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Founder, Presd. The late Dr. HUGO FLECKER.

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EDITOR'S NOTE — Lateness of this issue is regretted. Please send more contributions or next issue will be later!

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

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UNUSUAL BOWER OF THE TOOTHBILL BOWER-BIRD, *Scenopoeetes dentirostris*

Many field observations have been published in past years regarding the habits and song of the Toothbill Bower-bird (native name "cherra-chelbo") and considerable doubt still exists whether or not it is a true mimic of the song of birds which frequent the areas of rain forest from approximately Cooktown in the north to a little south of Townsville, Queensland. Many well known ornithologists have contributed interesting data to various journals, including Syd. Jackson 1908, Sharp brothers 1908, Bertram Green 1909, P. A. Bourke 1947. Others include A. H. Chisholm O.B.E., Norman Chaffer and Dr. John Warham, all of whom have had considerable field experience of this interesting Bower-bird.

However, it is an unusual bower constructed above the usual display area that I wish to record. As far as I am aware this type of structure has not been reported previous to its discovery on October 14, 1956 by my son and myself, in an area of rain forest 2½ miles north-west of Lake Barrine, in the shire of Atherton, Queensland.

Habitat: An isolated area of rain forest comprising some 230 acres in broken undulating terrain of metamorphic origin, the forest margins containing many large trees of *Acacia* sp. known locally as black wattle. Most of the commercial trees had been removed some years previously and the area had then been left undisturbed, thus becoming a haven for rain forest birds. I always found it an extremely good area for the study of wild life, and especially the Toothbill Bower-bird.

Bower Site: Situated on the crest of a steep ridge, not far from a small clearing and close to an old snagging track, the site was in a more open situation than is usual for the Toothbill, who tends to avoid sunlight.

The ridge was approximately ¼ of a mile long and about half a chain wide, both sides very steep and dense and only accessible with difficulty. My son and I were observing a rather good display area and a bird with an excellent range of mimetic song, when we noticed something unusual about the area above the display area. We then made a detailed survey of the ridge which contained eight different playgrounds, all except this one being of the usual type. We took details of this unusual bower and a brief description follows:

Description of Bower: Two thin vines from a rain forest tree ran at an angle of 45° and through a dense shrub about six feet from ground level, the ends of both vines reaching the ground, and were held in position by two bent sticks each of which was pushed into the loose soil and debris raked over the portion of the vines on the ground. This gave the bower added strength and stability. The vines which on their way to the ground ran through the dense foliage of the shrub, were held in position by four sticks 3 feet in length and about ½ an inch in diameter, which kept the structure in a bent position to within about eight inches from the ground. More or less evenly spaced, these 3 feet long sticks were placed in a horizontal position and were interlaced under and over both vines. Numerous smaller sticks and twigs were also interlaced and with the assistance of the larger sticks gave the bower a lean-to shape, and it was quite a substantial structure. Three forked upright sticks suitably spaced and pushed into the loose soil assisted to take some weight off the bower.

Directly below the structure was the usual display area, swept clean of old debris and containing more than forty wild tobacco leaves, some being over 18 inches long. In the centre of the display area was a dark patch of

masticated berry pulp residue, two dark blue and two brown berries. Around the edge of the display area were several forked sticks newly trimmed by the bird and ready for use, presumably, in the structure above. One large white toadstool with the stem pointing to the sky was an attraction near the centre of the display area or "circus ring".

On the day when it was first found, an attempt was made with an old type camera to photograph the unusual structure but only one exposure could be made. Next day, October 15, 1956, with new battery and bulbs, four exposures were made. One of these was forwarded to A. H. Chisholm O.B.E. of Sydney who, with K. A. Hindwood, checked the picture which was not very satisfactory, but the main details were evident.

The bower was kept under observation for four weekends running.

