

since 1927, but whether by the same pair of birds he did not know. In contrast to the bower, which is essentially a playground, the nest built by the bower birds is very flimsy. Their food consists of wild fruits, such as berries.

Mr. L. R. Black's monthly report on butterflies, birds and snakes was read and discussed.

ELIZABETH KENNEDY,

Hon. Secretary.

PUBLICATIONS

- No. 1. Check List of North Queensland Orchids. Price 1/-.
- No. 2. Marketable Fish of the Cairns area. Price 1/-.
- No. 3. Check List of North Queensland Ferns. Price 1/-.
- No. 4. List of Edible Fruits of North Queensland. Price 2/-.
- No. 5. List of Birds Occuring in North Queensland. Price 2/-.



The North Queensland Naturalist

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An Aboriginal Spinning Top

(By KEITH KENNEDY, Museum of Music, Townsville)

The illustration shows a spinning top once used by the aborigines of the North Queensland rain forest. At the beginning of this century, it was brought down to Sydney, New South Wales, from the Atherton Tableland. This kind of top is now very rare, owing to being made from

amongst the rain forest blacks of the Tully River, and states that the hole in the side to cause the hum was a recent innovation.

Measurements of the illustrated specimen, which is now in the Musical Museum of Townsville are: diameter of gourd 6.5 cm., length of wooden spindle on the axis of which the top spins, 16cm., its diameter being 6 cm. The spindle passes through two holes, one at the top and the other at the bottom of the gourd, and is held in place by native string and a black gum.

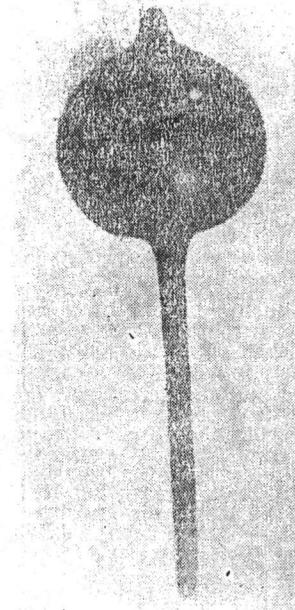
Two lateral holes 5 mm. in diameter are burnt in the gourd to cause the hum when it spins, which is done by rotating the longer end of the spindle between the palms of the hands and dropping the top on a suitable surface. To prevent the gourd from becoming fractured, the aborigines would often spin a top on a piece of native cloth manufactured from bark (2).

A top made of beeswax flattened into a disc through which was thrust a wooden peg was once used by the blacks of the Cape Bedford district (1), and this was spun by twirling the proximal end of the peg between the fingers.

In Central Australia the Lake Eyre tribes use burnt gypsum mixed with water and rolled into a ball, into which a small peg of wood was inserted. The ball is spun with the fingers and rotates on the peg. In some parts of Central Australia and in Western Queensland the peg is dispensed with and the top becomes a spin ball.

(1) ROTH, N.Q. Ethnography, Bull. 4, Brisbane, 1902.

(2) KENNEDY, Bark Cloth of N.Q. Aborigines, N.Q. Naturalist, No. 71, Cairns, 1944.



a small gourd, *Benincasa vacua* F. Muell., which is rather brittle and so is easily destroyed. There were two varieties, the silent and the humming. Roth (1) saw them in use

H. Flecker Natural History Prize Essay, 1951

Observations on the Life History of *Coscinoscera hercules* (Misk.)

By JOHN McLOUGHLIN

Early in April last, seventy eggs of the Hercules Moth, *Coscinoscera hercules* (Misk.) were presented to my brother and myself in the hope that we might be able to rear them. On April 19th, sixty seven of these

seventy eggs hatched. The caterpillars were approximately an eighth of an inch in length, and of a chalky white in colour and covered with spines protruding at regular intervals along the back and side. Their first meal

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consisted of the egg-shell, which they ate soon after hatching. There were about six of these larvae, which did not eat the egg shell and by keeping a close check on them, it was noticed they were amongst the first to die.

