

plants. The Tree Society displayed a fine exhibit on the subject of the kauri, while the Natural History Club had an unusual exhibit entitled "The Forest Floor". The Botanical Society occupied one complete hall with its exhibition of beautiful and interesting plants of the North Island and outlying islands. These were all carefully labelled and aroused a good deal of interest. Mr. Farnell's attractively arranged collections of handsome and unusual native trees and shrubs maintained the high standard we have come to expect from him.

Visitors were intrigued by an exhibit of seaweeds set up by Professor Chapman and members of his staff, in which it was shown how the modern marine botanist is able to keep his seaweeds alive and healthy. The editor contributed a display of ferns, in which she received generous help from members - that help is now gratefully acknowledged.

Two groups of Maoris, demonstrating with detailed explanations the processes of Maori weaving, attracted the attention of both young and old.

Altogether we felt the "Cheeseman" sprang to life again in a thoroughly vital and vigorous way.

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Several members have spoken to the editor of their interest and pleasure in Betty Molesworth-Allen's "A Journey to Africa" published in the June number of the News Letter. They will then be glad to enjoy a further account of her African wanderings.

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A Journey in Africa Part 2.

Southern Rhodesian roads were dusty, coating the dry thorn scrub through which we were passing in the shimmering heat, with only the lovely Wisteria tree (Bolusanthus not Bolanthus as previously written) in flower for colour. To me, here was one of the most exciting of African trees. The Baobab (Adansonia digitata), the first I had seen in its wild state. The enormous swollen and soft looking trunks held aloft great leafless branches, like tentacles reaching outwards. It was easy to believe the ancient African legend that the tree now stands on its head! Once, when there was only one of its kind, it so angered its local god over some matter, we gather not so trivial, that the deity pulled the Baobab up in temper and thrust it back upside down, and so its descendents remain today.

Towards Bulawayo the savannah altered a little, there was an Ochna with black fruits on a red base, a more colourful relation to the dull shrub so commonly grown in Auckland gardens. There was a small yellow-flowered Cassia, (C. abbreviata var.) which was very bright, and many Aloes, especially A. marlottii, which was very common. Soon we passed through parched farmlands, most distressingly poverty stricken, and with miserable houses, whose only claim to beauty were magnificent Jacaranda trees beside them in full flower. From here on we continually saw Adenium Sp., a relative of the Frangipanni, with rose pink flowers and which is commonly grown in Malaya. Even if it is grown in pots it flowers well in our moist climate and makes me feel that many of these lovely plants could be cultivated in warm Auckland.

Bulawayo, a prosperous-looking large town had wide streets lined with Silky Oaks alternating with Jacaranda, both of which were in flower. Gardens were gay with crimson, mauve and golden flowered Bougainvillea. Whilst here we made a pilgrimage to the Matopo Hills where Sir Cecil Rhodes lies in a simple grave on the top of a colossal rounded boulder. The flat metal plate was inscribed "Here lies Cecil J. Rhodes", and nothing more. The view from it was magnificent and from amongst the boulders were a few familiar trees. A small, rather woolly Erythrina with scarlet flowers, and a yellow flowered legume, a large tree similar to one we get in Malaya, and several species of Combretum. Tiny little Duiker deer peered at us through the Wisteria trees and we saw a huge herd of Sable Antelope on our way home.

From Bulawayo we went to our first game reserve, a wild area of tall savannah set aside for the refuge of wild animals - not fenced nor enclosed in any way. All the reserves we saw were like this, but I am determined to write only about the BOTANY not about the wonderful animals. I must confess here that my poking about the thorn trees and looking at the plants received a setback, when miles away from habitation we came across the notice, short but very much to the point: "Beware of Elephant."

We were in both Southern and Northern Rhodesia during the time that is called the suicide months, just before the rains, when it is very hot and yet humid (just like Malaya!). The trees had been bare for some months, but now the rains were only about six weeks off, trees came to life and before we left N. Rhodesia were clothed in varying shades of green. Although most of the wildflowers from the south were absent, I did find a few, but nearly all were very odd looking, nor could I track them down.

