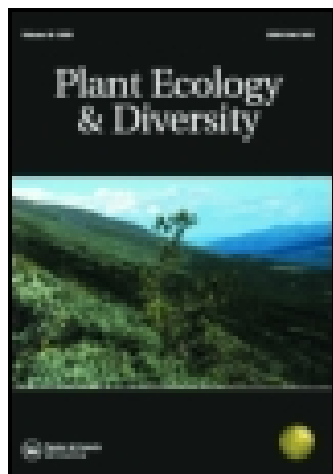


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VII. On the Effects produced on the Operator by the Poisoning of Plants in a Herbarium

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VII. *On the Effects produced on the Operator by the Poisoning of Plants in a Herbarium.* By Captain F. M. NORMAN, R.N., Madeira, in a Letter to Professor Balfour.

MADEIRA, 18th April 1866.

Sir,—I have for some years been living in this island, and have during a great part of that time occupied myself in forming a herbarium of the indigenous and naturalised plants of the island, which after much labour I have nearly completed, having at present about 600 specimens. The unfortunate incident which for the present has suspended my occupation, induces me to communicate with you, as a botanist of eminence and repute, to ask your advice under the circumstances. Being a perfect stranger to you, I perceive that an apology is due from me for thus troubling you. I trust, however, that the common bond of fellow-workmanship in Flora's domains (however humble a place I may occupy), will be kindly accepted by you as a sufficient one.

I have been accustomed, in order to guard the plants against the attacks of insects, to use a strong solution of corrosive sublimate (the same as that which is recommended in "Balfour's Botanist's Companion"). I used to lay it on with a feather, and, when perfectly dry, the plant thus treated was, in common with all the others, placed in a double sheet of white paper in its proper position on the shelves of a wardrobe. Perhaps, out of the whole of my 600 plants, 100 *at most* have been thus treated. The sublimate was kept in the "plant room," and never taken out of it. In the beginning of March I was taken ill, symptoms of mercurial salivation came on, and I was severely salivated. Fortunately I was in robust health at the time, and recovered quickly; my teeth, however, formerly a beautiful set, between the effects of salivation and mineral acid gargles, are entirely ruined. A fortnight after I had recovered, and was strong, I resolved to begin work again, (meanwhile, all the poison had been buried, for of course I shall use it no more). I bound up mouth and nose with a handkerchief, put on gloves, went to my wardrobe, took out a few bundles of plants, turned over a few to compare, insert new ones, &c., and put them away. This wardrobe is in my dressing-room, where I keep the dried plants, because it is

my driest room ; but I never apply the poison here. I then went out of doors, had myself brushed and washed. Twenty-four hours afterwards the symptoms came on again, and I was again salivated (though in a very minor degree). Observe, that all that I did was to look at a few plants in the wardrobe, where about 10 per cent. of the plants have been treated with poison.

Now, sir, is not this an unfortunate matter ? Just at the time when I am finishing the collection, when I want constantly to compare, and when, in order to complete a revised catalogue, I want to look at every single plant in detail, I find myself thus cut off from communication with my source of interest and daily occupation. Will you be so good as to write to tell me if you have had any experience in this matter ; if you have used this poison to your own plants ; if you know of any accidents of the same sort, and whether the collections in England are treated with the sublimate ; and if they are, whether it is considered dangerous to take the plants down to examine them when required. I suppose I must be peculiarly sensitive. I am thinking of having a mask made with a glass front, and kid gauntlets, for I cannot give up, without another trial, the results of three years' hard work. If I can finish the collection, I think that it will be a complete and valuable one. I shall be much obliged if you can offer me any advice on the subject ; in return, I can offer to get you any Madeira plants that you may want, which I shall have much pleasure in doing.—Believe me, Sir, your faithful servant,

FRANCIS M. NORMAN.

P.S.—As regards the quantity of poison used, I have used altogether, during two years and a half, three bottles, each containing—alcohol 1 ounce, corrosive sublimate 20 grains, camphor 30 grains ; and ordinarily I anoint both sides of the leaves.

[It appears that Captain Norman had kept the plants in his room, and being thus under the influence of a mercurialised atmosphere, he had suffered in the way he described. It was stated that no such effects had in any instance been observed in the course of poisoning the plants of the Edinburgh University Herbarium ; and Mr Gilbert Stuart stated

that he had slept for six months in a room where plants poisoned in a similar way were kept, and he had not felt any bad consequences. It would appear that Captain Norman must be peculiarly liable to be affected by mercury.]

VIII. *Report on the Cinchona Plantations of Ceylon, in a Letter to the Secretary of State for India.* By CLEMENTS R. MARKHAM, Esq.—Communicated by Dr GREVILLE, from a Colombo paper transmitted to him.

I have visited and inspected the Government Cinchona plantation in Ceylon, as well as some of the coffee estates where the cultivation has been undertaken, and now have to report the results of my observations.

The plants in Ceylon, with the exception of those of *C. Calisaya*, which came from Java, are entirely derived from seeds procured from South America under my superintendence, at the expense of the India Office, and the Ceylon cultivation may, therefore, be considered as a branch of the great undertaking which has been successfully carried out under the auspices of the Secretary of State for India.

In Ceylon, the Cinchona experiment is under the able superintendence of Mr Thwaites, the Director of the Botanical Garden at Peradenia, and the cultivation is conducted, under him, by Mr M'Nicholl, a very intelligent gardener, who resides on the spot. The first plants arrived in 1861, when the site for a plantation was selected by Mr Thwaites, and the work commenced.

The knot of mountains in the Central Province of Ceylon, which at one point attains a height of 8280 feet above the sea, is entirely composed of gneiss with veins of quartz. The soil formed by the disintegration of this rock is not rich,—not to be compared with the fertile loam produced by the more modern volcanic rocks of Java; but this poverty of soil is made up for by abundant supplies of water and a genial climate. The valleys formed by the mountain spurs are extensively cleared and planted with coffee; but there is still a good deal of forest on the higher elevations, and on one of the highest plateaux is the hill station of Neuera-Ellia, 6220 feet above the sea. From Kandy the mountains are ascended, on their northern face,