On the morning after hatching it was found that they had congregated around the edge of the water in which the food plant, *Homalanthus Populifolius* Grah had been standing in. Although at first the purpose of this was not clear, it was soon realised that they were drinking, and this they continued to do until they pupated.

On 26th April, the larvae, having grown practically three times their size in one week, shed their first skin. They were still of a chalky white colour with a faint greenish tinge between the segments of the bodies, and the spines were now longer and more distinct.

Their second skin was shed on the 3rd May, when their colour still remained white, although it possessed a frosty green colour. The spines were now very long, and about half an inch in length. At this stage they started to disappear, and at first it was thought that they might have crawled away, but no trace of any strays could be found and the mystery was only solved when, one night, a large green frog, *Hyla coerulea* was seen sitting in the water. On counting the flock, it was noted that five more had disappeared, so it was then certain that our green friend had made a meal of them. The frog was then removed to the swamp and as there were no more mysterious disappearances it was believed that the visits had ceased. The sixty seven were now reduced to forty-two.

The third moult took place on the 8th May, when they had attained a length of about one and a half inches and were a beautiful pale blue with bright yellow spines. At this time, however, about ten of the remaining forty two started to die off, and appeared unable to crawl out of their skins. It was noted that the smaller weaker ones died, leaving only the more robust. Thirty two caterpillars now remained.

On 15th May, they moulted for the fourth time, their colour now being

a bright bluish green with dark green hind claspers, and now shorter yellow spines. They were rather big now, and their consumption of food tremendous. Thus a branch given to them in the morning would be stripped in the afternoon.

The fifth moult took place on 27th May, when they were now of a deep green colour and about four and a half inches in length, the spines being short and very hard, now a deeper yellow in hue. At this stage, two thirds of the remaining thirty two larvae died. At first it was thought that this was due to some disease, but this evidently was not the case. It was noted as just mentioned that they were voracious eaters so much so that they often stripped the branch before an opportunity was made to replenish them. One afternoon upon returning to feed them, the reason was soon noted, for in their quest for food, the caterpillars came into contact with one another, striking out with spiked heads and necks, sinking the hard spines into the soft bodies of the other, causing internal injuries ending finally in death.

On 10th June, the remainder moulted for the sixth time. They were reduced in number to six and a half inches in length, or at least four of them were. The other seven simply died off one by one.

On the 20th June one of the four pupated, pulling a number of leaves around it, and spraying them with a fine silk like thread. Before this was accomplished, however, it fastened the leaves to the branch with a coarse thread, preventing it falling should the leaves die and break off. The other three soon did likewise, and now their emergence is patiently awaited.

Out of 67 larvae, four lived to pupate. This indicates how nature balances life. Left in their native state, birds and parasitic insects would have made short work of the caterpillars, and may have reduced their number to nil. However, we now know more about this wonderful moth's habits than before, and if fortunate enough to obtain more eggs, it is hoped, with this experience, to raise at least half of them into adult moths.

A Butcher Bird Family History

PIED BUTCHER BIRD, *Cracticus nigrogularis*.

By GORDON F. LEITCH

In 1936 a much battered butcher bird appeared in our bay—just fifteen years ago.

"Our Bay" needs a little explanation. It is situated on the North East tip of Magnetic Island. Hemmed

in by massive ramparts of granite over which two tracks climb that can be negotiated by those sound in wind and limb. Our main road, however, is by sea over a partly sheltered beach that is not always fit for landing. Eleven acres of flat tree covered land comprises our Bay, beautiful, secluded and unspoilt.

The butcher bird, a black and white, was the first recorded here and had probably suffered some adventures with a hawk as his head was bloody and tail feathers missing.

