
THE NORTH QUEENSLAND NATURALIST

CAIRNS

Journal of
NORTH QUEENSLAND NATURALIST CLUB

Founder, Presd. The late Dr. HUGO FLECKER.

OBJECTS — The Furtherance of the Study of the various branches of Natural History and the Preservation of Our Heritage of Indigenous Fauna and Flora.

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"Each Author is responsible for the opinions and facts expressed in his or her article".

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Club Officers — September 30, 1966 to September 30, 1967.

President : A. J. CASSELS, Esq.

Hon. Secretary : Mrs. M. L. CASSELS. Hon. Treasurer : Mrs. M. MEARS.

Editor : Miss J. MORRIS.

CLUB HANDBOOKS.

Check List of North Queensland Orchids	.....	75c
Check List of North Queensland Ferns	.....	10c
Edible Plants in North Queensland	.....	20c
List of Birds Occuring in North Queensland	.....	20c
Marketable Fish of the Cairns Sea	.....	10c
Check List of Australian Dryopidae	.....	5c

(Plus Postage).

EDITORIAL.

Club members are pleased with our new meeting place at Oddfellows Hall, Lake Street, opposite the Fire Station. We hope that any Country members in town on meeting night will be able to find it without difficulty.

Wide public interest was shown in the Club's exhibit of "Dangerous Plants of Cairns District" at the Cairns Show. Dr. L. J. Brass is to be commended on this well thought out and excellently arranged display, which served to warn people of potentially dangerous plants both in garden and bush, besides drawing attention to our Club.

The active participation of more families and young people in Club field days and meetings is most welcome.

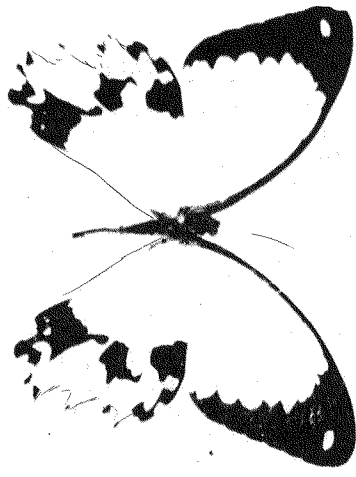
Members' subscriptions are due again in September — also, too soon!

MIMICRY.

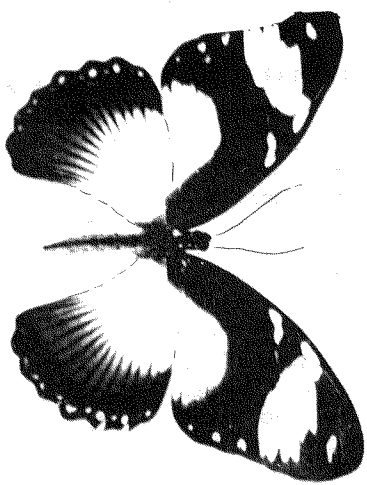
Mimicry is one of the most fascinating aspects of the battle for survival.

Some butterflies have in their bodies distastful or, even, poisonous substances, formed in the course of the ordinary metabolism of the larva, or derived from its food. Such butterflies are, usually, left alone by predators which learn to recognise them very quickly, after only one or two trials.

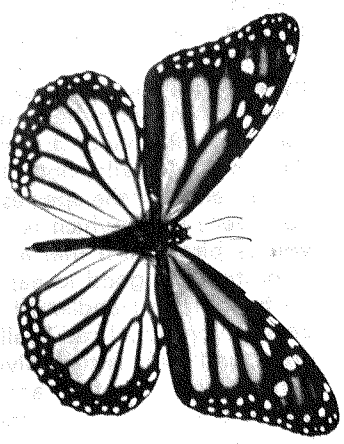
Most of these protected Lepidoptera have bright colours and bold patterns which make them conspicuous. Their behaviour does the same. Both appearance and behaviour function as a definite warning that they are inedible. The most outstanding feature is the small number of different colour patterns which they show. If we compare a great number of specimens of protected species we would see the same colour pattern repeated over and over again by the representatives of widely different genera and families. The conclusion is inevitable that members of a great many groups, which we would expect to look very different from each other, have converged to a relatively few simple



