
THE NORTH QUEENSLAND NATURALIST

CAIRNS

Journal of

NORTH QUEENSLAND NATURALISTS 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.

ADDRESS — Box 991, P.O. CAIRNS.
Q. 4870, Australia.

MEETINGS - Second Tuesday of each month at Oddfellows Hall, Lake St., 8p. m.
FIELD DAYS - Sunday before meeting. Notice of place and time given in "Cairns Post".

Subscriptions (Due September 30):

City and Suburban Members, \$2.50. Country Members, \$2.00.
Junior Members, 50c.

Vol. 36

April, 1969

No. 148

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

Club Officers — September 30, 1968 to September 30, 1969.

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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

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EDITORIAL.

To one recently returned from the somewhat drab grey-greens of Sydney bush, North Queensland in the "wet" seems brilliantly green, all a-glowing and a-growing. The National Parks, bush-filled sandstone gorges and beautiful waterways round about Sydney are indeed a saving grace of this (to mere country cousin) overwhelming city. However, broadcast warnings against swimming at those beaches and waterways because of sewerage and industrial pollution, may serve as a warning to us also - a warning not to allow our coastal rivers and Reef waters to become so polluted. One thinks of the sewerage farms near Melbourne where waste material is put to good use.

Our club president and secretary have been spear-heading efforts to preserve the Cairns foreshore as a Bird Sanctuary, and we have joined the fray to try to prevent any drilling for oil on the Great Barrier Reef.

With regular meeting and field days resumed a busy year is under way. Do come along when you can, and send some contributions for the Journal.

BIRD NOTES FROM CAIRNS

Albinoid Plovers

About eight years ago, a Mr. Hocking drew my attention to an unusual Masked Plover (*Lobibyx miles*) on the North Cairns Reserve. It proved to be a partial albino. It had the black cap and black markings under the wings, but the rest of the bird was pure white. This bird kept to a special territory on the Reserve and was there for many months. A visiting German ornithologist took a colour transparency of it there. Then the City Council decided to make that particular part of the Reserve into a swimming pool. Consequently the bird went away and was not seen again.

Several years later, when setting out on a Naturalists' Club Field Day, I observed two partial albino plovers on the City Council Chamber grounds. These were seen by several other people that day but were not seen again.

Just before Easter 1968, my son stated that he had once more seen an albinoid plover and a day or so later I also saw this bird in McLeod Street. I have been told that an albinoid plover has also been seen around the Hambledon Sugar Mill.

It would seem that this albinoid strain is passing down the generations, as it is very unlikely that the bird seen today is the same bird that was seen eight years ago.

Display of the Victoria Rifle Bird

I have been very fortunate in seeing two distinct displays by the Victoria Rifle Bird (*Ptiloris victoriae*).

The first display took place right at the top of a dead tree in Black Mountain Road near Cairns. The female had flown to a projection just below the male bird and was out of my sight. The male formed his wings into a circle so that it was possible to see the sky right through them and then proceeded to sway down and to the side, backwards and forwards many, many times, with the wings always in the circle. This lasted for several minutes and my companions and I had a clear view of him the whole time.

My next display was of quite a different sort. In the same patch of jungle I saw a male bird on another shorter dead tree. At first I thought he was sitting in a mud bowl, but suddenly he placed his feathers together again and I could then see that the "mud bowl" was nothing more than his own feathers fluffed out. A year or so later, whilst along Black Mountain Road again with an American birdwatcher, we were privileged to see a similar display. However this time I could see the whole of the bird. With his feathers fluffed out, he looked like a ballet dancer with black bodice and tights and a lighter grey ballet skirt. He stayed in this position for several minutes, then dropped the feathers down and resumed feeding.

Crested Pigeon in Cairns

Just before Easter, 1968, I was astonished to see three Crested Pigeons (*Ocyphaps lophotes*) walking along the road near the North Cairns Reserve. The nearest to Cairns that I have observed this species is between Ravenshoe and Archers Creek, about 100 miles away. I do not know if these birds were escapees from an aviary. They have been seen by a number of other bird watchers in the town.

