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The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. 3. *N 11*

CAIRNS, OCTOBER 1934

No. 25



North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

Next Meeting is postponed until Monday, 15th October (instead of 8th October).

BUSINESS FOR NEXT MONTHLY MEETING—Monday, October 15, 1934:

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

	PROPOSERS	SECONDEES
Nurse Strang Cairns District Hospital	Dr H. Flecker	Mr. J. Wyer
Sister Williams Cairns Baby Clinic	Mr. M. Auricchio	Dr. H. Flecker
Mr. Boyns 21 Spence Street, Cairns	Mr. M. Auricchio	Mr. J. Wyer

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—

Lecture by Miss U. N. McConnel on
North Queensland Anthropology

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, S. Dunn, T. P. Walsh

Aquatic Insects in North Queensland

By DAVID O. ATHERTON, B.Sc.Agr., Q.D.A.

(Continued from Vol. 2, p. 23)

The Odonata or dragon flies and damsel flies are probably the most conspicuous and consistent members of the fresh water insect fauna of northern waters. The strong and erratic flight of the dragon flies as they dash about, sometimes skimming the surface and anon flashing upwards at some unfortunate midge, constitutes a source of endless wonder and admiration. Of all insects some of the dragon flies are possessed of the most highly developed powers of flight. They are able to fly very swiftly, can change direction almost instantaneously, rise vertically, come to a full stop from headlong career in a moment, are able to hover in one spot and cap all aeronautical achievements by flying backwards at will. The immature forms of these accomplished fliers are known as nymphs and are confined to a watery environment where they crawl about among the rocks, mud and debris of the bottoms, devouring whatever small forms of life they are able to capture. When the nymph is full grown it climbs some convenient rock or plant before transforming itself into the adult insect. It would be tedious to enumerate even a few of the more common dragon flies of North Queensland but there are several which merit specific mention. Almost everyone must be familiar with the large blue *Orthetrum caledonicum* Br. and also with the large red *O. villosovittatum* Br., as both are strong fliers and quite common about the creeks of Eastern Queensland. Another interesting species is *Austrophlebia costalis* Till. which has a wing expanse of over five inches and is reputed to fly at 60 miles per hour. I have taken this species in the rain forest of the Atherton Tableland between Millaa Millaa and Ravenshoe. A beautiful species confined to North Queensland and New Guinea is *Ryothemis resplendens* Sel. It expands about two inches and the lower part of each wing is coloured a very beautiful iridescent blue. This species may be taken in leisurely flight about any of the mountain streams of the far northern coast, such as that of the Intake, near Cairns.

It is impossible in a brief note such as this to do more than indicate the most interesting representatives of the various aquatic groups in the insects usually encountered. However, this alone will serve to draw attention to those denizens of our waters which will amply repay the study of the field naturalist. So far as I am aware neither the stone flies nor the Blepharacerae have previously been recorded from the coastal or mountain streams of North Queensland, and in view of their other habitats in much colder climates the present record is doubly interesting and is made in the hope that further study of the groups will receive a local stimulus that shall result in the lifting of the veil which now obscures their distribution in this State.

EXCURSIONS

YUNGABURRA.—Mr. A. E. Coleman of Yungaburra has kindly invited members of the club to visit his property together with Mount Hypipeme. Cars will meet in front of Tropical Theatre Cairns, at 8 a.m. Sunday, October 28th. Will those desiring to attend please communicate with Mr. M. Auricchio.

MICHAELMAS CAY.—Excursions are being arranged to Michaelmas Cay and the surrounding reef about Friday, Saturday and Sunday, 21st, 22nd and 23rd December. Details will be announced later. Members of the Field Naturalists' Club of Victoria will be present. Will those desirous of participating kindly communicate with Mr. M. Auricchio as early as possible.

Census of North Queensland Plants (Continued)

(Figures after plants indicate flowering months)

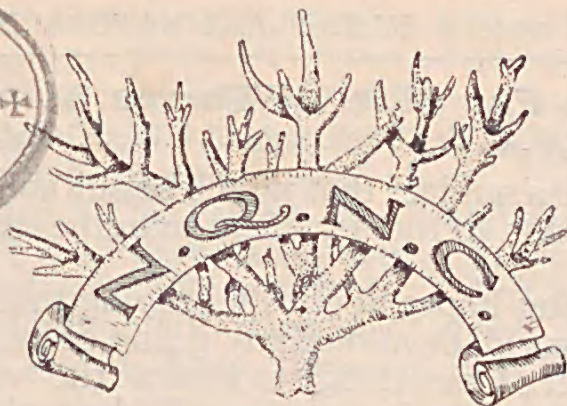
- Jacksonia thesioides*, A. Cunn., 6.
P. of Wales I. (F.M.B.); Thursday I. (F.M.B.); Lizard I. (M'Gillivray); Endeavour R. (Banks and Sol.).
- Gastrolobium*, R.Br.
grandiflorum, F.v.M. Heart Leaf Poison Bush, 2.
Flinders R. (F.M.B.); Mt. Mulligan (Flecker); Rockingham B. (F.M.B.); Cape R. (F.M.B.); Pt. Denison (F.M.B.)
- Pultenaea*, Sm.
Millari, F.M.B.
Herberton (J. F. Bail)
- Bossiaea*, Vent.
carinalis, Benth.
Cape R. (Daintree).
- Brownii*, Benth.
Pt. Bowen (R.Br.)
- Armitii*, F.v.M.)
Gilbert R. (Daintree); Herbert R. (Armit)
- phylloclada*, F.v.M.
Is. of G. of Carpentaria (R.Br.)
- Templetonia*, R.Br.
Hookeri, Benth.
I. of G. of Carpentaria (R.Br.)
- Hovea*, R.Br.
longifolia, R.Br. Long-leaf Hovea.
Gadgarra (Kajewski); Newcastle Range (F.v.M.); Rockingham B. southward (F.M.B.)
var. *pannosa*, Benth.
Palmer R. (F.M.B.)
- longipes*, Benth.
Rockingham B. (F.M.B.); Burdekin R. (F.v.M.)
- Crotalaria*, L. Rattlepod.
verrucosa, L. 3.
Hodgkinson R., Mt. Mulligan (Flecker); Rockingham B. (Armit); C. Upstart (M'Gillivray); Edgecombe B. (Dallachy).
- crispata*, F.v.M.
I. of G. of Carpentaria (R.Br.)
- juncea*, L. Sun Hemp.
Pt. Denison (Bowman)
- linifolia*, L. 3.
I. of G. of Carpentaria (R.Br.); Mabuiag I. (Macgregor); Mt. Mulligan (Flecker); C. York (M'Gillivray); Endeavour R. (R.Br.); Pt. Denison (Fitzalan).
- nana*, Burm.
Sweers I. (J. F. Bail.)
- calycina*, Schrank. 4.
I. of Torres Str.; Wai Weir I. (Macgregor); Mt. Mulligan (Flecker) Endeavour R. (R.Br.); Pt. Denison (Fitzalan).
- retusa*, L. 12.
Cairns (Flecker); Edgecombe B. (Dallachy).
- Mitchelli*, Benth.
Pt. Denison (Fitzalan).
- humifusa*, Grah.
Rockingham B. southward (F.M.B.)
- novae-hollandiae*, DC.
G. of Carpentaria (F.M.B.)
- Cunninghamii*, R.Br. Bird Flower.
G. of Carpentaria (F.v.M.)
- trifolium*, Willd.
Is. of G. of Carpentaria (R.Br.); Pt. Denison (Fitzalan).
- incana*, L.
Gilbert R. (F.v.M.)
- striata*, DC. 4 to 9, 11, 12.
Murray I. (Macgregor); Cairns (Flecker); Innisfail (Flecker); Bowen (F.M.B.)
- dissitiflora*, Benth.
G. of Carpentaria (Landsborough)
- laburnifolia*, L.
Rockingham B. (A. Cunn.); C. Upstart (M'Gillivray); Sandy shores of Burdekin R. (F.v.M.); Pt. Denison (Fitzalan).
- quinquefolia*, L.
L. Burdekin R. (Bowman)

Addenda and Corrigenda

Vol. 1

- No. 9, p. 6—After (*Peperomia*) *leptostachya* (Hook. and Arn.) add 1 and 8.
- No. 10, p. 7—*Flindersia afflaiana*. After loc. Atherton Dist. add (Swain).
After (F.) *bourjotiana* add 7 to 4.
- P. 8—*Halfordia scleroxyla*. For Kerosene-tree read Ghittoe. 4.
Add locs. Cairns Atherton Dist. (Swain); Gadgarra (Kajewski).
Micromelum pubescens. Add locs. York I. (Macgregor); C. York (Francis).
After (*Muraya*) *exotica* (L.), add China Box.
Atalantia glauca. For Native Kumquat read Australian Kumquat.
For (*Ailanthus*) *imberbiflora* (F.v.M.) read (A.) *malabarica*, A.DC. White Siris. 12.
After (*Brackenridgea*) *australiana* (F.v.M.) add 19.
Add loc. Boonjie (Kajewski).
- No. 11, p. 4 *Canarium australasicum*. Add loc. Range Rd. (Kajewski).
Tribulus cystoides. Add locs. York I. (Macgregor); Pt. Molle (M'Gillivray).
Before *Erythroxyton* insert
Family ERYTHROXYLACEAE.
For *Erythroxyton* read *Erythroxyton*.
Before Family Malpighiaceae add
(E.) *ecarinatum*, Burck. Brown Plum. 7 and 10.
Gadgarra (Kajewski); Boonjie (Kajewski).
After (*Oxalis*) *corniculata* (L.), Creeping Wood Sorrel, add 5 to 9, 11.
Add loc. Cairns (Flecker).
Before Family Malvaceae add
Family GONYSYLACEAE.
Micromelasma
setosa, White. 12.
Mt. Molloy (Brass); Street's Cr., Kuranda (Doggrell); E. Malanda (Kajewski).
Before (*Sida*) *macrocarpa* add
Malva (L.)
parviflora, L. Small Flowered Mallow Europe.
Charters Towers.
Before (S.) *cordifolia* var. *mutica* add
(S.) *acuta*, Burm.
Croydon (Wilson); Gordonvale (Jarvis); Palm I. (Herbert); Townsville (Bick).
cordifolia, L. 2 to 4, 6 to 9, 12.
Mt. Mulligan (Flecker); Cairns (Flecker); Palm I. (Herbert).
After (S.) *cordifolia* (Linn.) var. *mutica* add Benth.
Before (S.) *rhombofolia* insert
(S.) *subspicata*, F.v.M.
Bountiful Is. (Macgregor)
Abutilon graveolens. For (W.) read
(W. and Arn.)
(A.) *muticum*. Add loc. Palm I. (Herbert).
Before *Urena* insert
(A.) *auritum*, Don.
Palm I. (Herbert).
crispum, Don. India and America.
Bowen (Michael)
Before (U.) *armitiana* add
(U.) *lobata*, L. 7 to 9.
Cairns (Flecker); Palm I. (Herbert).
- P. 5—After *Hibiscus notho-manihot* (F.v.M.) add 12.
Add loc. Daintree R. (Kajewski).
Before (H.) *divaricatus* add
(H.) *radiatus*, Cav. Qucotham. 2 and 5.
Cairns (Flecker); Mt. Mulligan (Flecker); Palm I. (Herbert).
After (H.) *tiliaceus* (Linn), Cotton-tree, add 12.
Add loc. Flinders Gp. (Rich. and Hed.); Daintree R. (Kajewski); Palm I. (Herbert).
After (*Sterculia*) *quadrifida* (R.Br.)
Ko-ral-ba, add 10 to 3.
Before (*Brachychiton*) *populneus* add
(B.) *acerifolium*, Cunn. Flame Currajong. 9 to 2.
From Rockingham B. Southward (Swain).
After (B.) *populneus* (R.Br.), Currajong add 10 to 2.
For (B.) *caudata* (Howard) read *diversifolium*.
Add locs. Coen R. (Swain); Mareeba (Swain).
Before (*Tarrietia*) *argyrodendron* (F.v.M.) var. *grandiflora* add
(T.) *argyrodendron*, (F.v.M.), Booyong 9.
Endeavour R. (Francis).
Bottom of page add
(T.) *argyrodendron* var. *macrophylla*, F.M.B.
Cairns-Atherton District (Swain).
- P. 6—For (T.) *argyrodendron* var. *peralata* (Bailey). Crow's Foot Elm read
(T.) *peralata*, F.M.B. Red Tulip Oak. 5
Add loc. Atherton Plat. (Swain); Gadgarra (Kajewski).
Before *Kleinhovia* add
(T.) *trifoliata*, F.v.M. 11.
L. Barrine (Kajewski).
Heritiera, Ait.
littoralis, Ait. Looking Glass Tree.
Palm I. (Herbert).





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The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 2

CAIRNS, NOVEMBER 1934

Serial No. 26

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—Monday, 12th. Nov., 1934

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr. J. J. Brooks, 77 Lake Street, Cairns
Dr. V. C. Byrne, Abbott St., Cairns
Mr. Geo. Hy. Clarke, 172 Sachs St., Cairns
Brother Dennis, Marist Bros. College, Cairns
Mr. Fernand Henri, A.M.P. Society, Cairns
Dr. T. G. Hewitt, 68 Abbott St., Cairns
Mr. Ian Higlett, Bank of N.S.W., Cairns
Mrs. M. J. Hill, Glen Boughton
Mr. W. I. Horn, care of Manahans Ltd., Cairns
Mr. W. J. McDonagh, Australian Hotel, Cairns
Mr. W. L. Miller, Australian Mach. Co., Cairns
Mr. S. P. Rutherford, c/o W. Smith & Co., Cairns

PROPOSERS	SECONDBERS
Dr. H. Flecker	Mr. T. Walsh
Dr. H. Flecker	Mr. M. Auricchio
Dr. H. Flecker	Mr. G. Bates
Mr. Hy. Purcell	Mr. R. J. Gorton
Dr. H. Flecker	Mr. J. Wyer
Mr. M. Auricchio	Dr. H. Flecker
Dr. H. Flecker	Mr. James
Mr. J. Wyer	Mr. J. McAuliffe
Mr. M. Auricchio	Mr. T. Walsh
Dr. H. Flecker	Mr. J. Wyer
Mr. M. Auricchio	Mr. J. Wyer
Mr. J. McAuliffe	Mr. M. Auricchio

4. Nominations for Membership.
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It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

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Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, S. Dunn, T. P. Walsh

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

In searching for a subject that might be suitable for your Association I felt I need not go further afield than the district in which I live.

I must blast your hopes at once by saying that it is a somewhat dreary part of the world, devoid of any grand scenery, and that I can not attempt for want of knowledge to exploit the various curiosities of Nature that occur within its bounds. Perhaps the poverty of my material, or my inability to make the most of it, will be excused when I assure you that for general interest, for beauty, for health, for convenience and for attractions for tourists it cannot compare with the favored stretch of territory of which Cairns is the centre. It has, however, the rather doubtful attraction of being almost unknown to most Australians, and on the principle that distant pastures are greener, you may be interested to hear something about it.

Our foremost Australian descriptive writer, Mr. Ian Idriess, is just about to publish a book dealing partly with the northern shores of Torres Strait, and as this book will doubtless be as widely read in Cairns as others from his pen, a little information about the scenes he describes will be opportune.

Torres Strait, lying between the most northerly point of Queensland and the southern shores of the great island of New Guinea, is about 100 miles wide. It is an island-studded sea and in few parts of its extent is the navigator absolved from the necessity of keeping a sharp lookout. Reefs, sand banks, islets, isolated rocks rising out of the water, and, worse still, rocks hidden under the surface, make it a bugbear to seamen. Curiously enough, I do not suppose that any other part of our Australasian seas are sailed by so many small craft. From Thursday Island alone, nearly 100 cutters and luggers are operating round the Straits, mostly engaged in pearl shelling, and all the other inhabited islands add their quota of fishing boats to the Torres Strait fleet. They are busy all the year round picking up the treasures of the sea and can be found in every nook and corner of the Straits.

But I am going to eschew the better known parts of the Straits and take you right up to the northern side where three or four large islands, all very close to the low-lying coast of New Guinea, figure in the chart. These are Boigu on the extreme west, Dauan and Saibai in the centre, and Daru at the eastern entrance to the Straits proper.

There are several types of islands in Torres Strait. Some are giganitic and three are of fairly recent volcanic origin, probably belonging to the same geological period that produced widespread volcanic activity along the eastern seaboard of Australia. There are evidences of this in Victoria and South Australia and possibly in the volcanic plateaux found east of the Dividing Range in New South Wales and Queensland. Other islands again are only sandbanks, and a fourth type might be described as a contribution of mud from the rivers of New Guinea to the island archipelago of Torres Strait.

To be continued

The Committee desires to see more members attend the monthly meetings.

Excursions

MICHAELMAS CAY.—Excursions are being arranged to Michaelmas Cay and the surrounding reef about Friday, Saturday and Sunday, 21st, 22nd and 23rd December. Details will be announced later. Members of the Field Naturalists' Club of Victoria will be present. Estimated cost of excursion, excluding provisions, 10/-. As accommodation is limited will those desirous of participating kindly communicate with Mr. M. Auricchio as early as possible.

The President of the Cairns Alpine Club has kindly invited members of the N.Q.N.C. to the following excursions:—BARRON GORGE—Up Barron Gorge to foot of Barron Falls, 18th November; ISABELLA FALLS, 2nd December. Buses leave corner at Tropical Theatre, Cairns, at 8.30 a.m. in each case.

Book Review

THE ELASMOBRANCH FISHES, by J. Frank Daniel, Prof. of Zoology, Univ. of Calif. Price 5 dol. 331 pages and 270 figures. Third Edition, revised. Published by Univ. of Calif. Press, Berkeley, Cal.

This excellent manual describes with great detail and numerous very fine plates and drawings the anatomy of the cartilaginous group of fishes, so that the student and others desiring an intimate knowledge of the structure of the numerous sharks, rays, saw-fish, etc., will not only find therein much anatomical information, but likewise a bibliography attached to each section to enable further research to be undertaken. In this region where these elasmobranchs are abundant, the comparative anatomist and the palaeontologist alike can find much to study with the help of this treatise, and of course the marine biologist will not find a better book on this subject.

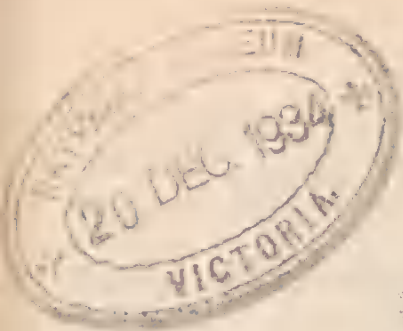
Census of North Queensland Plants (Continued)

(Figures after plants indicate flowering months)

Medicago, L.	patens, Lindl. Spreading Scurf Pea
denticulata, Willd. Burr Trefoil.	Pt. Denison (F.M.B.); Burdekin
S. Europe	(F.M.B.)
Townsville	cinerea, Lindl.)
Stylosanthes, Sw.	G. of Carpentaria (Landsborough);
mucronata, Willd.	Hughenden.
Townsville (Bick.)	leucantha, F.v.M.
Lotus, L.	G. of Carpentaria (Landsborough);
australis, Andr. Austral Trefoil	Bogie R. (Dallachy); Edgecombe B.
Edgecombe B. (Dallachy)	(Dallachy).
Psoralea, L. Scurf Pea	Indigofera, L.
badocana, Benth. A-mega	linifolia, Retz.
G. of Carpentaria (R.Br.); Morehead	Bountiful Is. (Macgregor); Endeavour
R. (Roth); Princess Charlotte B.	R. (B. and Sol.)
(F.M.B.)	enneaphylla, L.
Archeri, F.v.M. Wommo	Is. of Torres Str. (F.M.B.); Rocking-
Gulf Country (F.M.B.); Cloncurry	ham B. (F.M.B.); Pt. Denison
(Palmer)	(Fitzalan).
plumosa, F.v.M.	haplophylla, F.v.M.
Gulf Country (F.M.B.)	Is. of G. of Carpentaria (R.Br.)
pustulata, F.v.M.	trita, L.
G. of Carpentaria (F.M.B.); Lawn Hill	Is. of G. of Carpentaria (R.Br.);
(Hann),	Adjoining Mainland (Landsborough).
Walsh R. (Barclay-Millar)	viscosa, Lam.
cephalantha, F.v.M.	Is. of G. of Carpentaria (R.Br.);
Mt. Elliott (Dallachy)	Endeavour R. (B. and Sol.); Pt.
testariae, F.v.M.	Denison (Fitzalan)
Rockingham B. (Dallachy)	

Addenda and Corrigenda

- Vol. 1.
 No. 9, p. 5—Before (*Hibbertia*)
anotheroides add
 (*H.*) *longifolia*, F.v.M. 8.
 Add loc. Range Rd. (Flecker)
 No. 10, p. 5—*Pittosporum rubiginosum*.
 Add mos. 7 and 10.
 Add loc. Kuranda (Flecker)
Bursaria tenuifolia. Add mo. 8.
 No. 11, p. 5—*Thespesia populnea*. For
 Flowers May and June, read 5, 6
 and 12.
 Add loc. Palm Is. (Herbert)
 P. 6—*Melhanianthus incana*. Add mo. 3.
 Add locs. Mornington Is. (McGregor);
 Mt. Mulligan (Flecker).
Waltheria americana. Add loc.
 C. Flinders (F.M.B.)
 Before *Commersonia* add
Abroma, Jacq.
fastuosa, R.Br.
 Darn'ey Is. (Maegregor); Daintree R.
 (Kajewski).
Grewia polygama. Add locs. York Is.
 (Macgregor); Mid. Morehead R.
 (Roth); Flinders Gp. (Rich and Hed.);
 Pt. Molle (F.M.B.)
Triumfetta rhomboidea. Add mos. 5, 8
 to 10
 For Townsv. read Townsville
T. nigricans. Delete ille.
Corchorus hygrophilus. Add loc.
 (Hughenden).
 Before *Sloanea* add
 (*C.*) *olitorius*, L. Tropical Asia.
 Flinders R. (White)
 Family ELAEOCARPACEAE.
Sloanea langii. Add loc. Gadgarra
 (Kajewski).
 (*S.*) *macbridei*. Add mo. 9.
 Add loc. Boonjie (Kajewski)
 (*S.*) *australis*. For Maiden's bush
 timber read Blush Carrobean. 9 to 3.
 Add loc. E. Malanda (Kajewski).
 P. 7—*Aristolochia megalosperma*. Add locs.
 Johnstone R. (Michael and Lad-
 brook); Boonjie (Kajewski).
 Before *Elaeocarpus* add (*A.*) *pubescens*,
 (White).
 Johnstone R. (Ladbrook)
 After (*E.*) *arnhemicus* (F.v.M.) add
 Olive Perry.
 For Near Musgrave Telegraph Station;
 Cape York Peninsula read Nr. Mus-
 grave Tel. Stat., C. York Pen.
 (*E.*) *foveolatus*. Add mo. 12
 Add locs. Daintree R. (Kajewski);
 Range Rd. (Kajewski).
 For Mountain Ranges; Rockingham Bay
 read Mountain Ranges, Rockingham
 B.
 Before (*E.*) *sericopetalus* add
 (*E.*) *ferruginiflorus*, White. 12.
 Mt. Alexander (Kajewski); Mt.
 Bellenden Ker (Sayer).
 (*E.*) *sericopetalus*. Add loc. Cairns-
 Innisfail Dist. (Swain).
 Before (*E.*) *grandis* add
 (*E.*) *longipetiolatus*, White.
 Buddaboo Cr. (Michael).
 coorangaloo. Brown Quondong.
 Martinstown (J. F. Bail.); Jungles of
 Atherton Dist. (Mocatta).
 (*E.*) *grandis*. Add mos. 1 to 12.
 Add locs. Endeavour R. (Francis);
 Gadgarra (Kajewski).
 Before Family Euphorbiaceae add
 (*E.*) *Johnsonii*, F.v.M.
 Gadgarra (Kajewski).
largiflorens (White).
 Smithfield (Doggrell); L. Barrine
 (Kelly); Gadgarra (Kajewski);
 Malanda (White); Johnstone R.
 (Michael).
 After Family Euphorbiaceae, add
 Juss. Spurge.
 (*E.*) *atoto*. Add locs. Nagi I. (Mac-
 gregor); Sir C. Hardy I. (Henne).
 (*E.*) *mittelliana*. Add loc. Peak Pt.
 (Macgregor).
 Delete N. Kennedy Dist.
 For Pt. Bown read Pt. Bowen.
 Place var. *glauca* on separate line.
 Place loc. Gulf Country on separate
 line and add (F.M.B.)
 (*E.*) *schizolenis*. Delete try.
 For Sandy Beach; Lizard Is; read
 Sandy Beach, Lizard I.
 Place var. *glabra* (?) on separate line
 and add Benth.
 Before (*E.*) *australis* add
 (*E.*) *Drummondii*, Boiss. Flat Spurge.
 C. Towers.
carissoides, F.M.B.
 Nr. Herberton (Ringrose)
 After (*Micranthemum*) *ericoides* (Desf.)
 add Heath *Micranthemum*.
 P. 8.—After (*Beyeria*) *viscosa* (Miq.) add
 Pinkwood.
 After (*Ricinocarpus*) *ledifolius* (F.v.M.)
 add Ledum-leaved Wedding Bush.
 Before *Bridelia* add
Bertya, Planch.
polystigma, Greening. 10.
 Range Road (Kajewski).
 Before *Cleistanthus* add
 (*R.*) *faginea*, F.v.M.
 Proserpine (Francis)
Cleistanthus apodus. Add. loc. Daintree
 R. (Kajewski).
 Before (*P.*) *gastroemii* add
 (*P.*) *brisbanicus*, F.M.B. 2 to 9, 11.
 Mt. Mulligan (Flecker); Cairns
 (Flecker).
urinaria, L. Te-mo.
 Mapoon (F.M.B.); Stannary Hills
 (Bancroft).



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 3

CAIRNS, DECEMBER 1934

Serial No. 27

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Wednesday, 19th December, 1934

Note Altered Date

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.
4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

Mr. T. R. Hall, Cairns Harbour Board, Cairns	PROPOSER Mr. J. Wyer	SECONDER Mr. H. Purcell
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7. Subject for the Evening—
Lecture by Mr. S. F. Colliver, Hon. Sec. of the Field Naturalists' Club of Victoria, on "Fossils and Their Meaning."

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, S. Dunn, T. P. Walsh

Notes on Some North Queensland Orchids

By the Rev. H. M. R. Rupp, Woy Woy, N.S.W.

During the past six months I have been almost bombarded with orchid plants and specimens from North Queensland—a very pleasant kind of bombardment, the continuance of which I shall welcome. But inasmuch as many of these orchids are unknown to me—some are undoubtedly undescribed species—and in view of the fact that the long journey south sometimes involves considerable damage to the travellers, I must ask for patience on the part of the kind senders. It takes a little while to puzzle out a strange plant even under the best of conditions. In most cases flowers are absolutely essential; and when it is at all possible *flowering, or at least budding, plants* are most desirable.

The gentlemen to whom I am indebted for so many interesting specimens are: Dr. H. Flecker, Mr. W. F. Tierney, and Mr. G. Bates, Cairns; Mr. Kenneth Macpherson, Proserpine; and Mr. A. Glindeman, Mt. Fox, via Ingham. Notes on some of the plants are appended.

Microstylis congesta Reichb. f.—Sent by Mr. Bates. Apparently a terrestrial species. The specimens were fruiting, and much withered, but definite identity was established. A stout plant 6-8 inches high, with a few leaves like *Calanthe* but much smaller. Flowers very small, congested in a spike-like terminal raceme on a long stalk. I am pleased to be able to report that young shoots are now appearing on the plants in my bush-house.

Dendrobium sp?—Raceme from Mr. Bates. Evidently close to *D. undulatum* R.Br., but more rigid and perianth-segments not twisted or undulate. Identity not yet established.

D. gracilicaule F.v.M.—From Mr. Tierney. Flowered at Woy Woy in September. No noticeable departure from southern type: rather less robust and flowers very small.

D. agrostophyllum F.v.M.—(Mr. Bates). Flowered late Sept. Agrees well with Bailey's description, Q.Fl. V. 1529: taller than plant figured by Fitzgerald.

D. ophioglossum H. G. Reichb.—(Mr. Bates.) Identity not quite certain: no flowers, but Bailey's description fits well. Plant now in bad condition.

D. rigidum R.Br.—(Mr. Tierney) Plant flowering on arrival and now about to flower again. Closely allied to *D. cucumerinum*, but with free branches (creeping in *cucumerinum*) and much smaller, duller flowers.

D. teretifolium R.Br.—(Dr. Flecker, Messrs. Tierney, Bates and Macpherson.) The North Queensland form differs importantly from the type and other southern forms; but as my observations on the subject are included in a review of the species submitted to the N.S.W. Linnean Society, I can say no more at this juncture.

D. eriacoides Bail.—(Mr. Bates) Plant with withered fruiting racemes: similar specimen from Mr. Tierney. Bailey expresses some doubt whether this is really a *Dendrob.* Flowers are most desirable to consider the point.

Bulbophyllum.—Several plants without flowers received from Messrs. Tierney, Bates, and Glindeman. Identity uncertain except in one case—*B. lichenastrum* F.v.M. Dr. Flecker sent a flowering specimen which was readily determined, and the plant was identical with

specimens from Messrs. Tierney and Bates. See Q.Fl.V. 1537, and figure in Fitzg., Aust. Orch.

Eria sp. ?—(Mr. Glindeman) Plants fruiting, with much-withered flowers. It is neither *E. Fitzalanii* F.v.M. nor *E. australiensis* Bail.; but seems to me identical with an unnamed species figured in Fitzgerald's unpublished plates in the Mitchell Library, Sydney. Am consulting Dr. R. S. Rogers.

Zeuvinoblouga Rogers and White.—(Mr. Macpherson) Dried specimens sent appeared to me to agree with descriptions by Dr. R. S. Rogers and Mr. C. T. White in *Proc. Roy. Soc. Q'land.* in 1921, of one of two specimens of *Zeuvinoblouga* (new for Australia). I sent one to Dr. Rogers, who promptly endorsed it as *Z. oblonga*. This is another excellent discovery by Mr. Macpherson, whose keen work on the orchids of Proserpine has previously been noted in this journal

Eulophia venosa Reickb.F.—(Dr. Flecker.) The sender reports that the plant was brought in by an aboriginal. It was in good condition when received. Previously quite unknown to me. A tall leafless terrestrial with a habit of *Dipodium punctatum*: Flowers not unlike those of a *Dendrobium*, whitish with deep red veins and markings.

Dipodium ensifolium F.v.M.—(Mr. Glindeman.) Stem quite leafy, in striking contrast to the more familiar *D. punctatum* R.Br., which has only closely-addressed bracts at the base. Racemes one or more, not unlike *D. punctatum*, which never has more than one.

Mr. Glindeman has sent several plants of a very minute epiphyte, smaller than any other Australian orchid known to me: quite leafless, and each plant with 1 or 2 fruiting capsules. Probably an undescribed species: genus uncertain. He has also sent another plant which I cannot identify, apparently allied to one or two from Cairns (Mr. Tierney, Dr. Flecker) which are proving more difficult to deal with. These "mystery plants" will doubtless be solved in time.

Excursions

MICHAELMAS CAY.—A small party including members of the Field Naturalists Club of Victoria will leave in Mr. E. V. Redmond's yacht, "The Gleam" on Thursday, 20th December, returning on Saturday or Sunday. Further details available from Mr. M. Auricchio.

LAKE BARRINE.—Leader Mr. Geo. Curry. Cars will leave corner at Tropical Theatre, Cairns, 8 a.m. Sunday, December 30th.

Identity of North Queensland Fish

The following fish collected by Mr. George Ernst have been determined by Mr. T. C. Marshall. The local names together with their more correct vernaculars, biological names and families are given in this order.

Bony Herring, Gray's Anchovy, *Engraulis grayi*, Bleeker Engraulidae

Mullet, Sea Mullet, *Mugil cephalus* Linn. Mugilidae.

Groper, Estuary Cod, *Epinephelus tauvina* Forskal Epinephelidae.

Nannygai (Nannegai), Silverspotted Sea Perch, *Lutjanus argentimaculatus*, Forsk Lutjanidae.

Red Bream, Black-spotted Sea Perch, *Lutjanus fulviflamma*, Forskal. Lutjanidae.

Fingermark, Ditto.

Moonlighter, Blue-banded Hassar, *Lutjanus kasmira* (Forsk.) Lutjanidae.

Grunter, Javelin Fish, *Pomadasys hasta* (Bloch) Pomadasidae.

Unknown locally, Double-spotted Sea Perch, *Scolopsis bimaculatus*, Ruppell Pomadasidae

Leather-jacket or Trumpeter, Crescent Perch, *Therapon jarbua*, Forskall. Theraponidae

Spiked Trevally, Black-finned Triple Spine, *Triacanthus biaculeatus*, Bloch. Triacanthidae.

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1
 No. 9, p. 5—*Clematis glycinoides*. Add loc. Range Rd. (Flecker).
 P. 7—*Endiandra discolor*. Add mos. 9 to 12.
 P. 8—*Litsea dealbata*. Add loc. Butcher's Creek (Miss Walsh).
 After *Argemone mexicana*, L. add Mexico. 8, 10.
 Add loc. Barron R. (Flecker).
 No. 11, p. 4—*Abutilon indicum*. Add mo. 9
 After locs. G. of Carpentaria and Pt. Denison add (F.M.B.).
 After loc. Green I. add (Flecker).
 P. 7—After (*Elaeocarpus*) *coorangaloo* add J. F. Bail. and White.
Euphorbia macgillivrayi. Add loc. Bountiful I. (Macgregor); Pt. Molle (Macgillivray).
E. serrulata. For Green Is.; Trinity Bay read Green I., Trinity B.
E. filipes. For ; (B. Brown) read (R.Br.)
 Before (E.) *eremophila* add
 (E.) *pitulifera*, L. Asthma Plant. 2 to 11
 Dimbulah (Flecker); Mt. Mulligan (Flecker); Cairns (Flecker).
 (E.) *eremophila*. For Flat Spurge read Desert Spurge. 12.
 Add locs. Nagi I. (Macgregor); Green I. (Flecker).
E. heterophylla. Add mos. 2, 5 to 12
 Add locs. Dimbulah (Flecker); Murray I. (Macgregor).
 Before *Poranthera* add
 (E.) *prostrata*, L. Introduced. 5.
 Cairns (Flecker).
 P. 8—*Phyllanthus hebecarpus*. Add mo. 8
 Add loc. Mt. Mulligan (Miss Wheatley)
 For (P) *hypsopodius* read *hypsopodius*.
 Add loc. Bartle Frere (Kajewski).
 After (P.) *buxifolius* (Reiw.) add Box Leaved Spurge.
Glochidion ferdinandi. Add mo. 10.
 Add loc. Cairns (Francis).
 Before *Neoroepera* add
 (G.) *Harveyanum*, Domin.
 L. Eacham (Kajewski)
 supra-axillare, Domin.
 Scrubby Creek (Kajewski).
lobocarpus, Benth. 7.
 Parramatta Swamp (Flecker).
 No. 12, p. 5—*Flueggia microcarpa*. Add mo 7.
 Add loc. Parramatta Swamp (Flecker).
Breynia stipitata. Add loc. Darnley I. (Macgregor).
 Before (*Petalostigma*) *quadriloculare* add
 (P.) *Banksii*, Britten and Moore.
 Mornington I. (Macgregor).
P. quadriloculare. For Bitter Crab read Purple Bulletwood. 9 to 2.
 Add locs. Flinders Gp. (Rich. and Hed.)
 After (*Hemicyclia*) *australasica* (Muell. Arg.) add Grey Boxwood. 2 to 6.
 Add locs. Chillagoe (Francis); Cairns (Francis); Innisfail Dist. (Swain).
 Before (*Dissiliaria*) *tricornis* add
 (D.) *baloghioides*, F.v.M. Hauer. 3.
 Proserpine (Francis).
Antidesma parvifolium. Add loc. Mabuag I. (Macgregor).
A. erostre. Add mo. 12.
 Add locs. Daintree R. (Kajewski); Gadgarra (Kajewski).
 P. 6—*Aleurites moluccana*. For Candlenut read Candlenut Siris. 1 to 5.
 Add locs. Scrubby Creek (Kajewski); Atherton Dist. (Swain); Innisfail Dist. (Swain).
Croton insularis. Add mos. 1 to 12.
 Add locs. Scrubby Creek (Kajewski); Atherton (Francis).
 Before (C.) *triacros* add
 (C.) *acronychioides*, F.v.M.
 Townsville (Francis).
 Before *Codiaeum* add
 (C.) *densivestitum*, White and Francis.
 Harvey's Cr.; Bellenden Ker (White).
C. variegatum. Add loc. Stephen I. (Macgregor)
Baloghia lucida. For Scrub Bloodwood read Ivory Birch. 10 to 1
 Add loc. Innisfail Rain Forests (Swain)
 Delete (*Fontainea*) *pancheri*.
 Before *Claoxylon* add
 (F.) *picrosperma*, White. 10.
 Butcher's Cr. (Miss Walsh); Boonjie (Kajewski); Glen Allyn (Kajewski); Mt. Bartle Frere (Kajewski).
 Before (C.) *hillii* add
 (C.) *australe*, Bail.
 Bowen (Benth).
Mallotus ricinoides. Add mos. 11 to 5, 7.
 Add loc. Smithfield Ra (Flecker).
M. paniculatus. Add mo. 6.
 Add loc. Johnstone R., Innisfail (Flecker).
M. philippinensis. Add mos. 7 to 1.
 Add locs. Cairns (Francis); L. Eacham (Kajewski).
M. angustifolius. Add loc. Boonjie (Kajewski).
M. polvadenus. Add loc. L. Barrine (Kajewski).
M. nesophilus. Add loc. C. Flinders (Cunn.)
Macaranga subdentata. Add locs. Kamerunga (Cowley); Yarrabah (Michael); Yungaburra (White); Johnstone R. (Michael).
M. involucrata. Add loc. Pt. Molle (Macgillivray)

6 FEB 1935



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 4

CAIRNS, JANUARY 1935

Serial No. 28

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 14th January, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr. T. Carr, Julatten
 Mr. Herbert E. Dann, 72 Lake Street, Cairns
 Mrs. J. Lyons, 51 Dutton Street, Cairns
 Mr. Arthur J. Moran, Strand Hotel, Cairns

PROPOSER	SECONDER
Dr. H. Flecker	Mr. J. Wyer
Mr. M. Auricchio	Mr. J. Wyer
Dr. H. Flecker	Mr. M. Auricchio
Mr. M. Auricchio	Mr. S. Dunn

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
"Lizards," by Pat. O. Flecker

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, S. Dunn, T. P. Walsh

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

(Continued from p. 6)

To such a formation as the last one belong Boigu and Saibai. Quite frankly one may cite them as being formed of pure unadulterated mud. Their most ardent admirers, if such islands have any, could not object to this description. Nor is this surprising. Both Baigu and Saibai lie but three or four miles away from the New Guinea mainland, opposite the mouths of large rivers.

