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THE NORTH QUEENSLAND
NATURALIST.

The official Journal and Magazine of the North
Queensland Naturalists Club.

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Hon. Editor -- V. Kennedy

EDITORIAL -- With the advent of the new year, the work of the North Queensland Naturalists Club is likely to receive an impetus that will result in the registering of greater knowledge of the natural phenomena of the Far North. Even though many scientific expeditions and isolated individual studies have been carried out since North Queensland was settled, much of that work has remained within the obscurity of scientific journals, read and known only by the very eager. With the active, well-directed interest of a Club yielding continuous results, that information and new facts will be more generally diffused and interpreted. The past months have seen the Club emerging from its infancy

and the beginning of 1933 sees it ready for work of a more definite character. It now has a programme.

THE NORTH QUEENSLAND NATURALISTS CLUB.

Meeting Room: The Anzac Club Rooms, Esplanade, Cairns.

General Meetings are held on the Second Monday in each month at 8 p.m. and the Committee Meetings are held on the first Mondays at the same hour. Owing to the intervention of Xmas and New Year Vacation the January meeting will be held on the **THIRD MONDAY, January 23rd, 1933.**

Agenda Paper. Minutes, Correspondence, Reports, Nomination and election of new members (new members nominated at one meeting shall be elected by ballot at the following general meeting.)

Excursions. Members are invited to submit plans or suggestions for Club field excursions at the general meetings.

Exhibits. It is desired that members having interesting specimens to exhibit at general meeting shall also make a few explanatory remarks upon them and hand a written summary of the remarks to the secretary (Mr. J. Wyer) for inclusion in the Society's books. This request is also made to lecturers at the meetings.

Lecture adjournment. After the ten minutes interval at the Jan. meeting, Rev. E.R. Gribble will deliver a lecture upon "THE ABORIGINES OF AUSTRALIA".

Club Officials: President: DR. H. FLECKER; Vice-Presidents: CAPT. W.P. FISH and MISS HOOPER; Secretary MR. J. WYER; Executive Committee: the foregoing with the addition of MISS M. HALL and MR. M. J. MANSKI; Treasurer: R. J. GORDON; Librarian and Editor: V. KENNEDY.

The Executive Committee of the Club is making headway with the proposed establishment of a Museum in Cairns and with the appointment of effectively trained guides at Green Island. They have the cooperation of the Cairns City Council and it is hoped that the both projects will become facts in the new year.

R A I N F O R E S T S.

At the last meeting of the Club, an interesting lecture on "Rain Forests" was delivered by Mr. J. Harold Smith, B.Sc. The following is a summary:-

Rain forest is a term descriptive of the dominant floral association in tropical countries where the rainfall is high and more or less evenly distributed through the several months of the year. In Australia it is limited to the eastern seaboard, reaching its climax in North Queensland, but persisting in an attenuated form as south as Tasmania. Given sufficient rain and adequate temperatures, its development is less dependent on soil conditions than in temperate parts of the continent. The association can be conveniently divided into the following sub-groups:-

(a) Intermittently inundated forest, which includes mangrove swamps, where the Rhizophoraceae dominate, swamp jungle characterised by the cabbage palm and some species specialised to withstand periodic immersion, and palmswamp, dominated by Archontophoenyx, usually located where there is a seepage of some kind.

(b) Higher lying forest, which makes up the bulk of the virgin country. The main features are the extraordinarily wide range of orders and genera in an area without any one being sufficiently common to be dominant in the real sense of the word, while

Lianas stretch down in profusion from the crowns of the tree to the ground. Epiphytes are common, and these three essential constituents to the rain forest flora provide an environment which is highly favorable to a rich faunal development concentrated for the most part in the crown of the trees. Such a fauna subsists mainly on the fruits which occur over a considerable period of the year, and the white ants, a necessary source of food for most of the insectivorous birds. Those white ants differ in their habits from the more familiar forest types for the mound-forming habit has been lost if ever it was developed, and the extant rain forest species live almost entirely on the trees within the shelter of their burrow system.

There are several peculiarities of the rain forest flora which distinguish it from other botanical associations. Buttress roots are a case in point, together with such subsidiary characteristics as flanged stems. The functional value of these morphological curios can only be conjectured for the old view that they mechanically assist in the support of the bole is nowadays discarded by most botanists conversant with the subject. Others include the general absence of those genera which contribute so largely to the savannah flora, though one or two Acacias have been recorded from rain forests, and a single Eucalypt, *Strobeliana*, may be found in certain areas of rain forest in N. Queensland. These are, however, the exception. Our dominant orders in the North are the Proteaceae, Rutaceae and the Lauraceae. It is curious that the *Flindersias* should belong to the Rutaceae, most species in which are more or less of the shrubby type. Perhaps this will ultimately prove to be a botanical misfit, which will be eliminated as the systematics of rain forest species are more thoroughly worked out.

The rain forest of North Queensland is a special floral development which has never received the study which its importance warrants. Consequently a considerable number of species are almost unknown, and systematists cannot find a better playground while those whose minds are cast in a different mould cannot but find material to interest them in any biological field.

