
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".

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

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CLUB HANDBOOKS.

Check List of North Queensland Orchids	75c
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Edible Plants in North Queensland	20c
List of Birds Occurring in North Queensland	20c
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EDITORIAL.

A well-attended public meeting in Cairns, arranged jointly by our Club and the Adult Education, concluded a recent lecture tour of Queensland coastal cities by Mr. Edward Hegerl of the Queensland Littoral Society. The importance of our association with this and other Conservation societies is great, and increasing, as local problems become increasingly common problems throughout state and country. Mr. Hegerl spoke on "Marine Conservation Problems of Queensland". He also mentioned the Society's Underwater Survey Section which conducts day, and night, surveys of fish species and numbers in certain localities.

Our club hopes to draw attention to the beauty and diversity of Nature in North Queensland with a window display at the Tourist Bureau for one month from 11th August. Members have put a great deal of work into preparing this display. Different habitats are depicted - reef and sea-shore, rain forest, and dry grassland - with painted backdrops for "atmosphere" and with appropriate fauna and discreetly potted plants (including a fine young stinging tree) arranged in most effective little tableaux. Above are beautiful displays of the Cairns Birdwing and other butterflies, moths, beetles, spiders, fungi, fossils, minerals. One segment shows the cycle of organic matter breaking down to return to the soil to nourish new life. Labels are clear and informative. Congratulations to those who planned and arranged it all!

The following extract from "Green Mountains" by Bernard O'Reilly was written 30 years ago. It is well worth noting in North Queensland today, when vast new land-clearing development schemes are under way.

"... The early givers of our land laws lost a splendid opportunity of making provision whereby the settlers and the wild life could live amicably together to their mutual advantage. The vanishing of many of Queensland's valuable birds has been due not so much to the indiscriminate shooting as to the complete destruction of the timber which provided natural habitats ... If a belt of natural timber varying from one to five chains wide, according to the area and location of the property, had been left around the boundary line of every holding in Queensland our feathered allies would still have been with us. Such things as grasshopper and caterpillar plagues would be non-existent; the dread blowfly scourge of the west would be curbed; the cane grub eradicated. The State would be a vast checkerboard of virgin timber and this new and urgent erosion problem could never have reached its present proportions."

Do please send along more contributions for the Journal.

NORTH QUEENSLAND COLEOPTERA.

Their food or host plants. Part IV.

By J. G. Brooks, B. D. Sc., F. R. E. S.

I am again indebted to the Queensland Government Botanist for identifying the numerous plants submitted to him for determination. The areas of collecting have been extended to include Bowen, Ayr, Sellheim and Mt. Molloy.

Yellow Jacket. Eucalyptus ochrophloia F.V.M. Addenda.

Family Buprestidae.

<i>Curis viridicyanea</i> Fairm.	
<i>Stigmodera</i> (<i>Themognatha</i>) <i>regia</i> Blkb.	
" "	<i>sanguineocincta</i> Saund.
" (Castiarina) <i>andersoni</i> L. & G.	
" "	<i>flavosignata</i> Macl.
" "	<i>sexplagiata</i> Macl.
" "	<i>straminea</i> Macl.
" "	<i>vallisii</i> Deuq.

Family Scarabaeidae.

<i>Diaphonia palmata</i> Schaum.
<i>Trichauxa marginipennis</i> Macl.
<i>Lyrachora obliquata</i> Westw.
<i>Schizorrhina immaculata</i> Lea.
<i>Ablacopus trapezifera</i> Thoms.
<i>Chlorobapta frontalis</i> Don.
<i>Lemosoma tibiale</i> Macl.
<i>Glycyphana stolata</i> Fab.
<i>Clithria albersi</i> Kraatz.

Family Cleridae.

<i>Eleale lepida</i> Pasc.
" <i>pulchra</i> Newm.
<i>Zenithicola crassus</i> Newm.
<i>Cleromorpha novemguttata</i> Westw.
<i>Lemidia hackeri</i> Lea.

Family Cerambycidae.

Scolicrobrotus Westw.

All these species are blossom feeders.

A Yellow Stringybark. Eucalyptus acemnioides Schau

Family Buprestidae.