The leading feature of the landscape anywhere near the coast in this part of Papua is mud, and mud again; it is quite in keeping that these two islands which are obviously detached portions of the Papuan mainland should be mud too. In the matter of mud, this part of the world can hold its own with any competitor, including even that famous red variety which is held in such esteem in Atherton.

What a contrast when we come to examine the island of Dauan. Its beautiful shaped conical peak, formed of real Australian granite, similar I have been told to the granite that occurs in southern Tasmania, rises 800 feet in the air and forms the most impressive, and indeed the only, landmark within the whole of this area. In my more youthful days I climbed the peak of Dauan at three in the morning in the company of four island boys who by dint of pushing, pulling and lifting got me to the top in time to see the sunrise. From the summit, which was a shattered column of granite cleft and riven after the style of the Rock of Ages, we were able to overlook the flat saucer-shaped island of Saibai, three miles away, and the vast hinterland of the Papuan mainland which melted away without sign of a hill into infinity. One might call Dauan the northern tip of Australia's league long Dividing Range were it not that New Guinea has actually usurped that honor. About five miles away on the Papuan coast rises a tiny outcrop of the self same granite, a mere wart on the face of these huge swamps and plains, called Mabudauan, and this is the actual termination of Australia's mountain system. The supposition is that Mabudauan was once an isolated island of granite round which in a later period the omnipresent mud of Papua has laid impious hands and included it in its glue-like grasp.

Turning to the fourth island, Daru, it is not my intention to blackguard it as it happens to be my home. Certainly a good deal of mud does enter into its formation, but it has outcrops of ironstone which have weathered into a very fertile friable reddish soil, and this makes it by far the best island in the series from an agricultural point of view. The great spreading mango trees of Daru's Murray Road, the well cut grassy lawns, the vividly coloured hedges of croton and hibiscus, and the groups of bananas, pawpaws, citrus fruit, palms and flowering trees, make it a very beautiful island. Miss Grimshaw compares it to a "Nobleman's Park," and it is an apt description. You see we have an average of 100 prisoners (mostly murderers) doing time on Daru who are largely employed in attending to the lawns, hedges and trees, and doing their bit towards making the little settlement something of a tropical paradise.

Further east again of Daru, but lying out of the true area of the Straits, is the delta of the huge Fly River, a territory which deserves a paper completely to itself.

Having dealt with the islands, there remains only the mainland coast, the chief features of which—its mud, its utter lack of elevations (with the exception of Mabudauan which I have already explained belongs to Australia), and its dreary aspect—I have already indicated. An almost continuous line of mangroves follows the coast, broken only by the mouths of rivers and creeks, and this monotonous rampart of olive green is only a small part of an uninterrupted line which extends from 150 miles further eastward through the Gulf of Papua to the extreme south-west point of Dutch New Guinea, a total distance of over 400 miles. Truly a God-forsaken looking coast, and what with dangerous seas breaking on it during the south-east season, ghastly mud banks extending miles out to sea, and in many places man-eating savages ashore, is a place to be avoided by sane people.

To give this portion of Papua its due, however, it is only fair to say that once you have dived through the curtains of mangrove that guard the coastline up one of the innumerable rivers, you will enter a charmed country. A few miles up the heavy jungle surges down to the river bank, and one's boat makes its way through a waterway lined with rich and lovely trees festooned with the gorgeous D'Alber-ti's Creeper, broken by palms, banks of ferns, nipa, bamboo, and all the characteristic vegetation of a tropical river. Here and there along the banks appear small villages with coconut groves and cultivated fields behind them.

To be continued

Census of North Queensland Plants (Continued)

Figures after plants indicate flowering months

- Indigofera**
pratensis, F.v.M.
 Bardekin (F.v.M.)
saxicola, F.v.M.
 Gulf Country (F.M.B.)
Bayleii, F.v.M.
 Murray I. (Macgregor)
brevidens, Benth.
 Yama I. (Macgregor)
subulata, Vahl.
 Hughenden (Price)
suffruticosa, Mill. S. America. 5 to 8. 12
 Cairns (Flecker).
- Lamprolobium**, Benth.
fruticosum, Benth.
 Lizard I. (Walter); Endeavour R.
 (B. and Sol.); Irvinebank (Bennett)
- Tephrosia**, Pers.
flammea, F.v.M.
 I. of G. of Carpentaria (R.Br.)
reticulata, R.Br. Gangol-malkai.
 I. of G. of Carpentaria (R.Br.);
 Endeavour R. (B. and Sol.); Herbert
 R. (Dallachy); Rockingham B.
 (Dallachy).
crocea, R.Br.
 I. of G. of Carpentaria (R.Br.)
oblongata, R.Br.
 I. of G. of Carpentaria (R.Br.)
porrecta, R.Br.
 I. of C. of Carpentaria (R.Br.)
- polyzyga*, F.v.M.
 I. of G. of Carpentaria (F.M.B.);
 Thursday and other Is. of Torres Str.
 (F.M.B.)
leptoclada, Benth.
 Walsh R. (Barclay-Millar).
astragaloides, R.Br. 4.
 Hodgkinson R., Mt. Mulligan
 (Flecker); Dunk I. (Macgillivray);
 Palm I. (Herbert); C. Towers (Plant)
juncea, R.Br.
 I. of G. of Carpentaria (R.Br.);
 Endeavour R. (B. and Sol.); Gould I.
 (Macgillivray).
filipes, Benth. 12.
 I. of G. of Carpentaria (R.Br.);
 Endeavour R. (A. Cunn.); Croydon
 (Burton).
 var. *latifolia*
 Endeavour R. (B. and Sol.)
oligophylla, Benth.
 Albany I. (F.v.M.); C. York
 (Macgillivray).
purpurea, Pers.
 Coconut I. (M'Gregor); Pt. Denison
 (Fitzalan).
 var. *brevidens*, Benth. 3.
 I. of G. of Carpentaria (R.Br.); Mt.
 Mulligan (Flecker); Endeavour R.
 (B. and Sol.); C. Upstart (M'Gillivray)

Addenda et Corrigenda

(Figures after plants indicate flowering months)

Vol. 1

No. 9, p. 5—For Sarauja read Saurauja.

S. *Andreana*. After locs. Freshwater Cr. and Crs. about Bellenden Ker, add (F.M.B.)

p. 8—Delete (*Limacia*) *selwynii*.

Hypserpa laurina. Add loc. Kamerunga (Cowley).

No. 10, p. 5—Before *Ionidium* add

Viola, L.

betonicifolia. Sm. Purple Violet. 8 and 10.

Cardwell (Curry).

hederacea. Labill. Ivy-leaf Violet. 10.

Freshwater Cr. (Flecker)

M. tanarius. Add locs. Morehead R.

(Roth); Cooktown (Francis); Palm I. (Herbert).

Before *Tragia* add

Ricinus, L.

communis, L. Castor Oil Plant. Africa Barron R. (McAuliffe).

After (*Homalanthus*) *populifolius*

(Grah.) add Austral Bleeding Heart 8 to 12.

Add locs. Daintree R. (Kajewski); Johnstone R. (Francis); Palm I. (Herbert)

Excaecaria agallocha. Add loc. Palm I. (Herbert).

For Family *Balanopseae* read

Family *BALANOPSIDACEAE*.

Balanops australiana. Add loc. Range Road (Kajewski).

For Family *Urticaceae* read

Family *ULMACEAE*.

Before Family *ULMACEAE* add

(*B.*) *montana*, White.

Mt. Alexander (Kajewski).

Trema aspera. Add mos 10 to 12.

Add loc. Charters T.

Aphananthe philippinensis. Add mos. 8 to 11.

Add locs. Evelyn (Francis); Innisfail District (F.M.B.)

Before *Malaisia* insert

Family *MORACEAE*.

M. tortuosa. Add loc. Morehead R.

(F.M.B.)

For *Psuedomorus* (Bureau)

brunoniana (Bureau) read

Pseudomorus, Bureau.

brunoniana. Bureau, Whalebone Tree. 9 to 5.

Ficus pilosa. Add loc. Saibai I. (Macgregor).

p. 8—*F. infectoria*. For Mooleeah read White Fig.

After loc. L. Barrine add (Kajewski)

F. eugenioides. For Tilgul read Small-leaved Fig.

Add locs. Range Rd. (Kajewski); L. Eacham (Kajewski).

F. platypoda, var. *mollis*. Add mo. 8.

Add loc. Range Rd. (Kajewski).

Before *F. dictyophleba* add

F. destruens (White)

Greenhills, nr. Cairns (Dodd); Gadgarra (Kajewski); Nr. Peeramon (Francis); Herbert R. (Johnstone); Rockingham B. (Dallachy).

Before *F. cylindrica* add

F. macrophylla, Desf. Moreton Bay Fig. 10.

From Rockingham B. southward (Francis).

Before *F. magnifolia* add

F. Watkinsiana, F.v.M. Green-leaved Moreton Bay Fig. 10 and 11.

L. Barrine (Kajewski).

F. magnifolia. Add loc. L. Eacham (Kajewski).

F. ehretioides. Add loc. Daintree R. (Kajewski).

Delete *F. scandens* and substitute

F. Nugentii, Domin.

Daintree R. (Kajewski); Range about Kamerunga (Nugent).

F. philippinensis. Add locs. Daintree R. (Kajewski); Range Rd. (Kajewski)

F. mollior. Add locs. Range Rd. (Kajewski); Gadgarra (Kajewski).

F. stenocarpa. Add locs. Daintree R. (Kajewski); Scrubby Cr., Herberton Ra. (Kajewski).

Vol. 2, p. 2—*F. opposita*. Add mos. 4, 8, 9, 11, 12

Add locs. Hodgkinson R., Mt. Mulligan (Flecker); Daintree R. (Kajewski); Range Rd. (Kajewski).

Before *F. mourilyanensis* add

F. fasciculata, F.v.M. Berdi-ga. Starke R. (F.M.B.)

F. casaria. Add loc. Gadgarra (Kajewski).

F. crassipes. Add loc. Gadgarra (Kajewski).

F. glomerata. Add mos. 4 to 11.

Add loc. Hodgkinson R., Mt. Mulligan (Flecker).

Before *Cudrania* add

F. frutescens, F.M.B. 9

S. Mossman R. (Flecker).

After *Cudrania*, add *Trecul.*

C. javanensis. Add mos. 10 to 1.

Before *Laportea* add

Parathrophis australiana, White.

Herberton Ra. (Kajewski).

Family *URTICACEAE*. Vent.

Laportea moroides. Add mo. 2.

Add loc. Barron R. (Francis).



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 5

CAIRNS, FEBRUARY 1935

Serial No. 29

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 11th February, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr. J. Collins, Bunda Street, Cairns
Mr. Moss, City Baths, Cairns

PROPOSER	SECONDER
Mr. J. G. Brooks	Mr. J. McAuliffe
Mr. M. Auricchio	Mr. W. James

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—

"Geology and its Relation to Evolution," by Mr. Maurice Blackburn, University of Melbourne, member of Field Naturalists' Club of Victoria.

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

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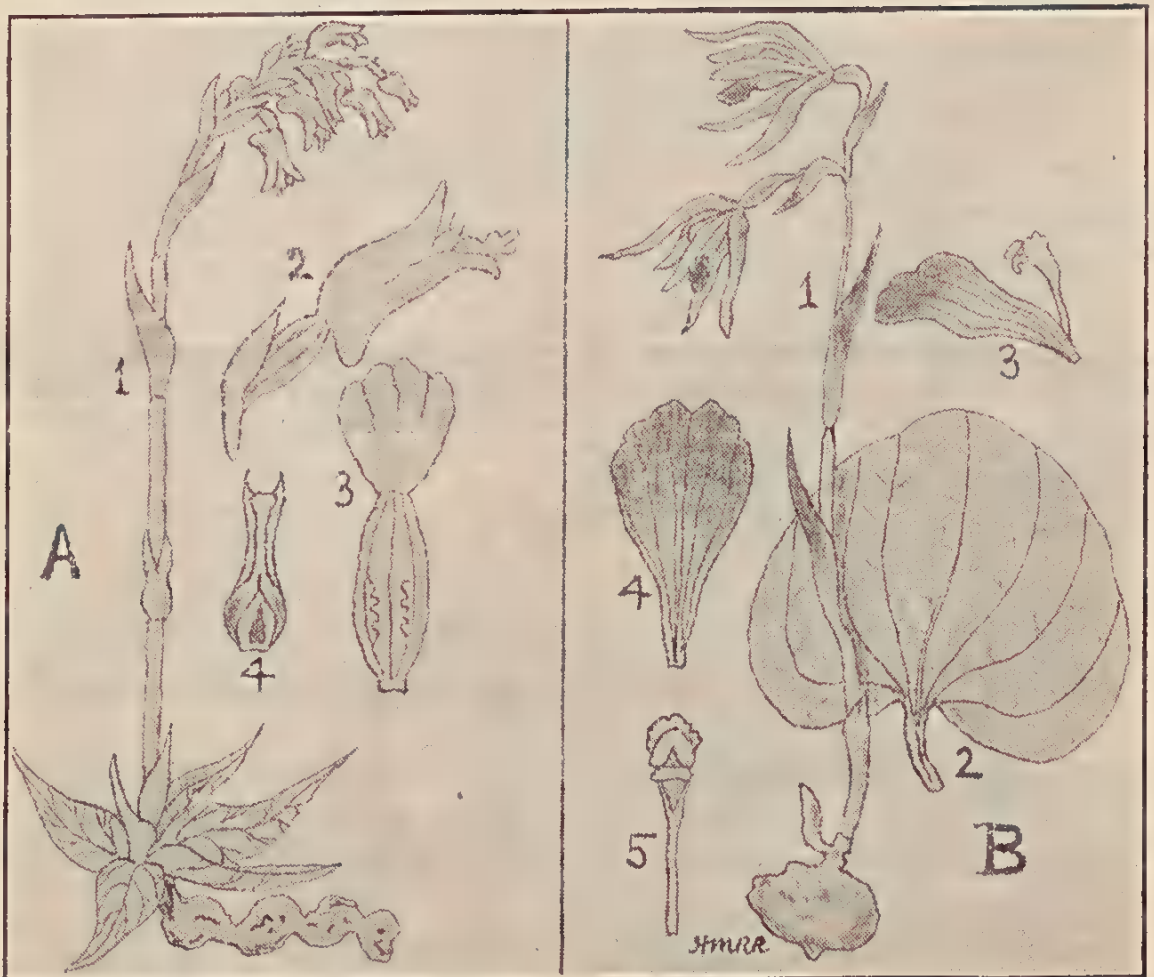
Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, S. Dunn, T. P. Walsh

Further Notes on North Queensland Orchids

By the REV. H. M. R. RUPP, WOY WOY, N.S.W.

Cheirostylis ovata (Bail.) Schlecht.—(Mr. Bates) This rare and interesting little plant was inadvertently omitted from my last notes. A single specimen was received, but it was in perfect condition except for slight withering of the labellum in the expanded flowers. It puzzled me. I could find nothing corresponding to it in Bailey's "Queensland Flora," never suspecting that it was included there in a genus I had always understood to include *leafless* species only. The leaves were the chief charm of Mr. Bates's plant, owing to their beautiful veining: they formed a substantial basal rosette. I forwarded a photograph and sketch to Dr. R. S. Rogers: and as usual, he was able to solve the mystery. Bailey had described the plant, from imperfect material, as *Gastrodia ovata*; but he expressed some doubt about the genus. Schlechter later on removed the species to the



TEXT FIGURES

A—*Cheirostylis ovata* Bail.

- 1 Flowering plant (reduced)
- 2 A flower enlarged
- 3 Labellum, front (greatly enlarged)
- 4 Column, top (greatly enlarged)

B—*Nervilia Dallachyana* F.v.M.

- 1 Flowering plant (reduced)
 - 2 Leaf
 - 3 Labellum and column from side (enlarged)
 - 4 Labellum, front (enlarged)
 - 5 Column, front
- In the flowering plant the leaf-bud can be seen near the tuber

genus *Cheirostylis*. Bailey calls the perianth "dirty white." In Mr. Bates's plant it scarcely deserves this unpleasant description: I should call it a very pale green or greenish-white.

Nervilia Dallachyana F.v.M.—(Mr. Macpherson.) In 1933 Mr. Macpherson sent a number of small tubers, to each of which was attached a comparatively large orbicular or reniform leaf, beautifully veined. There appeared to be two forms—possibly two species, one larger than the other. In the larger form the leaf was slightly beset with hairs: in the smaller it was glabrous, and coloured a rich pink on the under surface. I suggested *Pogonia* as the genus, and sent leaves to Dr. Rogers. He agreed that they would probably belong to the group included in *Pogonia* by Bentham and Bailey, but stated that the section *Nervilia* in this genus, to which all the Australian forms must be referred, had been raised to generic rank by Schlechter. In November 1934 Mr. Macpherson was able to send excellent specimens in full bloom. In some seasons—as is the case with various other orchids—no flowers are produced and only the leaves appear. At no time is the leaf contemporary with the flowers. On each of Mr. Macpherson's flowering stems could be clearly seen at the base the leaf bud just beginning to develop. I was able without difficulty to determine the specimens as Mueller's species *N. Dallachyana*. The two forms alluded to above do not appear to be specifically distinct, the differences (apart from the leaves) being only dimensional. This is one of the most beautiful terrestrial orchids I have seen, and if amenable to culture it should become a great favorite. Flowering stem 4—6 inches high, pink with loose magenta sheathing bracts. Flowers 2, larger ones 2 in. in diameter. Sepals and petals red, linear-lanceolate, petals slightly shorter. Labellum very concave above, when flattened out broadly spathulate or paddle-shaped, anterior third bright magenta with a wide notch at the apex. Column very slender, rather long, partly embraced by the concave labellum.—Strathdickie North, Proserpine; K. Macpherson, Nov. 1934.

About the same time Dr. H. Flecker, of Cairns, sent a specimen which suffered so badly in transit that I was unable to determine it. One flower yielded to treatment sufficiently to enable me to identify it beyond doubt as a *Nervilia*, but I believe it to be specifically distinct from the Proserpine plant.

Addition to List of Local Fish

Local name, Rock Cod. *Epinephelus summana*, Forskal. Summan Rock Cod.

Census of North Queensland Plants (continued)

(Figures after plants indicate flowering months)

<i>Tephrosia purpurea</i> ,	<i>Sesbania</i> , Pers.
var. <i>rufescens</i> , Benth.	<i>grandiflora</i> , Pers.
Pt. Bowen (A. Cunn.)	? N. C. York Pen. (F.M.B.); ? I. of
var. <i>longifolia</i> , Benth.	Torres Str. (F.M.B.)
G. of Carpentaria (R.Br.)	<i>aegyptiaca</i> , Pers.
var. <i>sericea</i> , Benth.	G. of Carpentaria (F.v.M.) Ngean-
C. Towers (Plant)	jerry; Cloncurry (F.M.B.)
var. ? <i>laxa</i> , Benth.	<i>aculeata</i> , Pers. Pea-Bush
I. of G. of Carpentaria (R.Br.)	G. of Carpentaria (F.M.B.)
var. <i>brevidens</i> , Benth. 3.	var. <i>sericea</i> , Benth.
Mt. Mulligan (Flecker)	I. of G. of Carpentaria (F.M.B.);
<i>rosea</i> , F.v.M.	Flinders R. (F.M.B.)
Gulf Country (F.M.B.)	var. <i>erubescens</i> , Benth.
<i>Millettia</i> , W et Arn.	Leichhardt R. (M'Gillivray)
<i>pilipes</i> , F.M.B.	
Johnstone R. (Bancroft)	

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1, No. 9, p. 8—After *Hypserpa*, add Miers.
- Vol. 2
p. 4—*Casuarina equisetifolia*. Add mo. 9
C. suberosa. Add loc. Daintree R. (Kajewski)
- Before Family Celastraceae add
(*C.*) *nodiflora* (Forster)
Mt. Alexander (Kajewski)
- Celastrus dispermus*. Add loc, Atherton Tableland (Francis)
- Before *Hypsophila* add
Hexaspora, White.
pubescens, White. 10.
Ft. of Mt. Bartle Frere (Kajewski)
- Hypsophila halleyana*. Add loc Mt. Bartle Frere (Kajewski)
- Denhamia obscura*. Add mo. 8.
Add loc. Parramatta Swamp (Flecker).
- Delete (*Caryospermum*) *melanocarpum* and add
Elaeodendron, Jacq. f.
australe, Vent.
Burdekin R. (Francis)
melanocarpum, F.v.M. 11.
Lizard I. (F.M.B.); Fitzroy I. (F.v.M.)
Cairns (Francis); Rockingham B. (F.M.B.); Pt. Denison (F.M.B.).
(*Siphonodon*) *pendulum*. Add loc. Stannary Hills (Bancroft).
- For *Elaeodendron membranaceum* read (*Siphonodon*) *membranaceum*.
Add locs. Barron R. (Cowley); Evelyn (J. F. Bail.); Tringilburra Cr. (F.M.B.); Range Rd. (Kajewski); Johnstone R. (Michael).
- P. 6—Before *Castanospora* add
Diploglottis, Hook. f.
Cunninghamii, Hook. f.
Cairns (Flecker)
- For (*Castanospora*) *alphanidi* (F.v.M.) read *Alphanidi*, F.v.M., Callarie.
- For Barron Scrubs, read Up. Barron R. (J. F. Bail.)
- After Mulgrave Scrubs, Johnstone Scrubs and Rockingham B. add (F.M.B.)
- Delete genera *Cupania*, *Toechema*, *Rantonia* and substitute the following:
Cupaniopsis, Radlk.
Wadsworthii, F.v.M. Radlk.
Mt. Elliott (F.M.B.)
anacardioides (Rich.) Radlk. Tucheroo. 8 to 10.
Cairns (Flecker); Townsville (Francis); Burdekin R. (F.v.M.)
serrata (F.v.M.) Radlk.
Rockingham B. (Dallachy).
var. *tomentella*, Radlk. 10.
Boonjie (Kajewski)
flagelliformis (F.M.B.) Radlk.
Barron R. (Cowley).
curvidentata (F.M.B.) Radlk.
Stoney Creek (Nugent)
foveolata, Radlk.
Rockingham B. (F.v.M.)
punctulata (F.v.M.) Radlk.
Gregory R., nr. Mt. Dryander (Michael).
Jagera, Blume.
pseudorhus (Rich.) Radlk. Pink Tamarind. 2 to 4.
Barron R. Ranges (F.M.B.); L. Barrine (Kajewski); Cardwell (F.M.B.)
Rhysotoechia, Radlk.
Robertsonii (F.v.M.) Radlk.
Barron Falls (Flecker); Rockingham B. (Dallachy).
Lepiderema, Radlk.
sericolignis (F.M.B.) Radlk.
Barron R. Scrub (F.M.B.); Mulgrave R. (F.M.B.).
Toechema, Radlk.
erythrocarpa (F.M.B.) Radlk. Chambin Barron R. (F.M.B.); Freshwater Cr. (Cowley); Butcher's Cr. (Miss Walsh) Ranges about Rockingham B. (Dallachy).
lanceolatum (White). 5 and 6.
Gadgarra (Kajewski)
tenax (Benth.) Radlk.
Rockingham B. (Dallachy)
Ellatostachys, Radlk.
nervosa, Radlk.
Proserpine (Francis)
Mischocarpus, Radlk.
Iachnocarpus (F.v.M.) Radlk.
Rockingham B. Coast (Dallachy)
grandissima (F.v.M.) Radlk.
Rockingham B. (Dallochy)
anadontus (Benth.) Radlk.
Gadgarra (Kajewski); Rockingham B. (Dallachy).
exangulatus (F.v.M.) Radlk.
Rockingham B. (Dallachy).
Lessertiana (Benth.) Radlk. Murgon. Daintree R. (Cowley).
Daemeliana (F.v.M.) Radlk.
C. York (Daemel).
pyrifarmis (F.v.M.) Radlk.
L. Barrine (Kajewski).
Synima, Radlk.
Cordierii (F.v.M.) Radlk. 12.
Daintree R. (Kajewski); Rockingham B. (Dallachy); Proserpine (Francis)
Sarcopteryx, Radlk.
Martvana (F.v.M.) Radlk.
Rockingham B. (Dallachy).
stinifata (F.v.M.) Radlk.
Range Rd. (Kajewski).





The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 6

CAIRNS, MARCH 1935

Serial No 30

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 11th March, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr Joseph Bennett, 196 Sheridan St, Cairns
Mr. C. W. Knudson, 121 Abbott St., Cairns
Mr. J. N. Tennant, 195 Sheridan St, Cairns

PROPOSER	SECONDER
Mr. Auricchio	Mr. Bates
Mr. Wyer	Mr. Auricchio
Mr. Wyer	Brother Dennis

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
Lecture by Mr. G. H. Clarke on "Holothurians" (Beches de Mer)

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

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T. P. Walsh

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

Continued from page 15

Whatever the Papuan is or is not, he has an unconscious gift of making his habitation harmonise with its surroundings. These little thatched houses, built of Sago stalks, Nipa Palm, Atap and what not, are of delicate shades of brown, buff, ochre, chestnut or sepia, which seem to melt into the vividly green background of the bush. I wish the builders of the typical Australian bush humpy, whose ideas of beauty begin and end with galvanised iron, could study these artistically formed and harmoniously tinted houses. Perhaps something more aesthetic might be evolved in the wilds of the North Queensland Scrub.

Away from the river bank, one may find a variety of country. Heavy jungle, forest, moorland, swamps with Sago Palms and Tree Ferns growing in lush black mud, seem to alternate with one another, while, in the upper reaches, there are expanses of open grass lands with clumps of rich scrub by way of contrast. The Oriomo Oil Field, which has so far failed to produce oil, is situated in country of this nature and forms a natural holiday ground for the small community of Daru. It is very nice to have open country, alive with game, to go to for the weekend, but we would all prefer to see the tall derricks and smoky activities of a great and prosperous oilfield in its place. However, as far as we can see at present, this is not to be, and unadulterated nature holds sway over the now deserted field.

There is perhaps more in the inland parts of this western division of Papua than I have indicated, and away from the coast it is interesting if difficult country to travel through. Let me explain right here, however, that any traveller through this part of the world need fear nothing from his fellow men, and this immunity from attack is a tribute to British rule in general, and to the administration of our wise and revered Governor, Sir Hubert Murray, in particular. Across the border, in Dutch Territory, there certainly are cannibals and the same may be said of the upper reaches of the Fly, but there is no danger of meeting with such gentry in the portions of the western division under control.

I still have to speak of the rather curious political division of the area under review. The three islands, Boigu, Saibai, and Dauan, belong to Queensland though they are within sight of the Papuan mainland, Daru is the administrative centre of the Western Division of Papua, and further west, within the Straits, the mainland is owned by the Dutch.

It is an anomaly that the nearby islands have been claimed by the Queensland Government and it leads to great restrictions in trade and every day convenience. When it is realised that the natives on these islands cannot grow enough foodstuffs for themselves, have no timber for building, and are dependent for administration, justice (they are a litigious race always running to court for adjustment of their squabbles), medical treatment and the sale of their marine produce at Thursday Island, two days sail away, it must be admitted that they are placed at a disadvantage by separation from their natural centre, Papua. They get over the difficulty to a certain extent by

coming in canoes to Daru, receiving a "paper" which enables them to visit the mainland, and buying sago, bananas and other foodstuffs or supplying themselves with building materials from the richly endowed rivers opposite John Douglas, the Grand Old Man of Torres Strait, always advocated the handing over of these islands, and in fact all the islands in the Straits, to New Guinea, and his contention is even more pertinent to-day when methods of ruling natives in this country are contrasted with those in vogue in Queensland. It is a well known fact that the natives of New Guinea are freer, happier and better off than the natives of Torres Strait who are largely ruled from Brisbane.

The northern portion of Torres Strait has been too remote to possess much of a historical record as far as Europeans are concerned.

We can go no further back than the famous voyage of Torres in 1603. who, according to accepted theories, kept while in the Straits as close to the New Guinea coast as sailing conditions would allow before going on to Manilla.

To be continued

Addition to List of Local Fish

Mr. Geo. Ernst has sent the following for identification:—

Harlequin Pig-fish. *Xiphochilus fasciatus*, Gunther. Labridae.

Census of North Queensland Plants (continued)

(Figures after plants indicate flowering months)

- | | |
|---------------------------------------|--|
| Swainsona, Salisb. | trichostachyum, Benth. |
| galegifolia R.Br. Darling Pea. | I. of G. of Carpentaria (R.Br.); |
| Burdekin R. (Fitzalan) | Endeavour R. (B. et Sol.) |
| procumbens, F.M.B. | polycarpum, F.C., 11 |
| var. ? minor | Mossman (Flecker) |
| Wimmera (Dallachy) | reniforme, DC. |
| Ormocarpum, Beauv. | Musgrave, C.Y. Pen. (Barclay-Millar) |
| sennoides, DC. | parvifolium, DC. |
| ? Endeavour R. (B. and Sol.) | Rockingham B. southward (F.M.B.) |
| Aeschynomene, L. | heterophyllum, DC. |
| indica, L. | Cairns (Whito) |
| Burdekin R. (Bowman) | triflorum, DC. 2, 5. |
| americana, L. | Cairns (Flecker); Kelsey Cr., nr. |
| Endeavour R. (Pers.) | Proserpine (Michael). |
| Zornia, Gmel. | scorpiuris (Sw.) Desv. Tropical Asia. |
| diphylla, Pers. | Mossman Dist., (F.M.B.) |
| I. of G. of Carpentaria (R.Br.); | Pycnospora, R.Br. |
| Mabuiag I. (Macgregor) | hedysaroides, B.Br. |
| var. gracilis (Benth.) | G. of Carpentaria (R.Br.); Rocking- |
| Walsh R. (Barclay-Millar) | ham B. (F.M.B.); Dunk I. |
| var. filifolia (F.M.B.) | (M'Gillivray). |
| Walsh R. (Barclay-Millar) | Uraria, Desv. |
| Desmodium, Desv. | cylindracea, Benth. |
| dependens, Blume. Waigen. | Sweers I. (Henne); Pt. Denison |
| Barron R. (Cowley). | (Fitzalan). |
| umbellatum DC. | Alysicarpus, Neck. |
| Barnard I (M'Gillivray); Rockingham | vaginalis, DC. |
| B. (F.M.B.); Pt. Denison (Dallachy); | Burdekin R. (F.M.B.) |
| Edzecombe B (Dallachy). | bupleurifolius, DC. |
| biarticulatum, F.v.M. | Mt. Mulligan (Flecker); Townsville |
| I of G. of Carpentaria (R.Br.); Rock- | (White); Magnetic I. (White)- |
| Ingham B. (Dallachy); Burdekin R. | Abrus, L. |
| (F.v.M.) | praecatorius, L. Crab's Eyes. |
| gangeticum, DC. | G. of Carpentaria (F.M.B.); I. of Tor- |
| Endeavour R. (B. and Sob.) | res Str. (F.M.B.); C. York (F.M.B.); |
| brachypodium, Grav. | Mapoon (Macgregor); Batavia R. |
| Burdekin R. (F.v.M.) | (F.M.B.); Cocktown Southward |
| | (F.M.B.); Cardwell (R.B.H.); Palm Is. |
| | (Herbert). |

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1, No. 10, p. 5—*Capparis nummularia*.
Add mo. 10.
- No. 11, p. 4—*Erythroxyllum eilipticum*.
Add mo 5.
Add loc. Mt. Mulligan (Flecker).
- No. 12, p. 6—*Codiaeum variegatum*, For
var. *moluccana* read *moluccanum*.
Add mo. 10.
Add loc. Wright's Creek (Flecker).
- Vol. 2, p. 2—After *Paratrophis* add Blume
P. 8—Delete genus *Nephelium* and
substitute—
Guoia, Radlk.
semiglauca, F.v.M. 8.
Cairns (Francis); Pine Cr. (Flecker);
From Rockingham B. Southward
(F.v.M.)
acutifolia, Radlk.
L. Barrine (Kajewski).
lasioneura, Radlk. 9.
Butcher's Creek (Miss Walsh);
Boonjie (Kajewski).
montana (White). 10.
Mt. Bartle Frere (Kajewski)
- Alectryon*, Radlk.
connatus (F.v.M.), Radlk.
Rockingham B. (F.M.B.); Pt. Denison
(F.M.B.); Burdekin R. (Francis)
subdentatus (F.v.M.), Radlk.
Tringilburra Cr. (F.M.B.); Rocking-
ham B. (F.M.B.)
tomentosus (Benth.) Radlk. 10 to 4.
Rockingham B. (Dallachy);
Proserpine (Francis).
- Arytera*, Radlk.
divaricata, F.v.M.
L. Barrine (Kajewski); Rockingham
B. (F.M.B.); Proserpine (Francis).
distylis, F.v.M. Corduroy
Pt. Denison southward (F.M.B.)
lautereriana (F.v.M.), Radlk.
Gadgarra (Kajewski)
- Before (*Harpullia*) *rhyticarpa* add
(H.) Hillii, F.v.M.
Ayr (Francis).
- H. pendula*. Add loc. Mulgrave R.
(Francis).
- Dodonaea lanceolata*. Add mo. 4.
Add loc. Mt. Mulligan (Flecker).
- P. 10—*D. viscosa*. Add loc. Russell R.
(Flecker).
- Delete genera *Guoia*, *Cupaniopsis*, *Sar-
copteryx*, *Jagera*, *Synima*, *Arytera*,
and *Mischocarpus*.
- P. 12—*Euroschinus falcatus*. Add loc.
Stannary Hills (Francis).
Add var. *angustifolius*, Benth
Stannary Hills (Francis).
For Family PLUMBAGINEAE read
PLUMBAGINACEAE.
For Family PORTULACEAE (Juss.)
read PORTULACACEAE.
- Portulaca oleracea*. Add mos. 5, 8 to 1
Add loc. Cairns (Flecker).
Before *Calandrinia* add
P. filifolia, F.v.M.
Torrens Cr.
For Family CARYOPHYLLEAE (Juss.)
read CARYOPHYLLACEAE.
Before *Polycarpaea* add
Drymaris, Willd.
diandra, Blume 4, 7 to 10.
Cairns (Flecker).
For *Polycarpaea* read *Polycarpaea*.
P. spirostyles. Add mo. 2.
After locs. Gilbert R.; Northcote and
Herberton add (F.M.B.)
Add locs Mt Mulligan (Flecker);
Kidston (F.M.B.).
- P. 14—*Amarantus mitchelli*. Add loc.
Hughenden.
Trichinium macrocephalum. Add mos.
2 and 10.
Add loc. Thornborough (Flecker)
- P. 19—*T. semilanatum* Add mo. 10.
calostachyum. Add mo. 10.
Alternanthera denticulata. Add mo. 4.
Add loc. Mt. Mulligan (Flecker).
Before *Gomphrena* add
(A.) *nana*, R.Br. 9.
Cairns (Flecker).
Before *Atriplex* add
(C.) *ambrosioides*, L. Introduced.
7 to 9, 11 to 2.
Cairns (Flecker).
A. halimoides. Add mo. 10.
- P. 18—*Suaeda maritima*. Delete Flowers
April, May and November.
Delete loc. Cairns.
Add var. *australis*, Domin. 1, 2, 4, 5, 10
and 11.
Cairns (Flecker).
- Salsola kali*. Add mo. 10.
Add loc. Hughenden.
For (*Sesuvium*) *portulacastrum* read
portulacastrum.
S. portulacastrum. Add mos. 1, 5 and 12
Add locs. Michaelmas Cay (Flecker);
Cairns (Flecker).
After (*Polygonum*) *lapathifolium* delete
(L.) and add L. Pale Knotweed. 8,
11 and 12.
Add loc. Ka nerunga (Flecker).
- P. 20—(F.) *iffiaiana*. After Atherton
District add (Swain).
- Vol. 3, p. 3—*Crotolaria trifoliastrum*. For
Willd read Willd. 8.
Add loc. Barron Gorge (Flecker).
- P. 16—For *M. tanarius* read *Macaranga
tanarius*.
Before *M. tanarius* add No. 11, p. 7.
- P. 20—*Rhysotoechia Robertsonii*. Add
mo. 8.



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 7

CAIRNS, APRIL 1935

Serial No. 31

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 8th April, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.
4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
"Trinity Inlet, an Ancient River Mouth," by Mr. Arthur J. Moran

Office Bearers for 1934-35

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Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, J. G. Brooks,
T. P. Walsh

The Pollination of *Cymbidium iridifolium*, Cunn.

By KENNETH MACPHERSON and the REV. H. M. R. RUPP

One of us (K.M.), attracted by the prolific seed-capsules borne by this orchid at Proserpine, was induced to watch the methods employed by nature to ensure perfect fertilization.

On Sept. 28, 1934, and on several subsequent occasions, the reward of patience came in the form of several small flying insects, hovering about a large plant in flower. These were at once recognisable as a small species of Native Honey Bee (not yet identified). Obviously enticed by the sweet perfume which is characteristic of *C. iridifolium*, the bees alighted on the expanded outer end of the labellum. They had evidently visited other plants in the vicinity, for closely adhering to the minute hairs which cover their backs, were several grains of orchid pollen.

The labellum of *C. iridifolium* is loosely attached to the base of the column. So far as we are aware no "irritability" has hitherto been observed in this labellum. The other writer of the present article (H.M.R.R.) has failed to induce signs of irritability by artificial methods on a raceme from Proserpine flowering in his bush-house. But the observer at Proserpine, watching the bees advance towards the base of the labellum, noticed the latter, with several jerky movements, close up against the column, imprisoning the bee, and bringing its back into contact with the sticky stigmatic plate, upon which were thus deposited the pollen grains carried by the insect. The struggles of the bee to escape are considerable, owing to the fact that along the median line of the labellum of *C. iridifolium* there is exuded a shining, viscid secretion (Lindley named the species *C. madidum*, "wet" or "viscid"). In its struggles backward it bursts the anther-sac, and receives a new supply of pollen on its back. The whole process was carefully observed.