On December 16, 1956, two violent storms buffeted the area and as expected the structure was seriously damaged. However, it was in the process of being rebuilt and was taking the shape of the previous bower. This time, however, the long interlaced sticks near the top were at least 4 feet in length but much thinner. Some interlacing of smaller sticks had occurred and pegging of the upright sticks also. On two occasions a Toothbill was observed to carry sticks to below the bower and it was noted the sticks were very dry and light and had been trimmed to the bird's requirements by the bill which is adapted for this purpose.

25 December, 1956: Bird still in occupation and very vocal; no change in the structure.

20 January, 1957: No change in the bower since it was rebuilt after December 16 although the bird was in attendance near the bower. Leaves in the display area had wilted badly but some new berry pulp was in the centre of the display area. Bird not very vocal and range of voice had considerable decreased.

26 February, 1957: No change except one long thin stick was placed on top of the bower. Birds now silent and not observed.

21 April, 1957: Birds not seen or heard. The bower had successfully survived the heavy wet and windy monsoon season. Display area under the bower covered in debris.

June, July, August, 1957: No change and no birds observed.

29 September, 1957: Return of Toothbills to the ridge and display areas. No work attempted on bower structure; the display area below was cleared and some leaves placed on the ground with a bird in attendance.

30 December, 1957: No work on bower: display area below occupied by a bird who was very vocal.

In 1958 ponding of the first section of the Tinaroo Dam commenced and the area of the unusual bower was flattened by a dozer to make a loading ramp for the removal of some valuable cabinet timber before it was inundated. This caused the birds to move further away and we were unable to obtain any more data of this unusual Bower-bird and its unique structure. For over seventeen years a casual check has been made on areas frequented by the Stagemaker, without any success in locating a bower of the type described.

It is possible that the bird with the unusual lean-to type of bower and perhaps other birds have acquired through evolution some knowledge of using sticks as bower material and so are able to construct a crude type of bower somewhat different from the usual one on the ground, which has leaves, berries and other material used for display and sex stimulation.

NEW GUINEA HOLIDAY

One night up at Wau I stayed up all night at Peter Shanahan's collecting light. He supplied me with an easy chair and a couple of blankets. The night was dark, the stars brilliant. Below the house a stream roared and swirled unceasingly.

Hawk moths, fourteen different varieties, hurtled in. The usual large, black with white stripe day flying moths came in, up to sixteen of them on the sheet at one time. I captured twelve different ground beetles, and was bruised on the cheek by a large rhinoceros beetle. It was amusing to see the rhinoceros beetles landing on the sheet. Once on, they trundled slowly ahead, walking over hawk moth wings and bodies, disappearing under the huge wings of the day flying moths and forging through the myriad small moths, completely unconcerned at the thrashing wings that slapped their faces. They resembled tanks and many had small moths and beetles on their backs like warriors riding their chargers into battle.

Around midnight, hercules moths, all males, came swooping and gliding in. At first I thought they were birds or bats until one landed on the grass at my feet, with long tails streaming from his wings. Soon there were eight hercules on the sheet, grass and nearby plants. Later, at about 3 o'clock, a shadowy shape sped in from behind me, there was a soft "thwack!" and one of the moths was snatched from the sheet. It gave me the fright of my life! The next time I was ready and saw that it was an owl. He came in eight times, sweeping past me to snatch a victim from the sheet and turning with beating wings to return to a branch over the swimming pool. By the droppings it seemed he had been doing this for many nights, for the light was on every night — an easy way for him to get a meal. At 6 a.m. the Pakistani with whom I stayed, and who was interested in ticks and mites, came and took me home.

My last weekend in New Guinea, three Canadian friends and I went out past Hobu, along the usual rough road, across wooden bridges spanning rushing rapid-riven streams and up steep hills clothed in dense jungle.

We stopped first at a huge tree that had crashed, its branches shattering in all directions. Searching its immense length we found some huge cases of longicorn beetles, but could find none alive. Apparently a possum or bandicoot had recently had a great feast for the remains of at least twenty beetles were scattered about. I found some very long-legged weevils that pranced around over the bark. Underneath I saw a gorgeous ground beetle with sky blue head, red thorax and azure wingcases — I was actually trembling with excitement trying to catch it.