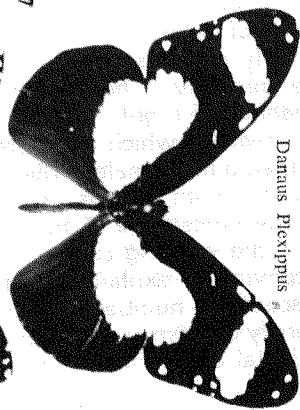
Papilio Dardanus 0 + 1



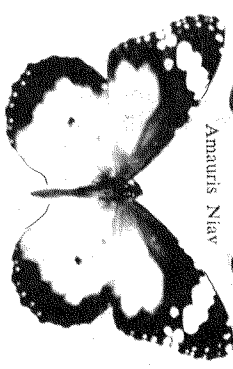
Papilio Dardanus 0 + 4



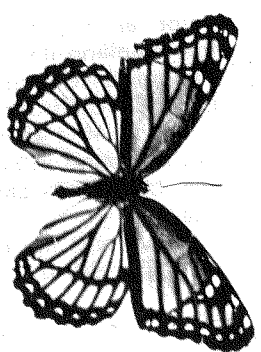
Danaus Plexippus 0



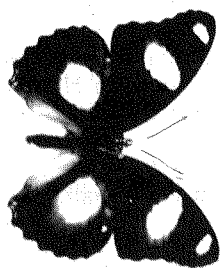
Amaurus Niav



Danaus Chryseippus



Limenitis Archippus (Nymphalidae)



Hypolimnas Misippus (Nymphalidae)



day-flying moth, *Epicopea Mencia*, mimics an *Aristolochia* feeding *Papilio Alcynous*. A very curious example is given by the Malayan *Papilio Polites*: some of the females have normal pattern, but some mimic the poisonous *Papilio Aristolochiae*; in Singapore, where *P. Aristolochia* is scarce, only about 50% of females are mimics; elsewhere, where *P. Aristolochiae* is common — the percentage of mimicking females reaches 85%.

In exactly a hundred years, since Bates read before the Linnean Society his paper, "Insect Fauna of the Amazon Valley", propounding the theory of mimicry, quite a lot of mimicking species have been found. Curiously, only three families: *Papilionidae*, *Pieridae*, and *Nymphalidae* are mimics; none have been found among the remaining families.

References:

1. Alexander B. Clots, "The World of Butterflies and Moths".
2. R. Morrell, "Malayan Butterflies".

E. SKREEN, P.O. Box 9, Bondi

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Bufo marinus Eaten by Rattus rattus.

This incident was observed at Hambledon Raw Sugar Mill, Cairns in the last week of May 1967. The mill weighbridge was checked by the Government Department, and was rechecked eight days later, and the weighbridge found insensitive. Examination showed a rats' nest and several partly eaten toad corpses in the weighing mechanism beneath the weigher dial, six feet above the weighbridge pit floor. Poison was laid and two rats were obtained. These were identified by Mr. J. H. Buzacott, Manager of Meringa Sugar Experimental Station, as being *Rattus rattus*.

A few days later the same incident occurred, and more *Bufo marinus* corpses were found stacked on the mechanism ledges, but no nest. A further *Rattus rattus* was found dead.

The weighbridge pit could only be entered by a rat by a 3" drainage pipe from an adjoining pit, which could be entered by a small steel staircase. The *Bufo marinus* corpses were found in the weigher mechanism six feet above the pit level, with only small apertures for the connecting rod mechanism. No toad could have got there by itself.