Incidentally, the fact was noted that the viscid exudation just alluded to is the real objective of the bee's visit. There does not appear to be any nectar in the flower. But as the bee moved down towards the base of the labellum, it was observed to be gnawing at the viscid exudation. The booty thus secured was then held between the front pair of legs, and subsequently transferred to the second pair, which then fastened it to the pollen carriers on the rear legs. There seems no doubt that this substance is used, as "Bee Glue" (Propolis), to close up small spaces and cracks in the nest. The supply is generally obtained from the young shoots and flower-buds of certain plants, but this particular bee has apparently "struck it rich" in the open *Cymbidium* flower.

Book Review

Catalogue of Hemiptera of America North of Mexico, by Edward P. van Duzee.—This catalogue of 902 pages published by the University of California Press at Berkeley in 1917 provides a very comprehensive reference book for students of the family Hemiptera. All genera and species are listed for every sub-family except the Aphididae Coccidae and Aleurodidae and authors of each species together with the publication references are given.

EXCURSION TO MICHAELMAS CAY.—The "Magneta" has been engaged for Sunday, 19th May next. As accommodation is limited, those desiring to attend please communicate with Mr. G. Bates as early as possible.

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

Continued from page 23

Within the last few years, Torres' route has been the subject of a bitter controversy between the Australian Historical Society, and a now deceased historian in England who propounded revolutionary theories constructed on his belief in certain newly discovered documents written by de Prado. This de Prado, who was formerly considered a sort of superior passenger sailing with Torres, claimed in his book to be actual leader. Those who backed his assumption of command went further and hailed him as the actual discoverer of Australia, stating that he sailed far enough south to pass Cape York. Captain Bayldon, of the A.H.S., pointed out in a series of logical papers founded upon his actual experience of the Straits and the possibilities of navigation therein that de Prado could not have gone so far to the southward as that; his defence of Torres has led historians to restore him as leader of the expedition and replaced Cook as the original discoverer of Endeavour Strait.

To be continued

Census of North Queensland Plants (continued)

(Figures after plants indicate flowering months)

- Clitoria*, L.
australis, Benth.
 Cardwell (Michael),
ternatea, L. 3, 5.
 Murray I. (Macgregor); Cairns
 (Flecker).
Glycine, L.
tabacina, Benth. 11.
 Mossman (Flecker).
tomentosa, Benth.
 Endeavour R. (B. and Sol.)
Hardenbergia, Benth.
retusa, Benth. Kong-an. 7.
 C. York (Hill); Albany I. (F.M.B.);
 Batavia R. (Roth); Endeavour R.
 (Banks and Sol); Parramatta Swamp
 (Flecker); Cooktown (F.M.B.); Dunk
 I (M'Gillivray).
Kennedy, Vent.
rubicunda, Vent. Dusky Coral-Pea.
 Rockingham B. southward.
?exaltata, F.M.B.
 Scrubs of Barron R. (Cowley);
 Atherton (J. F. Bail.)
Erythrina, L.
vespertilio, Benth. Grey Corkwood.
 G of Carpentaria (R.Br.); C. York
 (M'Gillivray); Batavia R. (Roth);
 Endeavour R. (Fraser).
indica, Lam. Coral Tree. 8 to 11.
 Green I. (Flecker); Pt. Denison
 (Fitzalan).
insularis, F.M.B.
 Yama I. (Macgregor); Turtle I., off
 Somerset (F.M.B.)
phlebocarpa, F.M.B.
 Newcastle B., C.Y. Pen. (Jardine).
Mucuna, Adans.
gigantea, DC. 10.
 Cardweil (R.B.H.); Palm I. (Herbert)
 Edgecombe B. (Dallachy).
Galactia, R.Br.
tenuiflora, Willd.
 I. of G. of Carpentaria and adjoining
 coast (R.Br.); Endeavour R. (B. and
 Sol.)
Muelleri, Benth.
 Walsh R. (Barclay-Millar).
varians, F.M.B.
 Morehead R. (Roth)
Canavalia, DC.
obtusifolia, DC. McKenzie Bean. 10.
 I. of G. of Carpentaria (R.Br.); Saibai
 I. (Macgregor); Endeavour R. (B.
 and Sol.); Green I. (Priest); Palm I.
 (Herbert).
Phaseolus, L.
truxillensis, H.B. et K.
 I. of G. of Carpentaria (R.Br.); Yama
 I. (Macgregor); Endeavour R. (B. and
 Sol.); Barnard I. (M'Gillivray).

Addenda et Corrīgenda

(Figures after plants indicate flowering months)

Vol. 1

- No. 9, p. 6—*Daphnandra aromatica*. After locs. Barron R. and Johnstone R. add (F.M.B.)
- P. 8—Before *Limacia*, add *Legnephora*, Miers
Moorei, Miers
Atherton Tabel. area (White)
- Before *Stephania bancroftii* add
(*S.*) *hernandias folia*, Walp. 3
Cairns (Flecker)
Atherton Tabel. area (White)
- No. 10, p. 5—Add (F.M.B.) after following locs.:—
- C. nummularis*. Cloncurry.
C. ornans. Batavia R. and Pt. Denison
C. canescens. Lynd R. and Burdekin R.
C. lucida. Hope Islets, C. Grafton, Burdekin R., Pt. Denison and Pt. Molle.
C. mitchelli. Cloncurry.
After FAMILY CRUCIFERAE add Juss.
Before (*Brassica*) *juncea* add
(*B.*) *campestris*, L. Europe. 5.
Cairns (Flecker).
- Lepidium ruderales*. Add mos. 7 to 11.
Add loc. Atherton Tabel. area (White)
- Ionidium suffruticosum*. After loc.
Mt. Mulligan add (Flecker)
Add (F.M.B.) after following locs.:—
Cochlospermum gillivraei. Thursday I., other I. off Coast. Middle Palmer R. Nassau R., Atherton, Pt. Denison and Burdekin R.
C. gregorii. Gilbert R.
Before *Scolopia* add
Flacourtia
cataphracta. 11.
Mossman (Flecker).
After (*Pittosporum melanosporum*) var. (?) *lateralis* add Benth.
Add (F.M.B.) after following locs.:—
P. venulosum. Coastal Ranges as Rockingham B. etc.
P. wingii. Bellenden Ker and other high ranges.
P. rubiginosum. Ranges about Bellenden Ker.
Before (*Bursaria*) *tenuifolia* add
(*B.*) *incana*, Lindl. 2.
Mt. Mulligan (Flecker)
- P. 7—*Zanthoxylon veneficum* Add loc. Atherton Tabel. area (White).
- No. 11, p. 4—Before (*Oxalis*) *corniculata* add
(*O.*) *corymbosa*, D.C. Brazil. 3, 5.
Cairns (Flecker).
(*O.*) *corniculata*. Add mos. 3, 10 and 12.
Add loc. Atherton Tabel. (White).
Before *Sida* add
Malvastrum, Gray.
tricuspidatum, Gray. Introduced.
Atherton Tableland area (White).
- S. rhombifolia*. Add nos. 2, 3 and 5.
After loc. Cairns Dist. add (F.M.B.)
Add loc. Atherton Tabel. area (White)
- S. acuta*. Add loc. Atherton Tabel. area (White); Townsville (White).
- S. cordifolia*. For Flowers Dec. read Flannel Weed, 7 to 5.
After Cairns add (White).
Add locs. Mt. Mulligan (Flecker); Atherton Tabel. area (White); Townsville (White)
- After *Urena lobata* (L.) add Pink Burr.
Add mos. 10 and 11.
- P. 5—*Hibiscus tiliaceus*. Add no. 6.
After locs. I. of Bay of Carpentaria, Cooktown, Dunk. I., and Lower Tully R. add (F.M.B.).
After loc. Green Is. add (Wright).
After loc. Cairns add (Flecker).
Add loc. Innisfail (Flecker).
- P. 6—Add (F.M.B.) after the following locs.:—
Kleinhovia hospita. Pt. Douglas.
Melhania incana. Pt. Denison and Burdekin R.
After loc. Mt. Mulligan add (Flecker).
Add (F.M.B.) after locs. of following:—
Waltheria americana
Cammersonia leichhardtii.
C. echinata.
Berrya ammonilla, var. *rotundifolia*.
Grewia orientalis.
- G. polygama*. Delete Cleveland.
After locs. Is. of G. of Carpentaria, Sweers Is., Cape York, Butcher's Hill, Cloncurry, Cleveland Bay, Pt. Denison and Pt. Molle add (F.M.B.)
Add loc. Mossman (Flecker)
Add (F.M.B.) after the following locs.:—
G. pleiostigma. Mulgrave R.
Triumfetta procumbens. All locs.
T. appendiculata. Sweers I.
T. pilosa. Mt. Elliott.
T. rhomboidea. All locs.
Add mos. 10 and 11.
Add loc. Atherton Tabel. area (White).
- After *T. nigricans*, F.M.B. add Black Burr.
Add (F.M.B.) after following locs.:—
Corchorus acutangulus. C. York.
C. sidoides. I. of G. of Carpentaria.
- P. 7—*Euphorbia pillulifera*. Add mos. 1 to 12.
Add locs. Mt. Mulligan (Flecker); Dimbulah (Flecker); Atherton Tabel. area (White).
- No. 12, p. 6—Before *Mallotus* add (*Acalypha*) *capillipes*, F.v.M.
Cairns Intake (Flecker).





The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 8

CAIRNS, MAY 1935

Serial No. 32

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 13th May, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.
Mr. Frederick Newton, Sheridan Street, Cairns
Mr. B. Derwent Vallance, City Council Chambers, Cairns.
4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
Discussion on Names of Fish, with members of Cairns
Amateur Fishermen's Association

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J. McAuliffe, J. G. Brooks,
T. P. Walsh

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

Continued from page 27

It may be taken as certain that Torres sighted Daru and indeed gave a short description of that island. He must have certainly seen Dauan with its lofty peak, but he just as certainly did not then dash down out of his course to examine the shores of North Queensland.

Thus the early history of this part of the world has been brought into prominence by the misinterpretation of old historical records.

Unfortunately I have few books of reference here and I am unable to say who named Dauan (Cornwallis Is.), Boigu (Talbot Is.) or Daru, but anyone interested would find the information in Logan Jack's encyclopaedic volume on the history of Northern Australia. Bligh bestowed its name on Darnley Island in 1792, and as this is only 60 miles away he must have been in the vicinity of the northern group. Blackwood and Yule visited this part of Papua in 1843 in the Fly and the Bramble. The former vessel gave its name to the famous river and the latter to Bramble Cay, the northernmost island in the Barrier Reef. After this I know of no other reference to this northern part of Torres Strait till the days of Chalmers, Douglas, Chester and other pioneers of British New Guinea who were prominent movers in the attempt to bring the whole eastern half of this country under British protection.

The name of Tamate is still held sacred in Daru. Just at the back of the settlement under the shade of a group of palms, may be found the grave of the martyred missionary whose skull was discovered at Goaribari (where he had been murdered) by the Rev. Baxter Riley of Daru and brought here for interment.

Daru was first opened as a Government station about 1888. The early days of the settlement here were enlivened by the presence of the notorious Tugeri tribe who terrorized mainland and islands alike. They even attacked the first Government station (then situated at Mabaudauan) but were repulsed without loss of life. Like most other aggressive tribes of Papua, they were gradually pacified by the humanistic methods adopted by Sir William MacGregor and continued to the present day.

In 1931, the Western Division was thrilled by the raid of the Suki people, living some 200 miles up the Fly, on Weridai village when 17 peaceful folk were butchered in a most treacherous manner. But the Sukis are quite tame now. Sixty of them are cutting grass and performing the necessary night services on Daru. Thus the Pax Britannica gradually soothes the wildest instincts of her subject races, and such events will become rarer and rarer till they disappear altogether.

History is even vaguer about the native races of this region than it is about the Europeans who visited it. Who are the Western Papuans? Where do they come from? Such information as I am able to lay before you here is gleaned from the researches of Professor Haddon who spent much time here and in Torres Strait.

Haddon makes a primary classification of *Homo sapiens* by means of the character of the hair, and his Ulotrichi, or woolly-haired people include the Papuans. He further describes them as a dark skinned race, short or tall, with long shaped skulls and widely spread

nostrils. The Papuans' "platyrrhine" nose is referred to as being bent at the tip, hence the origin of the term "Jews of Papua" which is often applied to the western native. This semitic appearance has led to the appearance of some wonderful theories as to their origin, one of the lost tribes of Palestine being a popular one. Haddon passes these assertions by in silence. He says that the local natives were members of an Ulotrichous race that reached Oceania, including some parts of Australia, from Indonesia.

These original woolly haired Papuans have now been replaced in many parts of the Pacific by newcomers of another type, but they have persisted in this corner of the world and curiously enough in Tasmania until they became extinct there. This last statement may surprise you as it did me when I first read it. I will therefore quote the passage so that there can be no mistake:—

"The now extinct Tasmanian . . . falls naturally into this group and may be regarded as a somewhat generalised variety of the Negrito-Papuan stock, which at an early date crossed Australia and was isolated in Tasmania by the formation of Bass Strait before the Australian reached so far south." (The Races of Man: A. C. Haddon, Sc D., F.R.S.)

To be continued

Census of North Queensland Plants (continued)

(Figures after plants indicate flowering months)

- Phaseolus*, L.
mungo, L. Komin.
 Endeavour R. (B. and Sol.); Gould I. (M Gillivray); Cleveland B. (Thozet).
semierectus, K. Tropical America.
 About Atherton (White); Bowen.
- Vigna*, Savi.
vexillata, Benth. To-e.
 Batavia R (Roth); Endeavour R. (B. and Sol.); Cloncurry (E.M.B.); Burdekin R. (F.v.M.)
lutea, Gray Anden-ga.
 Saibai I. (Macgregor); P. Charlotte B. (F.M.B.); Bloomfield R. (F.M.B.)
luteola, Benth
 Endeavour R. (B. and Sol.); Burdekin R. (F.v.M.)
lanceolata, Benth. Malaga. 3 and 11.
 Endeavour R. (B. and Sol.); Cloncurry (F.M.B.)
- Dolichos*, L.
biofrus, L. Malkan.
 C. Bedford (Roth); Cooktown (F.M.B.); Butcher's Hill (Roth); Bloomfield (F.M.B.),
- Dunbaria*, W. et Arn.
marmorata, Benth.
 I. of G. of Carpentaria (R.Br.); Pt. Denison (Fitzalan).
scarabaeoides, Benth
 Pt. Denison (F.M.B.); Burdekin R. (F.M.B.).
reticulata, Benth. Korlbun.
 I. of G. of Carpentaria (R.Br.); Endeavour R. (B. and Sol.); Cooktown (F.M.B.)
- grandifolia*, F.v.M.
 I. of G. of Carpentaria (R.Br.); Pt. Denison (Dallachy).
plurifolia, F.v.M.
 Irvinebank (Bennett).
cinerea, F.v.M.
 Townsville (Fawcett).
- Rhynchosia*, Lour.
acutifolia, F.v.M.
 Tate R. (Burton); Gilbert R. (F.v.M.)
Cunninghamii, Benth. 11.
 Endeavour R. (B. and Sol.); Green I. (Wright); Mt. Elliott (Fitzalan).
minima, DC.
 Burdekin R. (F.M.B.)
- Eriosema*, DC.
chinense, Benth. Torakal.
 Palmer R. (F.M.B.); M. Morehead R. (Roth); Endeavour R. (B. and Sol.); Cooktown (F.M.B.); Butcher's Hill (F.M.B.); Bloomfield R. (F.M.B.)
- Flemingia*, Roxb.
lineata, Roxb.
 G. of Carpentaria (F.v.M.); Pt. Denison (Dall.); Burdekin R. (Bowman); Edgecombe B. (Dall.)
pauciflora, Benth.
 G. of Carpentaria (Landsborough).
parviflora, Benth. 6.
 Pt. Denison (Dall.); Burdekin R. (Bowman).
involutrata, Benth.
 Endeavour R. (R.Br.)

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- No. 12, p. 7—*Macaranga tanarius*. After loc. Howick's Group, add (F.M.B.)
 Add mo. 7.
 Add loc. Redlynch (Flecker).
Ricinus communis. Add mos 4, 6 and 12.
 Add loc. Atherton Tablel. area (White).
Homalanthus populifolius. Add loc. Atherton Tablel. area (White).
Omphalea queenslandiae. After locs. Harvey's Cr. and Johnstone R. add (F.M.B.)
Trema aspera. Add loc. Atherton Tablel. area (White).
 After locs. Rockingham B. and Burdekin R. add (F.M.B.)
 Add var. *viridis*, Benth.
 Atherton Tablel. area (White).
 Add (F.M.B.) to the following locs.—
Aphananthe philippinensis. Barron R.
Malaisia tortuosa. Rockingham and Edgcombe Bays, Burdekin River.
Ficus pilosus. Albany Is.
 P. 8—*F. thynneana*. Add mo. 5.
 Add loc. Cairns (Flecker).
 Vol. II, p. 2—*F. opposita*. Add mos 1, 3 and 12.
 Add (F.M.B.) after the following locs.—
F. esmeralda. C. Grafton.
F. casearia. Endeavour R. Fitzroy I.
F. pleurocarpa. All locs.
F. crassipes. Scrubs Harvey's C., Scrubs Russell R.
F. glomerata. Cooktown.
 Add mo. 11.
 Before *Laportea* add
Urtica, L.
incisa, Poir. Cood-mo-ro.
 Atherton Tablel. area (White)
 Before (*L.*) *moroides* add
 (*L.*) *gigas*, Wedd. Large Stinging Tree
 Atherton Tablel. area (White).
photiniphylla, Wedd. Shiny-leaved Stinging Tree.
 Atherton Tablel. area (White).
 (*L.*) *moroides*. For Stinging Tree read Gympie. Add mo. 1.
 After locs. Mungana and Edge Hill add (Flecker).
Pipturus argenteus, After loc. Fitzroy I. add (F.M.B.)
 Add mo. 7.
 Add loc. Cairns Intake (Flecker).
 P. 4—*Casuarina torulosa*. Add mo. 6.
 Add loc. Lamb Ra. (Flecker)
 P. 6—*Diploglottis Cunninghamii* Add. var. *Muelleri*, F.M.B. 11.
 Mossman (Flecker).
 P. 12—*Portulaca oleracea*. Add mos. 1 to 4
 Add loc. Atherton Tablel. area (White)
 P. 14—*Amarantus spinosus*. Add loc. Atherton Tablel. area (White)
 Before (*A.*) *viridis* add
 (*A.*) *interruptus*, R.Br.
 Atherton Tablel. area (White).
 (*A.*) *viridis*. Add mos. 1, 4 to 10.
 After each loc. add (Flecker).
 Add Atherton Tablel. area (White).
 P. 16—Before *Atriplex* add
 (*Chenopodium*) *carinatum*, R.Br.
 Atherton Tablel. area (White)
 P. 18—Before Family POLYGONACEAE add
Mollugo, L.
Spergula, L. 6.
 Cairns (Flecker)
 P. 22—Before *Monococcus* add
Rivina, L.
laevis, L. S. America.
 Atherton Tablel. area (White).
 Before Family NYCTAGINEAE add
Phytolacca, L.
octandra, L. Red Ink Plant. America.
 Vol. III, p. 3—*Crotolaria Mitchelli*. Add loc. Atherton Tablel. area (White).
 P. 15—After (*Tephrosia filipes*) var. *latifolia*, add Benth.
 P. 19—*Sesbania aculeata*. Add mo. 5.
 Add loc. Cairns (Flecker)
 P. 23—*Aeschynomene indica*. Add mo. 5.
 Add loc. Cairns (Flecker).
 Before (*Alysicarpus*) *bupleurifolius* add
 (*A.*) *rigosus*, DC.
 Cairns (Flecker).
 P. 24—For *Wikstroemia* read
Wikstroemia.
Suaeda maritima. For (var.) *australis* read *australis*.





The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 9

CAIRNS, JUNE 1935

Serial No 33

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 10th June, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

	PROPOSER	SECONDER
Mr. H. A. Burkitt, 137 Lake Streets, Cairns	Mr. A. B. Cummings	Mr. Ike Askew
Mr. Cromwell Cadolo, 226 Sachs Street, Cairns	Mr. A. B. Cummings	Mr. M. Auricchio

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
Lecture by Mr. J. G. Brooks, on Coleoptera (Beetles).

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J.P., J. McAuliffe, J. G. Brooks,
T. P. Walsh

Two Trees of the Genus *Dysoxylum* in North Queensland

By C. T. WHITE, Government Botanist

The Queensland members of the *Dysoxylum*, are rather in need of revision. In the course of investigations into the limits of some of the species, I have drawn up the following notes on two of them.—

Dysoxylum amooroides Miq. in Ann. Mus. Bot. Lugd.-Bat. IV 16. *D. cerebriforme* F. M. Bailey, Bot. Bull. XIV (Dept. Agric., Brisbane) 7, Pts, I and II, 1896.

Mowbray River, in riverine rain-forest, *L. J. Brass*, No. 1942; (fig specimens); 16/1/32; (soft-wooded tree, abt. 28 ft. high; branches few, erect, conspicuously marked with old leaf-scars; leaves clustered at apex of branches, up to 3 ft. long; fls. creamy white,). Bundaberg, *R. E. Watson*. Rockhampton, *F. J. Byerley*. Near Rockhampton growing along banks of creeks at Sliepner, going towards Mt. Chalmers, *H. G. Simmons*. At the foot of Eungella Range, *W. D. Francis*. Johnston River, *W. C. Harding*. *H. G. Lambrook*, No. 97 (tree 40 ft., sparingly branched, leaves at end of branches). Freshwater Creek, near Cairns, *L. J. Nugent* (type of *D. cerebriforme* F. M. Bail.). Babinda, *J. F. Illingworth*, No. 93 (tall slender tree in second growth rain-forest). Barron River *E. Cowley*. Mulgrave River, *F. M. Bailey*. Edgecombe Bay, *Rev. N. Michael*, Wickham Terrace Reserve, Brisbane (cultivated tree) *F. M. Bailey*.

The species is very closely allied to *D. rufum* Benth. The trees are very similar in the field, and in the Queensland Herbarium several flowering sheets of *D. amooroides* Miq. had been labelled *D. rufum* Benth., var. *glabrescens* Benth; in fruit they can be easily distinguished, but the flowers are very similar. The leaves in *D. rufum* Benth. are on the whole smaller, the inflorescences shorter, and the calyx lobes more pubescent or hirsute.

As can be seen from the above list of localities, this tree has a wide distribution in Queensland, extending as far south as Bundaberg (Burnett District). For some time past I had been under the impression that *D. cerebriforme* F. M. Bail, was identical with *D. amooroides* Miq., and sent some specimens collected near Rockhampton by Mr. H. G. Simmons to the Royal Botanic Gardens, Kew (Eng.), for comparison. They were kindly examined for me by Mr. V. S. Summerhayes, who reported as follows:—

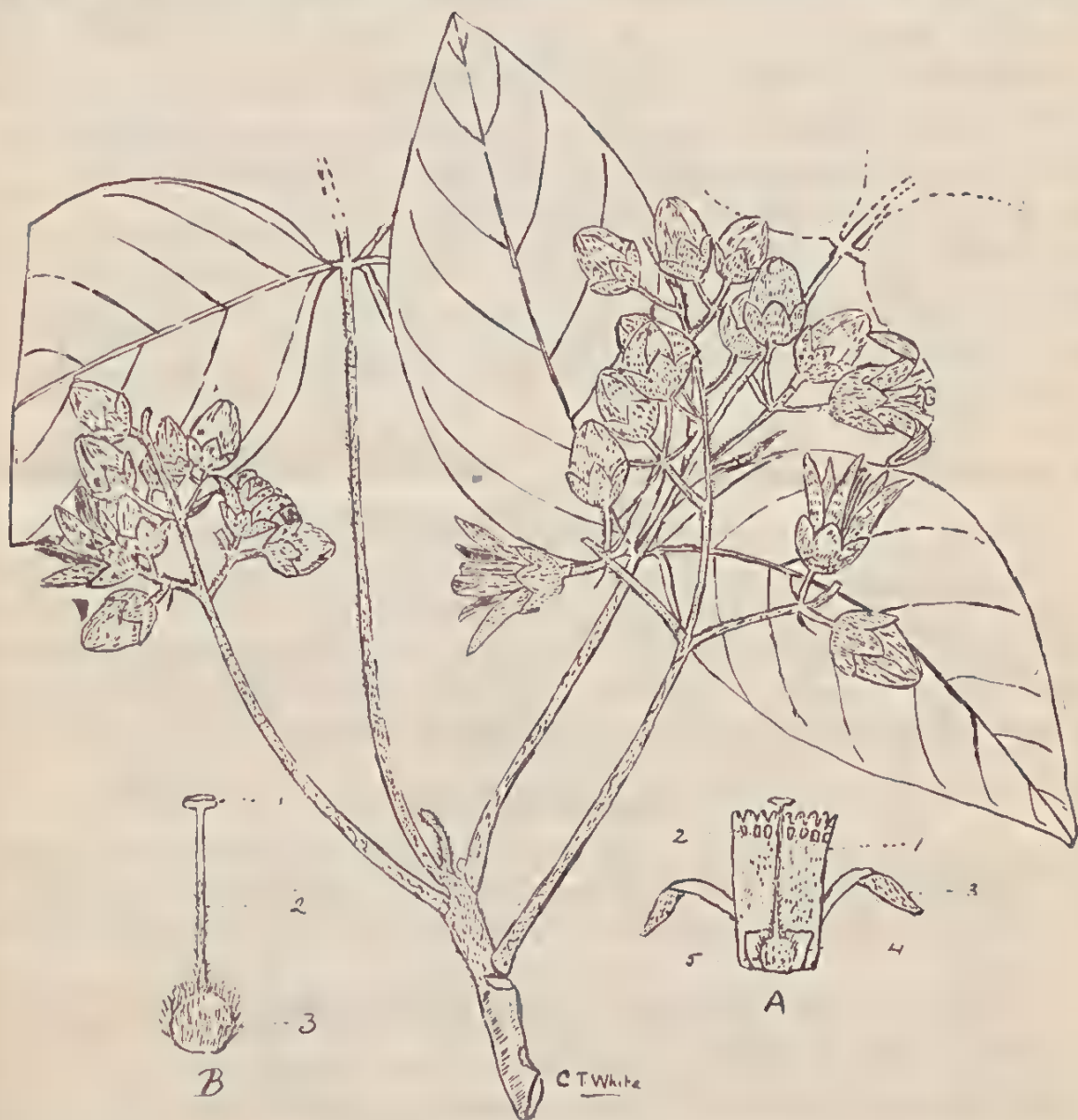
“*Dysoxylum cerebriforme* F. M. Bailey. I am rather puzzled about this. The specimen (fruiting only) collected by Simmons and sent by Mr. White agrees extremely well with all our material of *D. amooroides* Miq., especially the fruit, which is an absolute match with fruit collected by De Vriese in Ceram and cited by Miquel in the original place of publication. We have, however, another specimen of *D. cerebriforme* at Kew, which was collected at Atherton by H. W. Mocatta in 1934 and sent by Mr. F. M. Bailey, according to the label. This has flowers which are totally different from those of *D. amooroides* as represented at Kew. I suspect that these two Queensland specimens really represent distinct species, especially as the leaves do not quite match.”

In explanation I may now say that F. M. Bailey described his *D. cerebriforme* from fruits only; many years later he described what he took to be flowers of the species. These were collected by

Mr. H. W. Mocatta, and consisted of two or three flowering twigs with one or two detached fruits. The fruits may have been those of *D. amooroides* Miq. (*D. cerebriforme* F. M. Bail.), but the flowers were certainly not. As far as I can see, Mocatta's specimens represent an undescribed species allied to *D. oppositifolium* F.v.M., and a description is given herewith accordingly. A reproduction of Bailey's figure is also given.

***Dysoxylum sericiflorum* sp. nov.**

Arbor ramulis robustis, partibus junioribus dense sericeo-pubescentibus. Folia paripinnata 2-4 jugata, rachi cum petiolo ca. 18 cm.; petiolo ipso 6 cm.; foliolis oppositis vel suboppositis obliquis ellipticolanceolatis apice acutis vel subacuminatis basi cuneatis; nervis praecipuis utrinque 10-12, supra leviter impressis, subtus elevatis ad axillas nerv-



***Dysoxylum sericiflorum* sp. nov.—**

A—Part of flower laid open, natural size.

1, Staminal tube; 2, Stamen; 3, Petal; 4, Disk; 5, Ovary.

B—Pistil enlarged.

1, Stigma; 2, Style; 3, Ovary.

orum saepe hirsutis; lamina 10 cm. longa, 5 cm. lata; petiolo valido 2 mm. longo. Paniculae breves terminales vel subterminales, ramis oedicellisque sericeo-pubescentibus. Calyx utrinque sericeus cupularis, 7-8 mm. diam., 5-lobatus; lobis late triangularibus, 3-4 mm. altus. Petala 5, ca. 7 mm. longa; extus dense sericea, intus glabra. basi cum tubo stamineo agglutinata. Tubus stamineus glaber denticulatus, antheris 10. Discus cupularis, dentatus. Ovarium pilosum, stylo in parte superiore glabro; stigmatate discoideo. *D. cerebriforme* F. M. Bailey in Queensland Agricultural Journal, Vol. II, N.S., p. 73 (1914), non Botany Bull. (Dept. Agric., Brisbane), XIV, p. 7 (1896).

Tree, branches strong, young parts densely silky pubescent, leaves equally pinnate, 2-4 jugate, rachis with the petiole up to about 18 cm., the petiole itself about 6 cm. long. Leaflets opposite or subopposite, oblique, elliptic-lanceolate, apex acute or acuminate, base cuneate, principal nerves 10-12, on either side of the mid-rib, slightly impressed on the upper surface, raised on the lower, and often hairy in the axils. Blade of leaflet 10 cm. long, 5 cm. broad; petiole strong, 2 mm. long. Panicles short, terminal or subterminal, branches and pedicels silky-pubescent. Calyx cup-shaped, silky on both the outer and inner surfaces, 5-lobed, 7-8 mm. diam.; the lobes broadly triangular, 3-4 mm. long; petals 5, about 7 mm. long, densely silky on the outer surface, glabrous on the inner, attached at the base to the staminal tube. Staminal tube glabrous, denticulate, anthers 10. Disk cupular, dentate. Ovary hairy, style glabrous in the upper part, stigma discoid.

Atherton, H. W. Mocatta, May, 1914.

Excursions

The President of the Cairns Alpine Club invites members of the N.Q.N. Club to the following excursions:—

15th June, Barron Gorge; 7th July, Over Hambledon Range along Freshwater Creek to Intake; 21st July, Walsh's Pyramid.

Further particulars from Mr. Higlett, Bank of N.S.W., Cairns.

Book Review

THE FREE-LIVING UNARMORED DINOFLAGELLATA, by Chas. Atwood Kofoid and Olive Swezy, Univ. of Calif., 562 pages, 12 plates and 388 figs. in text. Published by Univ. of Calif. Press, Berkeley, Cal.

This splendid work makes a wonderful text book for students of this particular branch of Marine Biology. The book is a most comprehensive work containing many chapters embodying the whole life cycle of the Unarmored Dinoflagellata, and also in meticulous detail many excellent plates and drawings of the different species. Students of this branch of marine biology will find a vast fund of information in this volume; it should be of immense value to anyone wishing to study the plankton to be found in North Queensland waters.



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 10

CAIRNS, JULY 1935

Serial No. 34

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—
Monday, 8th July, 1935

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr. R. F. G. Fogarty, Esplanade, Cairns
Mr. A. B. Mills c/ P. J. Doyle Ltd.
Lake Street, Cairns.

PROPOSER
Mr. Wyer
Mr. Wyer

SECONDER
Dr. H. Flecker
Dr. H. Flecker

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—

Lecture by Mr. W. F. Tierney; "Orchids; The Rise and Progress in Culture"

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J.P., J. McAuliffe, J. G. Brooks,
T. P. Walsh

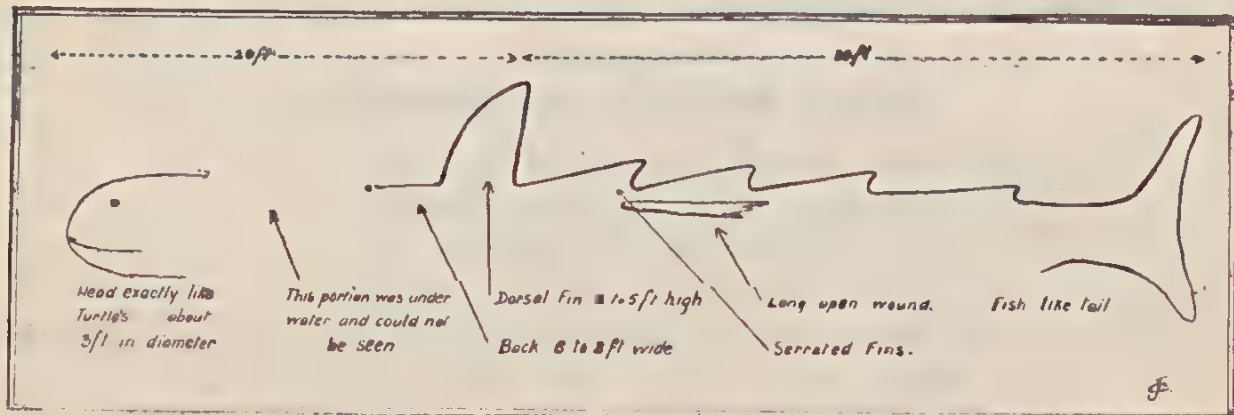
Unidentified Sea Animal

A series of newspaper reports of a strange animal seen was recorded thus:—

Innisfail, 15th Aug., 1934. A fishing party comprising Messrs W. Chung, P. Ogden, E. Ogden, E. How Kee, B. Clark and B. Crimmin had a strange experience yesterday morning when they were at a spot three miles from Mourilyan Harbour, and more than twice that distance from Flying Fish Point. The party aver that they sighted what was a specimen of sea serpent and in the light following the dawn they had a good view of this weird marine visitor. According to accounts brought by them to Innisfail, the sea was very calm, when without warning the monster suddenly appeared some little distance from the launch. It had a weird head, whilst its neck resembled a snake in its sinuous twistings. The head waved backwards and forwards above the surface for some little time, and it was estimated the full length of this marine visitor was about 50 feet. The rest of the body from the head down could be seen on the surface of the sea. After viewing the fishermen the "apparition" began to swim slowly and a few seconds later it was submerged, only to reappear a few minutes later. On this occasion it was in considerably closer proximity to the boat. The repulsive appearance of this denizen of the deep coming nearer to the party caused them some little apprehension. The sea serpent did not come right up to them but started swimming around in circles during which it made peculiar sounds which were distinctly heard. Then the strange thing stopped swimming and lay almost motionless on the surface of the sea, giving those on board the boat an excellent view of it. A little later the sea serpent started swimming out to sea and continued in that direction till it was lost to view. Some of the party declare that the monster had a head like a turtle and its eyes were small, and protruding teeth. The back of this strange marine creature seems to have a considerable number of spikes protruding from it.

Word was also received that some people who were engaged fishing near Flying Fish Point yesterday morning some miles from where the big marine specimen was first seen, also observed something very strange out to sea. It did not look like a whale, but was some extraordinary form of marine life.

The accompanying drawing was made by one of the eye witnesses, Mr. E. How Kee.



Later reports are the following:—

Townsville Daily Bulletin, 20th August, 1934. A little group of Townsvillites—two men and a 9-year-old boy—who went out into Cleveland Bay on Sunday (19th) believe that it has sighted the strange monster; otherwise they declare, there is another denizen of the deep which they have seen. The Townsville party set out on Sunday morning in a 14 feet motor launch, intending to drop anchor and fish at the Fairway Beacon at the entrance to the Platypus Channel, which is about 4 miles from the breakwater heads. When nearing the the beacon, the boy drew attention to a dark object which was to be seen about 400 yards to the eastwards of the beacon. It was taken to be a whale, of which a number have been seen in our waters. The launch continued on its journey and a little later the anchor was thrown a short way out from the beacon. The object still remained above water, standing possibly 8 feet out. It was clearly a head, resembling more that of a huge turtle than anything else, and slightly arched. Further along, 3 small dark objects were seen, possibly a boats length apart, giving the appearance of a monster of the sea with a series of humps. The object was seen for about 20 minutes: then it submerged, and soon after rose again. The party watched it for a little longer, and then decided to return to town, to land the boy, and endeavour to secure a camera. It looked as if it might remain there all day.

Two pressmen, armed with cameras, promptly joined the fishermen, and the launch returned to the bay. The boat cruised around in the vicinity in which the monster was seen and remained there for some hours, but without catching a glimpse of it. When the launch was returning into the bay, the steamer "Marella" steamed in and anchored outside the Fairway. Perhaps it disturbed the creature.

Bowen, 24th August, 1934. The North Queensland sea monster has been seen again—this time by Mr. H. Hurst, a well-known Bowen fisherman. He was on his way to Bowen with a load of fish, when he saw a dark object on the surface of the water, which he pointed out to his companions, Messrs C. Hurst and J. Ayles. The sea was dead calm at the time. While they were watching, the creature suddenly raised its head 8 to 10 feet out of the water. They then saw that it was a huge kind of snake, about 30 to 35 feet long. It had a head like a turtle and a body like a big ribbed hose. The party did not stop the launch, as they had no rifle on board. The monster was in the vicinity of Gloucester Passage, and when last seen was heading towards Sinclair Bay, which lies at the opposite side of the harbour from Bowen, about 16 miles distance.

Book Review

INSECT WONDERS OF AUSTRALIA, by Keith C. McKeown, Asst. Entomologist Australian Museum, Sydney. 252 pp., 31 photogr. illustrations. Publ. by Angus and Robertson, Ltd., Sydney. 6s.

In his preface, the author states that the illustrations form a series of pictures of living insects which can hardly be rivalled by any similar work produced in other countries. There is little doubt that this claim is true. The text is written in a delightfully interesting style, easily read and understood, even by those who know nothing about insects and absolutely free from any technicalities. This book is certain to create greater interest in a truly wonderful world and can be recommended to everybody even though they may confess to having no interest at all in "wogs" of any sort.

Excursions

The President of the Cairns Alpine Club invites members to the following excursions:—July 14, Budabadoo. July 28, Rail to Kuranda to Buchan's Point via Double Is. Lookout. Fare 3/.

Full information from Mr. Ian T. Higlett, Bank of N.S.W., Cairns.

