
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.

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

MEETINGS — Second Tuesday of each month at Oddfellows Hall, Lake Street, 8 p.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. 35.

JULY, 1968.

No. 146.

CONTENTS.

Club Handbooks	2
Editorial	2
A New-Comer to Australia Remembers the African Bush	3
"Australian Sarcanthanae"	5
Pot Pourri	6
Quail of North-East Queensland	7
Request for Information on Migrant Birds	8

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

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

President : A. J. CASSELS, Esq.

Hon. Secretary : Mrs. M. L. CASSELS. Hon. Treasurer : Mr. G. AYRES.

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.

News of Club activities in recent months includes some interesting discussions at meetings, a showing of excellent films by courtesy of C.S.I.R.O. and others, enjoyable and rewarding Field Days to Double Island, Mourilyan Harbour and Fitzroy Island in particular. A good attendance of visitors as well as members on occasions has been very pleasing. Some few members have collected specimens of frogs (*Cophixalus*) and of *Helichrysum* flowers in response to requests from Universities of Queensland and of Berlin. Fresh material has been added to the Flecker Herbarium by Dr. Brass. At the Cairns Show, a display of fine photographs of "wild" life was provided by Mr. and Mrs. Hinton under the title, "Yours to Protect".

Regarding protection, we note with concern that routine statements issued by the Fauna Officer of the Department of Primary Industries to local Press, declaring an open season on certain species of duck, etc., fail to add that this does not apply within sanctuaries and that a large area of North Queensland — from Cape Tribulation south to Mission Beach and west to Mt. Garnet — is such a sanctuary. Surely the existence of sanctuaries should be made clear in every such statement.

Do please remember that contributions for this Journal are always welcome.

A NEW-COMER TO AUSTRALIA REMEMBERS THE AFRICAN BUSH.

To an amateur naturalist who lived for eleven years in Central Africa, it was very interesting to arrive in North Queensland and to look at the new environment with an experienced eye. Zambia and North Queensland are situated about the same distance south of the equator and so their general conditions of temperature, seasons, amount of sunlight etc are the same. Both places are part of old, worn-down continents and the soils found in both are the result of millions of years of erosion of ancient rocks. However, Zambia is situated right in the middle of a great land-mass and has no coast-line or coastal-plain. Average altitude is 3,000 ft. above sea-level, and so it is only in the deep river valleys that hot, humid conditions like those round Cairns are found.

Because it is so far from the coast, rainfall is relatively low, 30 - 40 ins. per year compared with Cairns' 80 ins., but conditions are very like those found on the west side of the Atherton Tableland. The original indigenous flora and fauna of the two localities is distinct, presumably as a result of independent evolution over a very long period.

Among African countries Zambia is lucky in not being over-populated. Compared with countries like Uganda and Malawi, Zambia still has plenty of land for her people, but they do exert more pressure on the land than do the aborigines here, because they are cultivators as well as hunters. Under modern conditions, white men are having much the same effect in both countries, shooting animals, flooding valleys, felling forests and spreading urban development and mining slag-heaps.

Rain-forest such as exists on the coastal ranges here, is found in Zambia only in a few, isolated localities. The most interesting is on the lips of the gorges near the Victoria Falls. As the mile-wide Zambezi River tumbles into its narrow, basalt gorge, a great cloud of spray is thrown up, "The Smoke that Thunders" is its Bantu name. The narrow strip of land on which the spray lands is always saturated, and the rain-forest found there contains giant trees, lianas and epiphytic ferns and orchids like those we find in the rain-forest here.

Scattered over the northern part of Zambia towards the Congo border where the rainfall exceeds 40 ins. per year, there are little pockets of residual rain-forest, known as "mushitu", along the beds of streams and around water-falls. As one picks one's way through the dense vegetation growing out of a thick layer of litter, one feels that one is, indeed, penetrating part of a forest literally as old as the hills.

However, the major part of Zambia is covered by dry, open woodland, with savannah in the drier parts to the west where the trees thin out and the vast plains of elephant grass are the homes of herds of antelope and other game. *Brachystegia-Isoberlinia* woodland is found in many parts of the country, and in September the red and bronze colours of the new foliage make a picture of "autumn tints" at the wrong season. In the valleys of the great rivers, Zambezi, Kafue and Luangwa are found the "mopane woodland" beloved of big game. The dry, scrawny-looking trees have leaves like pairs of wings, and bear succulent pods. When all the grass is dry and flavourless, elephant and buck find the mopane bushes very much to their taste. Among these small trees stand out the giant baobabs with gross, grey trunks and bare branches like up-ended roots. They are related to the bottle-trees of Australia.

