Chinchona Plantations at Darjeeling, to which place I sent one plant last year. I have thus 14 plants of Ipecacuanha.

4. I am confident that the cultivation of this valuable plant could be carried on as successfully as that of Chinchona, provided suitable places are selected for the experiment. Until now, the plants in the Botanical Gardens and in the Chinchona Nursery at Darjeeling have been grown under the shelter of glass-frames, which are used here for the protection of the most delicate exotics, and at Darjeeling for the propagation of the Chinchonas. I am unable, therefore, to say from experiment what climate will be suitable for the cultivation of the Ipecacuanha Plant; but it is probable that the successful cultivation of the plant in the open air in India will be attained in the valleys of the mountain ranges possessing a climate in which Coffee, Tea, and the most tropical species of Chinchona flourish. The measures to be adopted to introduce the cultivation of the Ipecacuanha Plant are, now that we possess the plant, comparatively simple. The cultivation must pass through the same stages as that of Chinchona. The aim of those to whom the cultivation is entrusted should be to increase the present stock as quickly as possible, and to enable them to do so, all the appliances of horticulture should be used. After two hundred plants have been secured, experiments on a small scale can be made on the power of the plants to resist the adverse climatological conditions of the situation selected on purely theoretical grounds for the cultivation.

5. The Ipecacuanha Plant, belongs to an order of plants in which a dimorphic condition of the flowers prevail, and as all the plants I possess, are the produce of one plant, their flowers illustrate the floral characters of only one of those two forms. Unfortunately, this is the form with long stamens, and a short style, in which the power of producing seed even with a cross from the other form is least developed, and which, by itself, is very unfertile. The plant originally introduced flowered here, but bore no seeds. Plants possessing the other condition of the essential organs of the flower will be obtained from the plants of Ipecacuanha now in India by sowing every seed there may be procured from them. Some of these seeds will produce plants having the other character of the flower, and from the spontaneous crossing of these two forms of flowers, the highest state of fertility of the species will be the result. Until then, the propagation must be carried on by cuttings, layers, and buds, according to the method by which the enormous increase of Chinchonas has already been obtained.

6. The cultivation of the Ipecacuanha can be carried on at the Chinchona Nursery in Sikhim. (I do not say Darjeeling, for the Plantations are 15 miles from Darjeeling, and at 2,000 feet above the sea in a narrow tropical valley). At least, for the next two years, the experiment will cost nothing, as the same agency by which I carry on the cultivation of Chinchona will suffice for the propagation of the Ipecacuanha Plants. All that is required is the permission of Government to my using my best endeavours, with the means at my disposal, to inaugurate the cultivation of Ipecacuanha in Bengal.

7. If this is accorded to me, I shall divide the plants I now possess between the Botanical Gardens in Calcutta and the Chinchona Plantations in Sikhim, with the view of the propagation of the plants being carried on vigorously at both places. The progress of the experiment would be referred to in my Annual Reports of the Botanical Gardens and the Chinchona cultivation in Bengal.

8. The original enclosures returned.

No. 113. ORDER THEREON, 5th March 1869, No. 569.

Miscellaneous.

1. Communicated, together with the enclosures, to the Board of Revenue, the Commissioner for the Neilgherries, the Acting Conservator of Forests, and to the Superintendent of the Government Chinchona Plantations.

2. It is observed that the Ipecacuanha Plant has already been introduced into the Neilgherry Hills, and that the Government of India were informed of this circumstance in October 1868, in reply to an enquiry made by them in that month. The report submitted by Mr. McIvor in November last respecting the plant was also transmitted to that Government in December following. In G. O., 22nd December No. 3,192, the Government expressed a desire to receive a further report from Mr. McIvor in due course. This report, when received, will be duly forwarded to the Government of India.

G. O., 15th October 1868, No. 2,638.
„ 20th „ „ „ 2,667.

G. O, 22nd December 1868, No. 3,192.
To Govt. of India, 22nd „ „ 3,193.

(True Extract.)

(Signed) R. A. DALYELL,
Acting Secretary to Government.

To the Board of Revenue.
„ the Commissioner for the Neilgherries.
„ the Superintendent, Government Chinchona Plantations.
„ the Acting Conservator of Forests.

Exd. G. A. Turton.

Govt. of {1869} Madras.

REVENUE.

To

THE BOARD OF REVENUE,

&c., &c., &c.

Dated March, 5th.

Recd. Encl.

G. O., 5th March 1869, No. 569.

MARCH.

Nos. 112-113.

Ipecacuanha plant.—Papers from the Government of India regarding its cultivation in India, communicated to Officers concerned.

Revenue Department

No 569

Proceedings of the Madras Govt under date the 3rd March 1869.

Read the following letter from the Govt of India

Forwarding papers relative to the cultivation of the Mercurialis plant in India & requesting information & the plant to be transmitted thro' this Presidency & Submission of Reports thereon.

Ld. 19th Jany 1869
No 341

Communicate

to Madras Govt to the Govt of Bengal the Govt of Bombay the Govt of the N.W.P. the Chief Commissioner of Oudh & the Chief Commissioner of Central Provinces.

It is observed that the Mercurialis plant is already known & cultivated in the Neilgherry Hills & that the Govt

of Sudia since
October 1858, in reply
to the enquiry made
by them whether they
informed of the cir-
cumstances. The
reports submitted by
Mr. Larkins in Nov.
last, respecting the
Island was also
transmitted to that
Govt. under date
the 22d Dec. No.
392. The Govt. expressed
a desire to receive
a further report from
Mr. Larkins upon
certain. This report
is now received and
has duly forwarded to the
Govt of India.

G.O. 15 Oct/58 No 2635
" 29 " " " 2667

G.O. 22d Dec/58 No 3152
to Govt of India 22d do No 3153.

1c

G.C.

Collection of the
Government of India