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1
No. 9, p. 5—*Hibbertia longifolia*. Add mo. 12.
Add loc. Herberton (Bates)
P. 6—After *Himantandra* add F.v.M.
No. 10, p. 5—After *Flacourtia* add L'Heritier.
After (F.) *cataphracta* add Rolfe.
After *Scolopia* add Schreber.
After *Brassica* add Tournefort.
After *Rinorea* add Aublet.
Drosera spathulata. Add mo, 12.
Add loc. Brown's B. (Flecker).
P. 6—Add (F.M.B.) after following locs:
Kayea Larnachiana. Mossman R.
Calophyllum inophyllum, All except Palm. I.
Polygala leptalea. All.
P. arvensis. Endeavour R. southward.
Bredemeyera secunda. Both.
B. excelsa. Ranges about Rockingham B.
Melia azedarach v. australasica. After loc. Green Is. add (Wright).
After loc. Mulgrave R. add (F.M.B.)
Add (F.M.B.) after following locs:—
Dysoxylum latifolium. Is. off Rockingham B.
D. Pettigrewianum. Scrubs at base of Bellenden Ker,
D. Schiffneri. Harvey's Cr.; Russell R. Scrubs.
Before (D.) *smooroides* add (D.) *sericiflorum*, White. 5.
Atherton (Mocatta).
For (D.) *oerebriforme* (Bail.) read *amooroides*, Miq.
Add mo. 1.
Add locs. Mowbray R. (Brass); Barron R. (Cowley); Mulgrave R. (F.M.B.)
Babinda (Illingworth); Johnstone R. (Hording).
Add (F.M.B.) after following locs:—
Aglaia elaeagnoides. Is. of G. of Carpenteria; Entrance Is.; Endeavour Str.
- No. 11, p. 4—*Tribulus cystoides*. Add mos. 7 and 12.
Add loc. Michaelmas Cay (Flecker).
P. 8—*Glochidion ferdinandi*, var. *mollis*. Add mo. 11.
Add loc. S. Mossman R. (Flecker).
No. 12, p. 6—After (*Mallotus*) *nesophilus* add (F.v.M.)
Vol. 2, p. 12—*Semecarpus australiensis*. Add mo. 10.
Add (F.M.B.) after all locs. except Annan R.
P. 18—*Polygonum attenuatum*. Add mo. 12.
Add loc. Kuranda (Flecker).
P. 22—Before *Rumex* add (P.) *praetermissum* Hook, f. 6. Cairns (Flecker).
Boerhaavia diffusa. Add mo. 12.
Add loc. Michaelmas Cay (Flecker).
For (*Pisonia*) *Brunoniana*, Endl., read *umbellifera* (Forst). Seem. 11.
Add loc. Mossman Gorge (Flecker).
P. 24—*Jacksonia purpurascens*. Add mo. 12.
Add loc. Herberton (Bates),
Vol. 3, p. 3.—*Crotolaria striata*. Add nos. 1, 3 and 10.
P. 4—For GONYSYLACEAE read GONYSTYLACEAE.
P. 7—For (*Stylosanthes*) *mucronata*, Willd. read (*S.*) *sundaica* Travnt. 5
Add loc. Cairns (Flecker).
P. 27—*Mucuna gigantea*. Add mo. 5.
Add loc. Edge Hill (Morris).
P. 31—*Vigna lanceolata*. Add loc. Mt. Mulligan (Flecker).
For (*Dolichos*) (*biofirus*. l. Mal.kan read (D.) (*buflorus*, L. Mal.kan.
P. 32—For (A.) *rigosus* read (A.) *rugosus*

Census of North Queensland Plants (continued)

(Figures after plants indicate flowering months)

- Pterolobium*, R.Br.
nitens, F.v.M.
Mt. Mueller, nr. Edgecombe B. (Dall.)
Dioclea, L.
reflexa, Hook. 12.
Range Rd. (Kajewski)
Cajanus, DC.
cajan (L.) Millsp. Pigeon Pea. 8.
Range Rd. (Flecker)
Cassia, L.
Brewsteri, F.v.M. 9 and 10.
Bloomfield R. (Francis) Pt. Denison (Bowman)
var. *sylvestris*, F.M.B. Mowei
Kamerunga (Cowley) Cardwell (R.B.H.)
laevigata, Willd. Arsenic Bush. Trop. Amer. and Afr.
Atherton Tablel. Area (White); Rockingham B. (F.v.M.)
Sophera, L. var. *schinifolia*, Benth.
Rockingham B. southw. (Dall); Burdekin R. (F.v.M.)
occidentalis, L. Coffee Senna. Afr.
Atherton Tablel. (White); Endeavour R. nr. Cooktown (McDougall)
alata, L. Ringworm Scrub. Ind.
Pt. Douglas (F.M.B.); Barron R. Dist. (Cowley)



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 11

CAIRNS, AUGUST 1935

Serial No. 35

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MONTHLY MEETING—

Monday, 12th August, 1935

JOINT MEETING WITH CAIRNS ART SOCIETY

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

Mr. B. O. Balfe, 52 Abbott St., Cairns

PROPOSER	SECONDER
Dr. H. Flecker	Mr. H. Purcell

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

7. Subject for the Evening—
"Art as applied to Natural History."

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J.P., J. McAuliffe, J. G. Brooks,
T. P. Walsh

North Queensland Orchid Records

By the REV. H. M. R. RUPP, Woy Woy, N.S.W.

I have already been allowed to present some notes on the orchids of this great area, in this journal for July and December 1934 and February 1935. The following notes may be regarded as supplementary, in part dealing with more recent records, and in part giving further information in regard to some of the species already dealt with.

Oberonia Titania Lindl. (*O. palmicola* F.v.M.)—This fairy orchid with the fairy name has reached me from two sources: (1) Dr. Flecker of Cairns who secured some fine specimens from Mr. Flockart obtained at Kuranda, as well as others obtained at a considerable altitude from Mt. Bartle Frere by members of the Cairns Alpine Club; (2) Mr. Macpherson at Proserpine. *O. Titania* extends southward to New South Wales, and I collected it on the Bellinger River last year. But Dr. Flecker and Mr. Macpherson both sent what may be termed a "giant" form, the plant and racemes being approximately three or four times as large as the type. The individual flowers, however, are no larger, and agree in all respects. Dr. Flecker had previously sent a very diminutive specimen, also from Kuranda, collected by Mr. Flockart, so that evidently both forms occur about the Barron Gorge.

Liparis habenarina F.v.M.—See "N.Q. Nat." for July 1934. This species has recently given us a surprise, Mr. W. Fordham having found it between Brunswick Heads and Byron Bay in N.S.W. It was supposed to be a strictly tropical plant. I have related the circumstances and have given a figure of the plant in the "Victorian Naturalist" for May 1935.

Microtylis congesta Reichb. f.—See "N.Q. Nat." for Dec., 1934. Mr. Bates's plants flowered well for me, and five capsules were developed on one raceme. I did not observe the agent, but the fact of fertilisation is interesting. In its native habitat this orchid develops capsules very freely.

D. Bairdianum Bail.—This species reached me from Ingham per Mr. A. Glindeman. A budding raceme failed to develop.

D. Taylori Fitzg.—Cairns, W. F. Tierney, and later, Dr. Flecker, who obtained his specimens firstly from Mr. T. Carr from Root's Creek and subsequently from a considerable altitude on Mt. Bartle Frere from members of the Cairns Alpine Club. This species flowered in the late autumn of 1935. It appears to be far more amenable to cultivation than its near ally *D. hispidum* A. Rich.

D. teretifolium R.Br.—See "N.Q. Nat." for Dec. 1934. A review of the species was read at the N.S.W. Linnean Society meeting of May 1935. The North Queensland form was described as var. *fasciculatum*, var. nov. The racemes are clustered in "fascicles" at the base of the leaf, giving a most distinctive appearance to this form: and there are other differences.

D. Mortii F.v.M.—See "N.Q. Nat." for July 1934, under *D. Bowmanii* and as a corollary to this, the "Q'land Nat." (Brisbane) for August 1934.

Bulbophyllum sp. (2). Specimens from Kuranda and from an islet in Josephine Creek, Bellenden Ker Range, with two flowers only, appear to be *B. Prenticei*, F.v.M.; and some from Ingham and some locality unknown to us, correspond well with *B. lichenastrum*, F.v.M. but flowers are lacking. Further material, with more flowers, is required in both cases. There is some doubt whether the plate in Fitzg. "Austr. Orch.," II, which was published after Fitzgerald's death, is really *B. lichenastrum*, and Rolfe in Orch. Review xiii, 1905, expresses the view that this species is a *Dendrobium*, not a *Bulbophyllum*.

To be continued.

Excursions

The President of the Cairns Alpine Club invites members to the following excursions:—11th August, Yarrabah to Brown's Bay (by launch). 25th August, Upper Stony Creek, via No. 13 Tunnel, fare 1/6. September, Glen Boughton and Gorge (by launch. Further details from I. T. Higlett, Bank of N.S.W.

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1, No. 10 p. 6—*Calophyllum*
inophyllum. For Alexandrian
 Laurel read Tacahamae Tree.
 Add mcs. 6 to 8.
- Vol. 3, p. 40.—Before *Pterolobium* add
Flemingia, Roxb.
lineata Roxb.
 G. of Carp. (F.v.M.); Burdekin R.
 (Bowman); Denison Cr. (Bow-
 man); Pt. Denison (Dall.);
 Edgecombe B. (Dallachy).
pauciflora, Benth.
 G. of Carp. (Landsborough).
parviflora, Benth.
 Burdekin R. (Bowman); Pt.
 Denison (Dall.)
involverata, Benth.
 Endeavour R. (R.Br.)
- Dalbergia*, L.
densa Benth.
 P. of Wales I. (R.Br.); Albany I.
 (Hill).
- Lonchocarpus*, HB. et K.
Blackii (F.v.M.), Benth. 10.
 L. Barrine (Kajewski).
- Derris*, Lour.
uliginosa Benth. Mo-kor-ia.
 I. of G. of Carp. (R.Br.); C. York
 (Hill).
- Koolgibberah*, F.M.B. Koolgibberah.
 Mulgrave R. Scrubs (F.M.B.)
trifoliata, 5, 10.
 Green Is. (Bates); Wright's Cr.
 (Flecker); L. Barrine (Kajewski)
- Pongamia*, Vent.
 C. York (M'Gillivray); Fitzroy I.
 (M'Gillivray); Pt. Denison
 (Fitzalan); Edgecombe B. (Dall.).
pinnata, (L.). Merrill.
 Daintree R. (Kajewski).
- Sephora* L.
tomentosa, L.
 Burdekin (F.v.M.); Green I.
 (Wright).
- Castanopsis*, Cunn.
australe, Cunn. Black Bean Tree.
 10 to 12.
 Endeavour R. (B. and Sol);
 Daintree R. (Kajewski); Barron
 Par. (Swain); Gadgarra Par.
 (Swain); Malanda Par. (Swain);
 Dirran Par. (Swain).
- Caesalpinia*, L.
naga, Ait.
 Bernard I. (M'Gillivray).
- Mezoserium*, Desf.
brachycarpum, 11.
 S. Mossman R. (Flecker).
robustum, White. 8 10 and 11.
 Butcher's Creek (Miss Walsh);
 Bonnie (Kajewski); Danbulla
 (Kajewski).
- Cassia alata*. For Ringworm Scrub
 read Ringworm Shrub.

Census of North Queensland Plants (continued)

(figures after plants indicate flowering months)

Cassia

- magnifolia*, F.v.M. 1, 2 and 5.
Up. Gilbert R. (F.v.M.); Chillagoe (Burton); Herberton (Burton); Clarke's R. (F.v.M.); Georgetown (Dunn).
- glauca*, Lam.
Yama I. (Macgregor); Pt. Denison (Fitzalan); Edgecombe B. (Fitzalan).
- retusa*, Sol. 3.
Mt. Mulligan (Flecker)
- australis*, Sims. Southern Cassia. 9.
Burdekin (F.v.M.)
- circinata*, Benth.
Burdekin R. (F.v.M.); Edgecombe B. (Dallachy).
- eremophila*, Cunn. Desert Cassia.
Burdekin (F.v.M.)
- oligophylla*, F.v.M. Turkey-bush.
Gulf Country (Bancroft).
- leptoclada*, Benth.
I. of G. of Carp. (R.Br.)
- Absus*, L. Chichm. 4.
I. of G. of Carp. (R.Br.); Walsh R. (Barclay-Millar); Hodgkinson R., Mt. Mulligan (Flecker); Pt. Denison (Fitzalan).
- minusoides*, L. 4.
I. of G. of Carp. (R.Br.); Moa I. (Macgregor); Chewko (Flecker):
- Petalostyles*, R.Br.
labichioides, R.Br.
var. *cassioides*, Benth.
G. of Carp. (F.v.M.)
- Labichea* Gaudich.
Buettneriana, F.v.M.
Endavour R. (Persich); C. Bedford (Poland).
- nitida*, Benth.
Rockingham B. (F.M.B.); Hinchinbrook I. (F.M.B.)
- rupstris*, Benth.
Newcastle Ra. (F.v.M.)
- Brassii*, White and Francis. 2 and 4.
Forest Home Stn., Gilbert R. (Brass); Mt. Mulligan (Flecker).
- Bauhinia*, L.
Carronii, F.v.M.
Cloncurry (Palmer); Burdekin (F.M.B.)
- Hockeri*, F.v.M.
Gilbert R. (F.v.M.); Is of Torres Str. (Henne).
- menandra*, Kurz Tropical America.
Endavour R. (F.M.B.)
- Harknessiana*, F.M.B.
Coen (Mrs Garraway).
- Azelia*, Sm.
australis F.M.B. Johnstone R. Teak
Johnstone R. (Bancroft).

- Cynometra*, L.
ramiflora, L.
Palm I. (Herbert).
- Erythrophloeum*, Afzel.
Laboucherii, F.v.M. Red Ironwood.
Is. of G. of Carp. (R.Br.); Gilbert R. (F.v.M.); Mitchell R. (F.M.B.); Palmer R. (F.M.B.); Batavia R. (F.M.B.); Endeavour R. (B. and Sol.); Atherton Highlands (Swain); Burdekin R. (F.v.M.)
- Entada*, Adans.
scandens Benth. Matchbox Bean.
C. York (F.M.B.); Batavia B. (R.B.H.); Wright's Cr. (Flecker); Cardwell (F.M.B.); Palm I. (Herbert); Cleveland B. (F.M.B.)
- Adenanthera*, L.
abropsoma, F.v.M. Oon-doo.
Gilbert R. (F.M.B.); Mitchell R. (Palmer); Palmer R. (F.M.B.); Mulgrave Tel. Stn. (Barclay-Millar).
var. *falcata*, F.M.B.
Koorboora (Waddell).
- pavonina*, L. Red Sandalwood.
Mulgrave R. (F.M.B.)
- Neptunia*, Lour.
gracilis Benth.
var. *major*, Benth.
Burdekin R. (F.v.M.)
var. *villosula*, Benth.
G. of Carp. (Landsborough).
- monosperma*, F.v.M.
G. of Carp. (Henne).
- Mimosa*, L.
pubica, L. Common Sensitive Plant of Trop. Amer. 1 to 12.
Cairns (Flecker); Innisfail (Flecker).
- Acacia* Willd.
plehocarpa, F.v.M.
G. of Carp. (F.M.B.)
- Binoeana*, Benth. Dwarf Nealia.
G. of Carp. (F.v.M.)
- juncifolia*, Benth.
Is of G. of Carp. (R.Br.); Pt. Bowen (Cunn.)
- galeoides*, Benth.
Sweers I. (Henne); Is. of G. of Carp. (R.Br.)
- subternata*, F.v.M.
Newcastle Ra. (Blackman).
- Victoriae* Benth. Bramble Acacia.
G. of Carp. (F.M.B.)
- decora*, Reichb.
Cloncurry (Palmer).
- uncifera* Benth.
Torrens Cr. (Young).



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club

Vol. III. No. 12

CAIRNS, SEPTEMBER 1935

Serial No. 36

North Queensland Naturalists' Club

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month at 8 p.m.

BUSINESS FOR NEXT MEETING—Monday 9th September

Annual General Meeting; Election of Officers; Presidential Address:
Botanic Gardens for Cairns.

1. Minutes.
2. Correspondence and Reports.
3. Election of Members.

	PROPOSER	SECONDER
Mr. A. Hawkins, Tropical Nursery, Edge Hill	Dr. Flecker	Mr. G. Bates
Mr. R. Hunter c/- A. J. Draper Ltd., Cairns	Mr M. Auricchio	Mr. J. Wyer
Mr. N. Lothian, 33 York St., Mont Albert E 10, Vict.	Dr. Flecker	Brother Dennis
Mr. Onyans, Customs Office, Cairns	Mr. J. Wyer	Mr. M. Auricchio
Mrs. W. Pittman, Highleigh	Mr. G. Bates	Mr. H. Purcell

4. Nominations for Membership.
5. General Business.
6. Remarks by Exhibitors.

It is particularly desired that members having interesting specimens should exhibit them at the Club's meetings, make a few remarks on them and furnish written particulars for record purposes. Brief descriptions should accompany exhibits for the benefit of fellow-members.

Office Bearers for 1934-35

President: Dr. H. Flecker, M.B., F.R.C.S., etc.

Vice-Presidents: Capt. W. Fish, Miss M. E. Hooper

Hon. Librarian: Mr. H. Purcell

Hon. Treasurer: Mr. R. J. Gorton

Hon. Secretary: Mr. J. Wyer, "Lochinvar," 253 Sheridan St., Cairns

Hon. Assistant Secretary: Mr. Michael Sergeant

Committee: Messrs M. Auricchio, J.P., J. McAuliffe, J. G. Brooks,
T. P. Walsh

The Far Side of Torres Strait

By DR. G. H. VERNON, M.C., F.R.G.S. Aust.

Continued from page 31

Many of the coastal people in other parts of Papua, belong to the Melanesian group and show a marked difference to the Jewish type of the west. Up to recent times, the Fly river natives have been headhunters and cannibals, and developed the cult of Totemism to a marked degree.

So much for the origin of local natives, which has been traced to an old established race, with primitive characteristics. It is surprising when one comes to know the modern representative, to find how little he differs from ourselves in many ways. But we now know that the members of the human race, whether hailing from the Papua or from the seats of culture in Europe, are after all very similar to one another.

The Western native is peaceful, industrious, and fairly intelligent. His staple diet is Sege and his physique proves that Nature has provided him with a satisfactory one. I believe that on the whole, the birth rate is falling: there are said to be some villages with no children under five; but the infantile mortality is also high. These people are free and happy under British rule, and though rather independent and fully conscious of their own rights are invariably respectful to Europeans.

INDUSTRIES and ECONOMIC SITUATION

The white population living on the lands bordering the Straits number but 25 of all ages and sexes, and about equally divided into Government officials, Missionaries and independent Planters and Traders. Naturally, the typical form of industry does not exist. The soils are heavy and poor. Copra and rubber are grown, also tobacco and Kapok. Nobody has grown rich on these products, and planting prospects are poor. Pearlshell, trochus and beche de mer of poor quality are exported occasionally.

A few years ago the hope of the district lay in the discovery of oil by the Oriomo Oil Co. These hopes have been blasted and Daru has become another Borneo as was at one time expected by the optimistic. A district that is largely composed of mud and heavy alluvial soils holds out no hopes of metals. There seems little immediate future before this part of Papua, and the Western Division will, I fear, remain moping at the hearth for a long time before the Fairy Godmother comes to light.

(To be Continued)

Excursions

The President of the Cairns Alpine Club invites members to the following excursions:—8th Sept. Glen Boughton and Gorge, (by launch). 22nd Sept. Behana Creek Falls. Fare 3/6. 6th Oct. Red Bluff to Kuranda and down Smithfield Range. Fare 1/6. Further particulars from I. T. Higlett, Bank of N.S.W., Cairns

Book Review

A KEY TO THE EUCALYPTS, by W. F. Blakely, Botanic Gardens, Sydney, with Descriptions of 500 Species and 135 Varieties and a companion to J. H. Maiden's Critical Revision of the Genus Eucalyptus. Price 10/-; Net. 339 pages and a few figs. This fine work gives an illustrated introduction to the classification of the species based substantially upon the characters of the anthers. A considerable number of new species and varieties, not previously described is included. A very special and exceedingly useful feature is that every species and variety has received a distinctive and appropriate vernacular name. It can be recommended not only to botanists and nature lovers, but as such characters as honey, oil, timber, etc. are specified in detail, to apiarists, timber merchants, collectors of eucalyptus oil, whilst as a reference book many other readers will find it highly informative and full of interest.

Additions to List of Local Fish

Unknown locally. *Alectis indica*, Ruppell. Diamond Trevally. Family Carangidae.
Local name "Ling". *Rachycentron canadus*, Linnaeus, Black Kingfish. Family Rachycentridae.
Local name "Black Bream". *Sparus berda*, Forskal. Pikey Bream. Family Sparidae

Addenda et Corrigenda

(Figures after plants indicate flowering months)

- Vol. 1
No. 9, p. 6—*Peperomia enervis*. Add loc. Root's Cr. (Carr).
P. 8—*Polanisia viscosa*. Add locs. Normanton (Priest); Donaldson's R. (Priest).
Add mo. 4.
No. 10, p. 5—*Drosera indica*. Add (F.M.B.) after locs. Is. of G. of Carpentaria, Lizard Is, Endeavor R.
After Mt. Mulligan add (Flecker).
Add mo. 5.
P. 6—After (*Melia*) *azedarach*, L., var. *australasica*, add C. DC.
After *Dysoxylum*, add Blume.
P. 7—Before (*Evodia*) *xanthoxyloides* add
(E.) Elleryana, F.v.M. Boogoobie, 2 Herberton (F.M.B.); Butcher's Cr. (Miss Walsh); Dunk I. (F.M.B.).
After *Microstemma*, add R.Br.
(E.) *xanthoxyloides*. Add loc. Bartle Frere (Flecker).
Add mo. 6.
P. 8—For *Citrus*, (L.), read *Microcitrus*, Swingle.
No. 11, p. 4—Before (*Tribulus*) *cystoides* add
(T.) *terrestris*, L. Calthrops. 4. Hodgkinson R., Mt. Mulligan (Flecker).
Urena lobata. Add loc. Tully (Carmichael).
Add mos. 4 to 6.
P. 5—*Hibiscus divaricatus*. Add loc. Hartley's Cr. (Flecker).
Add mo. 10.
Triumfetta rhomboidea. Add loc. Murdering Pt. (Priest).
Add mos. 4 and 6.
P. 7—*Euphorbia atoto*. Add loc. Green Is. (Flecker).
Add mo. 1.
No. 12, p. 5—*Breynia cernua*. Add loc. Butcher's Cr. (Miss Walsh).
Add mo. 2.
P. 7—*Ricinus communis*. Add loc. Daradgee (Priest).
Add mos. 7 and 8.
Excaecaria agollacha. Add loc. Yarrabah (Flecker).
Add mo. 1.
Vol. 2, p. 12—After *Corynocarpus*, add Forst.
After *Limonium* add L.
P. 16—*Achyranthes aspera*. Add loc. Cairns (Flecker).
Add mo. 5.
Vol. 3, p. 3—*Crotalaria Mitchellii*. Add loc. Carpent. Dns. (Priest).
Add mo. 4.
P. 7—*Stylosanthes sunaica*. Add loc. Mt. Mulligan (Flecker).
Add mos. 4 and 7.
Indigofera viscosa. Add loc. Hodgkinson R., Mt. Mulligan (Flecker).
Add mo. 4.
P. 23—*Desmodium biarticulatum*. For Rock-Ingham B. read Rock-Ingham B.
Add loc. Cairns (Flecker).
Add mo. 5.
For (D.) *brachypodium* read *brachypodum*.

Census of North Queensland Plants (continued)

(Figures after plants indicated flowering months)

Acacia

- purpureapetala*, F.M.B.
 Stannary Hills (Bancroft);
 Herberton (Stirling).
- translucens*, Cunn.
 Is. of G. of Carp. (R.Br.);
 Massacre Inlet G. of Carp.
 (Brass).
- Simsii*, Cunn. 2.
 G. of Carp. (R.Br.); Mt. Mulligan
 Flecker); C. Upstart (F.M.B.);
 Cleveland B. (Cunn.); Pt. Denison
 (Fitzalan); Edgecombe B.
 (Dallachy).
- var. *multisiliqua* Benth.
 Is. of G. of Carp. (R.Br.)
- homalophylla*, Cunn. Myall.
 Cloneurry (F.M.B.)
- excelsa*, Benth. Ironwood Wattle.
 4 and 5.
 Clarke R. (Daintree)
- homaloclada*, F.v.M.
 Hinchinbrook I. (Dall.)
- complanata* Cunn.
 Endeavour R. (B. and Sol.)
- Rothii*, F.M.B. Lar.
 Mouth of Batavia R. (Roth).
- dineura*, F.v.M.
 Stannary Hills (Bancroft)
- sericata*, Cunn.
 G. of Carp. (F.v.M.); Etheridge
 (F.M.B.)
- oraria* F.v.M. 6.
 Nr. beach, Cairns (F.v.M.); nr.
 beach, Rockingham B. (F.v.M.);
 nr. beach. Pt. Denison (F.v.M.)
- flavescens*, Cunn. Red Wattle. 1 to
 5.
 Mt. Mulligan (Flecker); Cook-
 town (Roth); C. Bedford (Roth);
 Palm. I. (Herbert).
- Wickhami* Benth.
 Is. of G. of Carp. (F.M.B.)
- lysiphloea*, F.v.M. Urr-tee
 Is. of G. of Carp. (R.Br.); Palmer
 R. (Roth).
- linarioides*, Benth.
 Cavern Is., G. of Carp. (R.Br.)
- Chisholmi*, F.M.B.
 Prairie (Chisholm); Torrens Cr.
 (Chisholm).
- stipuligera*, F.v.M.
 Gulf Country (F.M.B.)
- umbellata*, Cunn. 2.
 Is. of G. of Carp. (R.Br.); Mt.
 Mulligan (Flecker).
- xylocarpa*, Cunn.
 G. of Carp. (F.v.M.)
- gonocarpa*, F.v.M.
 Rocky shores of G. of Carp.
 (F.v.M.)
- drepanocarpa*, F.v.M.
 G. of Carp. (F.v.M.); Palm Is.
 (Henne); Whitsunday I. (Henne)
- conspersa*, F.v.M.
 I. of G. of Carp. (R.Br.)
- delibrata*, Cunn.
 Gulf Country (Bancroft).
- torulosa*, Benth. 8.
 G. of Carp. (F.v.M.); Mt.
 Mulligan (Miss Wheatley);
 Dayman's I., Endeavour Str.
 (Hill).
- julifera*, Benth.
 Rockingham B. (Hill); Edgecombe
 B. (Dall.)
- leptostachya*, Benth.
 Pt. Denison (Fitzalan);
 Edgecombe Hts. (Dall.)
- leptocarpa*, Cunn. I-wa-wal.
 C. York (Hill); Mid. Palmer R.
 (F.M.B.); C. Flinders (Cunn.);
 Endeavour R. (Cunn.); Pt.
 Denison (Fitzalan).
- polystachya*, Cunn.
 Is. of G. of Carp. (R.Br.);
 Endeavour R. (Hill).
- holocarpa*, Benth.
 Trinity B. (Hill); Rockingham B.
 (Dall.)
- nlectocarpa*, Cunn.
 Is. of G. of Carp. (R. Br.)
- aulacocarpa*, Cunn. Hickory Wattle.
 1 to 6.
 Saibai Is. (Macgregor); Mt.
 Mulligan (Flecker); Gadgarra
 (Kajewski); Dunk I. (F.M.B.)
- calyculata*, Cunn.
 Endeavour R. (B. and Sol.);
 Fitzroy I. (Cunn.)
- crassicarpa*, Cunn. Lancewood.
 Sweets I. (Henne); Albany I.
 (Hill).
- mangum*, Willd.
 Edgecombe B. (F.M.B.)
- var. *holosericea*, Cunn. War-room.
 Is. of G. of Carp. (R.Br.);
 Endeavour R. (B. and Sol.);
 Cooktown (F.M.B.); Range Rd.
 (Kajewski); Palm I. (Herbert);
 Pt. Denison (F.M.B.); Edgecombe
 B. (Dall.)
- cincinata*, F.v.M.
 Rockingham B. (F.M.B.)
- latifolia*, Benth. 12.
 Is. of G. of Carp. (R.Br.);
 Princess Charlotte S. (Roth).



The North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club.

Vol. IV.

CAIRNS, OCTOBER, 1935.

No. 37

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Business for Next Meeting—Monday, 14th October.

Election of Members.

	Proposers	Seconders
Mr. Jones-Humphrey, Lake St., Cairns.	Mr. M. Auricchio	Mr. J. Wyer
Miss F. Colquhoun, McLeod St., Cairns.	Capt. W. Fish	Mr. H. Purcell
Miss D. Colquhoun, McLeod St., Cairns.	Capt. W. Fish	" "
Mr. G. L. Rutherford, Lake St., Cairns.	Mr. J. McAuliffe	Mr. T. Walsh
Mr. St. John Robinson, Paxton St., T'ville.	Dr. H. Flecker	Mr. J. Wyer

Excursions.

The President of the Cairns Alpine Club invites members to the following excursions:—

6th October—Red Bluff to Kuranda and down Smithfield Range. Fare 1/6.

20th October—Campbell Creek Falls. Fare 3/-.

Further particulars from I. T. Higlett, Bank of New South Wales, Cairns.

Notes from the Presidential Address.

Dr. Flecker dealt with the necessity of Botanical Gardens for the City of Cairns. The far north of Queensland possesses wonderful flora, but this is spread over a vast area. Should a scientist or tourist desire to see the beauty of the scrub and forest, many hundreds of miles must be traversed and much time is necessary in so doing.

Cairns, with botanical gardens of properly identified and labelled northern shrubs and trees, must have a far greater attraction for visitors.

Exhibits at the September Meeting.

Dr. H. Flecker—A collection of North Queensland native plants.

Miss Hooper—*Dendrobium Adae* from Bartle Frere.

Capt. W. Fish—*Aspidium confluens*.

Mr. Balfe—An unidentified black rat caught in Cairns.

Visitors during September.

Dr. Guthrie (Sydney) studying the erosion of the surface of Australia and at the same time collecting Lepidoptera (moths and butterflies).

Mr. W. H. Hemmingway (Auckland, N.Z.), collecting insects in general for the Soldiers' Memorial Museum, Auckland.

Mr. and Mrs. E. S. Hanks (Victoria), interested in bird life.

Dr. O. Posthumus (Java), specially interested in ferns.

The Naturalists' Club as Naturalists.

For the club to produce a wild nature show which represents all branches of wild nature, more specialist collectors are required. To make a success of collecting it is desirable that a member select a group and collect that group alone. There are quite a number of specialist collectors in the club, but then again there are many neglected orders in wild nature. Now is the time to start for a larger and better Wild Nature Show for 1936.

Contributions for this Page.

Observations of nature will be greatly appreciated and can be forwarded to J. G. Brooks, Box 545, Cairns.

THE FAR SIDE OF TORRES STRAIT

By Dr. G. H. VERNON, M.C., F.R.G.S. (Aust.)

Continued from Vol. 3, page 46.

Let me conclude with a tale of a Papuan with a remarkable nose. Most Papuan noses resemble door knockers. This man's soared heavenwards in such an ultra retrouse fashion that it attracted much attention in Torres Strait Hospital (Thursday Island) where he was a patient at the time.

This man in due course came on to the operating table, and during the administration of the anaesthetic, we were alarmed at seeing a long black object like a snake, though of dwarf dimensions, being extruded at the nostril. The surgeon, with great presence of mind, seized a forceps and drew out a piece of bamboo coiled up like a watch spring, which had been snugly inserted in a hole cut out in the tip of the nose. On removal the whole organ collapsed on his face.

It was disinfected and placed by his bedside, and eventually, when he

discovered that his beauty had been interfered with, was put back again.

This is surely a stone age variation of modern face lifting.

I now beg to take leave of your company and to thank you for the honour you have shown me by inviting me to add to your contributors. In describing the Far Side of Torres Strait I have tried to give an accurate impression of that district and have not hesitated to mention its bad points. I feel I may have erred in stressing these and that you may go away thinking that the Western Division of Papua has nothing to recommend it.

On the contrary, there is a great interest to visitors, and should any of you wish to journey beyond Thursday Island and see the lonely land that lies to the north of Queensland, you may feel very certain of receiving a warm welcome from those of us who call it home.

ADDENDA ET CORRIGENDUM.

- Vol 1. No. 9, p. 5—*Clematis glycinoides*. For loc. southward, read (F.M.B.). Add mos. 6 and 9 and loc. Proserpine (Macpherson).
- No. 10, p. 5.—*Viola betonicifolia*. Add mo. 4 and loc. Proserpine (Macpherson).
- P. 6.—Before *Dysoxylum* add (M.) *dubia*, Cav. 10. Proserpine (Macpherson).
- No. 11, p. 4—*Malvastrum tricuspdatum*. Add mo. 4 and loc. Cairns. (Flecker).
- Sida acuta*. Do.
- P. 6—*Helicteres semiglabra*. Add mo. 4 and loc. Mt. Mulligan (Flecker).
- P. 7—*Euphorbia heterophylla*. After locs. Green Is. and Cairns Add (Flecker).
- Add mos. 1 and 4 and loc. Proserpine (Macpherson).
- E. prostrata*. Add mos. 3, 4, 6 to 8 and 10 to 1 and loc. Mt. Mulligan (Flecker).
- No. 12, p. 7—*Macaranga Tanarius*. Add mos. 8 to 10 and loc. Proserpine (Macpherson).

- Vol. 2, p. 14—*Amarantus spinosus*. Add mo. 3 and loc. Gordonvale (Flecker).
- P. 16—*Gomphrena lectybens*. Add mos. 3 and 4 and locs. Dimbulah (Flecker) and Babinda (Flecker).
- Chenopodium carinatum*. Add mo. 4 and loc. Mt. Mulligan (Flecker).
- P. 22—*Rivina laevis*. Add mos. 4 to 8 and loc. Cairns (Flecker).
- Boerhaavia diffusa*. Add mo. 4 and loc. Mt. Mulligan (Flecker)
- Vol. 3, p. 40—*Cassia Brewsteri*. Add loc. Proserpine (Macpherson).
- P. 43—*Derris trifoliata*. Add mo. 11 and loc. Proserpine (Macpherson.)
- P. 44—*Cassia glauca*. Add mos. 6 and 10 and loc. Proserpine (Macpherson).
- P. 48—*Acacia nulacocarpa*. For Hickory Wattle read Brown Salwood. Add mos. 7 and 8 and loc. Proserpine (Macpherson).

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

- Acacia dimidiata**, Benth.
Is. of G. of Carp. (R.Br.).
- humifusa**, Cunn. 2.
Is. of G. of Carp. (R.Br.), Mt. Mulligan (Flecker), Albany I. (Hill), Somerset (F.M.B.), Flinders Gp. (Rich. and Hedley), Lizard I. (McGillivray), C. Cleveland (Cunn).
- argentea**, Maiden 4.
Mt. Mulligan (Flecker).
- spectabilis**, Cunn. 8.
Harvey's Ra. (Mitchell).
- Farnesiana**, Willd. Bunkerman 5.
Cloncurry (Palmer), Ft. Denison (Fitzalan).
- Bidwilli**, Benth. Yadthor.
Cloncurry (Palmer), Ft. Denison (Fitzalan).
- Sutherlandi**, F.v.M.
Bew. Georgetown and Junction, Cr. (Burton).
- Albizzia**, Durazz.
canescens, Benth. Thow-i-ee.
Burdekin R. (F.v.M.).
- procera**, Benth.
Thursday I. (F.M.B.), Palm I. (Herbert)
- xanthoxylon**, White and Francis.
Yellow Siris.
Pt. Douglas Dist. (Swain), Mt. Molloy Dist. (Swain), Kuranda Dist. (Swain), Atherton Dist. (Crothers).
- Toona**, F.M.B. Red Siris, 1 to 11.
Endeavour R. (F.M.B.), Pt. Douglas Dist. (Swain), Barron R. (F.M.B.), Cairns (Nugent), Innisfail Dist (Swain).
- Pithecolobium**, Mart.
pruinatum, Benth. Snow-wood.
Herberton (Francis).
- ramiflorum**, F.v.M.
Daintree R. (Fitzalan).
- grandiflorum**, Benth. Lace-flower Tree.
C. York (Hill), Endeavour R. (B. and Sol.), Edgecombe B. (Dall.)
- Lovellae**, (F.M.B.), 1 to 6
Green I. (Wright).
- Hendersonii**, F.v.M.
Innisfail (Francis).
- moniliferum**, Benth. Muller.
Is. of G. of Carp. (R.Br.), Water-courses around G. of Carp. (Leichhardt), Saibai I. (Macgregor), Cloncurry (Palmer).
- sapindoides**, Cunn.
L. Barrine (Kajewski).

Family ROSACEAE, Juss.

- Parinarium**, Juss.
nonda, (F.v.M.) Ranna.
G. of Carp. (F.v.M.), Gilbert R. (F.v.M.), Mabuiag I. (F.M.B.), Albany I. (F.v.M.), C. York (M'Gillivray), Morehead R. (F.M.B.), Cooktown (Roth).
- Griffithianum**, Benth.
C. York Fen. (F.v.M.)
- Pygeum**, Gaertn.
Turnerianum, F.M.B. Abill.
Bloomfield R. (Roth), Barron R. (Cowley), Gadgarra (Kajewski), Evelyn (J. F. Bail), Bellenden Ker (Palmerston and Meston).
- Rubus**, L.
rosaefolius, Sm. Panga-panga 8.
Barron Gorge (Flecker), Dunk I. (F.M.B.).
- alceaefolius**, Poir.
Babinda (White).
- Hillii** (F.v.M.)
Daintree R. (Kajewski).
- Muelleri** (F.v.M.)
Gadgarra (Kajewski).
- Archidendron** (F.v.M.)
Lucyi (F.v.M.)
Daintree (Kajewski).
- Cyclocarpa**, Miq.
stellaris, Afz.
Kelsey Cr. nr. Proserpine (Michael).

Family SAXIFRAGACEAE.

- Argophyllum**, Forst.
Lejourdanii, F.v.M.
Gadgarra (Kajewski), Walsh's Pyramid (F.M.B.), Mt. Elliott (Dall.)
var. cryptophleba, F.v.M.
Mulgrave R. (F.M.B.)
- cryptophlebium**, Zemann.
Mt. Alexander (F.M.B.)
- nitidum**, Forst.
var. fulva, F.M.B.
Mt. Bellenden Ker (Sayer), Mt. Bartle Frere (Johnson).
- Abrophyllum**, Hook.
ornans, Hook 10.
Rockingham B. southw. (F.v.M.).
var. microcarpum (F.M.B.).
Gadgarra (Kajewski), Dunk I. (Banfield).
- Quintinia**, A. DC.
Quatrefagesii, F.v.M.
Bartle Frere Summit (Johnson).