Zambia is known as the land of the three rivers, and, of these the Zambezi is the most important, curving round the western and southern borders of the country and forming much of its frontier with Angola and

Rhodesia. At one point in its long course, the giant river crosses a vast flood-plain known as Barotse-land. Perhaps this tract was once the bed of an ancient lake, and every year from January to May it fills up as the Zambezi burst its banks and forms an inland sea, 30 miles wide and 100 miles long. This mass of water is the home of myriads of wild birds; open-billed storks, which live on snails; ibises; fish-eagles (Zambia's national emblem), many kinds of kingfisher and many others. When I saw the birds on the lagoon at Minimalka Station near Mount Garnet I thought I was back in Barotse-land, except, of course, for the unique black swans.

Unfortunately all the small streams and lakes are infected with bilharzia in Zambia if any Africans live near and use them for washing etc. Bilharzia is a small parasitic worm which spends most of its life in the bladder of a human host, but the free-living stage of its complicated life-history swims about in water. This little larva can penetrate unbroken human skin, and a heavy infestation can cause an unpleasant and debilitating disease. To all careful people, therefore paddling or swimming in Zambia's rivers is taboo because of bilharzia if not because of crocodiles. How very much we appreciate the lovely swimming places in Australia's beautiful rivers!

Zambia has natural and artificial lakes, just as North Queensland has. Lake Kariba, formed by the damming of the Zambezi River where it flows through a narrow, rocky and exceedingly hot gorge, is a vast inland sea compared with Lake Tinaroo. It has changed the local weather by evaporation from its huge surface and may even have caused some earth tremors by its weight. In contrast to the irrigation purpose of Lake Tinaroo, Kariba is used for hydro-electric power exclusively. We may be thankful that Tinaroo seems unlikely to become a political bone of contention like Kariba which was made jointly by Zambia and Rhodesia in earlier, friendlier days.

North Queensland is unique in possessing several crater lakes of great beauty and interest. Zambia's natural lakes by contrast, include the rift-valley lake of Lake Tanganyika. Zambia only borders this huge lake in the extreme south. Lake Tanganyika is a miniature sea of which the opposite shore is invisible and the nearby shore has sand-dunes on which break real waves. Elephants walk along the beach, hippos feed in the shallows, and Nile perch and yellow-bellies of great size lurk in the deep water. Sudden squalls can come up which keep native dug-out canoes very close in-shore and send all shipping running swiftly for harbour.

Although Zambia has an incomparably richer fauna of mammals than has North Queensland, I think Australian birds are more colourful, melodious and numerous than Zambian birds. There are no big parrots in Central Africa although I have seen some charming little rosy-cheeked love-birds. In gardens there are many pied wagtails, more boldly pied and much bolder in behaviour than Australia's willy wagtail. In every garden, too, there are hosts of tiny wax-bills, brown-backed and blue-breasted, always feeding under the poinsettias and frangipanis. Mynahs have not yet found their way to Central Africa, but one common bird seen in both countries is the coal-black, fork-tailed drongo. I cannot describe in detail the spur-winged geese, egrets, kites, eagles and many other beautiful birds, but we all know the comparison between the flightless African ostrich and the Australian emus and cassowaries.

Of all the lovely flowers which I found in the African bush (and some of which I sent to the Herbarium at Kew), I remember vividly the many small ground orchids and gladioli which I collected in the dambos. These dambos are curious low-lying areas in the bush where the ground is often damp, and where trees will not grow. The soil is often pitted with elephants foot-marks, big enough to take the stump of a North Queensland house, and dambos are also favourite places for buck and zebra to graze at dawn and dusk. Here in the gardens of Cairns I watch with affection for the scarlet *Haemanthus* lilies in November; I saw them in the Victoria Falls rain-forest and many

times on huge ant-hills in the bush. The climbing flame-lily is my favourite "remembrancer". It grows all over Zambia and was the national flower.

Blue-gums have been introduced into many parts of Zambia for making straight poles. African trees are very poor pole-producers because they are hacked at by the Bantu and crippled every year by bush fires. The umbrella-tree here seems to me to be unique and characteristic of the small rain-forest trees.

If any one particular thing were to be chosen as having an over-whelming attraction for visitors to Zambia, it would be the game. Not only are herds of such animals as roan-antelope and groups of crocodiles seen in the big game-parks, but at any time of the day you may have monkeys come into the trees of your garden, and any night you may see hyena or even leopard in the beam of your head-lights. Undoubtedly, the grace and beauty of form and colouring of these animals lends a very special appeal to the African bush, and the remnants of the Australian marsupial fauna in North Queensland are poor in comparison.

An uninformed visitor from a cold country might find many similarities between the natural country-side of Zambia and North Queensland, especially if he visited the Mareeba area. Sparse trees, tall grass and termite hills make very similar pictures, but to the naturalist there are, of course, many interesting differences. As an English naturalist I took eleven years to feel as familiar with the African wild scene as I did with the primroses and robins of my youth, and I know that I shall be as fond of North Queensland nature after a comparable sojourn.

