Vol.9. No.1. December, 1951.

QUARTERLY NEWS LETTER

AUCKLAND BOTANICAL SOCIETY

HON. SEC. Mrs. P. Hynes, 34 Calgary St., Mt. Eden.

HON. EDITOR: Miss Marguerite Crookes, 31 Maungawhau Road, Epsom, S.E.3.

PACIFIC AFFAIRS

We are fortunate in having to hand two very interesting accounts of botanical observations on various islands of the Pacific. New Zealand is from many points of view, very much a part of the Pacific World, so we are always glad to welcome from members first hand accounts of any aspects of its fascinating flora.

We publish first, extracts from a letter from Mr. R. Cooper, the Museum Botanist, to two members of the Society. Mr. Cooper has been granted leave of absence from the Museum for two years in order to undertake study and research in America. He will be working at the Herbarium in the Missouri Botanical Gardens where he will carry out research on the genus Pittosporum. We take this opportunity of wishing Mr. Cooper every success in his work.

* * *

ACROSS THE PACIFIC

"The days at Suva and Apia were well worthwhile. I hoped to collect at both places, but Mr. Parham of Suva asked me to gather the Suqiwa Palm, Veitchia joannis, for Professor Moore of the Bailey Hortorium, and my press was soon filled. I gathered a few grasses, which take little room, but spent most of the time, looking, sniffing and tasting. The first tropical plant we saw was Hibiscus, in a hedge near the wharf at Suva. It is used as a hedge plant, and is almost a weed. The variety of single and double forms and the range of colours are most attractive. Then we found an Indian Temple tree, or Frangipanni, Plumeria acutifolia, in bloom. The sausage-like branches were bare of leaves and the pink and white flowers were clustered at the tips. Next we saw coco-nut palms, along the Suva waterfront. Mimosa pudica, the sensitive plant, is a weed in the streets, and the children had a lovely time with it. The next 'discovery' was a Traveller's tree, Ravenala

madagascariensis, in the gardens of the Shell Oil Coy. Later, at Apia, we tested one with a knife, and found a pint or two of water in the base of each leaf. The fountain tree, or African tulip, Spathodea campanulata, was in full bloom - a splendid sight. Unfortunately we were too early to see the Flamboyant, Delonix regia, but the African tulip made Suva a most attractive town. On the waterfront we found a well grown Barringtonia speciosa, a spreading tree, very similar in appearance to the Moreton Bay fig, with large square fruits which float for long distances. The nut is a fish poison. The tree was laden and we carried a load of fruits back to the ship to toss overboard. (Mr. Parham told me that some of the Fijian species and at least one of the N.Z. species of Pittosporum have been used successfully as fish poisons).

Around the Fijian cottages we saw our first banana palms, sugar cane, manihot (tapioca), taro, and breadfruit trees. I called on Mr. Parham of the Dept. of Agriculture, and spent a happy morning with him at the Plant Introduction Station, near Nausori. There I saw a Kapok tree, cacao in fruit, Nigerian coffee in flower and fruit, varieties of banana palms, sugar cane, pawpaw, and other food plants, pandanus, rubber, tropical legumes and grasses. There is a small plantation of Fijian plants at the Station, and I ambled through it to see the Fijian species of Podocarpus, Dacrydium and Agathis - much easier than climbing the mountains where they grow.

The road to the station runs past the Colonial Sugar Coy's mill at Nausori, and the fields of cane alongside the wide Rewa river were most colourful and interesting.

I spent some time at the herbarium of the Dept. of Agriculture, looking through the Fijian material of Pittosporum. The collection has been made by Mr. Parham as a spare time job, and worked over by Dr. A.C. Smith of the U.S. National Museum. It contains some very valuable and interesting material, and will be of great use when a full-time systematic botanist is available. An economic botanist has been appointed and apparently there are plans for a systematic botanist and/or a curator of the plant introduction station. Many areas in Fiji are still unexplored and the flora is a rich one, still poorly known. I think that a very profitable field awaits one or more young botanists, prepared to study tropical plants and to spent some energy exploring the higher portions of the islands.