Since that date "Old Bird," as he is affectionately called, has resided with us. Finding a wife, probably from Horseshoe Bay, the nearest colony of his tribe, Bill set up housekeeping and year by year nested and reared families of from one to four per annum. Some years, storms destroyed nest after nest and no eggs were hatched, while in 1949 a record of four young were reared. How many wives Bill has had it is impossible to say as full plumaged birds are extraordinarily difficult to identify. Even seen closely many times a day, separately and together, it is only by little mannerisms and movements that we can pick them out.

But Bill was different. These butcher birds, though bold enough, are very suspicious and generally show little confidence in human beings. All of them will take food from the hand but only while on the wing, but old Bill would perch on the hand and take his meat in leisurely fashion and behave like a perfect gentleman.

But alas, he will no longer. Late last year he suddenly became suspicious, shy and almost unapproachable.

We decided that some picnic party on the beach, and he never missed a picnic, had abused his confidence and frightened him. Probably someone tried to catch him, but whatever happened we have to gain his confidence again—after fifteen years.

Now to family matters. The butcher bird menage is a model for training the young in domestic duties. The young birds do not get their full plumage till their second year, in fact at about eighteen months. Until then, in their grey and white livery they are hand maidens and rouseabouts to their parents.

When nesting time comes round the parents choose a site after a very careful inspection of many pos-

sible locations. The site is invariably a very high fork in a beach casuarina (*Casuarina equisetifolia*) often on such a bough tip that a heavy continuous wind whips the nest to pieces. There is one constant characteristic in these nest sites, however, a bough invariably crosses the nest some six to nine inches above it as a protection from hawks.

Now the nest building begins. Both old birds get busy bringing in sticks and twigs and after some juggling a framework of a nest appears.

The 1949 nesting was very closely watched and this is what happened. The previous year had produced only one young bird of unknown sex and we called it Sandy and Sandy watched his parents at work for a few hours and then appeared with a twig. He placed this on the nest just as mother came along with another. She picked up his offering, threw it overboard and placed her own twig in position. Sandy then went and got another and another till at last one was accepted and woven into the nest. Next day, Sandy was doing his full share of the work though occasionally his twig was removed and replaced for his education.

In due course the nest was completed and eggs were laid. Sandy again did his share of the brooding and did his shift on the eggs. Whether the old male ever did a turn on the eggs could not be ascertained as it was impossible to distinguish the old birds apart.

On the hatching of the chicks Sandy was again instructed in family management and nursery work. From early till late he gathered and brought in food for the family. A family of four hungry youngsters kept the parents and Sandy hard at it for weeks and by the time they were self supporting the staff were worn and weary. I should mention that quite early these youngsters were brought along and lined up for their meat ration.

This gave us a total butcher bird population of seven, since reduced to four by migration. There was no increase in 1950 as the nests were repeatedly whipped to pieces by the South-Easters. It will be interesting to see this year's set up. We think one of the remaining four birds is a stranger and possibly another has arrived, an elusive shy bird.

Sandy with a full domestic education is with the migrated group and no doubt this season will make a good husband—or wife.

The Dance of the Stone Curlew

Burhinus magnirostris Latham

By GORDON F. LEITCH

We have all heard of the famous brolga's dance. Most of us have seen it, but how many among us have seen the Stone Curlew's dance? The weird chorus of wailing whistles on a moonlight night conjure up pictures of mystic ceremonies and dances held in an open glade in the scrub. A dingo's howl in the distance adds to the effect and a touch of frost completes the atmosphere.

A couple of moons ago I had a dress circle seat on at one of these dances. An inconspicuous sleeping cabin wired from the ground to the wall plate, back and front, gives me many a quiet view of unsuspecting birds and other animals. In front, it faces a glade running to the sea. At the back a glade runs into the scrub, so I see quite a lot.

The moon was near the full, the curlews were in fine voice and I lay at peace watching the moonlight on the water and waiting for the angel of sleep.