JOAN M. WRIGHT, M.A., B.Sc|

Cairns 1968.



"AUSTRALIAN SARCANTHANAEE"

By A. W. DOCKRILL.

AN APPRECIATION :

This work is a pure scientific paper. As such it doubtless has received and will continue to receive as it becomes better known, the favourable recognition deserved, from scientists world wide.

To qualify for "popular science", such a work must necessarily have a mass of redundant deviations and embellishments normally necessary to encourage the interest of persons with little intimate knowledge, though not without some fair inclination to that particular field of science. In this paper there are no such extravagances.

It describes a part of that order of the plant kingdom, "Orchidales", which, as the word "Orchids", has aroused in increasing numbers of people over recent centuries, a desire to extend their knowledge of the plants and their cultivation.

The part selected, the subtribe "Sarcantanae" includes a number of species widely known horticulturally, as well as others with generally minute flowers, but these even more fascinating in colour and form.

The unusual, if not unique, feature of this work is an illustration to scale, of the plant, its flowers and their parts, of each species described. The descriptions, although in mostly scientific terms, are so lucid that almost every one with any enthusiasm could, by careful comparison with the match-

ing illustrations, identify most of the species described. Indeed, in some cases, the illustration is sufficient.

No handbook of popular descriptions, even if available, could so expand the chances of the novice and non-scientific amateur and professional, of making an accurate diagnosis of the hitherto obscure names of so fascinating a section of the Orchids.

Thus (Alick Dockrill has achieved that rarity :—

A popular science production without a blemish on its purity.

J. BERRY.

POT POURRI.

BIRD CATCHING SPIDERS.

I have heard many people scoff at the thought that a mere spider could catch something as large as a bird in its web, but I have had two instances when this has happened.

A few years ago whilst taking an American bird watcher out near Edmonton we saw a small bird tangled up in some very strong web. We unravelled the poor little thing to find it was a very juvenile Fantailed warbler (*Cisticola exilis*). Fortunately the baby was not dead and flew away after a few minutes.

The other occurrence was this year when once more I was taking an American visitor on a Field trip. We were on the road to Mareeba when I saw something hanging from a strand of silk. I stopped the car and went over to investigate. This turned out to be a juvenile Brown honeyeater (*Gliciphila indistincta*) who was caught by one leg to a strand of silk. Though it fluttered feebly from time to time it was unable to extricate itself. We quickly pulled the web from its leg and released it and like a rocket, its parent flew down from a nearby tree to look after it once more.

M. L. CASSELS.

In late June 1968, I collected three large caterpillars from the moss-covered trunk of a palm on a creek bank near Babinda.

These insects were 38 mm. long and 5 mm. in diameter and their backs and sides were covered with barbed hairs about 16 mm. long.

I placed them in a jar for further observation and they pupated two days after being collected.

The pupal case was naked, as in many moths, but the caterpillars had constructed a roughly elliptical basket around their respective pupae by crossing a large number of the long barbed hairs and binding them together with silk. These baskets were neatly made and the hairs crossed each other at approximately right angles. Roughly in the centre, and parallel to the long axis of the baskets, the pupae were suspended by silk strands and by some of the long hairs which were attached to the pupa by silk.

Scattered irregularly over the pupa's body were a number of short strong spines whose tips ended in blunt hooks or a short spiral. A few of these spines were at the posterior point of the pupal body and it was to these and those on other parts of the body that the suspending silk and hairs were attached.

N. C. COLEMAN.

QUAIL OF NORTH-EAST QUEENSLAND

The members of the true Quail (Phasianidae) and the Bustard Quail (Turnicidae) families are well represented in north-east Queensland. The Phasianidae comprises three species: Brown Quail *Synoicus australis*, King Quail *Excalfactoria chinensis*, Stubble Quail *Coturnix pectoralis*. The Brown Quail and King Quail could be said to be more or less resident species and the Stubble Quail more of a nomadic species.

The Bustard Quail (Turnicidae) are represented by the Red-backed Quail *Turnix maculosa*, Painted Quail *T. varia*, Buff-breasted Quail *T. olivii*, Black-breasted Quail *T. melanogaster*, and Red-chested Quail *T. pyrrhotorax*. The Red-backed Quail is more of a resident species and the others have some nomadic tendency.

In the true Quail (Phasianidae) the male is usually larger and more brightly coloured than the female, and it is the female who incubates the eggs and rears the family. In the Bustard Quail (Turnicidae) the position is reversed and it is the female who is the dominant member; after laying a clutch of eggs she leaves the smaller and duller coloured male to incubate the eggs and look after the young chicks while she attracts another male. True Quail possess a hind toe which is lacking in the Bustard Quail family.