The toad corpses were eaten as follows: eyes, stomach and portions of the back legs. The poisonous neck glands were not touched. The white tailed rat around swamps, according to Mr. Buzacott, has been known to eat the stomachs only. Mr. Buzacott stated this was the first observation of *Rattus rattus* eating *Bufo marinus*. Whether the three rats died of eating some portions of the poisonous skin of these toads or the poison set is unknown. One could surmise that the rats were besieged in the pits by factory cats and have eaten any toads which jumped into the first pit and could not escape. These toads were dragged into the weighbridge pit via the small drainage pipe and eaten as available food, in a position where the cats could not follow, near their nest.

N. G. K. ADAMS.

BIRDS OF HUNTER'S CREEK, JULATTEN, NORTH QUEENSLAND.

A small stream, Hunter's Creek, rises on Mt. Lewis and flows between Julatten and Mt. Molloy, probably into Rifle Creek and thence to the Mitchell River. It was in this area on the banks of the creek that we camped, two adults and five children, for a weekend during mid-October 1965, a stones throw from the main road. It looked a good birding spot as it was on the fringe of the Mt. Lewis rain forest and the open eucalypt country typical of Mt. Molloy and it contained also some grass savannah and last but not least a two acre lily lagoon—Abattoir swamp — or more appropriately Lake Jacana. The area fulfilled its promise well as my wife and I recorded 83 bird species (4 heard) in $1\frac{1}{2}$ days and within $\frac{1}{4}$ of a mile of our camp.

A new one to us, the Noisy Pitta, was located in a small copse only 75 yards from the tent whilst closer still were both Boat Billed and Pied Flycatchers, a pair of Long Tailed Nightjars and of course many others.

It is worth listing separately the birds on Lake Jacana itself. Firstly Jacana (or Lotus bird) were very numerous and an estimate of 100, I am sure would not be an exaggeration. Others included Green Pygmy Geese, Jabiru, plenty of Eastern Swamp Hens, a lone Pied Goose, Black and White Eyed Ducks, Australian Snipe, Darter, Royal and Yellow Billed Spoonbills, Masked Plover, Little Grebe, Sandpipers and various Egrets and Cormorants.

In addition we visited a small swamp behind Mt. Molloy some three or four miles away and recorded 16 species there, which included Glossy Ibis. Of course many we had already seen on Lake Jacana.

We were fortunate to meet Mr. Kevin Gadd on whose property most of these birds were seen and it is a pleasure to record that he is an ardent conservationist and quite willing to permit bird observers on his land providing all property rights are respected and cattle are not unduly disturbed. He mentioned that fruit pigeons were numerous along the creek in November and December so these alone should be worth a special visit. At one time 3 Pied Geese were on the Lake, but one morning when he visited the Lake, two had been shot by "Sportsmen".

It is worth mentioning that the Lake has been filmed and photographed by Mr. Vincent Serventy and Mr. Graham Pizzey and no doubt has been shown on TV and in the nature magazines.

Finally the children in addition to swimming (br.r.r.r.r.) in the creek were able to identify 6 species of small fish and these together with some mammals heard throughout the night plus sundry snakes and lizards and a lovely climate makes this an ideal camp spot for all who can still take pleasure in Nature's wonders.

A. J. CASSELS.

ON COLLECTION OF ALPHEID SHRIMP FROM QUEENSLAND.

During 1960-1961 while a Fulbright Research Scholar and Guggenheim Fellow in the Zoology Department of the University of Queensland (Anonymous, 1960), and a guest of the Heron Island Research Station of the Great Barrier Reef Committee, I made a number of collections of pistol or snapping shrimp (Alpheidae) at sites along the Queensland Coast. My field of study has for many years included biological sources of underwater sound, and my modest collections were made for purposes of later identification of alpheid sound sources, the identifications to become part of the data accompanying tape recordings of underwater sound.