PECULIARITIES OF WILD LIFE AT MERLUNA STATION, CAPE YORK

Merluna Station is a large area and it has quite a number of lagoons scattered around, many of them large expanses of water. And yet there are no water fowl other than a few black and white ibis, which feed in water only two and three inches deep. I lived and worked as a stockman on Merluna for 12 years. There were odd times when one of the Aboriginal stockmen would suddenly say to us all, "Miagoodie?" (Guess what?). Of course we all looked in trees and on the ground until he told us to look upwards. Away up in the blue sky would be 10 or 12 pelicans (Cuchinuchie, native name) flying in formation, very high up. They never land on any lagoons on the station. Twenty miles east of the station near the Batavia River is a lagoon where, at certain seasons, pelicans are so thick that they get tangled up with one another's wings. Thirty miles south of Merluna on a large sheet of water we have often seen 20 or 30 sailing around doing a spot of fishing.

Occasionally, too, one of the Aboriginal stockmen would alert us in the same way and high up in the sky would be two galahs, their calls coming to us quite plainly. And that was the closest that galahs ever came to land on Merluna country. Around Coen and Mein and for 5 miles north up to Guider Creek there were galahs, but from the Guider north to Merluna (23 miles) or on any part of the station we did not see any. The grass seed they ate at Mein, to the eye, did not appear to be any different from that on Merluna. Of course the soil was different in places, but the trees were the same.

Stanley H. Boyd.

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BOOK REVIEWS

YOUR AUSTRALIAN GARDEN, No. 4 Grevilleas, 50c. Published by the David G. Stead Memorial Wildlife Research Foundation, Box 4840, Sydney. This 32 page booklet is the fourth of a series which should prove helpful to anyone interested in the cultivation of Australian plants. About 75 of the approximately 250 species of Grevillea are described, with practical details for the home gardener of their height, spread and habits of growth, and their propagation and cultural requirements. Line drawings illustrated some of the many forms of leaf and inflorescence.

VENOMOUS AUSTRALIAN ANIMALS DANGEROUS TO MAN, edited by J. Ros. Garnet, published by Commonwealth Serum Laboratories, Parkville, Victoria. This small book gives a general and most interesting account of the marine creatures, Arthropods (centipedes, spiders, ticks, etc.) and reptiles of Australia which can inflict venomous bites or stings, with mention also of the poisonous qualities of certain fish and molluscs when eaten. Chapters are included on the distribution and identification of the more deadly snakes, and on the treatment of envenomation. Final paragraph of the Preface states: "Antivenenes are available for treatment of poisoning by any of the dangerously venomous snakes, by the ubiquitous red-back spider and by the stonefish of tropical waters and we feel sure that eventually a method of producing an antivenene for funnel-web spiders, the sea wasp, and even the ringed octopus will be devised." The book is clearly illustrated with line drawings and excellent black and white photographs.

THE HOARY WATTLED BAT OF NORTH QUEENSLAND

In 1852 John Gould, in his great work "The Mammals of Australia", described a small bat, Scotophilus nigrogriseus, collected in the vicinity of of Moreton Bay. The accepted generic name is now Chalinolobus for this little insectivorous bat that may be recognized by the wattle-like fleshy lobes at the corners of the mouth. The pelage is greyish-black; dull white tipping of the hairs accounts for the somewhat grizzled appearance. The forearm is barely an inch and a half in length (in some New Guinea "flying foxes" the forearm measures more than eight inches).

The first record of Chalinolobus nigrogriseus from North Queensland came in 1948 when Dr. George Tate and I visited the farm of Mr. Seagren, located about ten miles west of Cooktown. We collected three specimens that were hawking insects near his home at dusk. In 1949 Jack Roberts, our host and friend at Shipton's Flat (about 30 miles south of Cooktown) during the 1948 Archbold Expedition, collected four additional specimens.

Ten years later R. F. Peterson and Lionel Evennett, collecting near the Gregory River (24 miles south of Burketown), shot another of these wattled bats. In June 1959 they took a specimen not far from the Queensland border in the Northern Territory at Red Bank Mine (18 miles west of Wologorang). Then in 1961 William Hosmer, formerly of Atherton, sent me a nigrogriseus collected by his friend, George Powlowski, at Karumba on the Gulf of Carpentaria.

I now know of records of six additional specimens. Two males in the C. S. I. R. O. collection at Canberra were captured by Mr. P. Freney when they flew into his house at Chillagoe in 1964. The Australian Museum in Sydney has four individuals from Sedan Dip, about sixty miles northwest of Julia Creek.