<i>Curis viridicyanea</i> Fairm.	
<i>Stigmodera</i> (<i>Themognatha</i>) <i>regia</i> Blkb.	
" "	<i>sanguineocincta</i> Saund.
" "	<i>saundersi</i> Waterh.
" (Castiarina) <i>andersoni</i> L. & G.	
" "	<i>carinata</i> Macl.
" "	<i>cinnamomea</i> Macl.
" "	<i>doddi</i> Cart.
" "	<i>flavosignata</i> Macl.
" "	<i>horni</i> Kerr.
" "	<i>maculiventris</i> Macl.
" "	<i>var. strandi</i> Obenb.
" "	<i>octospilota</i> L. & G.
" "	<i>sexcavata</i> Deuq.
" "	<i>sexplagiata</i> L. & G.
" "	<i>vallisii</i> Deuq.

Family Scarabaeidae.

<i>Hemipharis insularis</i> L. & G.
<i>Eupoecila australasiae</i> Don.
<i>Polystigma punctata</i> Don.
<i>Cacochroa decorticata</i> Macl.
" <i>obscura</i> Blkb.
" <i>variabilis</i> Macl. var. Lea.
<i>Clithria albersi</i> Kraatz.
" <i>eucnemis</i> Burm.
<i>Trichaulax philippii</i> Schreib.
var. <i>macleayi</i> Kraatz.
<i>Glycyphana stolata</i> Fab.
<i>Microvalgus bursariae</i> .
<i>Syllitus tuberculatus</i> McKeown.
<i>Telocera wollastoni</i> White.
<i>vallisii</i> Deuq.

Family Cleridae.

Scrobiger splendidus Newm.

Family Oedemeridae.

Copidita punctatum Macl.

Family Alleculidae.

Chromomea ochracea Cart.

All these species are blossom feeders.

Bats' Wing Coral Tree. *Erythrina vespertilis* Benth.Family Scarabaeidae.*Anoplognathus parvulus* Waterh.

Foliage feeders.

Grey or Pale Bloodwood. *Eucalyptus polycarpha* F. V. M.Family Buprestidae.*Curis carusca* Waterh.*Stigmodera* (*Themognatha*) *excisicollis* Macl." (*Castiarina*) *alternata* Lumb." " *andersoni* L. & G." " *atronotata* Waterh." " *auricollis* Thoms." " *cinnamomea* Macl." " *erubescens* Blkb." " *horni* Kerr." " *maculiventris* Macl." " var. *strandii* Obenb." " *octospilota* L. & G." " *triguttata* Macl.Family Scarabaeidae.*Phyllotocus navicularis* Blanch.*Mimadoretus flavomaculatus* Macl.*Hemipharis insularis* L. & G.*Eupoecila australasiae* Don.*Polystigma punctata* Don.*Cacochroa decorticata* Macl." *variabilis* Macl. var. *Lea*.*Clithria eucnemis* Burm.*Lyraphora velutina* Macl.*Glycyphana stolata* Fab.Family Cleridae.*Phlogistus sculptus* Macl." *smaragdinus* Gorh.*Eleale lepida* Pasc." *vitidicollis* Macl.*Zenithicola crassus* Newm.Family Cerambycidae.*Chlorophorus curtisi* L. & G.*Aridaeus heros* Pasc.Family Curculionidae.*Curculio mastersi* Pasc.

All these species are blossom feeders.

Bloodwood. *Eucalyptus gummifera* (Gaertn) Hochr. Addenda.Family Buprestidae.*Stigmodera* (*Themognatha*) *aestimata* Kerr." (*Castiarina*) *andersoni* L. & G." " *auricollis* Thoms." " *carinata* Macl." " *cinnamomea* Macl." " *decipiens* Westw." " *doddi* Cart." " *flavosignata* Macl." " *nigriventris* Macl." " *obsepta* Kerr." " *rubella* Cart.Family Scarabaeidae.*Phyllotocus assimilis* Macl." *navicularis* Blanch." *vittatus* Macl.*Cheiragra pallida* Macl.*Dilochrosis balteata* Vall.*Eupoecila evanescens* Lea.*Chlorobapta frontalis* Don.*Lemosoma tibiale* Macl.*Glycyphana pulchra* Macl.*Mimadoretus flavomaculatus* Macl.*Automulus brooksi* Brit.Family Cerambycidae.*Tellocera wollastoni* White.*Stenellipsis spencei* McKeown.All are blossom feeders except *S. spencei* McK., which is taken on dying leaves.Cockey Apple. *Phanconia careya* (F. Muell) Kunth.Family Buprestidae.*Cyphagastra pistora* L. & G." *vulnerata* Thery.

Foliage feeder.

Burdekin Plum. *Pleiogynium cerasiferum* (F. Muell) Domin.

Family Buprestidae.