Without warning, the wee-ee-loo of the leader of the curlew troupe opened up within ten feet of my pillow and when the show started. There were three birds present in the first movement of the ballet, two courtiers and a lady evidently. The latter very coy and diffident. The routine was for one of the cavaliers to glide forward before the lady and give a bow right and left, then to stand very upright with head thrown back and give the long mournful wee-loo repetition with the second male coming in with the chorus. Other birds out of sight joined in for a moment, then ceased, letting the wee-loo repetition die away on a lower note. The number one performer then did some side stepping and scraping with his neck slightly distended but always with the swift gliding steps so characteristic of the movements of these birds. Every now and then he broke into the mournful cadence of the same

corroboree song with chorus joining in. This first movement did not take more than a minute or two and then number two male shouldered the first bird away and took up the routine in front of the female, while the first star kept up his side stepping and bowing on the side lines. The lady seemed unconcerned about the whole thing and moved about the little glade in little runs in an aimless fashion. Three grey ghosts of birds doing a minuet in the moonlight.

Two more birds glided on to the stage and moved with the group, but except for helping with the chorus, took no part in the bowing and posturing of the male birds.

The stone curlew is generally about as graceful as a dry mulga stump, but in this little performance it exhibited a delicate grace that was very charming, and as it moved out of sight I felt I had been a most privileged spectator.

I presume these were young birds courting. I think, or I like to think, these birds mate for life. I am open to be corrected about this but there are a pair of birds in a belt of quinine (*Petalostigma*) scrub within a hundred yards of me now and they have been there for five years to my knowledge, except for a month or two in the spring when they go into the hills to nest.

DENDROBIUM GIDDINSII HUNT.

In the North Queensland Naturalist xv, 87, 25th June, 1948, I described and named *Dendrobium giddinsii* Hunt. Soon afterwards, the Rev. H. M. R. Rupp and the late W. H. Nicholls drew my attention to the fact that they could not separate it from *D. Bairdianum* F. M. Bail., a species which I had unaccountably overlooked in making the determination. It is, of course, that species and the name *D. giddinsii* must be reduced to a synonym.

TREVOR E. HUNT, 18 vi 1951.

Expedition Through Cape York Peninsula (Continued)

By DOUGLAS VEIVERS

There are few places which rival the Cape York Peninsula for variety and affluence of wild life, the causes affecting this result being largely obvious. The country is sufficiently fertile to support their large numbers yet far enough removed from close

civilisation to allow of their continuance, unmolested. In addition there occur many species of birds, not native to the land, but which have migrated to the Australian continent from New Guinea and northern islands. These are more abundant in

the very north of the peninsula, though some, such as parrots and lorikeets may be seen far south.

The Morehead River District, some miles above the Hann, could serve as an excellent example of this prolificness. Along the river and well above the level of the deep dry bed occur permanent lagoons, some of them several acres in extent. The only aquarian inhabitants of these water-holes is the small freshwater crocodile, *Crocodylus johnsoni* but the amount of bird life which flocks to them is astounding. At one time I have seen many hundreds of ducks and geese congregated on the surface of the water, while brolgas, jabirus and the ever-present plovers swarmed the banks and waded in the shallows.

In the trees beside the lagoons, both black and white cockatoos kept up their incessant cries, and when at sunset the screeching thousands of galahs came to water, there was truly pandemonium.

At night the herds of pigs would wander down and wallow in the mud of shallows, while an occasional dingo or two crept furtively in to drink. Hither these scattered lagoons come eventually all the wild creatures of the dry land, for water is their life's blood and here, where scarcity exists, is its true value known.

The varieties of parrots (and there were many) which frequent this section of the peninsula, were largely unknown to me, and most I could not now identify. One, of which I saw one flock, was a magnificent bird, predominantly green in colour, with a dense black crown and its striking appearance remained in my memory. I understand it to belong to the genus *Barnardius*, but more I could not say. Whatever the species, their gay colour is always a welcome addition to the landscape.