Dr. Tate, in his 1952 report on the mammals of the Cape York Peninsula, identified the 1948 and 1949 specimens as Chalinolobus rogersi. This species was described in 1909 by Oldfield Thomas at the British Museum, who received a specimen from near Wyndham in the Kimberley area of Western Australia. After an examination of the accumulated material in the Archbold Collections, I have concluded that the Cape York and Gulf country specimens are not rogersi but nigrogriseus. The Kimberley rogersi is similar to nigrogriseus but it has a smaller skull and its pelage is more heavily "frosted". In my opinion rogersi should be regarded as a subspecies of nigrogriseus, the correct name being Chalinolobus nigrogriseus rogersi.

In addition to the Queensland records we know of specimens from five localities in the Northern Territory, and two localities in eastern New South Wales. All of these specimens, on the basis of descriptions and measurements, are considered as belonging to the nominate subspecies, C. nigrogriseus nigrogriseus. One fact stands out when all of these records are mapped. There is a gap of nearly 900 miles between the Moreton Bay and Chillagoe collecting localities. Naturalists in coastal Queensland should be on the lookout for this little bat, whose habits are practically unknown.

The question of the identification of these North Queensland specimens came up when I was attempting to identify a specimen collected on Fergusson Island (off the northeast coast of Papua) in 1891. After a detailed comparison of this New Guinea individual with the Queensland material, Dr. Karl Koopman of the American Museum of Natural History (New York) and I have concluded that the name nigrogriseus should also apply to the Fergusson Island specimen. We have a paper in preparation giving full details.

The above account is an excellent example of how little we know about the distribution of many of our local mammals. This bat is no doubt common in many parts of its range, but it was only after piecing together material

gathered over the years that a logical picture of its range began to develop. Resident naturalists can also contribute valuable information about the life histories of bats by systematic observation and judicious collecting. I will be happy to identify any small bat found or collected by readers of this Note. Simply put the specimen in "metho", after slitting open the abdominal cavity with a scissors or razor blade. A plastic food bag makes a convenient container for specimens. A dilute solution of formalin (one part to twelve of water) is even better than "metho". Dr. L. J. Brass (P. O. Box 1155) in Cairns will be glad to forward any specimens to me.

North Queensland is in an envious position as regards natural history. Not only is there a large number of available habitats, but there is also a wonderfully diverse mammal fauna. By a happy accident of geography Queensland's Cape York Peninsula has served several times in the past as a bridge for the interchange of mammal species between New Guinea and Australia.

Hobart M. Van Deusen

Archbold Expeditions
American Museum of Natural History
New York City

14 November 1968

PARASITISM OF COMMON OAK BLUE BUTTERFLY

The common oak-blue butterfly (*Amblypodia amythis*) is plentiful along creeks and rivers in the Cairns district and its life history has been described in detail. As I have found their larvae feeding on three families of plants, always with attendant green tree-ants, it seemed opportune to me to observe them more closely with a view to finding their parasites, if any. As the eggs are never laid in the absence of ants from the food trees, and as the ants guard the butterfly from the time of egg-laying to the emergence of the adult, it might seem impossible for any parasite to get past the pugnacious ants. Over a period of one year I collected over sixty mature butterfly larvae of which four proved to be parasitised. These parasitised larvae were taken from young growth of eucalypts (Bloodwood and gum-topped box). I will describe the emergence of the parasites from two of these with some details of host reaction after emergence.

The parasitised caterpillars were active when collected but had ceased all activity two days before the parasite larvae emerged. They had not bound or rolled leaves together, as is usual in this butterfly prior to pupation. From the time of cessation of activity in the first host, it was examined with a binocular microscope morning and evening. The first lot of parasites emerged and had spun cocoons beneath the host's body before 6 p. m. Fifty-three emergence holes had been cut through the ventral wall of the host, two larvae had died without spinning cocoons. The cocoons were arranged in two double layers beneath the host in form like part of a honeycomb and they were formed of a yellowish white silk.

The heart beat of this host seemed regular for the first two days after the parasites emerged, the skin was glossy in appearance and the body generally appeared healthy. The host remained in one position clinging to the parasite cocoons beneath its body and it resisted attempts to remove it. On the second day after parasite emergence there were brief periods of side to side movement of the head - a movement that is common to many caterpillars when producing silk, but there was no sign of silk on the lower lip from which silk is normally produced. This movement had ceased next morning, the heart beat was much slower and there was an irregular short spasmodic movement of the body with an

infrequent opening and closing of the mandibles. On the fourth day, the host body showed signs of shrinking, it still moved slightly when touched, the mandibles moved slightly, and it still clung firmly to the parasite cocoons. Heart beat was still perceptible in the evening and there was a slight flow of light brown fluid from the mouth. On the morning of the fifth day, heart beat was slight with no sign of outer body movement, and the caterpillar was dead before 5 p. m.