Further on Joan swung her net at a small butterfly and found she had caught an iridescent blue jewel. Pamela caught a minute butterfly of soft pastel lavender. Red lacewings were particularly abundant and the black and yellow birdwings, and an occasional green and black birdwing, winged swiftly up the road. The flashing dashes of a butterfly that resembled the oak blue were seen, while small delicate yellow butterflies with black edgings slipped at the side of a muddy pool.

Past native gardens and tall banana trees, we came to a silver mountain stream, which was an absolute haven for kingfishers. While I was bathing my feet, I noticed the largest kingfisher that I saw in New Guinea sitting quietly on an overhead branch. He was indigo blue, with salmon pink throat and white breast and his red bill was like a stop signal. One of the prettiest was the dwarf kingfisher, 4½ inches long, with the upper parts blue-black, the crown and parts of the wings shiny blue, and a paler blue band down

the back to the rump; with the under parts ranging from bright orange to gold, and with orange legs. I saw here for the first time the European kingfisher, which in New Guinea is called the River Kingfisher. The Little Kingfisher in his colourful blues, and the Azure Kingfisher with his azure blue back and deep orange under parts, flashed up and down the stream.

As I followed the stream, turning over rocks and disturbing small frogs, I came upon an excited mob of small birds badgering a large owl that clicked its beak in annoyance, amber eyes glaring. The owl was a thick set bird about 20 inches in length, clothed in greys and browns, and had a checkered breast.

Just before we turned for home we came to some abandoned gardens. Mooching through shredded bark I caught two small ground beetles of radiant green, the wingcases shot through with red filaments. Under some logs I caught very small ground beetles with large pop-eyes. The head and thorax of these were bronzy green and the wingcases black with yellow markings. We also found some soft winged longicorns, brown in colour. I had previously caught one up at Wau when it came in to a light.

The surprises of my last collecting trip were not over. Coming back to the bridge at Hobu, Rod suddenly yelled, "Bird of Paradise!" He had seen it fly across the road ahead to a tree at the side of the road. There hanging from a vine was a Red Bird of Paradise. Through binoculars I noted his yellow head and back, his lacy reddish orange tail which fell like a lyre-bird's tail feathers, and the feathers on his sides like a duster, a delicate tracery of red and orange. He was playing on the vine, hopping and twisting, his long feathers shaking silkily; one moment he was hanging upside down, the next flapping energetically higher. This went on for some time. Then, uttering a harsh cry that spoilt the effect of his blazing beauty, he flew back across the road like a flaming banner and disappeared into the towering treetops. All the way to the bridge we could hear him calling.

John Crowhurst, Cairns.

DOMINANT NATIVE TREES — DISTRIBUTION IN N.Q.

The following is a brief selection of the native trees of North Queensland. In fact hundreds of species could be listed over dozens of different localities, but this simple list may give the enthusiast a basis to work from. Names given are those used in the timber trade, with some local names added in brackets, followed by the presently accepted botanical names and some synonymous names now superceded.

COASTAL REGION: (Within 20 mile radius of Cairns)

This area can be divided into three main types of woodland.

1. **Littoral Forests:** These include both the mangrove areas and the flood plain swamps adjacent to and confluent with the mangroves. The dominant species are:

Mangroves — many species including *Aegiceras majus*. *Avicennia marina*.
Bruguiera gymnorhiza, *Excoecaria agallocha*, *Xylocarpus granatum*.
Tea Tree — *Melaleuca leucadendron*.
Coast Cottonwood — *Hibiscus tiliaceus*.