Fawkneri, F.v.M. 10.

Bartle Frere (Kajewski), Rockingham B. (Dall.)

Polyosmia, Blume.

rigidiuscula, F.v.M.

Mt. Bartle Frere Summit (F.M.B.)

reducta, F.v.M.

Russell R. (Sayer).

alangiacea, F.v.M.

Rockingham B. (Dall.)

hirsuta, White.

Harvey's Cr. (F.M.B.), Johnstone R. (Michael).

rhytophloia, White and Francis.

Boonjie (White).

Family CUNONIACEAE.

Callicoma, Andr.

Stutzeri, F.v.M.

Daintree R. (Kajewski), Gadgarra (Kajewski), Rockingham B. (Dall.)

Spiraeanthemum, Gray.

Davidsonii, F.v.M.

Bellenden Ker Ra. (Sayer and Davidson).

Gillbeea, F.v.M., 8

adenopetala, F.v.M.

Daintree R. (Kajewski), Butchers' Cr. (Miss Walsh).

Ceratopetalum, Sm.

Virchowii, F.v.M.

Mt. Bartle Frere (Johnson).

NORTH QUEENSLAND COLEOPTERA (Beetles)

By J. G. BROOKS.

Phalacrognathus muelleri Macl.

(Family Lucanidae). The finest of all the Australian Stag-beetles, rare and confined to North Queensland. The elytra are wonderfully burnished, reflecting a deep metallic carmine with rich green edgings. In the males the mandibles are prolonged forwards, suggesting the antlers of a stag. The larvae are found in rotten wood chiefly of large forest trees, the beetles are found in the same localities often inside the wood, too.

Specimen from the Intake (Cairns.)

Lomaptera duboulayi Thoms.

(Family Scarabaeidae, Sub-Family Cetoniinae). This is a flower-haunting beetle, and is practically confined to the warmer parts of Australia. It is metallic green in colour with a brownish yellow border and yellow legs. It is about one and one quarter inches in length and three-quarters of an inch in width, the body is somewhat flattened.

Specimen from Kuranda.

Lomaptera yorkiana Jans.

(Family Scarabaeidae, Sub-Family Cetoniinae). This beetle is similar in size, shape and habits to *Lomaptera*

duboulayi, but it is plain glossy green specimen with green legs.

Specimen from Cairns.

Callodes grayanus Wh.

(Family Scarabaeidae, Sub-Family Rutelinae). A leaf-eating chafer beetle found principally on eucalypts. About one and one-half inches in length and an inch in width; body rounded dorsally. Bright glossy green in colour with an orange border and orange coloured legs.

Specimen from Ayr.

Callodes atkinsoni Wh.

(Family Scarabaeidae, Sub-Family Rutelinae). In appearance this specimen resembles a miniature *Callodes grayanus*. In size it is about three-quarters of an inch in length and half an inch in width.

Specimen from Gordonvale.

Callodes rayneri Macl.

(Family Scarabaeidae, Sub-Family Rutelinae). Similar in size, shape and habits to *Callodes atkinsoni*, but the elytra are a plain glossy green without a bordering.

Specimen from Mackay.

The
North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club.

Vol. IV.

CAIRNS, NOVEMBER, 1935.

N

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 11th November, 1935.

Lecture by Mr. Gilbert Bates, "The Theory of Coral Reef Formation."

Election of Members.

Mr. E. W. Priest, c/o Mayne & Co. Ltd.,
Wilson St., Newtown, N.S.W.
Mrs. Dalziel, Box 75, Atherton.
Mr. E. G. Roberts, Telegraph Office,
Cairns.
Mr. F. Slater, Edmonton.

Proposers Seconders

Mr. S. Dunn	Mr. J. Wyer
Mr. J. G. Brooks	Miss Hooper
Mr. J. Wyer	Mr. Morris
Dr. H. Flecker	Mr. S. Dunn

The September Lecture.

Mr. S. T. Blake, M.Sc., chose as his subject "A Botanist's Travels in Western Queensland." He dealt fully with the types of country and vegetation found in Western Queensland, also with the importance from the pastoral point of view. The lecture was supplemented with a number of lantern slides and these made the lecture more interesting and educational. "The hospitality of the people in Western Queensland cannot be surpassed," said Mr. Blake.

Exhibits at the October Meeting.

Dr. H. Flecker—A collection of plants from the North Queensland Herbarium, showing the standard mounting of specimens.

Rhododendron Lochae from Mt. Bartle Frere, 4,800 feet above sea level.

Capt. W. Fish—Name plates to be used in the naming of trees in the City of Cairns.

Capt. W. Fish—Blossom, *Darlingia spectatissima*, a tree known on the Atherton Tablelands as Grey Silky or Bull Oak.

The leaf of *Pteris cretica* var. *albolineata*. This specimen was grown by him from spores. It is a horticultural form, not native, and probably from Crete.

Mr. S. Dunn—Larva of *Danaida archippus* Fabr., Order Lepidoptera, Family Nymphalidae, Sub-family Danainae. This specimen was collected on an orange tree.

Mr. J. G. Brooks, L.D.S.—A collection of Coleoptera, listed in the September issue of this journal.

Visitors during October.

Professor A. Watson (Adelaide), interested in Fish and Geology.

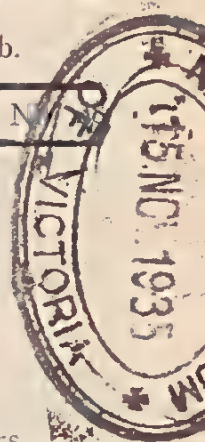
Mr. S. T. Blake, M.Sc. (Brisbane), Walter and Eliza Hall Research Scholar in Economic Biology for 1935-36. Studying the Grazing Lands of Queensland for the Queensland Government.

Mr. Taylor (Sydney), from the School of Tropical Medicine, Entomologist.

Mr. J. Callaghan (Brisbane), interested in the rotary hoe as an agent for the destruction of the larvae of *Lepidiodia caudata*, which are destroying the pastoral grasses of the Atherton Tablelands.

BOOK REVIEW.

7. AUSTRALIAN SPIDERS AND THEIR ALLIES by Walter W. Froggatt, F.R.Z.S., Pres. Naturalists' Soc., N.S.W., 123 p.p., 50 illust. Publ. by Roy. Zool. Soc. of N.S.W., 2/6. This is the first handbook yet published on Australian spiders, etc., and includes illustrated descriptions of spiders, ticks, mites, centipedes, bug killers, scorpions and wood lice. For popular study and reference at a popular price, it is difficult to conceive of a more useful volume. The descriptions are as free from technical terms as is possible, and in addition to the technical names, vernacular names are given in practically every instance to various families as well as to the different species. To those who desire to know something about our spiders and their allies, this volume can be strongly recommended.



FOSSILS AND THEIR MEANING.

Synopsis of Lecture given to the North Queensland Naturalists' Club by F. S. COLLIVER, Esq., Hon. Sec. Field Naturalists' Club of Victoria.

The study of fossils or the science of Palaeontology (Gr. Palaios, ancient; onta, beings; logos, reasoning) is one of the oldest of the sciences, although many strange ideas in relation to the nature of fossils were held by the early workers. For example: Theophrastus (about 300 B.C.) thought that fossils were due to a plastic virtue latent in the earth; this idea was adopted by quite a number of subsequent naturalists who ought to have known better.

The term "Fossil" (Lit. fossus, dug up) is now restricted to the remains of or evidence of previous life on the earth. When fossils were first collected it was evident that they were not all of the same age owing to their position in the strata, and it was soon seen that some table for age determination was necessary.

Early workers divided the then known strata into three layers which they called Palaeozoic Mesozoic and Cainozoic; or most, middle and least ancient. Another series of terms were Primary, Secondary and Tertiary, and both of these sets are used for classification purposes still.

These terms were insufficient and gradually others were introduced, these introductions were mainly for well-developed series of strata, and in many cases the names used were taken from the locality; e.g.: Devonian from Devon; Jurassic from the Jura Mountains; and now we have quite a lengthy series of names denoting ages for the various strata that constitute the earth's crust; for Australia, they may be listed as follows:—

ERA	EPOCH
Cainozoic or Tertiary	Holocene
	Pleistocene
	Pliocene
	Miocene
	Oligocene
Mesozoic or Secondary	Eocene
	Cretaceous
	Jurassic
	Triassic
	Permian
Palaeozoic or Primary	Carboniferous
	Devonian
	Silurian
	Ordivician
	Cambrian
	Pre-cambrian

It must be noted that when the term "Beds" or "Series" are used they have reference to deposits of rock that have been laid down in water (either marine, lacustrine or estuarine) or wind blown deposits that have collected on the surface; it is practically only in deposits of these kinds that fossils occur. The word rock may mean either sandstones, shales, slates, limestones, mudstones, clays or loose earthy deposits.

The question is often asked "How old are these in terms of years?" Here the geologist is surrounded by difficulties, and it is impossible to give an answer with any degree of accuracy. To illustrate this:— Two workers endeavoured to obtain at least an approximate series of ages in terms of years for the epochs given, by estimating the time taken for sedimentary deposits to form in the sea at the present time.

It was found by actual measurement that approximately one inch of sediment formed per century, this being an average taken for numerous different localities; the thickness of all the known sedimentary series was estimated and the total brought to inches.

For England, the total thickness of the sedimentary series was approx. 18 miles and this gave an age of 33½ million years, in Australia, however, the total thickness of the sediments is nearly 37 miles, this then would make Australia to be twice the age of England; it can be seen then that any such estimation for age is subject to a great deal of error; and when other workers using other theories to base their calculations on, obtain answers which vary by thousands of million of years, it can be seen that these estimations though interesting, are of little value to the science.

For age of a fossil then, we use the name of the series the specimen occurs in; e.g.: Silurian, Eocene or Pleistocene, etc.

Fossils may be the actual animals preserved (e.g.: Mammoths preserved in the frozen soils of Siberia) complete skeletons or only separate bones or teeth, shells or other hard parts of animals, vegetable matter, casts and impressions or even footprints and other similar markings.

(To be continued)

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

- Schizomeria*, Don.
floribunda, Schlatter.
 L. Barrine (Kajewski).
- Davidsonia*, F.v.M.
pruriens, F.v.M. Davidsonian Plum.
 10.
 Edge Hill (Flecker), Mourilyan
 (Flecker), Tully R. (J. F. Bail).
- Ackama*, Cunn. and Francis.
quadrivalvis, White and Francis. 3
 to 7.
 Cooktown Dist. (Swain), Gadgarra
 (Kajewski), Innisfail Jungle
 (Swain), Rockingham B. (Dall.).
- Geissois*.
lachnocarpa, F.v.M. Rose Marara.
 12 to 4.
 Up. Barron R. (J. F. Bail), Atherton
 Dist. (Swain).
- Weinmannia*, L.
apetala, F.M.B. 12 and 1.
 Kamerunga (Cowley).
- Family CRASSULACEAE. DC.**
Bryophyllum, Salisb.
calycinum, Salisb. Africa.
 Cairns (Wright).
- Family NEPENTHACEAE.**
Nepenthes, L.
Kennedyana, F.v.M.
 C. York (Jardine), C. Sidmouth
 (Moore).
Bernaysii, F.M.B.
 C. York (Jardine).
albo-lineata, F.M.B.
 C. York Pen. (Jardine).
Moorei, F.M.B.
 C. York Pen. (Jardine).
Jardinei, F.M.B.
 Somerset (Jardine).
Rowanae, F.M.B.
 C. York (Jardine).
Alicae, F.M.B.
 C. York Pen. (Jardine).
Cholmondeleyi, F.M.B.
 5 miles S. of Jardine R. (Jardine).

- Armbrustea*, F.M.B.
 Coen (Miss Armbrust).
Garrawayae, F.M.B.
 Betw. York Dns. and Weipa (Gar-
 raway).

Family OENOTHERACEAE.

- Jussiaea*, L.
suffruticosa, L. 3 to 10.
 Mt. Mulligan (Flecker), Lizard I.
 (M'Gillivray), Innisfail (Flecker),
 Burdekin R. (Bowman).
- Ludwigia*, L.
parviflora, Roxb. 4.
 Hodgkinson R., Mt. Mulligan
 (Flecker).
- Gaura*, L.
parviflora, Roxb.
 Hodgkinson R., Mt. Mulligan
 (Flecker).

Family ARISTOLOCHIACEAE,

- Juss.
Aristolochia, L. Birthwort.
deltantha, F.v.M.
 Pt. Douglas, F.M.B., Rockingham
 B. (Dall.)
pubera, R.Br.
 Rockingham B. (Dall.)
Thozetii, F.v.M.
 Barron R. (Nugent), Rockingham
 B. (Dall.).
indica, L., var. *magna*, F.v.M.
 Is. of Torres Str. (F.M.B.), En-
 deavour R. (B. and Sol.), Rocking-
 ham B. (Dall.).

Family Lythraceae.

- Ammania*, L.
pentandra, Roxb.
 Lynd R. (Leichardt), Endeavour R.
 (R.Br.).
 var. *decussata*, Benth.
 Is. of G. of Carp. (F.M.B.).
diandra, F.v.M.
 Gulf Country (F.M.B.)
triflora, R.Br.
 Is. of G. of Carp. (R. Br.).

ADDENDA ET CORRIGENDA.

- Vol. 1, no. 9, p. 6. Before (*Pepe-romia*) *enervis* add (P.) *reflexa*, Dietr. 6, 10. Mt. Bartle Frere (Flecker).
 P. 8. *Polanisia viscosa*. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.

- No. 10, p. 5. *Drosera indica*. Add loc. Barron R., Mareeba (Flecker) and mo. 7.
 P. 8. *Acronychia haplophylla*. Add loc. Bartle Frere (Flecker) and mo. 6.
 No. 11, p. 4. Add (F.M.B.) after following locs.

- Canarium muelleri*, Bloomfield R.
Ganophyllum falcatum, Both.
Tribulus terrestris. Add locs. Carpentaria Dns. (Crosbie) and Mareeba (Flecker) and add mos. 6 and 7.
 Add (F.M.B.) after following locs.
T. cystoides. G. of Carpentaria and Pennefather R.
T. hystrix. Towards G. of Carpentaria.
Ryssopterys timorensis. C. Cleveland.
 After *Malvastrum tricuspidatum* Gray. Introduced add Pantropical. Add mo. 7.
 Before (*Sida*) *macropoda* add (*S. corrugata*, L. 6. Carpentaria Dns (Crosbie). Var. *trichopoda*, Benth. 7. Carpentaria Dns. (Crosbie).
 Add (F.M.B.) after following locs.
S. macropoda. G. of Carpentaria.
S. acuta, var. *mutica*. Macarthur R. G. of Carpentaria.
Abutilon otocarpum, Stokes' Range on Gilbert R.
A. graveolens, Pipe's Is.
A. muticum. Source of Burdekin.
Urena armitiana. Etheridge R.
 P. 6 *Melhania incana.* Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 Before *Waltheria* add *Melochia*, L., *pyramidata*, L. 6. Carpentaria Dns. (Crosbie).
W. americana. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
Commersonia echinata. Add loc. Behana Cr. (Flecker) and mo. 9.
Grewia polygama. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 Before *Corchorus* add (*T.*) *repens* Merr. 6. Green I. (Flecker).
 P. 8. **Glechidion supra-axillare.** Add loc. Proserpine (Macpherson) and mo. 9.
 No. 12, p. 6. **Mallotus philippinensis.** Add loc. Barron R., Mareeba (Flecker).
 P. 8. **Ficus eugenioides.** After loc. Atherton add (F.M.B.). Add mo. 8.
 Vol. 2, p. 2. **F. casearia.** Add loc. Russell R. (Flecker) and mo. 6.
 P. 4. **Caryospermum arborescens.** Add loc. Bartle Frere (Flecker) and mo. 6.
 P. 8. **Harpullia frutescens.** Add loc. Mt. Bartle Frere (Flecker) and mo. 6.
Dodonaea lanceolata. After Mt. Mulligan add (Flecker). Add loc. Rechter's Cr. (Flecker) and mo. 7.
 P. 12. For (**Plumbago**) *zealanica* read *zeylanica*. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 P. 14. After **Amarantus spinosus** (L.) Prickly Amaranth. Introduced, add Pantropical. Add mo. 9.
Amarantus viridis. Add loc. Carpentaria Dns. (Crosbie).
 P. 16. Before (*Alternanthera*) *denticulata* add (*A.*) *nodiflora*, R. Br. 6. Carpentaria Dns. (Crosbie). (*A.*) *denticulata*. Add loc. Carpentaria Dns. (Crosbie) and mos. 6 to 8.
 (*A.*) *nana*. Add loc. Carpentaria Dns. (Crosbie) and mos. 1 to 3 and 6 to 8.
 After *Gomphrena decumbens* add Jacq.
Chenopodium carinatum. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 P. 18. Before (**Mollugo**) *Spergula* add (*M.*) *Glinus*, A. Rich. 6. Carpentaria Dns. (Crosbie).
Polygonum plebeium. Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 P. 22. **Pisonia umbellifera.** Add loc. Bartle Frere (Flecker) and mo. 6.
 For THYMELAEACEAE read THYMELEACEAE.
Pimelea cornucopiae. Add loc. Yungaburra (Carmichael) and mos. 4 and 6.
 Vol. 3, P. 3 *Crotolaria linifolia.* Add locs. Mareeba (Flecker), Yungaburra (Carmichael) and mos. 4, 6 and 8.
 P. 7. **Psoralea leucantha.** Add loc. Carpentaria Dns. (Crosbie) and mo. 6.
 P. 23. **Alysicarbusivaginalis.** Add loc. Mareeba (Flecker) and mo. 7.
 P. 27. After (**Glycine**) *tabacina*, Benth., add Variable *Glycine*.
 P. 44. **Cassia retusa.** Add loc. Bartle Frere (Flecker) and mo. 6.
C. mimusoides. Add loc. Yungaburra (Carmichael) and mo. 6.
Acacia Victoriae. Add loc. Carpentaria Dns. (Crosbie) and mo. 7.
 Vol. 4, P. 3. **Rubus Hillii.** Add loc. Chuchuba (Flecker) and mo. 6.
 P. 24. After **Elaeagnus**, add L.

North Queensland Naturalist

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Vol. IV.

CAIRNS, DECEMBER, 1935.

No. 39

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 9th December, 1935.

Joint Meeting with Boy Scouts of Cairns.

Subject for evening: Scouts and Natural History.

Election of Members.

Mr. J. V. Pelling, 201 McLeod Street, Cairns.
Mr. G. A. McBride, 71 Abbott Street, Cairns.
Master Robert Birch, 9 Pembroke Street, Cairns.
Master B. Henderson, 3 Terminus Street, Cairns.

Proposers	Seconders
Mr. H. Purcell	Mr. G. L. Rutherford
Mr. G. L. Rutherford	Mr. R. J. Gorton.
Mr. J. Wyer	Mr. R. J. Gorton.
Miss Williams	Miss J. Whittick

November Lecture.

A very interesting lecture was given by Mr. G. Bates on "The Theory of Coral Reef Formation." The lecture dealt very fully with the various theories advanced by Darwin, Murray and others in explanation of this phenomenon. He also dealt with the various efforts of scientific expeditions to prove or disprove the rival theories. The lecturer was assisted by the episcope belonging to the club and this proved very helpful in enabling the members to understand the various features illustrated.

Exhibits.

Mr. H. Chargois—Aerial photographs of Green Island and surrounding reef and Cairns Inlet.

Mr. G. Ernst—Banded Sand Crab, *Charybdis cruciata*.

Dr. H. Flecker—Poached Egg Cowry, *Ovulum ovum*, Bullrout (*Notestes robusta*).

Mr. E. Pitt—Bird of Paradise.

Mr. J. Wyer—Nest of Yellow-breasted Sunbird, *Cyrtostomus frenatus*.

Mr. J. Wyer—Shell of Hawk's Bill Turtle.

Mrs. Jenkins—Striped Opossum, *Dactylopsila trivirgata*.

Mr. A. B. Cummings—Hermit Crab, *Dardanus megisthops* in *Dolium*.

Mr. T. R. Hall—Backscratcher, *Tapeinochilos pungens*, var. *Queenslandiac*.

BOOK REVIEW.

8. GOULD LEAGUE SONGS AND POEMS. 75 pp., 3 photogr. illust., 2 coloured plates, music for 15 songs. Publ. by N.S.W. Gould League of Bird Lovers. Not for sale. This is an excellent, exceedingly interesting little book on novel lines. Verses on the better known birds, many set to music of well-known rhymes, coloured illustrations of four fantails and four whistlers, and most beautiful photographs of birds and their nests, together with some descriptive text will certainly appeal to many, especially younger people who otherwise can have no other interest in birds than to aim a shanghai, shoot them or destroy them in other ways. The Gould League is certainly to be congratulated in displaying the beauties of bird life in such an interesting manner.

FURTHER NOTES ON NORTH QUEENSLAND ORCHIDS.

By The Rev. H. M. R. RUPP, Woy Woy, N.S.W.

Bulbophyllum exiguum, F.v.M.?—Dr. Flecker sent specimens obtained by Mr. T. Carr from Root's Creek in the Mount Molloy District and from Miss F. Vallance gathered on Mt. Bartle Frere

which I have provisionally determined as this species, but further fresh material is desirable to confirm the determination.

B. Macphersonii, Rupp.—See *N.Q.*

Nat. for July, 1934 (under *Osyricera purpurascens* Deane. The strange history of this little orchid, which at Dr. Rogers' suggestion has now been renamed after Mr. K. Macpherson, of Proserpine, will be found in the *Vict. Nat.* for July, 1934.

Phreatia limenophylax Reichb.—This curious little orchid, suggestive of a scrap of *Mesembrianthemum* has reached me from (1) Cairns (Dr. Flecker) where they were obtained from Mr. T. Carr, of Root's Creek, and from a member of the Cairns Alpine Club from Mt. Bartle Frere. (2) Ingham (Mr. Glindeman). The flowers are minute.

I am indebted to Dr. H. Flecker for specimens of the first four plants here dealt with, and to Messrs. W. F. Tierney and K. Macpherson for the remainder.

Anoectochilus Yatesae, Bailey in *O'land Agr. Journ.* XIX, 1907. In the "Queensland Flora," Bailey remarks that he had received "leafy short specimens of what will most probably prove a species of the above genus (*Anoectochilus*) from the Trinity Bay Ranges." His prediction was later verified by a flowering plant, which he named after the finder, Mrs. Arthur Yates. The type specimen, which I have been allowed to inspect by the Queensland Government Botanist, Mr. C. T. White, is now in the National Herbarium at Brisbane. In July, 1935, Dr. Flecker sent me a small terrestrial orchid collected by Mr. Larnach near Ravenshoe. I was unable to determine it with any certainty, but concluded that it must belong either to *Anoectochilus* or to *Cheirostylis*. I forwarded the specimen to Dr. R. S. Rogers, who expressed the view that it was certainly an *Anoectochilus*, and was probably *A. Yatesae*. Inspection of the type material kindly lent by Mr. White soon proved this opinion to be correct. The species is small, but has the beautiful foliage characteristic of *Anoectochilus*: in this case the leaves are a deep brownish-green, with reticulate veins almost golden yellow. The labellum is remarkably fimbriate, and there are long filiform appendages to the column.

Oberonia pusilla, Bailey. This and the next two plants were obtained by Dr. Flecker himself near Ravenshoe. *O. pusilla* is very distinct from our two other species in Australia, *O. iridifolia* Lindl. and *O. Titania* Lindl. It

is even smaller than the latter, and the leaves, though similarly distichous, are semi-cylindrical. There is a very definite stem, shortly branching. The specimen was not flowering, but two typical spicate *Oberonia* racemes of capsules were present.

Bulbophyllum Macphersonii, Rupp. (*B. purpurascens*, Bailey; *Osyricera purpurascens*, Deane & Bailey. See "Victorian Naturalist," July, 1934.) Mr. Kenneth Macpherson found this plant on Mt. Dryander, and in the article referred to will be found the reason for its new name. The original locality was the Bellenden Ker Range. Dr. Flecker's locality is new.

Cleisostoma cornutum, sp. nov. 1935.—Planta parva radicibus aeriis. Caulis brevis, folia lata, superiora majora. Racemi foliis paullum long-



CLEISOSTOMA CORNUTUM
sp. nov.

An enlarged flower, and greatly enlarged callium and column, are shown above.

iores, cum floribus paucis. Sepala petalaeque fusca, striata; labellum viride, rugosum, apice obtusissimo cornuto;

calcar obtusum, striatum. Columna brevis cum appendice uno in rostellii fronte.

A small plant, somewhat similar to *C. tridentatum* Lindl. with aerial roots; leaves broader and stem short, the upper leaves larger than the lower. Racemes slightly longer than leaves, with few flowers. Sepals and petals brown, striate; labellum green, rugose, with a very obtuse apex furnished with a spreading "horn" on either side. Spur blunt, striate-ridged. Column short, with a single horn-like appendage in front of the rostellum. Anther markedly depressed on top. Capsule not seen.

The curious horn-like processes of the labellum at once suggest a name for this distinctive little species, which reached me with two flowers in excellent condition for examination. Dr. Flecker sent a plant with a much younger one immediately above it, both attached to a twig. They are quite healthy after two month's residence in N.S.W.

Luisia teretifolia, Gaudich?—Mr. W. F. Tierney sent a plant, obtained by him during a trip to Cape York and the neighbouring islands, which he thought might prove to be an *Aerides*. No flowers were present, but a capsule was received, approximately of similar size and form to that of *Dendrobium teretifolium*. In the absence of flowers it is not possible to express a very definite opinion, but I think the plant is most probably *Luisia teretifolia*.

Dendrobium sp.?—Mr. Tierney also

sent two plants of a *Dendrob* which he has supposed to be *D. fusiforme* Bailey. For some time I have possessed two plants which seem to me beyond doubt to belong to the latter species. Mr. Tierney's plants were without flowers, but they do not impress me as identical with mine. They may prove to be a shorter and relatively stouter form of *D. fusiforme*, but I think it possible that they are *D. criocarpum*, a species figured by Fitzgerald in his unpublished plates, which are in the Mitchell Library at Sydney. Nothing appears to be known of this species beyond the fact that Fitzgerald figured and—presumably—named it. It will be interesting to learn whether it is identical with Mr. Tierney's plants.

Zeuxine oblonga Rogers and White.
—Mr. Kenneth Macpherson found plants of this little-known terrestrial orchid in the Proserpine district in 1934. The flowers were nearly all past maturity. In July, 1935, he sent me three young plants, all of which prospered in a pot and began to bloom in September. I know of no orchid less orchid-like in appearance, except the subterranean *Rhizanthella* and *Cryptanthemis*. At a casual glance one might pardonably mistake this little *Zeuxine* for a member of the *Acanthaceae*. The leaves wither before the flowers develop. *Z. oblonga* will be found described by Dr. Rogers and Mr. C. T. White in Proc. Roy. Soc. Q'land, September, 1920.

ADDENDA ET CORRIGENDA.

Vol. 1, No. 9, p. 8. *Capparis umbellata*. For Coast Scrubs from C. York to Pt. Denison, read C. York (F.M.B.), Rechter's Cr. (Flecker), Pt. Denison (F.M.B.). Add mo. 7.

No. 10, p.5. *Ionidium suffruticosum*. Add loc. Rechter's Cr. Mth. and mos. 7 and 10.

No. 11, p. 6. *Grewia polygama*. Add loc. Rechter's Cr. Mth. (Flecker) and mos. 7.

For (*Triumfetta*) procumbens, Forst. read (*T*) repens, Merr.

6. Add loc. Green I. (Flecker).

Vol. 2, p. 6. Before *Diploglottis* add *Cardiospermum*, L.

Halicacabum, L. Heart Pea, 6. 10. Barron R., Mareeba (Flecker).

P. 24. After *Elaeagnus*, add L.

Vol. 3, p. 3. *Crotalaria juncea*. Add loc. Mareeba (Flecker) and mo. 7.

P. 7, bottom of page. Add (*Indigofera*) *hirsuta*, L. 7, Barron R., Mareeba (Flecker).

P. 15. *Tephrosia juncea*. Add loc. Rechter's Cr. (Flecker); add mo. 7.

P. 24. This page is incorrectly numbered 20.

P. 31. *Flemingia parviflora*. Add loc. Rechter's Cr. Mth. (Flecker) and mo. 7.

P. 40. *Dioclea reflexa*. After Hook. add f. Add loc. S. Mossman R. (Flecker) and mo. 11.

P. 43. Delete *Flemingia lineata*, F. pauciflora, F. parviflora and F. involucrata.

After (*Mezoneurum*) *brachycarpum* add Benth.
 P. 7. After Geissois add Labill.
 Vol. 4, p. 8. Delete (T.) repens.
 For *Alysicarbusivaginalis* read
Alysicarpus vaginalis.

Delete last line P. 24. After *Elaeagnus*, add L.
 P. 7, bottom of page. Add
 (*Indigofera*) *hirsuta*, L. 7.
 Barron R., Mareeba (Flecker).

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

Anmanzia, Lam.
indica, Lam.
 Endeavour R. (B. and Sol.).
auriculata, Willd. 5 and 9.
 Pt. Lookout (B. and Sol.), Cairns
 (Flecker).
Lagerstroemia, L.
flos-reginae, Retz. India. 11 to 4, 8.
 Endeavour R. (Persieh).
indica, L. India.
 C. Sidmouth (Curdie).
Archeriana, F.M.B.
 Palmer R. (Baird).
 var. *glabrescens*, F.M.B.
 Coen (Mrs. Garraway), Walsh R.
 (Barclay-Millar).
Sonneratia, L.
alba, Sm. Pornupan.
 Cooktown (Roth), Johnstone R.
 (Bancroft), Palm I. (Herbert).
 Family **STACKHOUSIACEAE**.
Stackhousia, Sm.
muricata, Lindl.
 Dunk I. (M'Gillivray).
intermedia, F.M.B.)
 Lizard I. (F.M.B.).
viminea, Sm.
 Nagi I. (Macgregor).
 Family **HALORAGIDACEAE**.
Haloragis, Forst.
heterophylla, Brongn. Rough Rasp
 wort.
 Burdekin R. (F.M.B.).
stricta, R.Br.
 Rockingham B. (F.M.B.).
acanthocarpa, Brongn. 4.
 Is. of G. of Carp. (R.Br.), Mt.
 Mulligan (Flecker), Rockingham
 B. (Dall.), Gould I. (M'Gillivray).
Muriophyllum, L.
verrucosum, Lindl.
 Mt. Elliott (Fitzalan).
 Family **RHIZOPHORACEAE**,
 R.Br.
Rhizophora, L.
mucronata, Lam. Red Mangrove. 7
 and 12.
 Is. of G. of Carp. (F.v.M.), En-
 deavour R. Mth. (Saville-Kent).
 Cairns Neighbourhood (Saville-
 Kent), Low Is. (Yonge), Russell
 R. (F.M.B.), Palm I. (Herbert),
 Bowen (Saville-Kent).

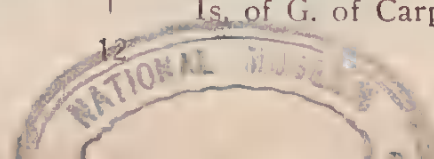
Cerriops, Arn. Spurred Mangrove.
Tagal, C.B.Rob. 12.
 Batavia R. (Roth), N. Cairns
 (Flecker), Russell R. (F.M.B.),
 Palm I. (Herbert).
Bruguiera, Lam.
Rheedii, Blume. Black Mangrove. 7.
 Is. of G. of Carp. (F.M.B.), Is.
 of Torres Str. (Swain), Batavia
 R. (F.M.B.), P. Charlotte B.
 (Swain), Cooktown (F.M.B.).
 Cairns (Swain), Russell R. (F.
 M.B.), Palm I. (Herbert).
gymnorhiza, Lam.
 Palm I. (Herbert).
caryophylloides, Blume.
 C. Sidmouth (Curdie).
parviflora, W. et. Arn.
 Johnstone R. (Bancroft).
Carallia, Roxb.
integerrima, DC. Mel-joor-ang. 6.
 Musgrave (Roth), Endeavour R.
 (R.Br.), Cooktown (F.M.B.),
 Bartle Frere (Flecker).
brachiata, Lour.
 Range Rd. (Kajewski).

Family **ALANGIACEAE**.

Alangium, Lam.
vitiense, Gray. 7.
 Gadgarra (Kajewski).

Family **COMBRETACEAE**.

Terminalia, L.
Catappa, L. Indian Almond. 9.
 Is. of Torres Str. (F.M.B.),
 Cooktown (F.M.B.), Low Is.
 (Yonge), Green I. (Wright),
 Rockingham B. northw. (F.M.B.)
platyptera, F.v.M.
 Etheridge R. (Batho), Palmer R.
 (Batho).
 var. *glabrata*, Benth.
 Gilbert R. (F.v.M.)
volucris, H.R.B.
 Is. of G. of Carp. (R.Br.), Sweers
 I. (Henne).
oblongata, F.v.M.
 Burdekin R. (F.v.M.).
bursarina, F.v.M.
 G. of Carp. (F.v.M.), Gulf
 Country (Hann).
circumalata, F.v.M.
 Is. of G. of Carp. (R.Br.).





North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club.

Vol. IV.

CAIRNS, JANUARY, 1936.

No. 40

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 13th January, 1936.

Lecture by Mr. M. J. Manski, "The Structure of Orchids as Compared with Other Flowers."

Election of Members.

Father Norman, Yarrabah.
Dr. E. R. G. Sheil, Innisfail

Proposers Seconders

Mr. H. Purcell Mr. W. Morris
Mr. H. Purcell Dr. H. Flecker

Notice

Will those who desire to organise or participate in excursions at short notice, kindly communicate with the Hon. Secretary.

The November Meeting

There was a very good attendance of Scouters and Scouts and the various phases of Natural History Study were dealt with in detail. As a result of this meeting Natural History will be given more prominence in the training of scouts. One scouter even went so far as to say that the scouts may form a Junior Field Naturalists' Club of their own. In any case there will be co-operation between the Scouts and the Club, to the advantage of both.

Exhibits at the November Meeting.

Dr. Flecker—Herbarium specimens

listed in the December issue of the Journal.

Mr. Hunter—Two cases of *Lepidoptera* (moths and butterflies) caught or bred by him in the Freshwater district.

Capt. Fish—Large stoneaxe head, ploughed up in Atherton.

Mr. Morris—Seed-pods of *Mucuna gigantea*.

Rev. Rupp—Photo of the Proserpine orchid—*Zeuxine oblonga*.

Mr. G. Bates—Undescribed orchid from Eubenangee.

Mr. G. Brooks, L.D.S.—Two boxes of *Colcoptera* (beetles) collected in the Cairns district during the preceding month.

Observations of Nature

will be greatly appreciated and can be forwarded to J. G. Brooks, Box 545, Cairns.

SOME NOTES ON BIRD LIFE AT CAIRNS.

By E. S. HANKS (Victoria)

Two minutes from the Cairns Town Hall is a field for the investigation of bird-life unequalled by any of its kind so far visited by the writer. The particular types of birds to which I refer are those known as "Waders"—birds which follow the receding tides to feed on the shores, reefs and mud-flats.

Many of these waders nest in far Northern Asia, making a journey of nearly half round the globe to reach southern latitudes for our summer, and returning to spend the northern summer in the Arctic circle. What a journey for a small bird! And it is the careful observation of the coming and going—a census of the species present from week to week, which is so necessary to extend what is known of these migrations.

For this work the beach at Cairns is unexcelled and residents have a unique opportunity in a field where much remains to be done.

During a visit to Cairns recently, large numbers of birds were observed feeding along the beach. At the sandy edge were a number of Silver Gulls (*Larus novae-hollandiae*), overhead a Gull-billed Tern (*Gelochelidon nilotica*) flew searching the shallows for small fish. This Tern has black legs and—unlike any other species of Tern—has a bill resembling that of a Silver Gull. In shallow water a large white Egret (*Egretta alba*) was manoeuvring a fish it had just caught into a suitable position for swallowing. Several of the gulls and a Little Egret (*Egretta garzetta*) hun-

grily watched the large white bird devour the morsel but dared not molest it. Not far off several specimens of the White Ibis (*Threskiornis molucca*) were prodding the mud with long black curved bills. Three other species noted also for long curved bills were at work on the mud-flats, namely the Whimbrel (*Numenius phaeopus*), the Little Whimbrel (*Mesocolopax minutus*), and the large sea-going Curlew (*Numenius cyanopus*). These species while easily separated from other waders by reason of the long curved bill, are not as easily separated from each other and the best guide is the respective sizes if they are together as on this occasion.

The Mangrove Bittern (*Butorides striata*) gave a remarkable demonstration of his ability to change the length of his neck; at times he would remain with it stretched out like a heron. A little later he appeared short-necked and almost tern-like. His burglar-like tread and sudden dart of the bill marked him as essentially a bird that lives by stealth.

Turnstones (*Arenaria interpres*) were noted in several places and a number of Red-capped Dotterels (*Charadrius ruficapillus*) ran almost at our feet. A single

specimen of the Grey Plover (*Squatarola squatarola*) passed quietly by; this was the first ever seen by the writer and it remained under observation for over half an hour. Godwits (*Limosa sp.*) though plentiful did not come very close in, and whether more than one species were present was not determined. White-faced Herons (*Notophoxyx novaehollandiae*) popularly but incorrectly called "Blue Cranes" were in evidence the whole way along the beach and large flocks of Sharp-tailed Sandpipers (*Erolia acuminata*) gave splendid demonstrations of company flying. Many other species of waders were present but were not identified and several individuals were noted in mottled plumage, perhaps not fully moulted from their northern phase for many of these quiet-plumed waders have a quite bright coloured phase up north in the breeding season.

A number of birds seemed to be finding sustenance on the beach in addition to the ordinary species. A pair of Mangrove Kingfishers (*Halcyon chloris*) made frequent excursions using a boat as a vantage point. A pair of Magpie-larks (*Grallina cyanoleuca*) and a flock of Peaceful Doves (*Geopelia placida*) also fed on the sandy edge of the beach.

"FOSSILS AND THEIR MEANING."

Synopsis of Lecture given to the North Queensland Naturalists' Club by F. S. COLLIVER, Esq., Hon. Sec. Field Naturalists' Club of Victoria.