HABITAT.

Quail frequent dense grassy situations, lucerne fields, fodder crops such as wheat, oats and maize and the taller grass lands especially Guinea grass which is abundant on many road margins. In these grassy situations Quail are very adept at concealing themselves, so much so that many experienced observers rarely see these elusive small birds except for a fleeting moment or two if they are accidentally flushed, usually when not expected, which leaves very little opportunity for any detailed study.

FLIGHT

The Brown Quail has a disconcerting habit of rising with a startling whirr, and usually flies a considerable distance before dropping to cover. Stubble Quail are harder to flush and if in a family covey often fly in all directions, which is an advantage if attacked by predators who then tend to be confused, leaving more time for the birds to gain cover. King Quail are much smaller and usually prefer to lie close and only flush reluctantly and when they do, fly only a short distance to suitable dense cover.

Bustard Quail generally are difficult to flush, preferring to stay concealed in good cover. The Red-backed Quail has a steady flight if flushed, and the wings do not make so much noise as the Brown Quail. The Painted Quail has a steady and wavering flight and besides frequenting farmlands can at times be flushed in open Eucalyptus clearings, especially near the foothills of mountain ranges. The Buff-breasted Quail is a rare species frequenting the savannah lands of central Cape York and has some resemblance to the Chestnut-breasted species of the Northern Territory. *T. olivii* is named after a collector who was a member of a well-known Cooktown family, and was probably the last species of Australian Quail to be located. The Red-chested Quail is a rare species and some seasons is absent, having nomadic tendency. This handsome species has a habit of standing on tiptoe and looking around before going to cover. Also this species does not often flush, preferring to hide close to the ground and at times can be caught by hand. The Black-breasted Quail is a very rare species and probably the largest of the Bustard Quail family. This species prefers to reside in a scrubby habitat, especially is it fond of Lantana thickets.

NEST AND EGG CLUTCH.

The nest is in a depression lined with fine grass and is usually protected by a rank tuft of grass or a small shrub. True Quail (Phasianidae) have from

six to eight eggs usually. The Brown Quail often has very large clutches of eggs. On one occasion I located a nest of fourteen eggs. Bustard Quail do not have large clutches, three or four eggs being average. Breeding is governed by the season; the monsoon season, when seeding grasses are abundant and insect life is prolific, is favoured by most species. If the season has been favourable Quail are more numerous but in dry years there is a tendency for some species to leave for other areas where conditions are more favourable.

OBSERVATION.

Observers who reside in town areas do not have as many opportunities to study Quail as do those who live on the land, and who during farm operations regularly move through grassy situations where the elusive birds reside. Even so members of the Quail family are always difficult to locate. It is a great help for observers to visit farm properties when harvesting of fodder and crop areas is in progress. The usual harvesting procedure is to work from the outside margins and finish in the centre of the field. As harvesting progresses the birds move away from the mown to the uncut area and it is in the centre where the Quail congregate. It is an advantage for the observer to be on a tractor or a vehicle as a good view can be obtained from such a vantage point. I have often been amazed at the numbers of Quail of several species which are in the last strip or two of uncut field. A note of warning to observers is to keep well clear of moving parts of machines if they wish to try this method of observation.

DISPLAY.

At times a distraction display is observed. On one occasion a female Brown Quail with several small chicks in the vicinity would not flush but kept running in a circle around a tall grass tussock, at times falling over like a person under the heavy influence of alcohol, and dragging one wing. When in this display she uttered strong churring agitated notes and when approached closely crept like a mouse along the ground to a dense Guinea grass tussock where she kept watch on my movements.

Space will not allow me to give a description of the plumage of the various members of the Quail family. Reference books cover this very well and also give details of the various call notes.

PROTECTION.

An open season is usually declared in Queensland each year. This in my opinion is not justified. The small birds have many predator enemies and are so small that the food value is almost negligible. Quail do a very useful service keeping crops free of insect pests and do no damage to grain crops. In my opinion all members of the Quail family should be given total protection.

J. A. BRAVERY, Atherton.

—o—

REQUEST FOR INFORMATION ON MIGRANT BIRDS.

For some time I have been working on migrant species of birds. Little is known about the routes taken from breeding grounds to wintering grounds. In most cases, many species probably fly along the coastal side of the range. However, much more information is needed so that these routes can be plotted with accuracy.

I would be particularly interested to hear from anyone who sees any species travelling in a certain direction regularly each year. Many species travel by night, and again, I would be interested to hear from anyone who regularly hears birds passing overhead through the night. Even a single sighting or a single night-time flight would be important, and in turn, I would be pleased to hear of it.

LLOYD NIELSEN, Box 12, Jandowae, Qld. 4410