On the borders of southern and northern Rhodesia lies the Victoria Falls, and approaching it we drove through the parched savannah we had got to know so well; the thorn trees were taller perhaps and the land was undulating. The falls are in this type of country and cannot be seen until almost on top of them, for the Zambesi flows widely over a chasm and flows away in a deep narrow gorge, neither of which can be seen from a distance. The only indication that the river is not pursuing a normal course, is the

clouds of spray arising like steam from flat ground, and if one is near enough, the thunderous noise of the water as it falls into the gorge. In fact the African name for the falls is the "Smoke that Thunders", and which led Livingstone to it. The falls are very beautiful and quite unspoiled; paths to the cliff edges are still rough, there are no boardings nor buildings near, even the hotel is hidden away. Within the belt of continuous spray were small patches of rain forest which are left untouched. Quite rightly it is very strictly controlled and no botanist may collect specimens for identification. (The late Mr. Alston of the British Museum once wailed that there was an undescribed specimen of Pteris there which still remained un-named for the want of a specimen!). On the canyon-like cliffs opposite the falls were Cheilanthes farinosa, with the underside white; a Cyclosorus similar to C. dentatus, Adiantum lunulatum, but many others, just out of the spray zone were dead and unrecognisable. Inside the rain forest were Adiantum capillus-veneris, Cyclosorus gongyloides, Pteris sp. (!) Nephrolepis undulata and Psilotum triquetrum.

On the forest floor, at this time of the year covered with dead leaves, were dozens of heads of Haemanthus filiflorus, which looked like balls of scarlet wool flecked with gold. Most of the herbs had died back, and few of the evergreen trees, in spite of a good guide-book, could I name. I did see an Olea sp. and a Ficus sp. loaded with fruit. One climbed down a side to the Palm Grove, on a level with the river, a veritable treasure trove of plants. For the most part it was again extremely dry, and the ferns were too withered to identify. There was a wild date palm (Phoenix) with slender trunks, a little Selaginella; a mauve flowered Solanum, a Gardenia with white scented flowers, a prickly Hibiscus and a white flowered Jasmine. Above us were Albizzia trees, also native.

Near the waters edge was a little china blue Lobelia and a borage of some sort with mauve flowers. The highlight was a scandent shrub, with large flowers which had petals elongated into threads. It was Strophanthus (Apocynaceae), and a species of this is illustrated in Strasburger's textbook of botany.

We drove alongside the broad Zambesi above the falls where a white flowered Eugenia was reflected in the cool waters. In some quieter backwaters I found a grass Setaria sp., Jussiaea diffusa, Myriophyllum spicatum, a familiar looking Potamogeton and Elodea. A Salvinia sp., a little floating fern known to students of botany was here also, and so too was the notice "Suicidal to Bathe - Crocodiles", so I hastily turned my interest to a Cassytha (C. filiformia) climbing over short and tall shrubs well back from the river edge. An Acacia was common, with long catkins of cream flowers and the African willow (Salix subserrata).

We stayed in a small hut a short distance from the falls, and in this area was yet another type of vegetation remarkable in its difference. It was called the Kalahari Sand vegetation, and there were tall well spaced trees resembling a woodland of temperate

climates except of course, for the floor of cream coloured sand. Apparently the trees were of great interest, but I could only recognise many legumes including the so called Rhodesian Teak, and a Bauhinia sp. One of the most interesting trees here is the MuBako Tree, better known as the Ordeal Tree (a legume, Erythrophleum). The violent poison extracted from its bark was used by witch doctors for their trials by ordeal which have so often been described. It was also a very convenient weapon for murder. To me, the tree looked somewhat like an Albizzia. Growing in the sand were several Crinum of one species. I was assured these were native, but they looked like garden escapes. There were many very large Baobab trees in this area, and near the statue of Livingstone we photographed perhaps the largest in Africa. There is apparently great water storage in their trunks, and this has been put to a number of uses by enterprising people. There is a very interesting small Ophioglossum which grows around the bases of Baobabs, and Mr. Alston asked me to look for specimens. They were obviously not up at this time of year for I spent hours in a bent position going round and round, just like Piglet, but it was far too dry.