(Continued from Page 6)

Often these organic remains are replaced by mineral matter, and thus the fossils consist of quartz, limonite, barite, vivianite, etc., taking on the same shape and in some cases the internal structure also of the organic original.

The variety of fossils is amazing, practically all living families are represented and by far a greater number of now extinct groups, in some cases little change is noted from the earliest types to those of the present time; e.g., a lamp shell or brachiopod (*Lingula*) found in the Silurian deposits of Victoria differs little from the living form found in Mission Bay, North Queensland; generally speaking, however, transition stages can be noted and family histories from beginning to end may be traced.

Back in the earliest strata (Pre-cambrian) lower types of life as radiolaria, mollusca and crustacea are found only. In Silurian times the first fish made their appearance, and the crustacea become more numerous; as the fish increase in size and number the (crustacea) Trilo-

bites decrease and finally in Carboniferous times become extinct.

In Silurian time too, the first land plants make their appearance. It is interesting to note that Victoria has produced specimens of the oldest land plant in the world. These come from the lower Silurian of the Matlock district; at the Carboniferous era the amphibia apparently have their beginning; the reptiles follow on and the first mammals appear in the Oligocene, whilst Man in his early stages begin about the pliocene.

Some of the groups reached their maximum development quickly and just as quickly declined e.g.: the reptiles in the Jurassic age were characterised by their tremendous size and variety of grotesque form. Some of the animals reached the length of 80 feet and were 20 feet high. Other types were smaller but more fearsome looking, and remains of several of these have been found in Queensland deposits of Jurassic age. Then in the Eocene these animals had declined to only a remnant of what they were. (To be continued)

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

Terminalia

- pterocarpa**, F.v.M.
Sweers I. (J. F. Bail.).
- melanocarpa**, F.v.M., 2, 12.
Mt. Mulligan (Flecker), Snapper I. (Cunn.), Dunk I. (F.M.B.), Pt. Denison (Fitzalan), Edgecombe B. (Fitzalan).
- seriocarpa**, F.v.M. Ngo-go-ro.
C. Bedford (F.M.B.), Cooktown (F.M.B.), Bloomfield R. (F.M.B.)
- Muelleri**, Benth. Eandi.
Batavia R. (F.M.B.), C. York (M'Gillivray), Is. of Howick's Gp. (F.v.M.), Is. off C. Bedford (F.v.M.), Is. off C. Flattery (F.v.M.), Rockingham B. (F.M.B.), Edgecombe B. (Dall.).
var. **minor**, Benth.
Is. of G. of Carp. (R.Br.), Endeavour R. (B. and Sol.).
- platyphylla**, F.v.M. Durin.
Is. of G. of Carp. (R.Br.), Flinders R. (Palmer), Thursday I. (F.M.B.), Mornington I. (Macgregor), C. Bedford (F.M.B.), Cooktown (F.M.B.), Bloomfield (Roth).
- microcarpa**, Dene. Draipute.
Gulf Country (F.M.B.), Pennefather R. (F.M.B.).
- grandiflora**, Benth.
Is. of G. of Carp. (F.M.B.).
- Lumnitzera**, Willd.
coccinea, W. et. Arn. 7.
Edges Mangrove Swamps, C. York (F.M.B.), Endeavour R. (B. and Sol.), Wah Day Cr. (Flecker), Mangrove Swamps, Rockingham B. (F.M.B.).
- racemosa**, Willd. 12.
Is. of G. of Carp. (R.Br.), Cairncross I. Torres Str. (M'Gillivray), Daintree R. (Kajewski).
- Macropteranthes**, F.v.M.
montana, Ra., F.v.M.
Newcastle Ra. (F.v.M.)
- Fitzalani**, F.v.M.
Pt. Denison (F.v.M.)
- Gyrocarpus**, Jacq.
Jacquini, Roxb.
Gilbert R. (F.v.M.), Pt. Denison (F.M.B.)
- Family MYRTACEAE**, Adans.
- Darwinia**, Rudge.
Thomasii, Benth.
Head of Cape R. (Bowman).
- Porteri**, White.
Mt. Mulligan (Flecker), Watsonville, nr. Herberton (Porter).

Verticordia, DC.

- Cunninghamii**, Schau.
Is. of G. of Carp. (R.Br.).
- Calytrix**, Labill
microphylla, A. Cunn.
Is. of G. of Carp. (R. Br.).
- leptophylla**, Benth. 4.
Geraldine Gorge, Mt. Mulligan (Flecker), Newcastle Ra. (F.v.M.)
- laricina**, R.Br.
Is. of G. of Carp. (R.Br.).
- Homalocalyx**, F.v.M
ericaeus, F.v.M.
Is. of G. of Carp. (R.Br.)
- Thryptomene**, Endl.
ligandra, F.v.M.
Is. of G. of Carp. (R.Br.), Lizard I. (M'Gillivray), Endeavour R. (B. and Sol.).
var. **parviflora**, F.v.M.
Gilbert R. (F.M.B.)
- Baeckia**, L.
crenulata, DC.
var. **tenella**, Benth.
Pt. Lookout (Banks), Endeavour R. (F.M.B.)
- Agonis**, DC.
lysicephala, F.v.M.
Lloyd B. (Gulliver), Yarrabah (Michael).
- longifolia**, White and Francis.
Endeavour R.
- Leptospermum**, Forst.
fabricia, Benth.
C. York (Hill), Lizard I. (Cunn), Endeavour R. (B. and Sol.).
- flavescens**, Sm. Tanton. 7 to 10.
Walsh's Pyramid (Miss O'Hanlon), Pt. Denison (Fitzalan).
- stellatum**, Cav.
Rockingham B. (F.M.B.).
- wooroonooran**, (F.M.B.)
S. Peak, Bellenden Ker (F.M.B.)
- Kunzea**, Reichb.
calida, F.v.M.
Flinders R. (F.v.M.).
- Callistemon**, R.Br.
citrinus, DC. Crimson Bottle-Brush.
Upper Barron R. (Pritzel), Mulgrave R. (F.v.M.), Purdekin F. (F.v.M.), Edgecombe B. (Dall.).
- Polandii**, F.M.B.
Bloomfield R. (Poland)
- rigidus**, R.Br.
Endeavour R. (Banks).
- viminalis**, Gaertn. 5 to 12.
Barron R. (McAuliffe), Range Rd. (Kajewski).
- Melaleuca**, L.
acacioides, F.v.M.
Is. of Torres Str. (F.M.P.).

symphyocarpa, F.v.M.
Is. of G. of Carp. (R.Br.), Torres
Str. (F.M.B.)

angustifolia, Gaertn.
Endeavour R. (B. and Sol.)

linariifolia, Sm. Poorga.
Mt. Mulligan (Flecker).
var. *trichostachya*, Benth. Tee-
doo.
Gilbert R. (F.v.M.), Dunk I.
(F.M.B.), Burdekin R. (F.v.M.)

leucodendron, L. Brown Tea-tree.
3 to 12.
Is. of G. Carp. (R.Br.) Mitchell
R. (Palmer), Palmer R. (Roth).
Up. Barron R. (Pritzel), Athert-
ton Plat. (Swain), Betw. Cairns
and Townsville (Swain), Palm I.
(Herbert).
var. *Cunninghamii*, F.M.B.
Murraba. 2 and 9.
Mt. Mulligan (Flecker). Thursday
and other Torres Str. Is.
(F.M.B.).
var. *mimosoides*, Cunn. 7.
Rechter's Cr. Mth. (Flecker),
Range Rd. (Kajewski).

lasiandra, F.v.M.
Musgrave (Jacobson).

genistifolia, Sm. Prickly-leaved
Tea-tree. 6 to 12.
Mt. Elliott (Fitzalan).

minutifolia, F.v.M.
Flinders R. (Bowman).

foliosa, Cunn.
C. Flinders (Cunn.).

Eucalyptus, L'Her.
capitellata, Sm. Brown Stringy-
bark. 12 to 2.
Rockingham B. (F.M.B.)

scabra, Dum-Cours. White Stringy-
bark. 1 to 12.
Herberton (F.M.B.)

triantha, Link. White Mahogany.
8 to 3.
Stannary Hills (Blakely), Athert-
ton Plat. (Swain), Rockingham
B. (Dall.)

carnea, Baker. Thick-leaved Ma-
hogany. 10 to 1.
Range Rd. (Kajewski), Atherton
(Blakely), Rockingham B. Blake-
ly).

paniculata, Sm. Grey Ironbark. 1
to 12.
Atherton Table. (Swain).

microcorys, F.v.M. Tallow Wood.
5 to 2.
Cleveland B. (Hill).

ADDENDA ET CORRIGENDA.

Vol. 1, no. 10, p. 8. *Acronychia parvi-
flora* Add loc. Mt. Bartle Frere
(Flecker) and mo. 10.

No. 11, p. 7. *Poranthera micro-
phylla*. Add loc. Atherton Table.
(Flecker) and mo. 9.

P. 8. *Phyllanthus simplex*. Add loc.
Mt. Mulligan (Flecker) and mo.
4.

Glochidion Ferdinandi. Add. loc.
Bartle Frere (Flecker).

No. 12, p. 7. Before (*Trema*) *sam-
boinensis* add (*T. aspera*), var.
virgata, 4. Mt. Mulligan (Flecker)

Vol. 2, p. 6. *Atalaya hemiglauca*. After
Gilbert R. add (F.M.B.). Add loc.
Pentland (Priest) and mo. 10.

P. 16. *Alternanthera angustifolia*.
After loc. add (F.M.B.)
Before *Gomphrena* add (*A*) *re-
pens* (L.) O. Kuntze. Trop.
and Subtrop. Amer. Khaki
Weed. 4, 12.
Mt. Mulligan (Flecker)

Gomphrena decumbens. For In-
troduced read Mexico and
Trop. Amer.

P. 22. Before Family NYCTAGI-

NEAE, add (*P*) *decandra*, L. 10.
Bartle Frere (Flecker).

Vol. 3, p. 3. Before *Gastrolobium* add
Aotus, Sm.
villosa, Sm. 10. Betw. Torrens
Cr. and Pentland (Priest).

Hovea longifolia. Add loc. Pent-
land (Priest).

P. 15. *Lamprolobium fruticosum*.
Add loc. Mt. Mulligan (Flecker)
and mo. 4.

P. 23. Before (*Desmodium*) *A.*
trichostachyum add (*D.*) *nemo-
rosum*, F.v.M. 10. Bartle Frere
(Flecker).

P. 27. *Glycine tabacina*. Add loc.
Proserpine (Macpherson) and
mo. 5.

P. 40. Before (*Cassia*) *Sophera*
var. *schinifolia* add (*Cassia So-
phera*, L.) 6.
Daradgee (Priest).

Cassia occidentalis. Add loc. Darad-
gee (Priest) and mos. 6 to 11.

Vol. 4, p. 7, *Aristolochia Thozetii*.
Add loc. Proserpine (Macpherson)
and mo. 10.

P. 12. Delete P. 7, bottom of page
et seq.

North Queensland Naturalist

The Journal and Magazine of the North Queensland Naturalists' Club.

Vol. IV.

CAIRNS, FEBRUARY, 1936.

No. 41

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, February, 10th, 1936.

Lecture by Dr. H. I. Jensen.



Election of Members.

Mr. Will R. Holloway, Box 185,
Gordonvale.

Proposer

Seconder

Mr. J. Wyer

Mr. R. Hunter

Excursions.

Will those who desire to organise or participate in excursions at short notice, kindly communicate with the Honorary Secretary.

The January Meeting.

Mr. J. Manski, chose as his subject, "The Structure of Orchids as Compared with Other Flowers." This lecture was of the instructive type, and with the aid of specimens, points of distinction, were ably demonstrated. It was a great pity that the Weather Gods were so unthoughtful, as many members thereby missed one of the best lectures given for some time, and it is to be hoped that the Club will always endeavour to obtain the services of instructive lecturers.

Quite a number of orchids are to be found in this district and a few collectors have taken up their culture. Some are difficult to identify as orchids, and the following hints on the identification of the orchid flowers may not be out of place in helping those interested to readily identify them.

An orchid flower has but three sepals and three petals; usually the third or bottom petal is totally different from the other petals and is called the labellum or tongue. The stamens with anthers attached, containing the pollen and the pistil, plainly seen, in other flowers, are not seen separately in the orchid flower, but are united to form the column which is placed under the top or dorsal sepal and is connected to the pedicel and seed stem. The

apex of the column contains the pollen hidden behind the stigma and rostellum, and by lifting the point the pollen can be seen. The seeds of the orchid are contained in a capsule, and are extremely small and resemble fine powder, but when magnified are spindle shaped and not unlike miniature bananas.

Exhibits.

Mr. Tierney—Orchid blooms preserved in methylated spirits. It was noted that all colours except yellow disappear from the blooms. This method is useful, in that it shows the shape and structure, etc., of the blooms, the club appreciates Mr. Tierney's gesture in presenting these specimens to the club.

Stethopachis formosa, Baly, the orchid beetle and its larvae, were also displayed.

Mr. J. Manski—Orchid blooms, Dendrobium Phalaenopsis, Calanthe veratrifolium, etc.

Mr. Pat. Flecker—Specimen of Astacopsis fleckeri from Root's Creek, and two species of yabbies from Brooklyn Station and Herberton.

Mr. H. Chargois—Photograph of cassowary chicks.

Rev. Rupp—Photograph of Dendrobium Cunninghamii, the only Dendrobium of New Zealand.

Dr. Flecker: Herbarium specimens.

Contributions for this Page.

Observations of nature will be greatly appreciated and can be forwarded to J. G. Brooks, Box 545, Cairns.

THE HAUNT OF THE NORTH QUEENSLAND SPINY CRAYFISH

By Dr. H. FLECKER and PAT. O. FLECKER.

It was in February, 1935, that Mr. Tom Carr, a member of the North Queensland Naturalists' Club, reported the fact that a crayfish obtainable at Root's Creek was good eating, but when after cooking, a portion was given to a pup, which had partaken of the thoracic viscera, it became sick within half an hour and died next day! He was therefore requested to forward a specimen for the determination of its identity, etc. In due course there arrived at Cairns, in a hermetically sealed tin, which had previously contained golden syrup, a very fine specimen of a crayfish in spirit. After removal from the tin, it was dried in the sun and later referred to the Director of the Queensland Museum, Mr. Heber W. Longman, who discovered it to be the male of an entirely new species of *Astacopsis*. Hitherto this genus had never been known to occur further north than the Tambourine Mountains, south of Brisbane. The new crayfish was found to resemble the Tasmanian form, *A. franklini*, more closely than the southern mainland species, *A. serratus*, and as no species of *Astacopsis* has definitely been recognised from New Guinea, the origin of these crustacea in North Queensland is as yet a matter of speculation.

A description of the new species, *Astacopsis fleckeri*, by Miss Watson, together with the plates which appear as a supplement to this issue, has appeared in the *Memoirs of the Queensland Museum*, Vol. X, Part V, October, 1935.

Inquiries from a number of individuals previously working in the Root's Creek area indicated that the crayfish was well-known to the residents of the district for many years, and that they had been frequently cooked and eaten, but it was suspected that other crustacea may have been mistaken for this species, for example, a large shrimp, exhibited in spirit at a hotel in Mareeba was obviously different. Another large crustacean caught in the Mitchell River, at Brooklyn Station was likewise not the object of our search, as it possessed quite insignificant chelae. During the winter of 1932, Dr. Darlington, an American collector for the Harvard Museum, who was accompanied by Mr. George

Curry, the Curator of Lake Barrine, endeavoured to procure specimens, but was unsuccessful. Evidently he was unaware that this species was undescribed for he would otherwise have certainly persisted in his efforts.

Through the courtesy of Mr. Montague, of Mount Mulligan, formerly at Root's Creek, we were supplied with a crayfish trap, and with it we set out to seek specimens of the new *Astacopsis*, which was so greatly desired by the authorities at the Queensland Museum. Having set out from Mount Molloy on New Year's Day, 1936, a 16-mile journey by the weekly motor lorry service brought us to Brooklyn Cattle Station, where, through the courtesy of the manager, Mr. Paul E. Hawkins, we stayed the night, incidentally baiting the trap with a large piece of raw meat and casting it into the Mary Creek, which flows into the Mitchell River, some two miles further on and thence to the Gulf of Carpentaria. Next morning, although the meat had disappeared entirely, the trap contained only a yabbie, the species of which is not yet determined, but as discovered later on, certainly not the *Astacopsis*.

We were greatly assisted by Mr. and Mrs. Hawkins in our preparations for the object of our search, especially with provisions, swags and pack horses, etc., so accompanied by their juvenile son, Alva, who was much more familiar with equestrian management than we were, we set off from the droughty conditions prevailing at the station for Mount Spurgeon, some 10 miles eastward, whence we travelled a further six miles eastward to a clearing formerly known as Uralla, over which a new Zarda Tin Sluicing Company has taken a lease, and which it is proposed to call Zarda. Here we found shelter and congenial company from a number of "tin scratchers," to whom we are much indebted for their hospitality. The prevailing continuous moist conditions were in striking contrast to the exceedingly dry conditions of the plains.

Mount Spurgeon is said to be 3,800 feet and Zarda 4,000 feet above sea level, the latter situated on the Upper Mossman River. The trap was set at once, but found to be of very little value, only one specimen being caught,



A New Spiny Crayfish.
Astacopsis fleckeri, Watson.

Discovered by Mr. T. Carr at Root's Creek, near Mt. Carbine, North Queensland.
Described in detail in the Memoirs of the Queensland Museum, Vol. X., Part 5, 1935.

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not inside, but actually outside the trap to which it clung. Observation showed that the crayfish were able to seize the bait from outside the trap with the limbs bearing the smaller chelae.

It was not long before the first specimens were sighted, recognised and captured, the process of securing them being surprisingly simple. They are often seen in quite shallow waters, only a few inches deep, and upon approach, unlike the much more alert yabbies, do not suddenly dart beyond reach with a jerk or two of the tail, although obviously quite capable of doing so. If seen in deep water they can easily be lured into shallower reaches by the tempting meat bait. The water is everywhere absolutely clear despite much rain, and sandy bottoms are frequent, and as these creatures are not excessively timid and not easily alarmed, all that is necessary is for the captor, wearing sandshoes, to place his foot firmly over the back of the crayfish, then seizing it well behind the legs bearing the chelae to lift it out of the water. Great respect for the large chelae (claws or nippers) is essential, as it is calculated that a nip from these might cause serious injury to the fingers. Alternatively the crayfish may be seized by firmly embracing the legs containing the chelae.

Like yabbies these crustacea live in burrows on the banks of the streams. The banks of drains at Stewart's Creek and at the Upper Mossman River were continuously destroyed by these tunnels, and at Root's Creek had to be replaced by concrete.

Upon securing these specimens alive, the colour is seen to be a bright royal blue below, and much duller blue above, the spines affording a striking contrast being a deep red. A few immature specimens were noted to possess a somewhat ruddy colour above. Upon the first day nine specimens were secured altogether, including one from Platypus Creek, a tributary of the Mossman, which was easily driven out of the shallow water with a canecutter's knife on to the sandy bank, from which it was picked up. The whole nine were placed together in a four gallon petrol tin, standing upright and covered over by an ordinary kitchen dish used for washing up, but next morning it was discovered that with one exception, all

had escaped. It appears that they stand upright on their chelae in a corner of the tin, tail uppermost, until a portion of the telson catches against the cut edge of the tin, thence they were able to lift themselves over the edge and escape. None of these could be found in the morning.

However another 18 or so were captured later, the localities being all east of the Great Divide, namely, the Upper Mossman River and two of its tributaries, the Platypus and Root's Creeks. One was caught in a water race constructed by the miners, and another on the steep, jungle-clad slope of a hill, three chains from the nearest water. This latter did not appear to be an isolated freak, as the miners report having secured a number in the jungle away from the creeks. It is to be understood that the whole undergrowth is decidedly damp. Although informed that some were obtainable at Stewart's Creek, the head waters of the Daintree River, none were found after a considerable search, although burrows provided evidence of their presence.

Root's Creek was originally reported by one of us to be 90 miles west of Cairns, but this is incorrect, but it must be understood that there are no roads, and that none of these localities, Mount Spurgeon, Upper Mossman River and its two tributaries have been surveyed. As a matter of fact, Root's Creek Falls, near the Root's Creek mining camp, is but two miles from the Zarda clearing, and is only 10 miles north-west of Mossman, from which it may be reached by a difficult foot track.

Although capture of these specimens proved simple enough, the problem of bringing them down in good condition was much more difficult. It was, of course, impracticable to bring sufficient spirit to preserve them in, and even if such were available, to secure suitable receptacles and to carry them by pack horses was quite beyond our resources, so it was decided to make an attempt to bring to Cairns alive in moist sugar bags. The showers which fell from time to time greatly assisted us in this direction. Our largest specimen measured ten and a half inches from the tip of the rostrum to the end of the telson, as compared with the nine inches of the original type, and this was carefully kept separately in a bag, the others being all kept together

in another bag. At Brooklyn Station, where two nights were spent awaiting the weekly lorry and train service, the bags were placed out in the rain, where all except five survived. The inevitable damage of limbs by mutual combat was taken into account and it was calculated that the detached fragments might be reassembled at a later date. Carriage in a railway compartment was negotiated by placing the sacks in a botanical vasculum.

Arrived at Cairns, the crustacea were at once immersed in a bucket of methylated spirit and allowed to re-

main there two days. They were then taken out for the purpose of drying, and it is believed that had the weather been fine this process might have sufficed as with the type specimens, but the seasonal summer rains had set in well, and the problem of keeping off the ants proved a difficult one. It is unfortunate, perhaps that pressure of other work prevented returning the specimens to suitable spirit containers, so that they were eventually placed in a cream tin full of diluted formalin, ordinarily intended for botanical purposes.

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

Eucalyptus

pruinosa, Schau. Kullingal. 10 and 12.

Is. of G. of Carp. (R.Br.), Normanton (Blakely), Etheridge (Blakely), Cloncurry (F.M.B.), Herberton (Bates).

populifolia, Hook. f. Bimble Box. 2, 3.

Is. of G. of Carp. (F.M.B.), Atherton Highlands (Swain), Burdekin R. southward (F.M.B.)

bicolor, Cunn. River Black Box. 1, 2, 8 to 11.

Flinders R. (F.M.B.), Gilbert R. (F.M.B.), Pt. Denison (F.M.B.)

miphloia, F.v.M. Grey Box. 1 to 4.

Atherton Tablel. (Swain).

var. *parviflora*. Leichardt's Box.

Mt. Elliott (F.M.B.)

melanophloia, F.v.M. Silver-leaved Ironbark, 9 to 2.

Gilbert R. (F.v.M.), Leichardt Ra. (Bowman), Croydon (Blakely), Reid R. (Blakely).

drepanophylla, F.v.M. Bowen Ironbark. 8 to 10.

C. Sidmouth (Moore), Palmer R. Gulliver), Stannary Hills (Blakely), Trinity B. (Hill), Nr. Atherton (Blakely), Mt. Elliott (Blakely), Ch. Towers (Blakely), Reid R. (Blakely), Cleveland B. (Blakely), Pt. Denison (Fitzalan).

leptophleba, F.v.M. Bastard Gum-leaved Box. 1 to 12.

Gilbert R. (F.v.M.), Chillagoe (Blakely), Alma-den (Blakely), Stannary Hills (Blakely), Palmer R. (Blakely), S. Coen R. (Blakely), Endeavour R. (Blakely), Daintree R. (Blakely), Cairns (Blakely),

Rockingham B. (Blakely), Ravenswood (Blakely), Burdekin R. (Blakely).

racemosa, Cav. Narrow-leaved Ironbark. 1 to 12.

Betw. Flinders and Lynd. Rs. (F.M.B.), Mt. Mulligan (Flecker), Cape R. (Blakely), Stannary Hills (Blakely), Lizard I. (Blakely), Range Rd. (Kajewski), Burdekin R. (Blakely).

var. *macrocarpa*, Domin. 3, 4.

Stannary Hills (Blakely), Atherton (Blakely), Castle Hill (Blakely).

Staigeriana, F.v.M. Lemon-scented Ironbark.

Palmer R. Sellheim), Cooktown Dist. (Swain).

Howittiana, F.v.M. Howitt's Gum 3. Gilbert R. (Blakely), Glendhu (Stafford), L. Lucy (Dall.), Herbert R. (Stafford).

Cloeziana, F.v.M. Queensland Messmate. 10 to 4.

Mt. Mulligan (Swain), Stannary Hills (Bancroft), Herberton (Swain), Ravenshoe (Swain), Nr. Cardwell (Blakely).

Raveretiana, F.v.M. Iron Tree. 1, 12 Pt. Denison (Fitzalan).

microtheca, F.v.M.

Cloncurry (Palmer).

miniata, Cunn. Melaleuca Gum. 5 to 8.

Croydon (Blakely), Little R. (Blakely), Alma-den (Blakely), Walsh R. (Barclay-Millar), Lynd R. (Leichardt), Palmer R. (Gulliver).

multiflora, Poir. Swamp Mahogany. 5, 9 to 11.

Dunk I. (F.M.B.).

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No. 42

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 9th March.

Dr. H. I. Jensen will lecture on the "Geology of North Queensland."

Excursions.

Will those who are anxious to arrange or participate in excursions at short notice, kindly communicate with the secretary.

The February Meeting.

Due to the non-arrival of the S.S. Wandana, our lecturer (Dr. Jensen) was not present. Mr. R. L. Hunter is to be complimented on preparing a lecture and gathering such a quantity of illustrative material at such short notice. He dealt ably with the life history of the yellow butterfly *Catopsilia pomona* Fabr., which is very common in his (the Freshwater) district. An interesting point mentioned was that some of these butterflies have female markings on one set of wings and male on the other.

Exhibits.

Dr. Flecker—*Eucalyptus pruinosa* and *E. racemosa*. Leaf Insect (Phasmatidae).

Dr. Cook (Barcaldine)—Scorpion (*Urodacus*) which bit a child in his district.

Mr. J. Manski—Pupa case of the Hercules Moth—*Coscinoscera hercules* Misk. (Family Saturniidae).

Mr. Bates—Mantis Prawn (*Squilla*).

Mr. A. B. Cummings—Spider Crab, clothed with weed as camouflage, from Green Island. Preserved Angel fish (*Chaetodon auriga*) from Green Island.

Mr. Holloway—Brass shim suitable for labels on plants.

Miss J. Brake—Female of *Eupatorus australicus* Arrow, Sub-family Dynastinae, Family Scarabaeidae.

Queensland Forest Service—Collection of polished timber blocks, all named, which were presented to the Club.

Mr. R. L. Hunter—Food plant (*Cassia fistula*), eggs, larva, pupating larva, larval skin and male and female of *Catopsilia pomona* Fabr. (Family Pieridae, Order Lepidoptera).

Mr. J. G. Brooks, L.D.S.—Fruit Flies (Family Trypetidae, Order Diptera) caught on the Wild Tobacco Plant (*Solanum verbascifolium*) at Lake Barrine.

Committee Change.

Mr. M. Auricchio was elected to fill the vacancy caused by the resignation of Mr. Balfe.

Wild Nature Show.

It was decided that this Show be held on the Friday and Saturday following the resumption of school after the August vacation. The appointment of a Show Secretary was left in the hands of the committee.

Contributions for this Page.

Observations of nature will be greatly appreciated and can be forwarded to J. G. Brooks, Box 545, Cairns.

"FOSSILS AND THEIR MEANING."

Synopsis of Lecture given to the North Queensland Naturalists' Club by F. S. COLLIVER, Esq., Hon. Sec. Field Naturalists' Club of Victoria (Contd. from p. 14.)

Similarly in the Mammals, in the Pleistocene period, wombats as large as hippopotamus, and kangaroos 12 feet high were common. These animals roamed all over the eastern half of the con-

tinent, but now they have disappeared leaving in the Holocene time numerous members of the family, but none of them even approach the size of their predecessors. In this case their disappearance

was undoubtedly due to changed climatic conditions with subsequent depletion of food supplies.

Another interesting case may be mentioned in relation to the sharks.

In the Tertiary deposits of Victoria sharks' teeth are common, and teeth of the white shark type have been found nearly six inches long. The monster that possessed teeth such as these must have been nearly 100 feet long, and these teeth are fairly common; now whilst sharks are common at the present time nothing even approaching such a size can be recorded.

As before mentioned, Man appeared about Pliocene times, and many strange forms were evolved before the present types. Australia unfortunately does not possess any very good evidence for ancient man; one very interesting point may be noted, however, in connection with a *Cohuna* skull; previous to the finding of this skull the lower jaw known as the Heidelberg Jaw was recognised to be the largest jaw found, and therefore the remains of the largest skull. This jaw, however, is much too small for the *Cohuna* skull, and therefore suggests that possibly some of the giants of the early men had their home in Australia.

In the tertiary times conditions in Southern Australia and Tasmania were very different to the present time. On the evidence of the fossil shells and corals, etc., it is seen that tropical con-

ditions somewhat allied to those enjoyed by Cairns were then enjoyed by Victoria and Tasmania, and it was due to these conditions that the giant marsupials flourished. By the evidence of their remains it is believed that Lake Callabonna, S.A., was a last stronghold of these creatures.

In the present time (Holocene Age) man is supreme, and as we learn by studying the rise and fall of previous life types, it seems possible that man too may follow suit and reach a maximum development, and then give way to some higher form of life. Just what this form of life may be—who can say? It can only be suggested as an interesting speculation.

A word might be said in relation to the economic aspect of the study of fossils, whilst in the main it is a pure science, unsullied by money matters. Still, it is interesting to note that in Victoria one of the now extinct fossil groups, the Graptolites (*Grapho* I write; *lithos* a stone) are used as index fossils for the gold bearing deposits. That is wherever these fossils are found it is known that one has a reasonable chance of finding gold; and to mention one other case applying more particularly to America, it is by the study of the Foraminifera (*Ferro*, I bear; *foramen*, a small hole) that oil field development has reached the efficiency shown in modern times.

HOW DO BUTTERFLIES DISTINGUISH THEIR FOODPLANTS?

By M. J. MANSKI.

To delve into the mysteries of insect life is very fascinating but to understand how these insects can distinguish their respective foodplants seems to be beyond reasoning power, and the best we can do is to merely guess.

In this article I shall deal with the butterfly and its foodplants.

Many naturalists are inclined to emphasise that sight is the solution; others favour smell; others favour chemical action, whilst others quote just instinct. In my experiences and observations, sight, smell and chemical action are all feasible. I go further and point out that after the caterpillar has ceased its eating and forms into its pupal stage there is always a certain amount of water

not required and on emergence of the butterfly its body is so saturated with the sap of the foodplant that the butterfly after mating seeks this plant by sense of smell, and unless it throws back to some distant parent that fed on other plants it should lay its eggs on the plants from which it springs.

Further, there is the case of "where I lay my eggs, feed or die as I have an idea that my forefathers were reared on this plant." It certainly seems unnatural for the butterfly to leave its young to starve if it does not like the plant, but in the case of *Lindula* (*Cynthia*) *arsinoe* *Ada* it seems so.

We know that certain butterflies are attracted by bright colours as *Papilio Ulysses joesa* is attracted by

bright blue and will fly down and examine it each time it returns during its circular flight. Also the *Terias hecabe sulphurata* is attracted by bright yellow, thus showing a keen sight and on the other hand, smell forms a big factor with them as the day-flying moth (*Alcidis zodiaca*) is attracted by the fumes of benzine, the double-tailed emperor (*Eriboea pyrrhus sempronius*) is attracted by overripe fruit, whilst the smaller *Mycalesis terminus* and *Mycalesis sirius* can easily be netted whilst they are feeding on the ripe fruit of *Melastoma malabathricum*.

Many butterflies keep to one genus of plants, just as certain races of people have their staple food, Chinese, rice; Egyptians, dates; Persians, figs; natives of India, curries, etc., and the newer races have a mixed diet, and who knows but that the mystery of food applies also to the older race of butterflies? Some may be true to type and know no other foodplant than their predecessors used, but many are crosses and hence the mixed foodplants.

Those that keep to the one class of plant are as follows:—*Troides priamus euphorion* (Cairns birdwing), *Eurycus cressida* (the large greasy), *Papilio polydorus queenslandicus* (the red-bellied swallowtail) feed only on *Aristolochia*; the *Papilio Ulysses joesa* keeps strictly to *Evo dia accedens*; the *Papiliones aegaeus*, *egipius*, *anactus*, *capaneus* and *sthenelus* keep to citrus trees.

Sight may be a factor in this regard as the spectrum may be the same for each genus of plants, but smell may also play a part, as the Citrus and *Aristolochia* have a very strong scent which may attract them.

I have noticed a female *Troides priamus euphorion* hover over a small tree around whose trunk a young *Aristolochia* vine was growing. I am almost certain that the butterfly could not see the plant and yet she knew it was there as she laid eggs on the leaves of the tree knowing that when the young caterpillars emerged they would soon find their foodplant.

These and other caterpillars have a tendency to leave their foodplants but come back at feeding time.

This makes the smell theory very feasible.

But what of *Lindula* (*Cynthia*) *arsinoe* Ada? What causes her to seek out the dry tendrils of the *Passifloraceae* and yet only the *Modecca populifolia* will satisfy the young larvae? Here is the case of "where I lay my eggs, live or die." Her actions point to protective colouration as the eggs soon turn to the colour of the dry tendril and the young larvae keep to the dry tendril also. Can this be the spectrum or sense of smell? It is hard to say. She knows the *Passifloraceae* but only one will feed the young. Take again the *Doleschallia bisaltide australis* (the leafwing butterfly) and its foodplant the *Eranthemum variabile*.

This butterfly will lay its eggs on the flower buds and under the leaves of all the varieties of this plant, but *Hypolimnas alimena* also has this foodplant and lays its eggs not on the flower buds or any variety but keeps strictly to seedling plants of the green underleaf variety, and in nearly all cases the small leaves are resting on the ground. How does she distinguish the plants and know what variety to lay on?

If the spectrum works on other plants why not on *Eranthemum variabile* and how does she single out the green underleaf? Again the *Hypolimnas bolina nerina* lays her eggs on the underside of seedling plants of *Sida rhombifolia*. The young larvae can be reared on *Sida rhombifolia*, but after the second moult they can be taken off *Sida* and placed on *Synedrella nodiflora*, whence they continue to grow without any difficulty and do not mind the change of food. This is interesting as in only a few cases can butterflies be persuaded to feed on plants other than that on which the eggs were placed.

Other butterflies that have singular foodplants are as follow (foodplants in brackets):—*Eupha prosope prosope* (*Scolopia Brownii*), *Danaida affinis* (*Vincetoxicum carnosum*), *Delias* sp. (*Loranthus* sp.), *Hasora alexis contempta* (*Pongamia glabra*), *Hasora discolor* (*Mucuna gigantea*), *Hasora hurama hurama* (*Derris trifoliata*), *Issoria propinqua* (*Xylosma ovata*), *Mynes geoffroyi* (*Laportea moroides*), *Miletus apollo apollo*

(*Myrmecodia Beccarii*), *Miletus narcissus* (*Loranthus*), *Ogyris zosine zosine* (*Loranthus*), *Notocrypta waiensis leucogaster* (*Alpinia coerulea*), *Phaedyma shepherdii* (*Pongamia glabra*), *Pseudodipsus eone iole* (*Faradaya splendida*), *Tellervo zoilus* (*Parsonsia velutina*), *Thysonotis hymetus taygetus* (*Alphitonia excelsa*), *Thysonotis cyanea arima* (*Entada scandens*), *Cethosia cydippe chrysepe* (*Modecca populifolia*).

Now let us look into the foodplants of some butterflies that do not confine themselves to one plant but may be found on two or more plants and in most cases the genus is widely separated and not related botanically. The *Catopsilias* may be found on *Cassia alata*, *C. fistula* and species of *Indigofera*; *Danaidae plexippus* and *petilia* on *Asclepias curassavica* and *Calotropis gigantea*. *Euploeas corinna* and *Eichorni* on *Nerium odorum* and *Asclepias curassavica*. *Amblypodia amytis*, *Hypolycaena phorbas phorbas* and *Lycaenesthes godeffroyi* may be found on *Eugenia*, *Terminalia Muelleri*, *Hibiscus tiliaceus*, *Glochidion Ferdinandi*, *Faradaya splendida*, *Cordia dichotoma*, *Heritiera littoralis* and another plant very much like the last mentioned, and *Miletus apelles* on *Avicennia offic-*

nalis and *Angophora* and possibly on *Careya australis*, *Papiliones agamemnon*, *macfarlani* on *Anona muricata* and *Sassafras*, whilst *Papilio hycaon* favours *Anona muricata* and *Cinnamomum camphorae* (the *Camphor Laurel*). *Papilio sarpedon choredon* may be found on *Sideroxylon Richardsii*, *Cinnamomum camphorae*, *Cryptocarya triplinervis*, *Mallotus* sp. and a species of *Macaranga*.

Precis albicincta may be found on *Thunbergia alata*, *Angelonia floribunda*, *Apyrasia scandens* and *Eranthemum variabile*. *Terias hecabe sulphurata* on *Cassia*, *Breynia* and *Indigofera*.

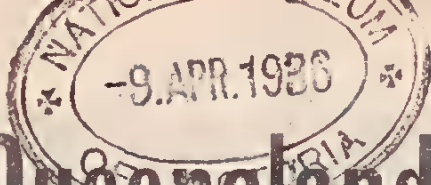
The plants are so varied that neither sight nor smell can hope to claim all these, and it may be possible that some chemical action peculiar to all these plants appeals to the butterflies.

Further observations are necessary and many experiments tried before a solution can be possible, and any members of the North Queensland Naturalists' Club so interested can get busy as there is quite a lot of life histories to be recorded, and the races of *Lycaenids* have yet to be compared with those of the South and the more one goes into this class of hobby the more interesting it becomes.

ADDENDA

Vol 1. No. 9, p. 5—*Hibbertia velutina*. Add (F.M.B.) after locs. Add loc. Betw. Ingham and Cardwell (Priest) and mo. 8. Before (H.) *longifolia* add (H.) *volubilis*, Andr. 10. Campbell Cr. (Flecker). Before (Nymphaea) *Lotus* add (N.) *gigantea*, Hook. Large Blue Water Lily, 9. Archer Cr. (Flecker). Before Family Piperaceae add (N.) *minima*, F.M.B., 11 Parramatta Swamp (Flecker). P. 6—*Drimys membranacea*. Add loc. Mt. Bartle Frere (Pearson) and mo. 9. P. 7—*Cryptocarya triplinervis*. Add loc. Mareeba (Flecker) and mo. 8. No. 10. p. 5—Before *Lepidium* add

Senebiera, Poir. *didyma*, Pers. Wart Cress. Europe, 9. Malanda (Flecker). Before Family Violaceae add *Raphanus*, L. *raphanastrum*, L. Jointed Charlock, Europe, 11. Cairns (Flecker). P. 6—Before *Xanthophyllum* add *B. (C.) sylvestre*, Lindl. (10. Betw. Torrens Cr. and Pentland (Priest). (X.) *octandrum*. Add loc. Bartle Frere (Flecker) and mo. 10. *Aglaia ferruginea*. Add loc. Mt. Bartle Frere (Flecker) and mo. 10. No. 11. p. 4—*Ganophyllum falcatum*. Add loc. Green I. (Cummings). P. 6—Before *Waltheria* add (M.) *corchorifolia*, L., 4. Mt. Mulligan (Flecker).