At Apia, Samoa, we were met and looked after by some friends in the civil serivce. I was attached to Mr. Bower, local head of the prison, for the day, and found him an excellent guide. We drove out to the prison through an avenue of Kapok trees, in full fruit, and the sight was one I will not forget. On each side of the road were plantations of Cacao trees, laden with red fruit. The crop is returning very high profits at present.

The fields near the gates of the prison are planted with breadfruit, and the drive is lined with Bougainvilleas, Bignonias, Hibiscus, Capsicums and Pineapples (in flower and fruit). The garden at Mr. Bower's home contains a large collection of tropical garden plants, and the variety of flowers and fruits was bewildering. After a second breakfast of iced pineapple and granadilla (a giant passionfruit), we drove to a plantation of teak trees, Tectona grandis, a native of Burma and thereabouts. After the work of the morning was over, (selecting trees for cutting), my guides took me through a cacao factory. I had not realised that there were so many processes between the fruit on the tree and the dried bean, ready for market. Then I saw the processing of rubber, from the bleeding at the trees (Hevea brasiliensis) to the packing of the dried sheets.

Another meal followed (more iced pineapple!). Then we took a postprandial amble through the prison and its gardens. The soil is stony, similar in places to Rangitoto, and top soil is rapidly leached and often washed away altogether!. There is little surface water, and moisture, in the gardens, is maintained by a thick mulch of wood shavings. The sight of many acres covered with shavings would gladden the heart of Frank Jollie, and other advocates of sawdust in the soil. A surface soil is formed and maintained by composting on a grand scale. All night soil, rubbish, dead cows and horses - condemned by the Dept. of Agriculture - are begged, borrowed or stolen by Mr. Bower, and built up in heaps 6 or more feet deep. A shallow but complete cover of earth keeps them from becoming smelly and they rapidly rot to black soil - about a foot deep. They are planted and covered with a mulch of shavings at this stage. No compost is spread, the heaps being built gradually over the whole area, 150 acres or more, in intensive cultivation. The land is spelled with plantations of Erythrina (planted as bean stakes!). Rats were a problem before trapping etc. was practised on a grand scale (the catch was 40,000 rats in a year!) The produce from the gardens feeds 50 or more prisoners and most of the

white population of Apia.

From the gardens we drove to a remnant of bush where milling was under way. The appearance and structure of the bush was very similar to that of the Waitakere ranges, although all the plants were new to me. The buttresses of the many species of tall canopy trees were most remarkable - (up to 8 feet or more high near the trunk, many feet in length, only an inch or so thick, and radiating from the base of the trunk like the spokes of a wheel). A mosquito possessed of a sharp sting infested the Mile-a-minute, (Mikania micrantha a composite weed from tropical South America), which springs up wherever trees are felled. A stinging shrub, name forgotten, was sampled, at first voluntarily, and later involuntarily. Adventitious roots and leaves dangle from many trees, and perching plants are larger and more noticeable than in the N.Z. forest.

On our last day at Apia, we were driven for some miles round the island to a rocky headland clad in coastal forest, very similar in appearance to that of N.Z. but the species were all new.

The flora of Samoa was studied by Erling Christophersen, who visited N.Z. in 1949 for the 7th Pacific Science Congress, but large areas are unexplored and much remains to be done. Bower acted as guide to Christophersen, and is familiar with the Samoan names and uses of the plants, but there are no professional or amateur botanists in the islands - so I was told. A surplus of food (bananas, coconuts, taro, manihot, breadfruit, pawpaws etc.) is available at all times and there is little need for the Samoans to work. Consequently there is little need for the services of economic botanists and a plant introduction station - the main problem of the authorities is to maintain the existing plantations with the labour available. Another most profitable field awaits a young botanist, prepared to climb hills (one mountain in Savaii exceeds 6000'), and work under most difficult conditions, but there is little chance of financial assistance from the Samoan authorities. The complete absence of keen amateurs is puzzling. "

* * *

We are grateful to Miss Nancy Bamford for this brief account of a much occupied trip:

"Miss Stevenson and I recently had an unexpected visit to Rarotonga in the Cook Islands. We left in a hurry and did