

The North Queensland Naturalist

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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

BUSINESS FOR NEXT MEETING MONDAY, 12th JUNE, 1939.

Lecture by Mr. L. LEEMING SCHOFIELD, "Legumes and their Value to the Human Race."

REPORTS OF MEETINGS:

13th March, 1939.

Demonstration by Mr. G. J. Brooks, on the Mounting and Setting of Insects.

17th April, 1939.

Cinematograph Film of "Meshie, a Chimpanzee, reared for most of its life with American children."

9th May, 1939.

Owing to the unavoidable absence of Mr. Schofield, the Lecture has been postponed until the next regular meeting.

New Member Elected:

Mr. S. J. Shepperson, Boonjie.

NOTES ON THE TERRESTRIAL FAUNA OF LINDEMAN ISLAND, WHITSUNDAY PASSAGE.

By

MELBOURNE WARD, F.R.Z.S., F.Z.S., Honorary Zoologist Australian Museum, Honorary Collector Queensland Museum.

(Continued from last issue).

Of four species of snakes found, none were numerous. The commonest was the Moon Light Snake, *Liasis childreni* (Boidae); next the Fat-Headed Snake, *Boiga irregularis* (Colubridae); then the Green Tree Snake, *Dendrophis punctatus* (Colubridae); and lastly a small collared snake known from the island by only two specimens. All except the last species were kept in captivity, and their feeding habits observed.

The Moon Light Snake, as its name implies, was found at night, and was active during the rainy season; they were readily caught by torch light, and I found them easy to handle. Large specimens were about three feet long and marked like a carpet snake, the colours, however, being of much darker shades of brown.

A NEW GENUS AND SPECIES OF AUSTRALIAN PTEROMALIDAE.

By A. A. GIRAULT.

The short marginal vein, reminding one of the common *Pachyneuron* and the low antennal insertion, are the characteristics of this genus. But it bears other characters as well. For instance, I have rarely seen a member of the group which bore that peculiar character so common in the Eucharitidae, namely what is called a "mouth-plate." It occurs here, nevertheless, and is almost unique for the family or sub-family. It is rare in the great majority of the groups of the Chalcidoidea, but is invariably present in the Eucharitidae. Without further pause, I name the genus and species.

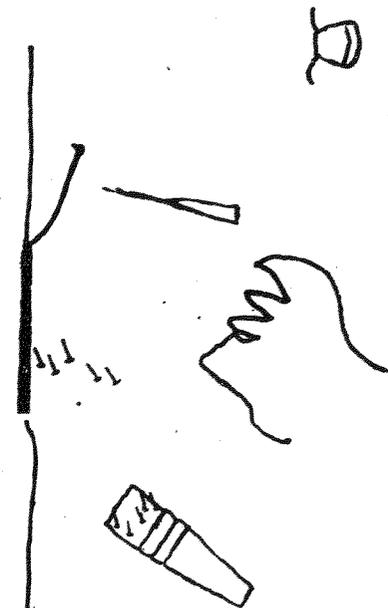
FAMILY PTEROMALIDAE. Genus *Inkaka* nov.

The genus runs, in my modernised synopsis, to the genus *Trigonogastrella*, but the marginal vein is shorter, distinctly shorter than usual for the genera of the Pteromalidae; the antennae are inserted lower down on the face and are clavate; the scutellum bears a distinct cross-suture near apex; there is the mouth-plate; the petiole is a half longer than wide; and the second segment of the abdomen is a third of the surface excluding the petiole, and is the longest segment.

1. *Inkaka 4-dentata* nov. Genotype. Aeneus, the veins of the wing fuscous, the palpi white; antennae black, the scape brown; legs fuscous aeneus, the hind tibiae darker at basal third (except at the knee), the tarsi yellow, so is the petiole. Pedicel exceeding the first funicle joint, the latter slightly longer than wide; sixth funicle segment twice wider than long. Marginal vein comparatively short, shorter than the post-marginal vein, the submarginal vein interrupted at apex as in some Spalangiae. Propodeum tricarinate, the neck forming about half the part, the spiracle of the propodeum small and round; median carina of the propodeum short, crossed by a cross-carina which joins long lateral carinae.

A detailed description of this genus and species is given in the manuscript of my systematic Monograph of the Australian Chalcidoidea now in the Queens-

land Museum at Brisbane. The species and genus were taken at Melbourne, Victoria, by Mr. B. Blackburn. The generic name is aboriginal.



Out-line drawings are given with the accompanying description. But I am not an artist. However, I have attempted to show the veins of the wings, the proximal ending of the discal ciliation, a mandible, the scutellum, axilla and cross-suture, one of the digits of the mouth-plate and the first funicle joint, ring-joints and the pedicel.

GEOLOGIC AERIAL PHOTOGRAPHS.

By L. C. BALL, B.E., A.M.I.E.A., Chief Government Geologist, Brisbane.

The invitation to me to contribute a note on some topic of North Queensland geology is appreciated, and I gladly embrace the opportunity to bring to the notice of the North Queensland Naturalists' Club a recent discovery of my own (See Queensland Government Mining Journal, October, 1938, p. 340, and November, 1938, p. 381).

This consisted in the detection of important geological features such as stratigraphic grain, faults and joints in aerial photographs of jungle-covered country as revealed by vegetal alignments. It is no new thing to the botanist that forest types are distinguishable in aerial photographs, more especially those taken from low altitudes, nor to the geologist that particular rocks have special plant associations which greatly facilitate the field differentiation of, say, granite and basalt or sandstone and shale country. Except in alluviated areas, the growth of vegetation is based primarily upon the petrological composition of the underlying rock as the source of mineral plant foods; but variable resistance to weathering may affect the availability of those foods.