North Queensland Naturalist

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CAIRNS, 1st APRIL, 1936

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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Next Meeting—Monday, 20th April, 1936.

Lecture by Mr. E. Williams, "The Role of Yeast in Industry," illustrated by microscopes and episcopes.

The March Meeting.

A most interesting address was given by Mr. R. Archbold, leader of the American Scientific Expedition to the Fly River, New Guinea, who arrived by amphibian aeroplane on his way thither. He spoke of his experiences of collecting in Madagascar and in New Guinea, likewise pointing out the advantages of the assistance of the amphibian in passing up the Fly River.

The Hon. Secretary will be grateful for any spare copy of this journal, Vol. III, No. 35, August, 1935.

Exhibits.

Mr. B. O. Balfe—Several different species of live tortoises.

Mr. L. D. Sykes (Melbourne).—Victorian and North Queensland spiders, labelled with short descriptive notes. Glass-topped boxes improvised from cigarette tins for sending specimens by post.

Mr. R. Pawsey—Photograph of Spear Fish (*Xiphias gladius*), caught at North Palm Island.

Walter Brake—Caterpillars (unidentified feeding on leaves of *Quisqualis*).

Dr. H. Flecker—Specimen of *Xylosma ovatum* in pot together with

flowers, pressed. Other herbarium specimens.

HYPOLIMNAS MISIPPUS.

In our next issue will appear the Life History of *Hypolimnas misippus* (not previously published) by Mr. R. Hunter.

BOOK REVIEW.

9. OUR INSECTS. 212 pp., 100 photographic plates, incl. 2 in colour. Printed by H. Pole and Co., Brisbane. Compiled by the Syllabus Notes Committee of the South Coast Inspectoral District, Brisbane. This is a magnificent handbook with fine illustrations on each alternate page. The various groups of insects are named with both the vernacular and zoological terms, together with terse descriptions. Intended for use in schools, its aim is to teach pupils to observe for themselves and thus to foster a love for natural objects such as insects. It is only by such means that a permanent appreciation, interest and love for the beautiful living things about them can be secured. The Educational authorities in Brisbane acting under the stimulus of Mr. W. F. Bevington, District Inspector of Schools, is heartily to be congratulated on its fine effort.

FURTHER NOTES ON ORCHID POLLINATION

By KENNETH MACPHERSON, Proserpine, and the REV. H. M. R. RUPP, Woy Woy, N.S.W.

In this journal for April, 1935, we gave the results of personal observations in connection with the pollination of *Cymbidium iridifolium*. The native bee described as the agent of fertilization in the case of this orchid has been identified by Mr. Tarlton Rayment as *Trigona Kockingsi* (C'k'll.)

Since then one of us (K.M.) has closely watched the process of pollination in the case of the well-known Rock Lily Orchid (*Dendrobium speciosum* Sm.) The observations recorded below were taken at Proserpine in North Queensland, and it remains to be seen how far the strange facts here published tally

with those observed by other naturalists in different areas. *D. speciosum* has an extensive range along the coastal belt of the whole of Eastern Australia, from the far north of Queensland to the county of Croajingolong, in Victoria. Fitzgerald expressed the opinion that not more than one flower in a thousand of *D. speciosum* sets a capsule in New South Wales. (Quoted by Darwin, "Fertilization of Orchids," p. 281).

In the course of the Proserpine observations, the bee named above in connection with *Cymbidium iridifolium*, together with an allied species (*T. symei*, Raym.), was found to visit the flowers of the Rock Orchid freely, but it was definitely established that these bees **refuse to act as the agents of fertilization!** This is the more remarkable in that *T. Kockingsi* at least displays no such unwillingness in the case of *Cymbidium iridifolium*.

On August 26, 1935, a careful watch was kept on the *Dendrob* flowers. The labellum of *D. speciosum* is loosely articulate on the foot of the column. A number of the little bees named above were observed to visit the flowers. In no instance were any pollen-masses seen adhering to their backs at this stage. As soon as they entered the flowers, the bees appeared to realise that their visit was fruitless, for they immediately endeavoured to escape. As in the case of *Cymbidium*, however, the labellum at once imprisoned them against the column. Their struggles were considerable, but they were set free by breaking the anther-sac, and pollen-masses immediately adhered to their backs. When they emerged they seemed to be in considerable distress, and unable to fly. They

spent some time in cleaning themselves, and it was observed that they deliberately got rid of the pollen-masses before they finally flew away, not to return. The observer formed the opinion that the initial inability to fly was caused by the sticky secretion of the stigmatic plate.

The *Dendrob* flowers were still kept under close observation. Three days later two individuals of a larger species of bee (*Euryglossa subsericea*, Chis.) were noticed hovering about, and both entered flowers. Like the *Trigonas*, they prepared to leave again almost at once, but being larger and stronger they quickly burst the anther-sacs and emerged with pollen-masses. They made no effort to remove these, but at once proceeded to visit other flowers, where pollen was deposited by them on the stigmatic plate. One specimen was then captured for the purposes of identification. It was observed that soon after the breaking of the anther-sac, the labellum loses all traces of irritability.

A slight element of mystery remains. The visit paid by *Euryglossa* is not appreciably longer than that of the two species of *Trigona*. Yet in the former case it would appear that there must be some reward, for the bee at once proceeds to visit other flowers; while the visit has such distressing results for the smaller bees, that they refuse any further business with the Rock Orchid. What is the explanation? If the smaller bees, wherever they exist, are habitually misled to a first and only experiment on Rock Orchid flowers, the fact may conceivably have some bearing on the scanty production of capsules by *D. speciosum*.

CENSUS OF NORTH QUEENSLAND PLANTS (Continued)

(Figures after plants indicate flowering months)

Eucalyptus,

pallidifolia, F.v.M. Mountain White Gum. 2, 3.

Nr. Cloncurry (Blakely), Cloncurry R. (Blakely), Flinders R. (Blakely).

camaldulensis, Dehm. Murray Red Gum. 4 to 6, 9 to 1.

Flinders R. (Froggatt), Mitchell R. (Blakely), Forsayth (Blakely), Chillagoe (Blakely), Alma-den (Blakely), Crovdon (Blakely), Cairns (Blakely), Ch. Towers (Blakely)

var. *acuminata*, Maiden. Yar-row. 10, 11.

- Etheridge R. (Blakely), Nr. Georgetown (Blakely), Stannary Hills (Blakely).
- exserta**, F.v.M. Bendo. 11 to 2. Gilbert R. (F.v.M.), Flinders Gp. (Rich. and Hed.).
- umbellata** (Gaertn.) Domin. Forest Red Gum. 1 to 12. Endeavour R. (Blakely), Range Rd. (Flecker), Gadgarra (Kajewski), Atherton (Blakely), Herberton (Blakely), Palm I. (Herbert), Pt. Denison (Fitzalan).
- platyphylla**, F.v.M. Wongola, 8 to 11. Is. of G. of Carp. (R.Br.), Endeavour R. (Hill), Stannary Hills (Blakely), Atherton (Blakely), Townsville (Blakely), Burdekin (F.v.M.), Pt. Denison (Blakely).
- alba**, Reinw. Timor White Gum. 5. Macarthur R. (F.M.B.), Palm I. (Herbert).
- resinifera**, Sm. Red Mahogany. 11 to 9. Palmer R. (Roth), Daintree R. (Fitzalan), Rockingham B. (Dall), Head of Cape R. (Bowman).
- pellita**, F.v.M. Large Fruited Red Mahogany. 5 to 12. Macalister Ra. (Blakely), Kuranda (Blakely), Range Rd. (Kajewski), Rockingham B. (Dall).
- phoenicea**, F.v.M. Ngaingar. 1 to 5. G. of Carp. (Blakely).
- clavigera**, Cunn. Apple Gum. 10, 11. Is. of G. of Carp. (R.Br.), Stannary Hills (Blakely).
var. **diffusa**, Blakely and Jacobs, Carbeen Gum. 10, 11. Normanton (Blakely), Chillagoe (Blakely), Alma-den (Blakely), Stannary Hills (Blakely).
var. **Gilbertensis**, Maiden and Blakely. Gilbert River Bloodwood. Gilbert R. (Blakely).
- Eucalyptus tessellaris**, F.v.M. Carbeen, 1 to 12. Is. of G. of Carp. (R.Br.), Chillagoe (Blakely), Flinders R. (Blakely), Palmer R. (Roth), C. York (Swain), Palm I. (Herbert), Pt. Denison (Fitzalan).
- setosa**, Schau. Rough-leaved Bloodwood. 5, 6. Is. of G. of Carp. (R.Br.), Sweers I. (Henne), Normanton (Blakely), Croydon (Blakely), Georgetown (Blakely).
- peltata**, Benth. Rusty Jacket, 5, 6, 12. Gilbert R. (F.M.B.), Lynd R. (F.M.B.), Einasleigh (Blakely), Alma-den (Blakely), Newcastle Ra. (Blakely), Cape R. (Blakely), Ch. Towers (F.M.B.), Ravenswood; Burdekin R. (F.M.B.).
- latifolia**, F.M.B. Round-leaved Bloodwood, 12 to 4. Is. of G. of Carp. (F.M.B.).
- gummifera** (Gaertn.) Hochr. Bloodwood, 11 to 5. Mt. Mulligan (Flecker), C. York (F.M.B.), Cooktown (Roth), Cairns (Blakely), Atherton (Blakely), Russell R. (Blakely), Severin (Swain), Palm I. (Herbert), Townsville (Blakely).
- terminalis**, F.v.M., Kulcha. 2 to 6. Mornington I. (Macgregor), G. of Carp. (Blakely), Mitchell R. (Blakely), Walsh R. (Blakely), Croydon (Blakely), Georgetown (Blakely), Gilbert R. (Palmer), Carpentaria Dns. (Crosbie), Alma-den (Blakely), Cloncurry (Palmer), Palm I. (Herbert), Townsville (Blakely), Proserpine (MacPherson).
- dichromophloia**, F.v.M. Red-barked Bloodwood. 4, 5. Is. of G. of Carp. (R.Br.)
- citriodora**, Hook. Lemon-scented Spotted Gum. 6, 7. Stannary Hills (Blakely), Irvinebank (Blakely), Mt. Garnet (Blakely), Herberton (F.M.B.), Atherton (Swain), Ravenshoe (Swain), Pt. Denison (F.M.B.).
- tetradonta**, F.v.M. Darwin Stringybark, 1, 7, 8. Normanton (Blakely), Norman R. (Blakely), Little R. (Blakely), Gilbert R. (Blakely), Mitchell R. (Blakely), Walsh R. (Blakely), Stewart R. (Blakely), Coen R. (Blakely), Batavia R. (Roth).
- Torelliana**, F.v.M. Cadagai. 5 to 2.

ADDENDA

- Vol. 1, No. 11, p. 6. *Melhania incana*. Add loc. Cloncurry (Macdonald) and mo. 7.
 P. 7—Before (*Elaeocarpus longipetiolatus*) add (**E.**) *obovatus*, G. Don. Woolah. 10.
 Brandy Pt. (MacPherson).
Euphorbia Mitchelliana. Add loc. Mt. Mulligan (Flecker) and mo. 4.
 P. 8. *Bridelia tomentosa*. Ditto. *Cleistanthus semiopacus*. Add locs. Intake (Flecker), Campbell's Cr. (Flecker) and mos. 8, 10.
 Before *Phyllanthus elachophyllus* add (**P.**) *thesioides*, Benth., 4. Mt. Mulligan (Flecker).
P. simplex. Add loc. Parramatta Swamp (Flecker) and mos. 11 to 1.
Glochidion Harveyanum. Add loc. Cairns (Flecker) and mo. 10.
 No. 12, p. 5. *Petalostigma quadriloculare*. Add (F.M.B.) after locs. Pt. Denison and Edgecombe B. Add loc. Malaan Rd., Ravenshoe Dist. (Flecker).
 P. 6. *Mallotus polyadenus*. Add loc. Cairns (Flecker) and mo. 10.
M. repandus. Add loc. Intake (Flecker) and mo. 8.
 P. 7. *Homalanthus populifolius*. Add loc. Intake (Flecker).
 P. 8. *Ficus infectoria*. For White Fig read Mooleeah.
F. magnifolia. Add loc. Behana Cr. (Flecker) and mo. 8.
 Vol. 2, p. 2. **F. crassipes**. Add loc. Malaan Rd., Ravenshoe Dist. (Flecker) and mo. 9.
 P. 8. *Arytera distylis*. Ditto.
 P. 10. Before (*Dodonaea*) *stenophylla* add (**D.**) *filifolia*, Hook. 10.
 Pentland (Priest).
Buchanania Muelleri. Add loc. Edmonton (Bates) and mo. 9.
 P. 12. Before *Calandrinia* add (**P.**) *bicolor*, F.v.M. 4.
 Mt. Mulligan (Flecker).
 Before *Drymaria* add *Stellaria*, L. *media*, L. Chickweed. Europe. 9. Malanda (Flecker).
 P. 14. *Amarantus spinosus*. Add loc. Fisher's Cr. (Priest) and mos. 6, 8, 10 to 1.
A viridis. Add loc. Cloncurry (Macdonald) and mo. 11.
 P. 16. *Alternanthera nodiflora*. Add loc. Parramatta Swamp (Flecker) and mo. 11.
 P. 18. End of list, add (**P.**) *elatus*, R.Br. 8.
 Mareeba (Flecker).
 P. 22. Before (*Rumex*) *halophilus*, add (**R.**) *Brownii*, Campd. 9. Malanda (Flecker).
Pimelea haematostachya. Add loc. Hughenden (Priest) and mo. 4.
 P. 24. Before (*Jacksonia*) *odontoclada* add (**J.**) *ramosissima*, Benth. 10.
 Betw. Torrens Cr. and Pentland (Priest).
 Vol. 3, p. 7. Bottom of page. Add (**Indigofera**) *Anil*, L. W. Indies. 10.
 Mulgrave R., Aloomba (Flecker)
 P. 19. *Millettia pilipes*. Add loc. Russell R. (Miss Hooper) and mo. 9.
 P. 23. *Zornia diphylla* v. *filiformis*. Add loc. Cairns (Flecker) and mo. 11.
Desmodium polycarpum. Add loc. Strathdickie N. (MacPherson) and mo. 4.
 Before *reniforme* add (**D.**) *trichocaulon*, DC. 3.
 Strathdickie N. (MacPherson).
Muelleri, Benth. 4.
 Mt. Mulligan (Flecker).
 P. 43. *Derris trifoliata*. Delete loc. Proserpine (Macpherson) and mo. 11 and add loc. Parramatta Swamp (Manski).
Pongamia glabra. Add loc. Myrtle Cr., Gregory (MacPherson) and mo. 11.
 P. 48. *Acacia mangium*, v. *holosericea*. Add loc. Proserpine R., Foxdale (Macpherson) and mo. 6.
 Vol. 4, p. 3 *Pithecolobium grandiflorum*. Add loc. Green I. (Cummings), Brown B. (Flecker) and mo. 8.
 P. 7. Before (*Jussiaea*) *suffruticosa* add (**J.**) *repens*, L. 10.
 Mulgrave R., Aloomba (Flecker)
Aristolochia pubera. Add loc. Mt. Mulligan (Flecker) and mo. 4.
 P. 12. Before *Myriophyllum verrucosum* add (**M.**) *variaefolium*, Hook. 7.
 Barron R., Mareeba (Flecker).



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CAIRNS, 1st MAY, 1936.

No. 44

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Business for Next Meeting—Monday, 11th May, 1936.

Lecture by Mr. E. Barke, of Meringa Experimental Station.
Subject: "Cane Breeding."

Election of Members.

Mr. H. R. Thurston, Box, 89 Mareeba.

Mr. H. Thorogood, Kelsey Creek.

Proposers.

R. L. Hunter

K. MacPherson

Seconders.

M. Auricchio

R. L. Hunter

Exhibits at the April Meeting.

Mr. H. Chargois—Photographs of Cuscus, *Phalanger maculatus*; Leaf-tailed Gecko, *Phyllurus cornutus*; caterpillar of *Hypolimnas misippus*; and Spiny Leaf Insect, *Extatosoma tiaratum*; also specimens of eggs of latter.

Mr. M. Mackesy—Crinoline fungus, *Dictyophora* sp.

Miss Strang—Flower heads of Backscratcher, *Tapeinochilus Queenslandiae*, one measuring 22 cm.

Mr. R. Hunter—Numerous moths from Cairns District.

Mrs. Sparvell, Mowbray—Two tussock moths (*Lymantriidae*) covered with empty cocoons of Braconid wasps. The emerged wasps were also exhibited.

Mr. G. Bates—A troublesome burr from Green Island, *Tribulus cystoides*.

Dr. H. Flecker—Herbarium specimens listed in Census.

April Meeting.

An interesting address was given by Mr. E. Williams, entitled "The Role of Yeast in Industry." The organisms were exhibited in culture and under the microscope. The lecturer dealt at length with various aspects of fermentation and the nature of enzyme action and their method of operation was discussed.

BOOK REVIEW.

10. AUSTRALIAN BIRD MAPS, by Robt. Hall, C.M.Z.S., Past Pres. R.A.O.U., etc., 220 pp., 101 maps, 3 plates. Published by the author, Hobart, 1922. Dedicated to "Boy Scouts and Girl Guides with any profits that may occur." Although not a new book, much exceedingly useful and interesting information about the migration of birds is given. The maps are perhaps crudely drawn, but nevertheless illustrate the numerous wanderings, and to those who wish to study the numerous birds, particularly which alight on the Cairns foreshore in their journey north and south, this book can be particularly recommended.

LIFE HISTORY OF HYPOLIMNAS MISIPPUS.

(By R. L. Hunter, Freshwater.)

Knowing there are still many life histories of Australian butterflies to be recorded it is naturally the aim of any collector to discover one, and, as the life history of *Hypolimnas misippus* had not been recorded in

Australia, coupled with the fact that this particular butterfly was common in my garden led me to try and discover its history.

On March 4th, 1936, I noticed quite a number of females in the garden,

flying short distances and walking on the ground. Watching one carefully I noticed that she seemed to be depositing eggs. After a careful search I found six eggs, one being laid on a blade of grass, various common weeds, but *Portulaca oleracea*, the common purslane, being favoured.

The egg is greenish white in colour, spherical and strongly ribbed. Although various plants were close by, the young larva (which emerged in three days) chose *P. oleracea* and commenced to feed.

The young larva was a smoky black colour, spiny, with two hairy horns. The first instar occurred on March 11th, the larva then turning almost black with an orange coloured head, more spiny and the hairy horns more

pronounced. After two days the colour changed to a dark patterned brown, and on March 20th commenced to pupate, the pupa being fully formed on the 21st.

Most of the lifetime of the larva was spent on the ground, raising the head and forelegs to feed. I found numerous larvae at a later date, but mostly hiding away under boards, or anything in fact, that provided cover.

The pupa is a mottled brown and spiny, hung head downwards by the cremaster; it differs from *H. bolina nerina* inasmuch that it is smaller and neater. After a duration of seven days three females emerged and three males a day later.

Butterfly—the male: Upper side black, with two white spots on the



H. Chargois.

Cairns.

forewing, and one larger one on the hindwing, all having purplish iridescent margins. Under side reddish brown, the white spots being larger and without the purple borders.

and a white bar next the apex of the forewing. Under side very similar to the top but much paler, and the apex of the forewing tawny orange. The sexes are very unlike, for whilst the male resembles the male of *H. bolina nerina* the female is very similar to *Danaida chrysippus*.

Female: Upper side tawny orange, outer margins black with white dots,

A NORTHERN FORM OF SARCOCHILUS HILLII, F.v.M.

By the Rev. H. M. R. Rupp, Woy Woy, N.S.W.

Although I think it wise for the present to place the orchid here described in *S. Hillii*, I should not argue the point with any botanist who considers it deserving of specific rank. The differences between it and the typical form of Mueller's species are certainly not unimportant; but the two plants are so much alike, and so obviously closely related, that it seems to me better to regard them as conspecific than to create a new species whose validity would probably be challenged.

The subject of this note is a small

epiphyte collected on Mt. Dryander, North Queensland, by Mr. Kenneth MacPherson in 1935. Specimens sent to me are now flowering in N.S.W. late in February, 1936. The general features of the plant and the structure of the flower are those of *S. Hillii*, the northern limit of which as recorded by Bentham and Bailey, was Rockhampton. It extends southward to the South Coast area of N.S.W. The distinctions between the type form and the Mt. Dryander plant are as follow:—

S. Hillii, Type.

Mt. Dryander Form.

1. Leaves and racemes dark or dingy green, spotted.
2. Flowers white or pink, fragrant.
3. Sepals and petals orbicular-ovate.
4. Lateral lobes of the labellum short, with a row of red splashes inside.
5. Mid-lobe densely beset with white hairs about the margins.
6. Disk with four stout clubbed calli set transversely, the two inner ones longer than the two outer.
7. Column with two erect teeth at the top in front.

- Leaves and racemes light green, unspotted.
 Flowers white, scentless.
 Sepals and petals narrower.
 Lateral lobes of labellum as long as the mid-lobe, strained or heavily splashed with red inside.
 Mid-lobe with orange margins, less densely beset with white hairs.
 Disk with three stout clubbed calli, the middle one taller and stouter than the two outer, and double-headed.
 Column devoid of teeth.

The last feature seems the most important morphologically, but is hardly sufficient to justify separation. With regard to the calli on the disk, the middle one of the three in the Mt. Dryander flower suggests a

union of the two inner ones in the type.

I suggest that Mr. MacPherson's plant be known as *S. Hillii* var. *tricallatus*.

CENSUS OF NORTH QUEENSLAND PLANTS—(Continued)

(Figures after plants indicate flowering months)

Eucalyptus,

- Torelliana*, F. v. M. Cadagai. 5 to 2.
 Pt. Douglas (Mocatta), Trinity B. (Blakely), Atherton (Blakely),

- Sea View (Blakely), Ingham (Mocatta).
abergiana, F.v.M. Rockingham Bay Bloodwood. 2, 3.
 Nr. Rockingham B. (Dall.).

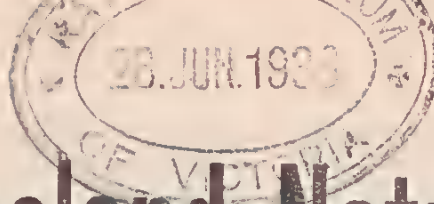
papuana, F.v.M. Drooping White Gum, 12 to 2.
 Normanton (Blakely), Alma-den (Blakely), Mt. Mulligan (Flecker), Gilbert R. (Blakely), Flinders R. (Blakely), Cloncurry R. (Blakely).
erythrophloia, Blakely, Red Bloodwood, 1 to 3.
 Cape R. (Blakely), Chillagoe (Blakely), Alma-den (Blakely), Walsh R. (Blakely), Cairns (Blakely), Townsville (Blakely), Ch. Towers (Blakely), Burdekin R. (Blakely).
trachyphloia, F.v.M., White Bloodwood, 1 to 3.
 Stannary Hills (Blakely).
pyrophora, Benth. Pale-barked Bloodwood, 7, 8 and 10.
 Cloncurry (Blakely).
grandis (Hill) Maiden. Toolur. 6 to 8.
 Atherton (Blakely).
Sherleyi, Maiden. Shirley's Silver-leaved Box.
 Stannary Hills (Blakely).
phaeotricha, Blakely et McKie. Queensland Stringy Bark. 10, 11.
 Yungaburra (Blakely).
Brownii, Maiden and Cabbage, Reid River Box; 6 to 8.
 Forsayth (Blakely), Alma-den (Blakely).
Cabbageana, Maiden. Coowarra Box, 1, 12.
 Charters Towers (Blakely).

Spenceriana, Maiden. Darwin Box, 9 to 11.
 Cape R. (Blakely), Reid R. (Blakely).
tropica, Cabbage. Corella River Box.
 Nr. Corella R. abt. 30 miles N. of Cloncurry (Blakely).
microneura, Maiden et Blakely. Gilbert River Box. 2.
 Gilbert R. (Blakely).
leucophylla, Domin. White-leaved Box.
 Nr. Cloncurry (Domin).
normantonensis, Maiden et Cabbage. Box.
 Normanton (Blakely).
Culleni, Cabbage. Cullen's Ironbark, 8, 9.
 Chillagoe (Blakely).
Whitei, Maiden et Blakely. White's Ironbark. 1, 12.
 30 miles E. of Hughenden (Blakely), Burdekin R. (Blakely).
pachycalyx, Maiden et Blakely. Stunted Spotted Gum. 12.
 Ranges nr. Cairns (Blakely).
Tristania, R. Brown.
suaveolens, Sm. Swamp Box. 1 to 12.
 G. of Carp. (R. Br.), Mt. Mulligan (Flecker), C. York (M'Gillivray), Endeavour R. (B. and Sol.), Cooktown (Roth), Stoney Cr. (Flecker), Range Rd. (Kajewski), Rockingham B. (Dall.), Repulse B. (Cunn.).

ADDENDUM ET CORRIGENDUM.

Vol. 1, no. 9, p. 8. Before *Stephania* add
Leichhardtia, F. v. M., 11.
clamboides, F. v. M.
 Edge Hill (Flecker).
 No. 10, p. 5. Before *Brassica* add
Sisymbrium, L.
orientale. Tumbling Mustard 12.
 Cairns (Flecker).
 No. 11, p. 6. **Heritiera littoralis**.
 Add. loc. Edge Hill (Flecker), Bessie's Cr. (Flecker), and mos. 4, 11.
 Vol. 11, p. 6. **Rhysotoechia Robertsonii**. Add loc. Waugh's Pocket Bates).
 Vol. III., p. 3. **Crotalaria striata**. Add loc. Cardwell (Priest) and mo. 2.

Vol. IV, p. 7. **Aristolochia deltantha**.
 Add loc. Edge Hill (Flecker) and mo. 11.
 P. 15. **Terminalia Muelleri**. Add loc. Edge Hill (Flecker) and mo. 11.
Lumnitzera racemosa. Add loc. Parramatta Swamp (Flecker) and mo. 11.
 P. 16. Before (*Melaleuca lasianandra*) add (**M. Leucadendron**).
var. minor, Sm. 10.
 Strathdickie N. (MacPherson).
 For (**Trema**) *samboinensis* read **amboinensis**.
 P. 27. **Eucalyptus pellita**. Add loc. Freshwater (Flecker) and Mo. 3.



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No. 45

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Business for Next Meeting—Monday, 8th June, 1936.

Lecture by Mr. S. E. Stephens, "Hastening and Directing Nature."

Election of Members.

Miss U. Mulholland, Grotto House, Cairns.

Miss B. Hinrichsen, Stratford School.

Proposers.

Dr. H. Flecker

Seconders.

Mr. R. L. Morris

Dr. H. Flecker Miss J. Whittick

Mr. Bergman—Live Barbel Tortoise (*Emydura latisternum*).

Miss Hooper—A Gordius worm.

Mr. S. Dunn—Alamanda infested with mature and immature Flatidae (Order Hemiptera).

Dr. Flecker—A mud wasp's nest, on knob of roller blind. Herbarium specimens including eucalypts.

May Lecture.

Mr. E. Barke, Chief of Staff of the Meringa Sugar Experimental Station, chose "Sugar Cane Breeding" as his subject, and delivered an interesting lecture, which was much appreciated by the members of the Club.

The object of sugar cane breeding is to obtain a combination of characters in a variety, which will be suitable for a particular environment.

There are five species of sugar cane: *Saccharum officinarum*, in various parts; *S. spontaneum*, Java; *S. sinense*, India; *S. barberi*, India; *S. robustum*, New Guinea.

The Hawaiian method is used for crossing, and species and varieties are crossed and recrossed to develop canes with a high sugar content and a high disease resistance, at the same time obtaining a large type of cane.

When new varieties are obtained they are inoculated with the different cane diseases and should they not possess strong disease resisting qualities they are eliminated.

Exhibits.

Mr. R. L. Hunter—A case of *Lepidoptera* (moths) showing in particular *Ophideres salamina* Fabr. and *Ophideres materna* L., two species of orange sucking moths, sub-family Noctuidae, Family Noctuidae. Also the original photos of the life history of *Hypolimnas bolina nerina* Fabr.

Mr. W. H. Nicholl (Victoria)—Original drawings of the following orchids: *Dendrobium Bairdianum*, *Beckleri*, var. *racemosum*, *Liparis cuneilabris*, *Phalaenopsis amabilis*.

BOOK REVIEWS.

11. OUR BIRDS, 224 pp., 100 plates, printed 1932 by H. Pole and Co., Brisbane. Compiled by the Syllabus Notes Committee of the South Coast Inspectoral Dist., Brisbane. It is the first of the excellent series of handbooks published by this committee. Each bird is described in most interesting detail on a whole page, with a full page illustration alongside. This should certainly stimulate the interest of children in the study of birds as is intended, but it is most unfortunate that undesirable vernacular names, such as Laughing Jack-ass, Black Duck, Blue Mountain, Pheasant, Blue Crane, etc., should be specially stressed at the head of the page, and that the more appropriate vernaculars as recommended by the R.A.O.U. should be given much less prominently. The technical names appear in an appendix.

12. OUR PLANTS. 210 pp., 100 plates. Printed 1933 by H. Pole and Co., Brisbane. Compiled by the Syllabus Notes Committee of the South Coast Inspectoral District, Brisbane, is another excellent handbook on the model of "Our Birds," the description of the plant appearing on the left hand page and the illustration on the right. Some 29 wild flowers, 29 weeds, 5 grasses, 19 garden plants and 18 trees with both technical and vernacular names are

given, the plants being most commonly found in the South Coast District. The omission of anatomical details of the flowers according to families is most wise, and this has caused in the past the abandonment of interest in botany. No-

body but a specialist is at all interested in such dissections, and the present arrangement is calculated to promote a life long interest in a very interesting study.

SOME RARER NORTH QUEENSLAND ORCHIDS.

By W. H. Nicholls.

1. *Liparis cuneilabris*, F.v.M., is one of those forms orchid growers would label "Of botanical interest only."

Nevertheless, during the flowering season a well-grown specimen is sure to attract the eye of the orchid lover. To orchidologists it is especially interesting on account of its rarity. Published descriptions of this plant are in need of supplementary data. A figure of it has (apparently) never appeared in botanical literature, with the exception of Bailey's rough line drawing in "A Comprehensive Catalogue of Queensland Plants, 1909."

In Mueller's *Fragmenta phytographiae Australiae*, IV., P. 164, a very brief Latin description appears. Pentham in *Flora australiensis*, VI., p. 273, and likewise Bailey in his *Flora of Queensland*, V., p. 1520, base their descriptions (mere outlines) on Mueller's, thus proving the paucity of material at hand for examination.

Liparis cuneilabris has been suggested a possible variety of *L. reflexa*, Ldl., and in the descriptions referred to above (Bentham and Bailey) the flowers are "said to be yellow."

In March (1934) a fine clump of *L. cuneilabris* was received from Mr. A. Glindeman, of Brisbane, the result of one of his periodical visits to Northern parts (via Ingham). In the following autumn (during March) buds were observed, and on April 17th several neat racemes were fully expanded. Lindley's *L. reflexa* also flowered with me a few weeks earlier and as some of the flowers still remained in perfect condition comparisons were easy.

The following description is from my specimens:—

L. cuneilabris, F.v.M. Habit, etc., similar to *L. reflexa*, Ldl., but leaves longer (30-36 cm.); the sinus of lamina less acute (almost flat); pseudobulbs more slender and compressed laterally. Flowers quite yellow, smaller than those of *L. reflexa*. Racemes erect, compact; labellum more or less cuneate, the apical part broad, apex apiculate; disk of labellum-lamina with two dark-coloured curved lines—noticeably raised into plates at base. Dorsal sepal and petals narrower than lateral sepals; petals only half as wide. Column yellow, only slightly incurved, base broad, upper and lower parts winged.

In the mature flower the segments



Liparis cuneilabris, F.v.M.

A. A typical specimen. B. A flower. C. A flower with segments reflexed. D. Labellum from side. E. Column from side. F. Pollen masses. G. Head of column from front. Anther removed.

reflex more definitely than in *L. reflexa*, Ldl.

(*Sturmia angustilabris*, F.v.M.)

Habitats in North Queensland:—
Rockingham Bay (Dallachy), Mourilyan Harbour (J. W. R. Stuart), Mt. Fox, via Ingham (A. Glindeman).

(2) A new form of *Dendrobium Beckleri*, F.v.M. var. *racemosum*, N. var.

Planta robusta; flores olivacei, racemosi.

Plant more robust than the typical form, which is a well known *Dendrobium*.

Flowers olive-green, very fragrant, the dark purplish-brown striae, so characteristic a feature of the common form is, in this variety apparent only at the extreme base of segments. The racemes have up to 10 flowers.

This interesting and apparently local and therefore rare form was sent to me by Mr. H. G. Henson, of Cairns. It readily responded to treatment in a heated glass house in Melbourne, and flowered during the months of September and October.

Habitat: Cairns.



Dendrobium Beckleri, F.v.M. var. *racemosum* (N. var.), Nicholls. A. Portion of plant in bloom (reduced). B. Flower enlarged. C. Pollen masses enlarged. D. Column from front enlarged. (Column foot not shown).

ADDENDA ET CORRIGENDA.

Vol 1., p. 6. *Xanthophyllum octandrum*. For F.v.M. read (F.v.M.) Domin.

Vol. III., p. 3. *Gastrolobium grandiflorum*. Add loc. Lr. slopes Mt. Spurgeon (Hawkins) and mos. 4 and 5.

P. 23. *Desmodium triflorum*. Add loc. Mareeba (Couper) and mos. 3, 4, 6, 8 to 12.

P. 43. *Mezoneurum brachycarpum*. Add loc. Green Island (Cumings) and mos. 4, 5.

Vol. IV., pp. 7 and 12. For *Ammania* read *Ammannia*.

Page 7. Before (A.) pentandra add (A.) *Rotala*. F.v.M. 4. Hodgkinson R. (Flecker).

CENSUS OF NORTH QUEENSLAND PLANTS—(Continued)

(Figures after plants indicate flowering months)

Tristania suaveolens,
var. *glabrescens*, F.M.B. 2.
Mt. Mulligan (Flecker).
conferta, R. Br. Brush Box. 9 to 4.
Atherton (Swain), Cardwell (Swain), Ayr. (Swain), Mth. Burdekin R. (F.v.M.), Strathdickie N. (MacPherson), Bowen (Francis), Edgecombe B. (Dall.).

exiliflora, F.v.M. 11, 12.
Daintree R. (Kajewski), Kuranda-Atherton Plat. (Swain), Rockingham B. (Dall.).

laurina, R. Br.
Freshwater Cr. (Bates).

longivalvis, F.v.M. Buttercup-tree. Abt. 6.

- P.* of Wales I. (R. Br.), Thursday I. (Scortechini), C. York (Gulliver).
lactiflua, F.v.M.
 Gulf Country (Palmer).
odorata, White et Francis.
 Johnstone R. (Ladbroke).
Syncarpia, Ten.
procera, Salisb. Turpentine Tree
 10 to 12.
 Between Cairns and Ingham (Swain), Herberton (J. F. Bailey), Gadgarra (Kajewski), Ravenshoe to Kirrima (Swain).
Metrosideros, Banks.
tetrapetala, F.v.M.
 Gilbert R. (Daintree).
verticillata, White et Francis.
 Bloomfield R. (Poland).
Xanthostemon, F.v.M.
pubescens. Red Penda. 5.
 Atherton Dist. (Mocatta), Gadgarra (Kajewski), Mazlin's Cr., Herberton Dist. (J. F. Bail).
chrysanthus, F. v. M. Northern Brown Penda.
 Barron R. (J. F. Bail), Johnstone R. (Harding), Rockingham B. (F.M.B.).
pachyspermus, F.v.M. Yellow Penda Cairns-Innisfail Dist. (Swain), Johnstone R. (Bancroft).
Youngii, White et Francis.
 Temple B., C. York Pen. (Young).
Backhousia, Hook. et Harv.
Bancroftii, F.M.B. et F.v.M. Johnstone River Hardwood, 6.
 Johnstone R. (Bancroft).
Osbornia, F.v.M.
octodonta, F.v.M.
 Is. of G. of Carp. (F.M.B.), Trinity B. (F.M.B.).
Psidium, L.
guajava, L. White Guava, Tropical America, 3, 6, 9 to 12.
 Cairns (Flecker).
Rhodomyrtus, DC.
trineura, F.v.M., 10.
 Gould I. (F.M.B.), Herberton (Kajewski), Mt. Bartle Frere (Kajewski), Rockingham B. (Hill).
cymiflora, F.v.M.
 Seaview Ra. (Dall.).
macrocarpa, Benth. Finger Cherry, 6.
 Barron Gorge (Cavall), Gadgarra (Kajewski), Mt. Bartle Frere (Flecker).
Myrtus, L.
rhytisperma, F.v.M.
 Rockingham B. (F.v.M.).
 var. *grandifolia*, Benth.
 Boonjie (Kajewski).
lasioclada, F.v.M.
 Herberton Ra. (Kajewski), Bellenden Ker. Ras. (Hill).
Shepherdi, F.v.M.
 Rockingham B. (Dall.).
Hillii, Benth. Scrub Ironwood. 11.
 Barron R. (J. F. Bail).
Bidwillii, Benth.
 Ft. Denison (Dall.).
racemulosa, Benth.
 Rockingham B. (Dall.), Pt. Denison (Fitzalan), Edgecombe B. (Dall.).
 var. *conferta*, Benth.
 Pt. Denison (Fitzalan).
acmenioides, F.v.M. 5.
 L. Barrine (Kajewski), Gadgarra (Kajewski).
nitida, Gmel.
 Endeavour R. (Pers.).
cxaltata, F.M.B.
 Scrubs abt. Barron R. (F.M.B.).
Metrosideros, F.M.B.
 Pks. of Bellenden Ker Ra. (F.M.B.).
Rhodamnia, Jack.
sessiliflora, Benth. Koorka-bidgan. 12.
 Barron R. (F.M.B.), Gadgarra (Kajewski), Garradunga (Bates), Rockingham B. (Dall.).
trinervia, Blume. 9, 10.
 Atherton Tableland (Swain),
 var. *spongiosa*, F.M.B. Din-din.
 Barron R. (Cowley), Tringilburra Cr. (F.M.B.).
 var. *macrophylla*, Domin. 12.
 Daintree R. (Pentzcke).
Blairiana, F.v.M.
 Mts. abt. Rockingham B. (F.M.B.).
Fenzlia, Endl.
obtusata, Endl. 4 to 7.
 Is. of Torres Sts. (Hutchinson), Badu I. (Endl.), Mt. Mulligan (Flecker), Cairns (Bates), Russell R. (Hill), Murdering Pt. (Priest), Rockingham B. (Dall.).
retusa, Endl.
 Is. of G. of Carp. (R. Br.)
Decaspermum, Forst.
paniculatum, Kurz.
 var. *laxiflora*, Benth.
 Rockingham B. (Dall.).