Kapok - *Bombax ceiba*, formerly *B. malabaricus*.
 Cheesewood (Leichhardt) - *Nauclea orientalis*.
 White Cheesewood (Milky Pine) - *Alstonia scholaris*.
 Corkwood - *Carallia brachiata*.
 Evodia (Corkwood, Parrotwood) - *Euodia elleryana*, formerly *Evodia elleryana*.
 Red Beech - *Dillenia alata*, syn. *Wormia alata*.
 Water Gum - *Eugenia tierneyana*.
 Cedar Plum (Tar Tree) - *Semecarpus australiensis*.
 Swamp Box - *Tristaniopsis suaveolens*.
 Yellow Penda (Sour Hardwood) - *Tristaniopsis pachysperma*.
 Damson - *Terminalia sericocarpa*.
 Almond (Sea Almond, Indian Almond, Fiji Almond) - *Terminalia catappa*.

Beach Calophyllum (Ball Nut) - *Calophyllum inophyllum*.
 numerous Palms, including Cabbage Palm - *Livistona australis*.
 2. Coastal Forests: These cover a fairly large area extending from the edges of the flood plains to the foothills and in places well up the mountain sides, where the merging with the rain forest can be clearly seen by the distinct colour change from the blue-green of the open forest to the dense dark green of the tropical "scrub". A very good example of this type of forest is seen along the Captain Cook Highway. Dominant species are:

Red Mahogany - *Eucalyptus resinifera* and *E. pellita*.
 White Mahogany - *E. acmenioides*. Red Bloodwood - *E. intermedia*.
 Carbeen (Moreton Bay Ash) - *E. tessellaris*. Tropical Gum - *E. papuana*.
 Molloy Red Box - *E. leptophleba*. Forest Red Gum - *E. tereticornis*.
 Poplar Gum - *E. platyphylla*, formerly *E. alba*.
 Tea Tree - *Melaleuca leucadendron*.
 Brown Salwood (Black Sally, Black Wattle) - *Acacia aulacocarpa*.
 She Oak - *Casuarina equisetifolia* var. *incana* (beach): *C. cunninghamii* (river); *C. torulosa* "(baker's wood)".

Turpentine - *Syncarpia glomulifera*.
 Swamp Box - *Tristaniopsis suaveolens*.

3. Rain Forests: (Jungle or Scrub). These cover areas extending in places from the beach front and the flood plains to the mountain tops. They are densely covered areas with a fascinating number of species of trees, shrubs, woody climbers, vines, palms, etc. The variations in rainfall, soil types and altitude make for constant changes in dominant species, but broadly speaking these would include:

White Cheesewood (Milky Pine) - *Alstonia scholaris*.
 Spur Mahogany (Spurwood) - *Dysoxylum pettigrewianum*.
 Cedar Plum (Tar Tree) - *Semecarpus australiensis*.
 Silver Quandong - *Elaeocarpus grandis*.
 Yellow Walnut - *Beilschmiedia bancroftii*.
 Queensland Walnut - *Endiandra palmerstonii*.
 Hickory Ash - *Flindersia ifflaiana*. Silver Ash - *F. bourjotiana*.
 Queensland Maple - *F. brayleyana*. Maple Silkwood - *F. pimenteliana*.
 Red Silkwood (Pencil Cedar) - *Palaquium galactoxylum*.
 Bolly Silkwood (Tanzania Silkwood) - *Cryptocarya oblonga*.
 Briar Silky Oak (Briar Oak, White Oak) - *Musgravea heterophylla*.
 Northern Silky Oak (Bull Oak) - *Cardwellia sublimis*.
 Red Tulip Oak (Red Crowsfoot) - *Argyrodendron peralatum*.
 Cassowary Satin Ash (Cassowary Gum) - *Acmena graveolens*.
 Canary Beech (China Pine) - *Polyalthia nitidissima*.
 Black Penda - *Xanthostemon chrysanthus*. Red Penda - *X. whitei*.
 Black Bean - *Castanospermum australe*.

Hard Leichhardt Neo-nauclea sp.
Damson (Sovereign Wood) Terminalia sericocarpa.
Candlenut - Aleurites moluccana.

Some Trees of the AHERTON TABLELANDS will appear in next issue.

References: Queensland Forestry Dept. Pamphlets 1 and 5.
A Card Key to the Rain Forest trees of North Queensland.
by B.P.M. Hyland.

John P. Martin.