Under prevalent climatic irregularities shallow underground water storage is a prime factor in the persistence of a particular floral species. We know that for underground storage open spaces are requisite. Limestone caverns are among the largest, being sometimes many yards in diameter and chains long; but they are of local occurrence, and need not be considered here. The next in order of cubic capacity are open rock fault fissures which may extend laterally for miles and vertically for hundreds of feet and usually are characterised by appreciable crustal dislocation, but excessive crushing of the wallrocks involving a detrital seal may inhibit storage. Crustal fissures are prevalent in all our more ancient rocks and are to be expected in the terrain back of our drowned coast. Joints are minor cracks disposed systematically and more or less prevalent in all rock masses as a result of dynamic stresses. The larger master joints may extend for many yards or even chains and near the surface may gape to form

reservoirs several inches wide. Unconsolidated sandy and gravelly sediments characteristic of valley bottoms are ideal water carriers and important where widespread and thick, but these do not concern us at the present. Porous rock strata however, whether horizontal, inclined or vertically disposed, cannot be ignored because they usually serve as aquifers, and consequently may directly affect surface vegetal growth along their outcrops.

The very fine set of *Adastra* aerial photographs of the Freshwater area loaned me by the Cairns City Council, comprises contact prints taken at regular intervals on aligned courses, and suitable for use stereoscopically. By that means, purely physiographic contours may be identified and deleted; and it is only then that the rain-forest or jungle is seen to be crisscrossed by extremely fine lines. These when plotted fall into three typical groups: (1) unbroken, persistent and few in number, (2) generally parallel but discontinuous and extremely numerous, and (3) broken, discontinuous and irregularly disposed. The first may be correlated with fault traces, the second with the stratigraphic grain (that is the pattern produced by the outcrops of the tilted sedimentary strata), and the third with induced joint systems.

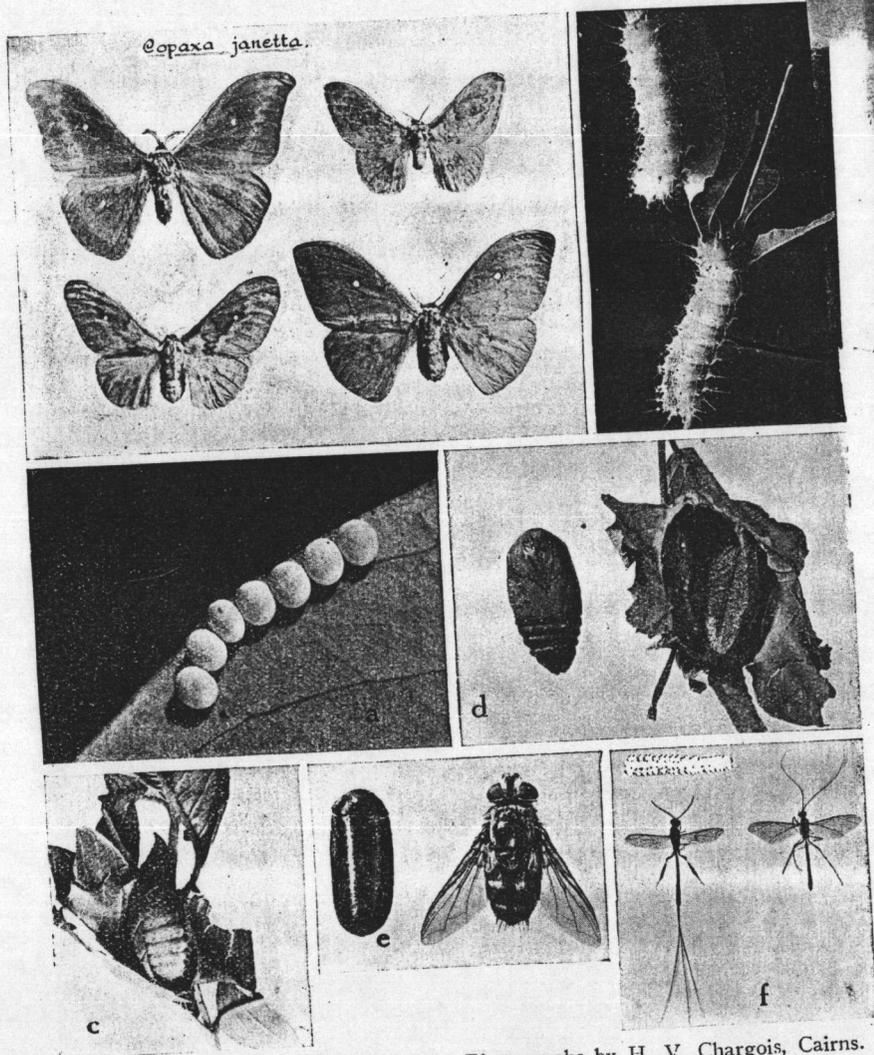
With your chairman, Dr. H. Flecker, and Mr. F. T. Morris, the city engineer, I paid a single visit to the Freshwater Inlet last year, and on that occasion, observed mineralisation by arsenopyrite where one of the master joints crosses the foot pad beyond the car park. I have suggested therefore that these contact prints would be very helpful to the prospector in these jungle-clad mountains, both for the purpose of topographic fixation and for the selection of more likely spots for ore deposition, e.g., fault intersections and/or stratigraphic folds.

The cross-hatching observable in dense timber may be of nearly as much interest to the botanist and forester as to the geologist and prospector; and I venture to express the opinion that the photographs offer a wide field of research to the members of the North Queensland Naturalists' Club.

LIFE STORY OF COPAXA JANETTA

Also Two of its Parasites.

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Photographs by H. V. Chargois, Cairns.

(a) Eggs, (b) Larvae, (c) Pupa, half-formed, (d) Fully pupated, (e) *Winthomia australis* (f) Braconidae.