Common to this area is a species of bower bird, which I believe is the Spotted Bower-Bird, *Chlamydera maculata*, a resident of such drier regions as this, and its playground may be discovered quite frequently along the banks of the gullies. The bower is built cylindrically, open at both ends, with strong arching walls of interlaced twigs. At the front entrance the bird strews its curious collection of oddments, pieces of broken glass, pretty pebbles, and fragments of bleached bone and shell.

In a light scrubby section encountered earlier on the tour, I recall noticing a playground of the Tooth-billed Bower-Bird, *Scenopoetes denirostris*, which I have often ob-

served in the coastal brushes around Cairns. This latter does not build a bower, but contents itself with a rather extraordinary playground. On a cleared area of ground about five or six feet in diameter, from which it has scratched all leaves and rubbish, it arranges even rows of large green leaves, such as those of *Litsea calbata*, the silvery undersides uppermost. Indicative of the nature of the bird, it may take considerable time for it to decide that a leaf is correctly placed, alternately moving it a little one way with its beak and standing back to note the effect. In such a manner it passes hours of its time. I have quite often, in the nature of an experiment, interfered with the arrangement of the leaves when a bird had left, reversing and realigning them. On the morrow they would be carefully returned to their original positions and correct sides up. For sheer eccentricity surely the curious habits and antics of this family of birds must be unrivalled by any other.

The day or so we spent in the region of the Morehead River was pleasant and crammed with interest, but time pressed, and we left for places further north. At Musgrave, the telegraph office and homestead of the cattle run of the same name, there was the necessity of a further day's halt, and we passed our stay here enjoying the hospitality of the owner. A pleasant day it was indeed. The hospitable nature and generosity which makes up the character of man is never more evident than amongst these people of the open areas and outback.

From Musgrave several tracks run north to Coen. The old route through Yarraden Station and Ebagoolah was in bad repair, the crossings of the two Colemans being reported impassable, yet this was the road by which we returned. On our forward journey it was necessary that we pick up some stores at the Depot on the Annie River, and we took the route through Violet Vale holding to the Princess Charlotte Bay, whence the road turns northward along the coast.

The track to the bay was good but ill defined. From the slightly undulating country of the interior the land flattens out into large fertile plains along the lower reaches of the Annie River and adjacent streams. Ideal grazing land though it may be, it is like most of the peninsula country, deficient in water through the winter months and sub-

sequently unable to support a maximum capacity of stock. Wells and bores placed in convenient centres would considerably alleviate the position and open up larger areas to perennial grazing, but at present, the stock owner relies upon naturally occurring waters.

On these plains of the Annie River and northwards to well beyond Coen occur the magnetic termitaria, one of the notable oddities of this country, though a satisfactory description would describe them as flat, their shape might well be outlined in further detail. Accurately, the eastward face of each bed is convex in its entirety, whilst the opposite face rises from a convex base to fairly flat at the summit. The average dimensions of the beds in the area would be from three to five feet in height by a similar length, with a thickness of six inches to a foot. Some of them, however, may attain a height of seven or eight feet.

Now the curious fact of course relating to these termitaria, and from which they derive their name, is that the longer axis invariably points in a roughly north and south direction. Many theories have been advanced in explanation of this phenomenon, one of which attributes to the prevailing winds and rains the influencing factors. It is suggested that the action of those winds and rains causes erosion to the eastern and western faces, permitting unhindered construction only in the northern and southern directions. This hypothesis, however, is unsound, the flaws being readily apparent. Another and more probable explanation is that the termite builds its nest to derive a maximum of heat (or minimum of light?) from the sun, a theory supported by the fact that the galleries in the termitaria are situated close to the surface. In all probability the termite is warmth loving (or light shunning?) creature, disliking even the mildness of the northern winters.

Meanwhile the small termite responsible for the construction of these curious dwellings, *Hamitermes meridionalis* continues with his duties, content no doubt in the knowledge that he at least knows where he is going. Although termites are usually called "white ants," they belong to an entirely different order, the Isoptera. Ants of course are a family to themselves (Formicidae belonging to the order Hymenoptera).