The second caterpillar's parasites emerged early one evening and I saw most of these emerge and, almost immediately, commence spinning cocoons. All had emerged in about an hour and had spun cocoons by early morning - a total of 57 cocoons and a few dead larvae. The reactions of this host were much the same as the first case, but it lived only three days after emergence. This and the third parasitised caterpillar were examined by microscope in the same detail as the first.

The third host had been resting on a leaf with its back towards the bottom of the jar and, when first examined with the microscope, the parasites could be seen boring through the back from within the host's body. This was totally different from the previous cases and I replaced the caterpillar back upwards in the jar before leaving for the day. By 5 p. m. that day, four parasites had emerged and others were cutting their way out, all through the ventral wall. I killed the caterpillar and opened its body, in which there were still 79 live parasite larvae and a few dead.

The parasites emerged from their cocoons in 8-9 days after emergence from their hosts. They were small black wasps of the genus *Apanteles* of the sub-family *Microgasterinae*, and were about the size of a very small mosquito. Sex ratio was about 3 females to one male, and, where I was able to observe, mating took place within 24 hours of emergence.

N. C. Coleman.

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FINGER CHERRY POISONING - FRUIT OR FUNGUS?

M. W. Jarvis

(Contribution from Australian Defence Scientific Service,
Department of Supply, Defence Standards Laboratories,
Maribyrnong, Victoria)

The family *Myrtaceae* is very widely distributed throughout Australia and New Guinea, perhaps the most notorious member being a shrub or small tree growing extensively in Northern Queensland, known locally as "Finger Cherry" and "Cooktown Loquat" and botanically (1) as *Rhodomyrtus macrocarpa* Benth. This plant bears fruit which are of cylindrical shape, $\frac{3}{4}$ to $1\frac{1}{4}$ inches in length and which are an attractive cherry-red colour when ripe.

It has been reported on numerous occasions (2-9) that humans and animals who have eaten the fruit have suffered to varying degrees of severity with sickness, paralysis, permanent blindness and even death. It is an unusual feature of this plant's toxicity that damage which is both sudden and permanent is done to the optic nerve, resulting in its atrophy. That there is a definite association between consumption of the fruit of *R. macrocarpa* and these effects is beyond reasonable doubt; questions as to the nature of the toxic principle and its action still remain unanswered. However, this is not all that is extraordinary or inexplicable about this plants effects. Some reports (5, 6) have claimed that the unripe

fruit is the source of the toxin said by Tryon(4) a former Government Plant Pathologist, to be a saponin, the quantity of which shows a seasonal variation being in greatest concentration in the unripe fruit. Yet others(5) say that the ripe or over-ripe fruits are the culprits. Counter to all these reports is the statement by Banfield(10) that the blacks eat the fruit unrestrictedly and declare it even good, as do some white people, eating it raw and preserved, without fear and without untoward effects.

Nonetheless, the Queensland Department of Education considered the danger of poisoning so serious to children, who have been the most numerous of the victims, that in 1915 it issued illustrations and descriptions to be prominently displayed in all schools throughout North Queensland warning children of the hazard. Since then no Australian cases of poisoning have been reported, but the Courier Mail of Brisbane(11) carried the story that twenty-seven soldiers who ate "cherries" in New Guinea become totally blind as a result. Thus from time to time this plant takes its toll of the unwitting and the young.

A peculiar feature of Rhodomyrtus macrocarpa may help to explain some if not all of its unusual and varied effects. This is the fact that a fungus of the Order Melanconiales known as Gloeosporium periculosum Cke. et Mass(12,) has been reported(6, 13, 14) as growing only on this plant. It may be possible that this fungus is the true culprit behind the poisonings. This may explain the seasonal variation since G. periculosum grows only on the mature, ripe and over-ripe fruits; it may also explain why young children and stock animals who may eat infected fruit fallen to the ground are the most common victims and may explain why aborigines and others who know whether fruits are infected escape injury. It is these questions and others like them that scientists at the Defence Standards Laboratories in Maribyrnong, Victoria, are trying to answer. They hope to find out whether the fruit, the fungus or the two together are the source of the toxic principles, the nature of these principles, their mode of action and if any antidote or treatment is possible. Information relating to the effects of this plant would be gratefully received by these Laboratories. It is hoped that as an outcome of the work done on this plant, a service may be provided to the parents of unwary children, the bush-walker and to the soldier training in the tropics.

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