Cyphagastra pistora L. & G.

" *vulnerata* Thery.

Chalcotaenia australasiae Saund.

" *cuprasceus* Waterh.

Family Curculionidae.

Peripagis limbatus Pasc.

Orthorrhinus cylindirostris Fab.

Family Cerambycidae.

Typhocesis macleayi Pasc.

These species are either foliage or bark feeders.

Golden-Beard Grass. *Chrysopagon fallax* S. T. Blake.

Family Buprestidae.

Paracephala aenea Blkb.

These species feed on the flowers of the grass.

Family Chrysomelidae.

Rhyparida didyma Fab.

THE GOLDEN BOWER BIRD.

Australia is noted for its colourful birds and birds with strange habits and calls. One of the most beautiful of these is the Golden Bower Bird (*Prionodura newtonia*) famed not only for its beauty but also because it belongs to that curious family of bower builders.

The male is a shining gold in colour with brownish wings, side of head and lower back, and, as he flies through the jungle of North Queensland, is a veritable flash of shining golden light. The female is less conspicuous, being an olive green above and light grey below - nevertheless an attractive bird.

The Golden Bower bird is found only in North Queensland, Australia, and there only in jungle country at an altitude of 3000 feet and over.

Other bower building birds are found in Australia and New Guinea and range from those that just clear a space in the jungle floor and decorate this with fresh leaves, to birds that build elaborate play houses and decorate with all manner of objects.

P. newtonia selects a place - generally in the more open type of rainforest - where two small trees or shrubs are fairly close together with a stick or branch connecting the two. He brings many small twigs and sticks and piles them around and between the two upright saplings to a height of three or four feet with the sides elevated a foot or so above the horizontal branch - the "singing stick". Sometimes the shoulders of the bower arch over the singing stick to form a tunnel-like opening. The singing stick is decorated with pieces of grey-green lichen, just about covering it with a mat of material with just a small piece uncovered where he sits to sing. Small white flowers of a particular species are also used, but when some similar artificial flowers were placed near by to tempt him, they were utterly ignored.

The bower may be used by the bird year after year and then suddenly abandoned and a new one built near-by.

When photographs were being taken at the bower, it was noted that Goldie visited it mainly in the early morning, although he did occasionally appear throughout the day. He was not very happy with the hide - or perhaps it was the flash equipment placed near the bower. Several times he came with lichen, always landing

on the same tree at the right of the hide, but not being sure of things, he did not come down but placed the lichen in a hollow tree. He would always approach the bower from the same direction, landing on a nearby perch behind and then hopping on to the singing stick, either to place the lichen or flowers or to sing and display to his mate.

Goldie has a variety of calls. Each time this particular bird arrived from a foraging expedition he gave a call like the twanging of a wire. At other times he gave an ugly croaking noise like a frog but when on the bower he gave a rather pleasant whistle. He also has been known to mimic when displaying.

The birds feed on native fruits and berries. The nest is an open cup made of dead leaves, thin strips of bark, small sticks and moss. This is lined with rootlets and twigs. It is usually found in an opening, ledge or hollow of a tree or other sheltered position in dense scrub and often only a few feet from the ground. There are two pure white eggs. Breeding season is from October to December and this of course is the time that the male redecorates his bower and displays there.

Marion Cassels.

ORCHIDACEAE.

PACHYSTOMA HOLTZEI (F. Muell.) F. Muell.

THE GENUS PACHYSTOMA BL. IN AUSTRALIA.

The single member of the genus *Pachystoma* Bl. found in Australia, *P. holtzei* (F. Muell.) F. Muell., was found originally in the Northern Territory and described by Ferdinand von Mueller as *Eulophia holtzei* F. Muell., this name later being corrected to *Pachystoma holtzei* (F. Muell.) F. Muell. by the same author.

A recent collection of several plants from North Queensland extended the known range of distribution of the species. Collected plants were not in flower at the time, and this single plicate leafed orchid was assumed to be a species of *Eulophia* R. Br., which it closely resembles vegetatively. Subsequent flowering of plants disclosed it to be a species of *Pachystoma* Bl., and it was positively identified as *P. holtzei* (F. Muell.) F. Muell. by Mr. A. W. Dockrill, Lae, who described it as identical to species from the Northern Territory, the original recorded location.

The genus, a member of the subtribe Phaiinae, is a small one of some eight species, found in India, China, through Malaysia to New Guinea, Australia and New Caledonia. The following description of *P. holtzei* (F. Muell.) F. Muell., in general, is typical of the genus.