A mile upstream from the mouth of the tidal Annie River has been

established a depot where supplies for Coen and neighbouring centres are unloaded from calling ships. The "port" was made some years ago, when the harbour at Port Stewart, further north, became silted and shallow. Though a deeper anchorage, the stream at the offloading stage at the Annie River is barely thirty feet in width, allowing passage of only the smallest of craft. Charlotte Bay itself is shallow and dangerous when a high sea is raging.

Along the shores of the bay and eastward from the Annie River are dense mangrove swamps and tidal disturbances. This is crocodile land, and the rendezvous of a few odd people who travel here to hunt the saurian, both as a form of sport and for the profit realised from the sale of his skin. Yet his numbers are not great, and I rather suspect that his hunting would be a doubtfully profitable occupation at best. As a quarry, he is certainly wary and elusive and appears to prefer the sanctuary of the water when the hunter enters his domain.

Along the narrow coastal plain the track runs north along Princess Charlotte Bay, and as we passed beside the beaches, we disturbed great numbers of broilgas, jabirus and wild ducks and geese which had been settled on the sands. The broilgas in particular were a striking spectacle, making off in graceful and leisurely flight.

On returning in from the coast, I recall passing through one of the most magnificent bloodwood forests I had seen, the great trunks of the trees rising clear to a hundred feet into the air. It was cool and pleasant in these glades and we passed some time in its pleasant atmosphere.

Northward the country is inconsistent with short shrubby regions running out into the typical grass forests of the interior. Through here a terrific wind of an earlier year had passed in fury, for everywhere the ground is strewn with the dead grey trunks of uprooted trees. Later I read accounts and listened to tales of this epic cyclone.

Numerous diversions and items of interest along the route slowed our time, for it was well into evening that day when the Divide was crossed from the foothills and the little township of Coen was reached.

Correction. In last issue, in heading of opening article by Dr. P. O. Flecker for "Great Barrier Wall" substitute "Great Basalt Wall."

North Queensland Naturalists' Club

Meets at School of Arts, Lake Street, Cairns, usually on second Tuesday in each month at 8 p.m.

MEETINGS

12th June, 1951: Mr. W. Hosmer, visitor from Sydney, described formation of Herpetological Society in Sydney.

11th July, 1951: Mr. A. B. Cummings gave an interesting address on mining in North Queensland.

14th August, 1951: Considerable amount of general business was discussed.

NEW MEMBERS ELECTED

12th June, 1951: Mr. John Sydney Gray, Box 267, Gordonvale; Mr. John Allen Gray, Box 287, Gordonvale; Mrs. Rose Keith, Box 63, Cairns.

14th August, 1951: Mr. Tom Carr, Molloy.

EXCURSION: 17th June, to Davies Creek was well attended and the weather good. Demonstration of the method of capturing wild bees—both of the domestic species and of the small native bee, *Trigona*, was made by Mr. E. Klemm and his assistant.

ANNUAL GENERAL MEETING: to be held on 11th September when

the election of officers, annual report and balance sheet will be dealt with.

BOOK REVIEW

26. A HANDBOOK OF THE SNAKES OF WESTERN AUSTRALIA, by L. Glauert, 50 pp., 15 figures, 1 coloured plate, published by W. A. Naturalists Club, 1950.

Each snake is well described with plenty of notes, being placed in its respective family, and as many of these are likewise found in the Eastern Australian states, it serves as a useful handbook for these also. However, the arrangement into families differs somewhat from that usually described the Green Tree Snake, *Dendrophis punctulatus* alone being placed amongst the Colubridae, whilst the Back-fanged Snakes are placed in the dual families, Homalopsidae and Dipsadidae—no distinction being made between them, comprising the freshwater snakes, *Cerberus*, *Fordonia*, *Myron* and *Boiga*. The common sea-snake in W.A., *Pelamis platurus* is the only one amongst the Hydrophidae and is not one of the common species of this family found in North Queensland.