The high bridge across the Zambesi took us into northern Rhodesia where there are now no barriers, and into the modern small town of Livingstone, then into more rolling savannah land; we were now over 4,000 feet in altitude. There were pink flowered shrubs; Acacia karoo, small very thorny shrub, and near habitation, tall Eucalypta, salmon pink Frangipanni, and a tree which looked awfully like Karaka and which was loaded with yellow fruit.

We stayed on a ranch on the shores of a vast swamp on the borders of the Kafue River. Mixed with a rare antelope were two species of yellow Jussiaea, a tall grass (Phragmites, I think) which I was told was about 12-16 feet tall, of which only 2 feet showed above the water, but there were vast numbers of crocodiles here so we bird watched instead. Nearby were hot springs, but most disappointing botanically (as they are also in Malaya). Cyclosorus gongyloides and a few sedges grew by the warm mud and literally nothing else.

Lusaka, the capital of Northern Rhodesia, was very new and had nothing exciting that I saw in the way of plants, but approaching Kitwe, an industrial town in the copperbelt, I saw in the red dust along the roadsides Pteridium aquilinum var. africanum, which was very distinct. The gardens here were most colourful, Frangipanni Crepe Myrtle (Lagerstroemia), Solanum macranthum (the tree) and S. weglandii, hundreds of Avocado trees laden with fruit, and all the tropical trees so commonly cultivated in Malaya. I did not care for the Rhodesias, what I saw of them, for there were no mountains and the countryside was so barren. Beyond Salisbury, I believe is quite different, with rain forest as well.

We arrived in Tanganyika from a road lined with now leafy trees (we missed the rains by about two weeks; by then some of the roads would have been impassible), climbing steadily. Where we stayed inside the border was tall woodland, obviously much

wetter and I saw Polystichum and Pteris, and when we drove up the highest road in Tanganyika which had a summit of 8,050 feet, we came to tall rain forest but which was very dry. It was very dense, and lichens hung from the trees. There were several Asplenium, Adiantum aethiopicum, a Loxogramme, and a much withered Trichomanes on a tree trunk. At this height, it was interesting to see that we had come back into fields of wildflowers, like those in the Cape, and it was very gay looking. Here also I saw the little orange flowered Thunbergia creeper which is cultivated in Auckland, a Hypericum shrub with very large yellow flowers amongst the Fairy Bells (Dierama), with pink, yellow and lilac daisies. As we drove back familiar Evening Primroses were opening their flowers.

From here we drove through desolate country, sometimes very high and cool, between 6-7,000 feet. We ate blackberries and strawberries at dusty and tumbledown hotels whose rates were terribly high, eventually dropping down several thousand feet (gradually!) into the famous Rift Valley. This curious geological formation is an enormous fault, sometimes many miles across, and which runs from Nyasaland, just south of here, up to the Dead Sea, a distance of several thousand miles. It is really just an enormous crack in the earth's surface. It was hot and dry, like the Beit Bridge area. There were Baobab forests, and it is thought that in many places, and certainly in Mombasa, these were planted by the slaves on their treks to the coast, after they had been rounded up by Arab traders-for always along the slave routes are the baobabs. There were patches of brightly coloured cultivated flowers around each small hotel oasis, and in the distance we could see the outline of tall mountains.

