A TOUR IN SIERRA LEONE.

On June 21st. those who overcame the difficulties of an interrupted tram service heard a talk from Mr. G. R. Fenton who, with English zoological and forestry degrees, was for a time a Forestry Officer in the Colonial Service, and is now with the N.Z. Rivers Control and Soil Conservation Council.

Sierra Leone is the second smallest of the four west African colonies. Its two million people include 16 langugage groups as different as Chinese and English, and only one has a pictorial writing. With curly negroid hair, the people are short by our standards, all dark, from copper-coloured to dark chocolate.

It is a wet tropical climate, temperatures averaging 85° throughout the year and rainfall 180" (maximum 400") over an 80-mile wide coastal zone. Inland, rainfall decreases and when it falls below 80" dense forest gives way to dry deciduous forest and then to savannah. The coastal belt is of tertiary age, comparable with the mudstones about Gisborne; then follows a wide band of basalt that gives a red clay and grows the best forest. The granite plateau 2000' high in the interior has very poor sandy soil. Soils are usually 40-50' deep owing to the intense weathering of rocks in hot moist climates.

Typically the forest has emergent trees, mostly legumes, with boles 180' tall, 8-10' through and with huge buttresses. Below these a second denser canopy is formed of smaller but still big trees with beneath this a tier of trees and shrubs. There are few ground herbs or ferns, so the forest is easy to walk through. Cutting out the emergent trees causes the bottom to thicken up until it becomes almost impenetrable. The only place that grass species form a natural association in this zone is on eroded pea-iron gravels, almost bare rocks and in the swamps.

Large areas are quite without roads and travel is by foot since tsetse precludes all domestic animals except a few goat-like sheep and a few goats. Here the war-time job was to get timber by inland route to Dakar. The locality was Kasewe on the edge of dense forest in the lowland zone and ten days' walk from the nearest white man. The natives live here by farming, growing dryland rice like corn. The land is communally owned and each year one tenth is burned to give a weed-free floor for planting. The staple food is rice, supplemented by cassava, bananas, yams, ground nuts, tomatoes, ginger, maize, and millet. All these food plants have been introduced to West Africa since the slave trade of the 16th century.

At first all work had to be done by hand with picks, shovels and saws; difficulties were illustrated by the example of building a bridge with pit-sawn timbers 20' x 1' x 1' weighing 70-lb. per cubic foot and carried up to 10 miles by relays of men. Roads followed the bridges, and then lorries could be brought in. Mills were built with pit-sawn timber, and arrangements had to be made to feed and house the concentrations of labourers. Houses were of mud and wattle with thatched roof perched on top. The African learns well and within six weeks of seeing his first caterpillar tractor he could drive it.

Rubber tapping was another activity. Hevea grows about missionary houses and other rubber sources were Funtumia, Ficus and Landolphia, a tree, an epiphyte, and a vine. Rubber is coagulated with an acid and here the primitive method was to let the juice run into the bottom of a tin, then squeeze a lemon over it; strips were hung in smoky sheds and then sold.

In a tropical forest trees are very varied and 160 tree species may grow on one acre. It is impossible to replant them to one species, and in wet forest the taungyui method is commonly adopted. Where clearing by burning for crops keeps ground open for a year or two planting is done at 24' spacing, and soon the new plants are surrounded by jungle ten feet high. Seed collecting is difficult and wildings are much used.

A District Officer travelling between houses usually 15 miles apart walks through a bush tunnel 25' high, and sees only a fraction of the animals living near and including snakes (the royal python is 15' long), leopards antelopes, and birds. The female hornbill, high in the forest, is walled up with mud inside a cavity in a tree, receiving her food through a small hole which she can block with her beak to keep snakes and other enemies from her nest. Monkeys are the commonest animals, but the chimpanzees live on hill tops, and baboons more in grasslands where they can run.

Questions elicited more information about birds, flowers, storms and timbers, only to leave us feeling how much more Mr. Fenton could have told us.

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WAIKANAE ESTUARY.

On December 6th. 1947 some twenty members and friends journeyed to Paraparaumu where they met five members of the Levin N.Z. Flora Club, their guests for the day's outing. Had the morning not dawned showery the number from Levin would have been greater.

Miss Neumann led us to where high tides had left the usual collection of debris amongst the plants that love the sun and salty marsh. Higher up grew sedges, rushes and small shrubs of Olearia solandri, Plagianthus divaricatus with berries, and Leptospermum scoparium. Smaller plants were Puccinellia stricta, a fine small grass; Plantago coronopifolia with finely cut leaves; Pratia angulata with its pretty white one-sided flowers and pink berries; Salicornia australis (glasswort) hugging the sand out in the open patches, with Samolus repens of primrose family scattered about, its small starry white flowers wide open. The trifoliate dark green leaves of Ranunculus acaulis shone like polished greenstone and its small pale yellow buttercups looked shy amid the leaves. Pinkish flowers gave colour to the wee plants of Tillaea sinclairii. Cotula minor, ferny-leaved with dark base, was found amongst taller neighbours. Selliera radicans was another little creeping plant with one-sided white flowers and yellow throat.

A call comes that the billy is boiling and we lunch under a ngaio tree, discussing the morning's booty. Appetites appeased, the party set out along the river where Juncus maritimus, the common big rush is conspicuous, its golden brown heads not yet quite in full bloom. Miss Neumann's boat carried some of us across the river to new hunting grounds. Scirpus nodosus with brown knobby head and smooth rush-like stem grew taller than the bluish-green Scirpus americanus with stems sharply triangular in section. Mazus pumilio is a low creeping plant also with lop-sided flowers white with a dash of purple near the throat and narrow leaves lightly touched with brown.

Boggy places and small pools were encountered where were seen Potamogeton cheesemanii with smooth entire floating leaves, the exotic P. crispum with small, soft, wavy-edged leaves that do not reach the water surface, and the rather string-like Ruppia with spirally coiled peduncles that make its species doubtful.

Glossostigma elatinoides, its cream flowers an eighth of an inch across set in clustering narrow leaves has a sensitive stigma which when touched springs erect. Lilaeopsis (Crantzia) belonging to the carrot family has narrow jointed "leaves" and tiny white starry flower flushed with pink and purple throat. When seen through the lens this is one of the most beautiful of the sand plants and has a look as if it were sprinkled with frost.

Time passed all too quickly and after recrossing the stream we enjoyed tea at Miss Neumann's home, where we found many New Zealand plants, some of them rare ones, growing quite happily in this well-sheltered spot. It was with many thanks to Miss Neumann that the party left for home.

E. C. Parsons.

(The Editor has taken the liberty of adding notes on a few species of water-plants seen after Mrs. Parsons had to go.)