THE AGILE WALLABY

The Agile or sandy wallaby (*Wallabia agilis Gould*) to most people in North Queensland, is a familiar animal inhabiting the open forests and adjacent grasslands of the coastal lowlands. This in fact is the usual habitat of the species, however it may also be encountered in suitable habitats further inland. This is usually evidenced by road kills particularly along the road between Kuranda and Mareeba.

The face of the agile wallaby is sharply pointed, and this feature together with the general body colouring and the partly hairy muzzle, serves to distinguish it from all other wallabies.

Distribution

The agile wallaby occurs commonly throughout coastal northern Australia and New Guinea. On the Queensland mainland, it is found abundantly in coastal districts north of the Tropic of Capricorn; populations also occur on some of the islands of Moreton Bay in South Queensland, including Stradbroke and Peel.

Dr. Tom Kirkpatrick of the Fauna Conservation Branch of the Department of Primary Industries, in recent years, has conducted studies on the biology of the "agile" and the following information has been acquired as a result of these studies.

Breeding

Breeding occurs throughout the year. Both males and females reach sexual maturity at the age of approximately 1 year, and under normal conditions a female may give birth to one young every 7 months. The time from mating to birth, provided no young is in the pouch, ranges from 29 to 33 days. As in the red kangaroo, birth is followed immediately by mating and the resulting embryo ceases development at an early stage. This "delayed" or "quiescent" embryo resumes development if the first young is lost from the pouch and birth occurs some 27 days after loss. If loss does not occur, development recommences in time for the quiescent embryo to be born when the first young is 7 months old and ready to be evicted from the pouch.

General Notes

The agile wallaby tends to be gregarious with small groups, particularly of females, sharing the same resting and feeding places. Unlike the large

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kangaroos, however, the young, after vacating the pouch quickly become independant of their mothers and the groups are not necessarily of related animals.

The potential life-span is about 10 years, with few reaching that age in the field.

REFERENCE

Kirkpatrick, T. H. (1970) "The Agile Wallaby in Queensland" (Queensland Agricultural Journal, March 1970)

C. M. Weaver.

SNAKE CATCHING

After finally obtaining my driver's licence and getting the car registered, my younger brother and I decided to go out on a few snake catching trips. On Monday morning it was raining miserably and we thought the snakes would be under the old iron and rubbish. When we checked our favourite spot at East Stratford, we found that yellow faced whip snakes (*Demansia p. psammophis*) and common fresh water snakes (*Natrix mairii*) were abundant. We managed to collect six of the former and four of the latter.

At a second spot in East Stratford, Michael noticed a four foot long Herbert River snake (*Stegnotus modestus*) in an old well partly filled with water. It could not get out as the water level was too low and the concrete walls too smooth. After catching him, we caught a common fresh water snake under some tin near by. We then checked an old building and found a brown tree snake (*Boiga fusca*) sitting on the rafters. Later, at different areas in East Stratford, we collected another three yellow faced whip snakes and three common fresh water snakes.

Behind the cemetery the next morning we caught an unusually coloured small eyed snake (*Denisonis pallidiceps*), which was all black, and a large common fresh water snake.

Later that day, we and a few friends drove out to the area around Crystal Cascades. In an old shed out there we found three brown tree snakes sitting in the rafters in different places. With considerable trouble we reached some old cane barracks, where nothing was found in two sheds except the cast skin of, possibly, a small eyed snake. While walking to the third shed, Michael captured a nice carpet snake (*Morelia spilotes variegata*), five feet long, coiled up in the grass.

In the third shed our luck continued. Under a table we found a children's python (*Liasis childreni*). Derek saw another children's python in the rafters which was quickly captured. Dennis noticed a third children's python in a different room, sitting in the rafters. While capturing it, we found another one with it but partly concealed by the iron roof. We then found a brown tree snake on a shelf in the building.

Some of these snakes will be kept for either our collection or our friends' collection. The others will be released in special areas where we hope to get them breeding.

Dennis and Michael Anderson,
Stratford.