Eventually we came up the other side to the town of Arusha in the lee of a tall forest clad mountain, 14,000 feet and snow-capped. No-one ever hears of this hillock for Mt. Kilimanjaro, Africa's highest mountain of nearly 20,000 feet lies only forty miles away, Arusha is on the mountain slopes and all around were coffee plantations, with Silky Oak grown as a shade tree for the plants. Coral trees (Erythrina) were on the roadsides. A pretty place but rather touristy, with lots of would-be hunters already in their safari kit and loaded with ammunition, parading the streets. In the lovely rain forest slopes were Rhino, Elephant and other large animals, all eating the botany I had so wanted to see. We stayed on the slopes of Mt. Kilimanjaro which I had planned to climb but I had been in hospital (the heat of the Rhodesias was too much for me !!) and so could not go.

Up to about 9,000 feet was under cultivation with tall pines and Cupressus in the wilder parts, and here I found a wonderful assortment of ferns on the edges of the swiftly flowing small rivers. Most of these were much more closely allied to the Malayan ferns, mostly tropical genera. There were Asplenium abyssinicum which looks like a large Cystopteris, Thelypteris, Cyclosorus, Phymatodes, several species of Cheilanthes, and many different Adiantum spp., including A. hispidulum, and a Pteris very similar to P. comans. There were several forms of Asplenium resembling A. Flaccidum,

and I do not think any work has been done on these; and at the river's edge were Peperomia mixed with pink Balsams. We walked up to the end of the coffee estates owned by the intelligent and well-to-do Chagga people, who greeted us with a smile and upraised hand, chanting "Jambo" the Swahili word for greeting. There were trim hedges of a Dracaena, with several species of Pellaea and Adiantum aethiopicum beneath. We "jamboed" our way down again and wished we could stay there, it was so peaceful and friendly.

The largest crater in the world is in Tanganyika, not far from Arusha, through the Rift again, and we climbed to 8,000 feet where we stayed in a little hut on the crater's rim, looking down 1,500 feet below to where there is a colossal concentration of game; this we went down to see and photograph. There was little forest on the wind swept rim, but a few tall trees festooned with liverworts and an Usnea lichen. On the trunks I collected a simple Polypodium, the Asplenoid Loxocaphe theciferum, which I had hoped to see, but we mainly saw big animals including a Hyena removing our dustbin from our door and rolling it over the crater rim. A tidy fellow no doubt.

Northwards towards Nairobi, and into Kenya, we came through tall Fever Trees (at last) which are Acacia xanthophloa, and which have an almost sulphur-yellow trunk; these were left standing on the vast farmlands here and we were fascinated to see cattle and Giraffe grazing together. Nairobi is a pleasant city, if expensive. The wide Princess Elizabeth Walk was lined with magnificent flowering Bougainvillea. Brachychiton was planted as an avenue tree, and we stayed with Dr. Greenway who was the director of the East African Herbarium and who was so kind to us. His lovely home was about 17 miles out of Nairobi, at 7,000 feet and although it was the hot time, we had fires every night. On a clear day we saw Mt. Kenya to the east, quite close, and s.w. (I suppose) Mt. Kilimanjaro.

We spent a week on the slopes of the Aberdare mountains, as the climbing of Mt. Kenya was still restricted, and one had to go fully armed (shades of Malaya). Even in this area there were still a few Maumau, but harmless, apparently. We stayed at 8,000 feet and it was cold. There were tall "Cedars", actually a Juniper, and Podocarpus covered with lichens, which dominated the countryside. Below them were woody Hypericum with yellow flowers, in whose shelter Thalictrum, a mauve Centaurea, several Oxalis and Commelina grew. With them were shrubs of Leonitis (Lion's Ear) and a red flowered Kalanchoe grew in dryer places. A lovely pale blue Delphinium was quite common. In the grassy areas I saw what I took to be scattered paper, but found to my delight it was a flat growing Scrophulariaceae, Rhamicarpa, with large flowers, and in one form or another it kept us company for most of our travels, for it is very common. In damper places I came across an old friend, Centella asiatica, and by some cliffs I saw Pteris cretica and Selaginella kraussiana (I think).

(to be continued)