LIFE HISTORY OF CYNTHIA ARSINOE ADA.

(By M. J. Manski) -

As the life history and food plants of a number of species are obscure, science can be aided by the keen observer and with this object in view I relate my experience of one species, "*Cynthia Arsinoe Ada*" whose life history has not yet been described (see page 91 No 7 "What Butterfly is that?"). Whilst collecting at Stratford on New Years Day I noticed the female hovering over the wild passion vine (*Passiflora foetida*). My suspicions being aroused I watched its movements and presently it flew into the lantana which supported the vine and alighted on a thin dried stick of lantana and suspending itself underneath the twig, deposited an egg on it and then flew to another plant in the lantana and repeated the performance. This egg I obtained. Sitting on my back steps next morning I noticed another female *Cynthia* depositing eggs on the dried tendrils of the *Granadilla* vine (*Passiflora quadrangularis*). This performance occurred several times.

During the day and on examination, I counted 36 eggs in all, 10 eggs being laid on one frail dry tendril.

Tying a coloured piece of cotton on a tendril to mark it, I was surprised to see next afternoon 3 eggs were deposited on the cotton. No eggs were deposited on the leaf or green tendrils of the food plant.

When first laid the eggs are white in colour but within twenty-four hours become somewhat darker and are then a pearly grey. They are ovoid-cylindrical in shape, about 1.5mm long by 1.2mm in diameter, and are adjoined to the substratum by one end - i.e. the longer axis is perpendicular to the surface on which the eggs are deposited. As is generally the case with the eggs of this group the chorion exhibits characteristic external sculpturing. The dome is marked out in irregular polygonal depressions and the sides are longitudinally striated by raised lines which are joined at regular intervals by less pronounced transverse ridges. The transverse ridges of adjacent rows are opposite one another. The sides are thus marked off into quadrangular depressed areas regularly arranged in a series of rows from shoulder to base the whole way round the circumference of the egg.

To be continued.

NOTES BY THE WAY.

The Club is proceeding with the appointment of guides on Green Island and the Barrier Reef. The idea sprang from consideration of the lack suffered by visitors in the absence of effective guidance. The Club proposed to appoint guides,

train them efficiently and, in collaboration with the City Council of Cairns, to issue tickets to visitors by which they could obtain the service of such a guide. The matter is still pending, although the Club has gone so far as to call for applications from those willing to act. The response was very satisfactory and a trial trip will be made to Green Island on Sunday Feb. 5th. All intending guides are asked to be in attendance so that the first lesson may be well learned. By the commencement of the next tourist season, it is hoped that a body of men thoroughly trained in the marine life (especially the coral) and the flora of the island will be at the disposal of the visitors.

A party comprising the President and Editor of the Club, the secretary of the Cairns-Tableland Publicity Association and others accompanied the Harbour Master (Capt. J. Brewster) to Oyster Cay and Upolu Bank a fortnight ago. The origin of the visit was a report that named birds had been seen on the island and that wilful destruction had become a common practice. On this particular visit no evidence could be found to justify the statements, although there is no doubt that such things do occur. One of the many aims of the Naturalists Club, therefore, will be to have this island bird life protected.

Another outcome of the visit was a determination to protect the cays themselves. Some time ago licenses were issued to persons to take coral sand from below high water mark. The work on Oyster Cay was never commenced, but that on Upolu Bank was carried out so effectively above high water that a great part of the cay and its vegetation has gone.

BOURGAINVILLEA CONTROVERSY.

Amongst the early activities of the Club was its public protest against the planting out of exotic shrubs and trees in the jungles, and on the ranges about Cairns. The objection had particular reference to the planting of bourgainvillea on the Cairns-Kuranda range when, it was argued, there were numbers of native trees quite as beautiful and more distinctive. The agitation came within the scope of the Naturalists Club which had the preservation and extension of natural flora of the Far North at its heart. The protest excited a controversy in which, it was noted, horticulturalists were very prominent in challenging the Club. They were ably assisted by professional plant sellers. The Club's main fear however was (and is) that the native charm and character of the Tropical North, with its already unrivalled profusion of glorious flora, was to be destroyed by the introduction of alien blooms that, beautiful in themselves, would merely perpetuate the landscapes of other places. Given that, and the now particular appeal of the tropics would vanish as it has elsewhere. The Queensland Naturalists Club (Brisbane) expressed its approval of the new Club's protest and suggested that amongst the many beautifully flowering trees, indigenous to the Far North, that could be utilised for the beautifying of the "bare patches on the range" are such as the Flame tree, Wheel-of-fire, Native Cassia, while palms would add the necessary atmosphere of the "tropics", which many tourists come north annually to find. The controversy died down somewhat but has been revived recently by press correspondence, (mostly anonymous). Some of the correspondence, unfortunately sprang from members of the Club who were present at the meeting but neither voiced their disapproval nor voted against the motion originally carried. The critics were effectively answered by the president of the Club (Dr. Flecker) at a recent meeting.