Pachystoma holtzei (F. Muell.) F. Muell. Victorian Naturalist 8 (1892) 180.
Eulophia holtzei F. Muell. Victorian Nat. 6 (1889) 55.

A terrestrial, sympodial plant with annual subterranean corn-like pseudobulbs. Each pseudobulb is two-lobed, sometimes with an additional side shoot, the lobes growing away from each other, each lobe almost cylindrical, pointed, smooth, almost white. The inflorescence is produced at the extremity of one lobe and the following season's growth at the end of the other.

The new growth develops seasonally. The tip of the previous pseudobulb develops into the new leaf, from the base of which grown the

new psuedobulb. The old psuedobulb withers and by the time of flowering, has gone.

Roots few, from below leaf stem. Leaves one or two, green, with the basal one smaller, sometimes appearing as a bract, Major leaf up to 40 cms. long, narrow, shortly petioled, the blade plicate, sharply pointed, up to about 1 cm. wide. Foliage grass-like and difficult to see in its native habitat, deciduous.

Inflorescence tall, slender up to 40 cms. high, with up to five amplexicaule bracts Flowers few, up to eight on the specimens observed, set closely together on the apical portion of the spike. Flower bracts about 8 mms. long, 2 mms. wide, acute, narrow.

Flower pedicel slender, pendulous, 5 to 6 mms. long, barely 1 mm. thick. Ovary large, swollen, to 10 mms. long 4 mms. diameter at middle. Pedicel and ovary finely pubescent with fine white hairs.

Flowers barely opening, apparently self-pollinating. Lateral sepals about 10 mms. long, swollen at base, mantum like about 3 to 4 mms. wide at base and tapering to a point, curved and channelled along length. Dorsal sepal slightly longer, about 12 mms. long and 3 to 4 mms. wide, boat shaped, the apex pointed. Petals almost as long as lateral sepals, narrow, about 1 mm. wide, almost linear but tapering towards the pointed apex, curved.

Column arching, about 8 mms. long, slender, terete, barely 1 mm. diameter, the apex knob-like, about 2 mms. by 2 mms., with short, blunt, rounded column wings about half the height of anther cap. Anther pubescent, dark purple brown, about 1 mm. by 1 mm. by 1 mm. Column also pubescent. Pollinia unequal, grouped together, 8 in number.

Rostellum a flat platform, the projecting triangular tip somewhat canaliculate. Stigma a viscid surface, almost square, set between the column wings in the face of the column beneath the rostellum, with the lower lip projecting slightly.

Column with a short column foot, about 1 mm. long, to which is firmly attached the three-lobed labellum. Labellum curved, as long as the petals, the unspread labellum 2 to 3 mms. wide and 10 mms. long. Lateral lobes erect, broad, rounded about 2 to 3 mms. high at broadest point, $\frac{1}{3}$ length from tip, tapering to base of labellum (which is about 2 mms. wide), and about 10 mms. long. Midlobe almost rectangular when spread, about 4 mms. long and 2 mms. wide.

Disk of labellum with a series of vague lines of papillae extending from almost apex of midlobe to base of labellum, where the papillae are very small and mingled with fine hairs. Papillae largest towards centre line of apex of the midlobe, although the apex of the midlobe is bare, more or less arranged in vague lines decreasing in size of papillae from centre line, with a line of small papillae at base of each lateral lobe.

Labellum is a dull pink purple colour, with the disk being a bright green yellow colour. Sepals and petals also pink purple with some fine minute white hairs on outer surface.

DISTRIBUTION: Northern Territory and North Queensland. In North Queensland found in lowland tea tree swamp at the foot of the Cardwell Range. Because of the grass like nature of the plants and the difficulty in locating plants in long grass, the distribution is probably greater than the small area investigated.

Flowering months apparently September to October. The described plants flowered in cultivation early October, but a trip to the natural habitat failed to reveal plants in flower at that time. Flowering time in the wild is

probably later, with the advent of the summer rains.

Ian Walters,
DeCoursey Street,
Mundingburra, Q. 4812.

KEY TO DRAWING:

- A. Plants to scale.
- B. Flower from side to scale by 5.
- C. Flower from front expanded, to scale by approx. 4.
- D. Column and labellum halved to scale by 5.
- E. Labellum spread to scale by 5.
- F. Column from front much enlarged.
- G. Pollinia much enlarged.

PACHYSTOMA BI.
holtzei. (F. Muell.) F. Muell.