For the information of carcinologists, my alpheid collections have been deposited in the United States National Museum through the good offices of Dr. Fenner A. Chace, Jr., Senior Scientist in the Department of Zoology, to whom I am much indebted for criticism of my tentative identifications and of the collections generally. The materials have received the following accession numbers: 232608 and 235498 (Moreton Bay); 233127 and 234240 (Capricorn Islands); and 234692 (Port Curtis).

One interesting association, called to my attention by Dr. Fenner A. Chace, Jr., of the Smithsonian Institution, is that between an alpheid of the Capricorn Islands (Nos. 233127, 234240), thus far unidentified, and the bristle-worm *Eurythoe complanata*, four pairs of the shrimp having been collected and so labelled, each pair hovering over one of the worms beneath a coral bommie on Heron Island Reef or on Wistaria Reef. On October 21, 1960 I was injured extensively on the right hand while collecting this shrimp on the Heron Island Reef by the barbed, fluid-containing spines of the bristle-worm. I avoided the blistering recently described for this injury (Yaldwyn, 1965) by at once immobilizing the injured hand so the spines would not break and then bathing the hand in vinegar soon after injury until the calcareous spines were completely dissolved and the irritation ceased. It seems likely that any mild acid, such as that from a cut citrus fruit, might serve the same purpose.

J. M. MOULTON

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Brunswick, Maine, U.S.A.

References :

- Yaldwyn, J. C. (1965) : *Aust. Nat. Hist.*, 15: 86.
Anonymous (1960): *Aust. J. Sci.*, 23: 157.

MICHAELMAS CAY.

This small cay about eight acres in size is famous as the breeding ground of many sea birds. On a visit on October 1st, 1965, between 10 - 20,000 Sooty Terns were found in all stages of nesting. This was the only bird with eggs and small young, though the Common Noddy Tern also had already nested and the young were on the wing. Lesser Crested Terns and Crested Terns seemed as though ready to nest, being seen among the nesting birds. It was obvious that the Sooties were in discrete parties, some which had nested earliest having flying young while others had small young, some were incubating eggs and some were new arrivals. The groups seemed to number about 500 birds and since arrivals take place regularly an observer coming a few months later might find an entirely different picture as regards numbers. About 20 Silver Gulls were working the colony of Sooties and on my disturbing the birds by my arrival immediately destroyed a number of eggs. This is inevitable on such islands but fortunately Sooty Terns will lay again when their egg is destroyed. No attacks on chicks were seen and in general there were remarkably few dead birds.

No landing was made on Upolu Cay but it was populated by about 1000 Sooties, no doubt in much the same stage of nesting as at Michaelmas.

V. SERVENTY.



A Twilight Supper.

During the dry season, the job of an Aboriginal stockman and myself was to keep a check on three windmills erected on three, once flowing bores, with twenty thousand gallon tank and the necessary troughing for cattle and horses to drink at.

As the sun was getting low in the evening there was a large sheen on the top of the twenty thousand gallon tank. This attracted many birds before they retired, and a few mud hornets and bees were busy. Now twilight was setting in and only a light sheen remained on the water. Lots of mosquitoes and small moths and other night fliers came out, and now the bats were appearing from every angle. Business was brisk, thirty or more bats darting and criss-crossing just a few inches over the water, all so busy and hungry. We just stood and watched. Then all at once in came two night hawks.* My native boy prodded me to watch the hawks carefully. "He like kiki (to eat) bats", he said. Those two night birds selected branches 20 to 30 feet high on trees each side of the tank, and every now and then one darted down and across and up onto the branch on the other side. And when we heard a light clap, we knew the hawk had got a bat, then we saw it eating the catch on the branch of the tree. In three quarters of an hour or less, darkness had set in, there was no more sheen on the water, and all insects and bats had dispersed, likewise the night hawks.

Each night we camped near those tanks, which was often, we saw the same show, until the storm rains set in.

STANLEY H. BOYD.

* Presumably some species of owl. Ed.