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CAIRNS, 1st JULY, 1936.

No. 46

NORTH QUEENSLAND NATURALISTS' CLUB.

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

Business for Next Meeting—Monday, 13th July, 1936.

Lecture by Mr. R. W. Mungomery. "Notes on the Introduction of the Giant American Toad (*Bufo marinus*)"

Election of Member.

Mr. P. W. Petersen, Harvey's Creek.

Proposer

Dr. H. Flecker

Seconder

Mr. R. L. Morris

June Lecture.

Mr. S. E. Stephens, Fruit Inspector of the Department of Agriculture and Stock, chose as his subject, "The Hastening and Directing of Nature."

In the propagation of plant life nature has adopted two methods, namely by seed and by plant division. Some plants are specialised in one form of reproduction, some in the other and some are adapted to both methods. By far the larger number, however, depend on seed.

It has been found that whereas the seed of a tree will produce a tree of a type distinct from its parents, any other part of the tree which can be induced to grow independently will produce another tree of similar characteristics to the parent. Hence some method embracing the use of portion of the parent tree other than the seed will defeat nature and accomplish our object. One such method is known as grafting or budding. This process can only be carried out with trees of the same family, that is an orange bud can be grafted on to the stock of a lemon tree, a cherry bud can be grafted on to the stock of a peach tree, but an orange bud cannot be grafted on to the stock of a peach tree. A budded or grafted tree will start cropping

at about half the time it takes a seedling tree for a similar result.

Mr. Stephens ably demonstrated his lecture with a number of specimens illustrating the varieties of grafts, and also gave a practical demonstration. His lecture was greatly appreciated by the members of the Club, who were present.

Exhibits.

Dr. Flecker—Herbarium specimens.

Miss Hooper—A Sea-Hare (*Aplysia*).

Mr. Thurston—A Tachinid Fly from Mareeba, bred from maggots parasitising caterpillars, which were attacking bean plants.

Mr. J. G. Brooks, B.D.Sc.—A Sea-Horse (*Hippocampus abdominalis*).

Visiting Naturalists in Cairns.

Dr. A. J. Turner (Brisbane)—An authority on **Lepidoptera**.

Mr. W. G. Hooper (Austria)—A botanist interested in the flora of North Queensland.

Mr. Geo. Bowen (Hamilton District, N.Z.)

Miss Wigan (Melbourne)—Ornithologist.

Miss Jamieson (Melbourne.)

SOME RARER NORTH QUEENSLAND ORCHIDS.

By W. H. Nicholls.

(3.) *Phalaenopsis amabilis*, Blume.

During my studies of *Phalaenopsis* species, especially the forms of *Ph. amabilis*, I have come to the conclusion that Bailey's species (*Ph. Rosen-*

stromii) is synonymous with the former.

With *Ph. amabilis*, var. *grandiflora*, Ldl., there appears to be very little difference—insufficient variation to justify even varietal rank.



Phalaenopsis amabilis, Blume.

- A. Plant and flowers.
B. Column.

Ph. amabilis is a particularly attractive orchid. The plant itself has a superficial resemblance to some of the larger Australian species of *Cleisostoma* (Blume). The foliage is rarely found in perfect condition, owing to the depredations of caterpillars, etc. Sometimes the plant is destroyed entirely.

The large white flowers are borne on long, often branched scapes, the orange-red markings on lip and column enhance the beauty of the elegant flowers.

In Queensland this orchid is known as "The Goat-eared Orchid." In reference to the large drooping petals, usually it is called "White Moth."

Ph. amabilis grows on rough-barked trees, on vines, and on granite boulders in dense jungle country at Mount Spec and on the Mossman River, in North Queensland, at a maximum altitude of 1,500 feet.

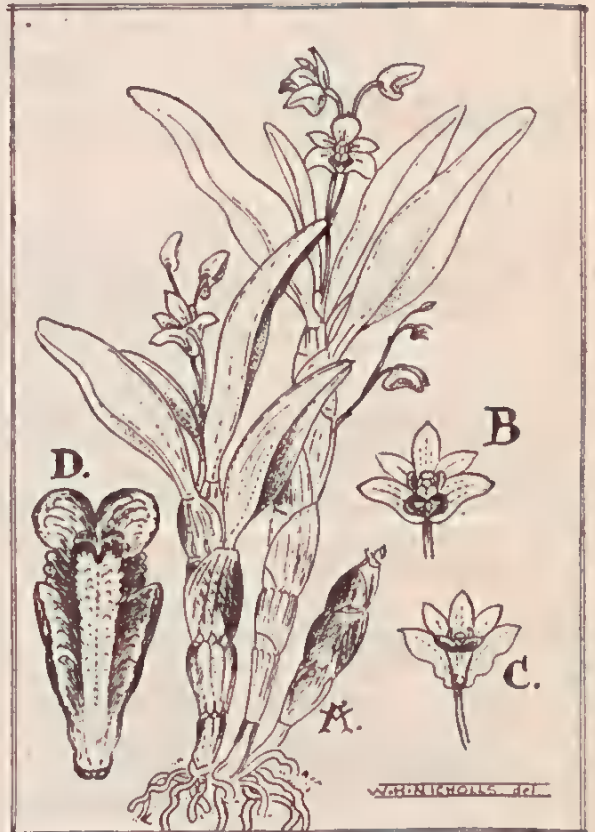
Flowering period—December-February.

I am indebted to Mr. A. Glindeman, of Brisbane, for my specimens.

This delightful species is one of Australia's best orchids. Found also in New Guinea, Java, Philippines, etc.

(4.) *Dendrobium Bairdianum*, Bailey.
(After J. C. Baird).

When first I saw a plant of *D. Bairdianum*, I was struck by the beauty of some of the pseudo-bulbs. Attractively-hued and veined—the predominating colour being purple—they were a delight to behold.



Dendrobium Bairdianum, F.v.M.

- A. Typical plant with freshly expanded flowers.
B. and C. Flower at different stages.
D. Labellum from above.

The flowers—usually 1 to 3 in a raceme—however, do not possess any great beauty, yet interesting in their various phases. In the initial stage, a heavy shade of green which changes to yellowish-green, then at maturity a pleasing buff colour.

The lip is thick and fleshy, deep purple, with a prominent white disk, with two raised pubescent plates extending almost the length of the mid-lobe.

The column is deep-purple also.

Flowering period: December-January.

Habitats : Between Herberton and Mt. Fox, via Ingham (A. Glindeman).
Mourilyan Harbour (J. W. R. Stuart),

ADDENDA ET CORRIGENDA.

(Figures after plants indicate flowering months)

- Vol. 1, no. 9, p. 5. *Hibbertia lepidota*.
Add locs. Settlement Cr. (Brass),
Betw. Einasleigh and Forsayth
(Brass) and mo. 2.
Before (H.) *glaberrima* add (H.)
Stirlingii, White.
f. *stelligera*, White, 1, 8.
Range Rd. (Flecker), Raven-
shoe (Brass).
f. *squamulosa*, White, 1, 8.
Herberton (Stirling), Stannary
Hills (Bancroft).
P. 7. Before (Endiandra) *exostemonea* add
(E) *reticulata*, White, 3.
Daintree R. (Brass).
P. 8. Before Family MENISPER-
MACEAE add
Valvanthera, White.
albiflora, White, 2, 11.
Daintree R. (Kajewski), Moss-
man R. Gorge (Brass).
Tinospora smilacina. After locs.
Thursday Is. and C. York add
(F.M.B.). Add locs. Hartley's
Cr. (Flecker) and mo. 12.
No. 10, p. 6. Before (Polygala) *lep-
talea* add (P.) *japonica*, Houtt, 1.
Herberton (Flecker).
Before *Bredemeyera* (Comesper-
mum) *secunda* add
(B.) *sphaerocarpa*, Steetz, 1.
Herberton (Flecker).
P. 7. Before (Melicope) *stipitata*
add (M.) *sessiliflora*, White, 2.
Mossman R. Gorge (Brass).
P. 8. Before *Samadera* add
(B.) *javanica*, (L.) Merrill, 12.
Hartley's Cr. (Flecker).
No. 11, p. 4. For (Canarium) *aus-
tralasicum* read (C.) *australi-
anum*, F.v.M. Add locs. Irvine-
bank (Bennett), Mt. Molloy (Car-
lin), Mossman R. (Brass), Mow-
bray R. (Brass), Harvey's Cr.
(Sayer), Crystal Stream Bch.
(Flecker), Townsville (Michael)
and mos. 12 to 2.
Sida corrugata. Add loc. Julia Cr.
(Priest).
For (*S. cordifolia*) var. *mutica*,
Benth. read (S.) *mutica*, Domin.
Before *Abutilon* add
(S.) *Dallachyi*, White, 4.
Mt. Molloy (Brass), Rocking-
ham B. (Dall.)
P. 5. *Hibiscus Normani*. After locs.
Fitzroy I. and Palm I. add
(F.M.B.). Add loc. Herberton
(Flecker) and mo. 1.
P. 6. *Melhania incana*. Add loc.
Croydon (Priest).
Waltheria americana. Add loc. Julia
Cr. (Priest).
Before *Triumfetta* add (G.) *papu-
ana*, Burret, 1.
Mowbray R. (Brass).
Before *Corchorus* add (T.) *suffru-
tcosa*, Bl.
Palm I. (Somerville).
P. 7. *Euphorbia prostrata*. Add locs.
Torrens Cr. (White), Cloncurry
(Legg), Townsville (White),
Proserpine (Michael).
P. 8. For (Phyllanthus) *brisbanicus*
(F.M.B.) read (P.) *tenellus*,
Roxb. Madagascar. Add mos. 1,
10 and 12.
P. *Dallachyanus*. Add loc. Her-
berton (Flecker) and mo. 1.
No. 12, p. 5. *Petalostigma quadri-
loculare*. Add loc. Herberton
(Flecker) and mo. 1.
P. 7. Before Family BALANOP-
SIDACEAE add
Dimorphocalyx.
australiensis, White, 1.
Mowbray R. (Brass).
Ficus Thynneana^a. After loc. C.
Grafton add (F.M.B.). Add loc.
Cook Highway (Miss Wright)
and mos. 6, 10 to 12.
Vol. 2, p. 10. Before (*Arytera*) *divari-
cata*, add (A.) *subnitida*, White 3.
Daintree R. (Brass).
P. 12. *Euroschinus falcatus*. After
loc. Cairns add (Flecker).
Aegialitis annulata. After loc. Lord
Howick's Group add (F.v.M.).
Plumbago zeylanica. After loc.
Goode I. add (F.M.B.)
Portulaca australis. After loc. G. of
Carp. add (F.M.B.)
P. *filifolia*. Add loc. Bibbohra
(Flecker) and mo. 1.
Calandrinia uniflora. Add (F.M.B.)
after both locs.
C. *spergularina*. Add (F.M.B.) after
all locs.

Before *Drymaria* add
Spargularia, Pers.
rubra, Pers. Common Sand
 Spurry. Europe. 1.
 Herberton (Flecker).
 P. 16. **Trichinium calostachyum**.
 Add loc. Duchess (Priest) and
 mo. 6.
Rhagodia spinescens.. After loc.
 Burdekin R. add (F.v.M.).
 After (**Chenopodium**) **ambrosioides**,
 L., add Mexican Tea and mos. 2
 to 12.
 After (**C.**) **carinatum**, R. Br. add
 Keeled Goosefoot. Add loc. Innis-
 fail (Flecker).
 P. 22. **Rumex Brownii**. Add loc.
 Herberton (Flecker) and mo. 1.
Muehlenbeckia rhyticarya. Add loc.
 Zarda (Flecker) and mo. 1.
Pimelea involucrata. Add loc. Mt.
 Spurgeon (Flecker) and mo. 1.
 Vol. 3, p. 3. **Gastrolobium grandiflorum**.
 Add loc. Betw. Torrens Cr.
 and Pentland (Priest)
Crotalaria linifolia. Add loc. Strath-
 dickie N. (Macpherson). Delete
 mo. 8 and add 1, 7, 12.
C. trifoliatum. Add locs. McLeod's
 Cr. (Flecker), Mt. Isa (Priest),
 Duchess (Priest) and mos. 1, 4,
 6.
 P. 7. Before *Stylosanthes* add
Trifolium, L.
repens, L. White Clover. Temp.
 N. Hemisph., 1.
 Root's Cr. Clearing (Flecker).
pratense, L. Red Clover. Europe,
 W. As., N. Afr. 1.
 Root's Cr. Clearing (Robbins).
 P. 12. **Polycarpaea breviflora**. Add
 loc. Crystal Stream (Flecker) and
 mo. 12.
 P. 19. **Milletia pilipes**. Add loc.
 Mowbray R. (Brass).
 P. 23. **Pycnospora hedycaroides**.
 Add loc. bet. Stratford and

Buchan Pt. (Flecker) and mo. 12.
 P. 27. Before (*Glycine*) *tabacina*
 add (**G.**) *clandestina*, Wendl.
 Twining *Glycine*, 1.
 Herberton (Flecker).
Galactia tenuiflora. Add loc. Her-
 berton (Flecker) and mo. 1.
 P. 31. Before (*Vigna*) *lutea* add
 (**V.**) *canescens*, White.
 C. York Pen. (Dr. and Mrs.
 Thomson).
 P. 44. **Bauhinia monandra**. Add loc.
 Mowbray R. (Brass) and mo. 1.
 For (**B.**) *Hawkesiana*, F.v.M., read
 (**B.**) *malabarica*, Roxb.
 P. 48. **Acacia calyculata**. Add loc.
 Herberton (Flecker) and mo. 1.
 Vol. 4, p. 3. Before *Albizzia* add (**A.**)
Whitei, 1.
 Herberton (Flecker).
 P. 4. **Polyosma rigidiuscula**. Add
 loc. Root's Cr. (Flecker).
 Bottom of list, add (**Ceratope-**
talum succirubrum, White. Blood
 -in-the-Bark.
 Gadgarra (Tardent), Danbulla
 (Fraser).
 P. 7. For (*Ackama*) *quadrivalvis*
 read (**A.**) *australiensis* (Schlecht),
 White. Pencillia. Add locs. Dain-
 tree R. (Brass), Glen Allyn
 (Hayes), Ravenshoe (Manuell).
 Before Family CRASSULACEAE
 add Family HAMAMELIDA-
 CEAE.
Ostrearia.
australiana, Baill.
 Mossman R. Gorge (Brass).
 P. 12. After **Stackhousia viminea**,
 add Slender *Stackhousia*, 1. Add
 loc. Herberton (Flecker).
 P. 36. Before *Osbornia* add (**B.**)
Hughesii, White. Stone Wood.
 Daintree R. (Hughes).
 Before *Myrtus* add
 (**R.**) *recurva*, White, 2.
 Mossman R. (White).

CENSUS OF NORTH QUEENSLAND PLANTS—(Continued)

(Figures after plants indicate flowering months)

Eugenia.

gustavioides, F.M.B. Grey Satinash.
 8, 10 to 4.
 Daintree R. (Kajewski), Range
 Rd. (Kajewski), Nr. L. Barrine
 (J. F. Bail.), Butcher's Cr. (Miss
 Walsh), Innisfail Dist. (Swain).
Ventenatii, Benth. Weeping Myrtle.
 10, 11.
 Josephine Falls (Flecker), Rock-

ingham B. (Dall.)
leptantha (Wight) Kai-go.
 C. Grafton (F.M.B.), Rocking-
 ham B. (F.M.B.), Mt. Dryander
 (F.M.B.).
 var. *parviflora* (F.M.B.)
 Johnston R. (F.M.B.)
jambolana, Lam.
 Albany I. (Hill).



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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns,
usually on second Monday in each month, at 8 p.m.

NEXT MEETING—MONDAY, 10th AUGUST, 1936.

Lecture by Mr. W. Schridde, entitled "Capture of Crocodiles. Animals in Captivity."

July Lecture.

Mr. Mungomery, of the Meringa Experimental Station, delivered an interesting address on the life-history and habits of the Giant Toad (*Bufo marinus*). This toad is a native of South America being more prevalent in the coastal districts. It was taken to Hawaii, where it has been very successful in controlling insect pests and now has been introduced into this district, in the hope that it may control the gray-back cane-beetle (*Irpidoderma albo-hirta*) and other insect pests.

This toad has not been bred in captivity until Mr. Mungomery was successful at Meringa. The female is larger than the male and has a smooth back whereas the male has a rough one. Normally the back is dark-brown, but yellowish after a moult. The ventral surface is creamy. The toad is capable when greatly provoked of secreting a poison which acts as a protective mechanism.

Life History.

Egg laying takes place during practically every month of the year at Meringa. The eggs are deposited in strings which entwine around aquatic plants. One toad laid 30,000 eggs, but the average is 20,000.

Blackish tadpoles hatch in one to three days depending on the temperature. On the tenth day after hatching, the tadpole begins to develop legs. When the legs are developed the tail begins to shrink. During the period of tail-shrinkage, the tadpole does not eat as the tail itself

provides sufficient nourishment. When the tail has disappeared the young toad leaves the water and lives on small insects.

The mature toads are capable of undergoing a sex reversal.

The lecture was appreciated by the members present.

Exhibits.

Mr. L. Massey, Cairns—Eggs, caterpillars, chrysalids, and adult male and female of the butterfly (*Papilio priamus euphorion* Gray).

Mr. P. G. Close, Cairns—Northern Blue Tongue Lizard (*Tiliqua scincoides*).

Mr. A. B. Cummings, Green Island—A Flute-mouth Fish (*Fistularia petimba*).

Dr. N. J. O'Connor, Mareeba—A Scorpion (*Lychas marmoreus*) responsible for injuries to a human-being.

Mr. S. L. Hannan, Cairns—A Larva of the beetle *Xylotrupes australicus* Thoms, Family Scarabaeoidae, Sub-family Dynastinae.

Mr. R. Hunter, Freshwater—A case of moths, Order Lepidoptera, including *Ophideres salaminia* Fabr. and *O. materna* L., Family Noctuidae, Sub-Family Noctuinae (Orange sucking moths) and *Coscinoscera hercules* Misk. Family Saturniidae, a specimen of the largest moths in the world.

Dr. Flecker, Cairns—A collection of Herbarium specimens, in particular including *Rhododendron Lochae*, now placed on the list of protected plants.

ENCOUNTER BETWEEN CONE SHELL AND OCTOPUS.

By Bruce Cummings.

In the course of seeking material for cinematographic study, a small party set out on the exposed reef at Green Island and came across a small octopus whose tentacles extended some eight or nine inches from its body. Placing this in an enamel pail of sea water, a further search resulted in the discovery of a live cone shell, *Conus textile* which was likewise deposited in the same receptacle, where the cephalopod was swimming about freely.

It was not long, however, before the latter was aware of the presence of the cone, and some twenty minutes or so later, as is usually the case in attacking gastropods, placed one of its tentacles across the entire length of the narrow opening of the shell, the tip of the tentacle entering further than the remainder. (The mouth of the shell measures two and a quarter inches long by about five-sixteenths of an inch wide). About twenty seconds later the octopus quickly withdrew its hold waving its tentacles about with a writhing motion as though violently agitated.

Inspection of the shell immediately after the withdrawal of the tentacles revealed a thin round spike-like object, evidently the radula being with-

drawn. This spike-like radula was about an inch in length tapering from its proximal extremity to a point distally, and was bright red in colour. A few minutes later it was noted that the octopus had shed one of its tentacles, it being detached close to its body.

The octopus was transferred to a glass tank and although well-supplied with abundant fresh sea water it was found dead on the following morning. On the other hand the cone shell did not suffer any apparent injury and is still alive and in excellent condition ten days later.

When the radula is protruded, it is seen directly beneath the syphon, the latter having a red band at its free extremity, a white ring around its centre and a black band proximally. The cone itself measures two and a half inches in length and an inch and three-sixteenths in diameter.

In view of the reported case of a fatal issue following the bite of a native of New Caledonia in 1874 from this shell as well as of similar fatalities from other species of *Conus*, this encounter between the two molluscs is interesting. No doubt, such are of frequent occurrence although rarely observed.

ADDENDA ET CORRIGENDA.

(Figures after plants indicate observed flowering months).

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|--|---|
| <p>Vol. 1, No. 9, p. 8. <i>Tinospora smilacina</i>. Add loc. Second Bch. (Flecker) and mo. 4.
 <i>Cleome aculeata</i>. For Introduced read Trop. Amer. and add mos. 3, 6, 9 to 12.
 No. 10, p. 5. <i>Capparis canescens</i>. Add loc. Mt. Mulligan (Flecker) and mo 12.
 After <i>Sisymbrium orientale</i> add L. Cent. and S. Eur.
 P. 6. Before <i>Melia</i> add <i>Turraea</i>, L. <i>pubescens</i>, Hellen, 12.
 Mt. Mulligan (Flecker).</p> | <p>P. 8. <i>Geijera salicifolia</i>. Add loc. Mt. Mulligan (Flecker) and mo. 12.
 No. 11, p. 4. <i>Tribulus cystoides</i>. Add loc. Cloncurry (Macdonald) and mos. 1, 2, 4, 5.
 Before (<i>Abutilon</i>) <i>muticum</i>, add (A.) <i>oxycarpum</i>, F.v.M., 2.
 Cloncurry (Macdonald)
 P. 6. <i>Corchorus trilocularis</i>. Add loc. Cloncurry (Macdonald) and mos. 2, 3.</p> |
|--|---|

- P. 8. **Glochidion Ferdinandi**. Add loc. Mt. Molloy (Flecker) and mo. 1.
- No. 12, p. 5. **Flueggia microcarpa**. Add (F.M.B.) after locs. Mitchell R., Palmer R., Pt. Denison, Cloncurry. Add loc. Mt. Molloy (Flecker) and mos. 8, 11 to 3.
- Petalostigma quadriloculare**, var. **glabrescens**. Add loc. Mt. Mulligan (Flecker) and mo. 12.
Before (*Antidesma*) *Dallachyanum* add (A.)
- Bunius**, Spreng. *Moi-kin*. 11.
Bloomfield (F.M.B.), Cairns (Flecker), Tully (F.M.B.).
- P. 6. **Croton arnhemicus**, var. **urenaefolius**. Add loc. Hodgkinson R. (Flecker) and mo. 12.
- P. 7. Before *Excaecaria* add **Sebastiana**, Spreng.
chamelaea, Muell. Arg. 12.
Dimbulah (Flecker).
- P. 8. **Trema aspera**, var. **viridis**. Add loc. Mt. Mulligan (Flecker) and mo. 4.
Delete *T. aspera*, var. *virgata*.
- Ficus euginodes**, Add loc. Mt. Mulligan (Flecker), Brown Bay (Flecker) and mos. 4, 12.
- Vol. 2 p. 2. For (*Pouzolzia indica*, Gaudich read (P.) **zeylanica**, (L.) Beauv. 2. Add loc. Cairns (Flecker)
- P. 6. Before *Castanospora* add **Allophyllus ternatus** (Fast.) Radlk. 2.
Parramatta Swamp (Flecker)
- P. 12. **Pleiogynium Solandri**. Add loc. Mt. Mulligan (Flecker) and mo. 12.
- P. 18. Before (*Trianthema*) *turgidifolia* add
(T.) **decandra**, L. 3.
Cloncurry (Macdonald).
Before Mollugo add
(T.) **monogyna**, L. 2, 3.
Cloncurry (Macdonald).
- Vol 3, p. 27. **Galactia tenuifolia**. Add loc. Freshwater (Flecker) and mo. 4.
- P. 31. **Phaseolus Mungo**. Add loc. Second Bch. (Flecker) and mo. 4
- Vigna vexillata**. For (E.M.B.) after Cloncurry read (F.M.B.) Add loc. Parramatta Swamp (Flecker) and mo. 2.
- P. 40. **Cassia Sophera**, v. **schinifolia**. Add loc. Cloncurry (Macdonald) and mo. 2.
- P. 44. **Erythrophloeum Laboucherii**. Add loc. Mt. Mulligan (Flecker) and mo. 12.
- P. 48. **Acacia calyculata**. Add loc. Bessie's Cr. (Flecker) and mo. 4.
- Vol. 4, p. 3. **A. Bidwilli**. Add loc. Woodville (Flecker) and mo. 12.
- Albizzia canescens**. Add loc. Minehan's, Hodgkinson R. (Flecker) and mo. 12.
- P. 4. For *Polyosmia* read **Polyosma**.
- P. 7. **Aristolochia Thozetii**. Add loc. Dimbulah (Flecker) and mo. 12.
- P. 12. **Haloragis acanthocarpa**. Add loc. Bessie's Cr. (Flecker).
- P. 15. **Callistemon viminalis**. Add loc. Bessie's Cr. (Flecker)
- P. 40. **Polycarpaea breviflora** should be inserted above, before *T. calostachyum* in Vol. 2, p. 12.

CENSUS OF NORTH QUEENSLAND PLANTS—(Continued)

(Figures after plants indicate observed flowering months).

- Eugenia**
- cormiflora**, F.v.M. Moorool. 6, 9, 10.
Barron R. (J. F. Bail), Cairns (Flecker), Gadgarra (Kajewski), Rockingham B. (Dall.)
- Hislopii**, F.M.B. Walkaran
Nr. Cooktown, above 1,500 ft. (F.M.B.)
- trachyphloia**, White. 11.
L. Barrine (Kajewski), Gadgarra (Kajewski).
- Tierneyana**, F.v.M. 10 to 12.
Daintree R. (Kajewski), Bi-boohra (Flecker), Wright's Cr. (Flecker), Rockingham B. (F.M.B.)
- grandis**, Wight. White Apple.
Albany I. (Hill), Lizard Is. (B. and Sol.), Herberton Dist. (J. F. Bail), Rockingham B. (Dall.)
- Johnsonii**, F.v.M.
Mt. Bartle Frere (Johnson).
- suborbicularis**, Benth. Ludgin-jacker.

- Mitchell R. (Palmer), Batavia R. (Roth), C. York (Hill), Somerset (F.M.B.), Endeavour R. (Hill), Bloomfield R. (Roth), Dunk I. (F.M.B.)
- Wilsonii**, F.v.M.
Rockingham B. (F.M.B.)
- fibrosa**, F.M.B. 6.
Somerset (F.M.B.)
- Banksii**, Britt. et Moore.
C. Bedford (Pollock).
- bungadinnia**, F.M.B. Bungadinnia.
Somerset (Jardine).
- eucalyptoides**, F.v.M. Austral Pear.
Endeavour R. (Barclay-Millar).
- paniculata**, B. et Sol. 11.
Scrubby Cr. (Kajewski), Atherton (Francis).
- sordida**, F.M.B. 6.
Mt. Demi (Brass), Freshwater (Francis), Gadgarra (Fuller), S. Pk. Bellenden Ker (F.M.B.)
- Luchmanni**, F.v.M. Cherry Alder 12.
Cairns (Francis), Atherton Tablel. (Francis), Mt. Bartle Frere (Johnson).
- angophoroides**, F.v.M.
L. Barrine (Kajewski), Rockingham B. (Dall.)
- oleosa**, F.v.M.
Gadgarra (Kajewski), Bellenden Ker (F.M.B.), Rockingham B. (Dall.)
- cyanocarpa**, F.v.M.
Rockingham B. (Dall.)
- apodophylla**, F.v.M.
Bellenden Ker Ra. (Sayer).
- hedraiophylla**, F.v.M.
Mossman R. (Sayer), Russell R. (Johnson)
- cryptophlebia**, F.v.M. 7.
Daintree R. (Kajewski), Gadgarra (Kajewski).
- Dallachyana** (F.v.M.)
Gadgarra (Kajewski), Rockingham B. (Dall.)
- subopposita**, F.M.B. Tarbugai.
Tully R. (J. F. Bail), Hull R. (Kenny).
- erythrocalyx** (White) 9.
Boonjie (Kajewski).
- FAMILY LECYTHIDACEAE.**
- Barringtonia**, Forst.
speciosa, L. 3 to 6, 11 to 1.
Dayman's I., Endeavour Str. (Hill), C. York (Hill), Rockingham B. (Dall.), Dunk I. (Banfield), Palm I. (Herbert).
- acutangula**, Gaertn. 1.
Mt. Molloy (Flecker).
- calyptrata**, Gaudich. 9 to 11.
Is. of Torres Str. (F.M.B.), Hammond I. (F.M.B.), Lizard I. (B. and Sol.), Bloomfield R. (Poland), Pt. Douglas (Reynolds), Kamerunga (Newport), Cairns (Kenny), Fitzroy I. (Flecker), Johnstone R. (Ladbrook), Rockingham B. (Dal.)
- longiracemosa**, White. 6, 11.
Daintree R. (Kajewski), Johnstone R. (Bancroft).
- Careya**, Roxb.
australis, F.v.M. Go-onje. 1, 10, 11.
Is. of G. of Carp. (R. Br.), Mitchell R. (F.M.B.), Batavia R. (F.M.B.), Palmer R., Pt. Douglas Beh. (Flecker), C. Grafton (B. and Sol.), Range Rd. (Kajewski), Cloncurry (F.M.B.), Burdekin Estuary (Fitzalan).
- FAMILY MELASTOMACEAE,**
Juss.
- Osbeckia**, L.
chinensis, L.
Rockingham B. (Dall.)
- Otanthera**, Blume.
bracteata, Korth.
Rockingham B. (Dall.)
- Melastoma**, L.
malabathricum, L. 1 to 12.
C. Bedford (F.M.B.), Endeavour R. (B. and Sol.), Mowbray (Mrs. Sparvel), Mt. Elliott (Dal-lachy).
var. **nanum**, F.M.B.
Kuranda (Kenny)
- Medinilla**, Gaud.
Balls-Headleyi, F.v.M.
Daintree R. (Kajewski), Alice Cr., Bellenden Ker (Sayer), Johnstone R. (Ladbrook).
- Memecylon**, L.
umbellatum, Burm.
Cleveland B. (Bowman), Rockingham B. (Dall.), Mt. Elliott (Dall.), Burdekin Estuary (Fitzalan), Edgecombe B. (Dall.)
- Tristemma**, Juss.
virusanum, Comm. Madagascar.
Babinda (Illingworth).
- FAMILY RHAMNACEAE, Juss.**
- Ventilago**, Gaertn.
viminalis, Hook. Thandorah.
G. of Carp. (F.v.M.), Cloncurry (Palmer).
- ecorollata**, F.v.M.
Endeavour R. (Pers.), Rockingham B. (Dall.)



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No. 48

NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Girls' and Infants' School, Abbott Street, Cairns, usually on second Monday in each month, at 8 p.m.

NEXT MEETING—MONDAY, 14th SEPTEMBER, 1936

BUSINESS: Annual General Meeting. Election of Officers.

Instead of the Annual Address which will be postponed until next meeting, Mr. C. T. White, Government Botanist, will address the meeting on "A General Talk on the Flora of North Queensland."

Election of Member.

Mr. N. J. B. Plomley, Bank of N.S.W., Threadneedle St., London.

Proposer

Seconder

Dr. H. Flecker Mr. M. Auricchio

Exhibts at August Meeting.

Mr. L. Massey (Cairns)—Eggs, caterpillars, chrysalids and adult male and female of the butterfly (*Delias argentona* Fabr.) with its food plant, *Loranthus odontocalyx*, var. *propria*, a mistletoe.

Dr. Flecker (Cairns)—A number of crabs. Unripe fruit of *Barringtonia speciosa*. *Balanophora fungosa* showing the male and female flowers. Herbarium specimens.

Mr. J. Wyer (Cairns)—Native stone axe and sharpening stone; petrified jaw-bone (mandible) of a *Diprotodon*, petrified wood and petrified clay. These specimens were obtained from the Chinchilla district.

Mr. A. B. Cummings (Green Island)—A razor fish (*Centriscus scutatus*.)

Mr. Pedder (Edge Hill)—A mounted specimen of Lesser Flying Phalanger (*Petaurus breviceps*).

Mr. Auricchio (Cairns)—Spiny Red Spider (*Gasteracantha* sp.)

Mr. J. G. Brooks, B.D.Sc. (Cairns)—A small collection of **Hemiptera** (bugs).

(a) A representative of the family **Tingidae**.

(b) A representative of the family **Gerridae**, sub-family **Halobatinae**, probably *Hermatobates haddoni* Carp. This particular specimen lives on the ocean.

(c) A representative of the family **Neididae** (*Capyella lobulata* Berg.) This specimen is to be found on the under surface of leaves of the stinging tree (*Laportea*).

A collection of North Queensland Spiders, determined by Mr. Lindsay D. Sykes, of Melbourne.

Visitors.

Mr. J. E. Bray (Sydney)—Interested in botany, particularly grasses.

Mr. and Mrs. E. G. Ogg (Gladstone)—Interested in birds, fish and mammals.

INSECT FAUNA OF THE UPPER WALSH RIVER, NORTH QUEENSLAND.

By R. C. CANNON, B.Sc.Agr.

The country is of granitic origin, with occasional areas of sandstone formation. In general one is faced with barren, stony ridges with characteristic stunted vegetation and coarse grasses, among which spear grass,

(*Heteropogon*, sp.) predominates. The whole of the country is very much cut about by creeks and gullies, all of which find their way to the Walsh River, eventually emptying their waters into the Gulf of Carpentaria.

The less rugged portions of the country constitute an open forest formation with poplar gum, (*Eucalyptus platyphylla*), ironwood, (*Erythrophloeum Laboucherii*), beefwood, (*Grevillea* sp.), box, (*Eucalyptus* sp.) bloodwood (*E. corymbosa*) and "quinine-berry" (*Petalostigma quadriloculare*) with ironbarks (*Eucalyptus* sp.) on the stony ridges. In the poorly drained areas are to be found associations of several species of the tea-tree (*Melaleuca* spp.), whilst the Walsh River carries a flora almost entirely of tea-trees and she-okes (*Casuarina* sp.), the former growing to a fairly large size.

The whole area presents a very barren and uninviting appearance, especially during the many dry months of the year. This probably accounts for the fact that it has been comparatively neglected by entomologists. A day's collecting will rarely yield a very large harvest, though what one does collect often comprises some very interesting specimens, including some rather bizarre forms.

Taking the year as a whole, certain families of *Coleoptera* probably occur in the greatest numbers, namely, *Tenebrionidae* and *Curculionidae*. To the casual observer this fact would be far from obvious as the greater proportion of these beetles are to be found under logs, rocks and other debris. During the summer months there are countless wasps and scarabs to be seen in flight and visiting the blossoms of the poplar gum, and other trees. At this period, too, there is a large range of moths to be taken on grass during the day or around lights at night; while on the other hand, the number of butterflies is limited. As in most of this inland country, large termite heaps are to be seen everywhere, carrying their population of termites which swarm around lights at certain periods of the year. Then, too, the creeks and river play their part in maintaking a fauna of aquatic and semi-aquatic insects. For convenience we shall discuss the separate orders of importance under their respective headings.

Plecoptera:

Mayflies are by no means common in any area and are but infrequently met with in this arid area, odd speci-

mens having been seen on the wing. The larvae or "naiads" spend their lives in the water and the adult emerge for its brief life of only a few hours. With such a short reproductive life, it is not surprising that very few can survive the dry conditions so often prevailing.

Odonata:

During all but the mid-winter months adult dragon-flies may be collected around waterholes and watercourses. The "nymphs" lead an entirely aquatic existence and are to be found clinging to grasses, sedges or dead twigs below the water level, where they feed on the lower forms of water life as well as on the larvae of other aquatic insects. There are represented both sub-orders, *Zygoptera* and *Anisoptera*. Quite a considerable time has been spent in searching for the larvae of that elusive damselfly, *Chorismagrion risi* Mort., but so far no success has been attained. Representatives of another group of archaic types have been collected, however, and include *Agriocnemis rubescens* Selys and an undetermined species of the primitive *Protoneturidae*.

Orthoptera:

This order includes the most primitive types of winged insects in which only minor differences occur between the larval and imaginal forms. In Europe fossil cockroaches are dominant in the earliest known insect beds of the Upper Carboniferous, though in Australia they do not appear till the Upper Triassic. To-day, on the other hand, they form a very small proportion of the Class *Insecta*. With the modification of the mode of living has come the condition of reduced wings as shown by the giant cockroach, *Macropanesthia rhinoceros* Sauss., the female of which measures up to 2 inches in length. This insect is quite common following a downpour of rain, when it will be seen crawling about and burrowing into the sandy soil. Some rather bizarre mantids are met with at most periods of the year, while grasshoppers occur in large numbers during the summer months. At certain periods these constitute a serious pest of young tobacco seedlings and often, to a minor extent, of the crops planted in the field.

Isoptera:

Wherever one looks there are to be seen the termitaria of so-called "white-ants." They occur over the whole range of soils in the district and are built up very rapidly. Fence posts, wooden buildings, dead trees, and even living trees are subject to their attack, the one exception being cypress pine (*Callitris* sp.). They do not enter this wood though their covered galleries may often be seen on the surfaces of cypress pine logs or posts.

They are probably a specialised offshoot of the *Orthoptera* in which the social habit has become predominant. Except in the case of the giant termite, *Mastotermes*, five distinct castes can be recognised, namely, the royal pair, the workers, the soldiers, the sexual or winged caste and neotenic royalties.

Following rain there are usually to

be seen millions of the winged caste of sexual individuals which swarm around lights, shedding their wings everywhere. It is this caste which is responsible for the formation of new colonies.

Hemiptera:

This extensive order comprises a wide range mostly of vegetarian insects, and, therefore, insects harmful to crops of all kinds. Representatives of both sub-orders are quite common and the most abundant group would probably be, as elsewhere, the family *Pentatomidae*. One of the most striking bugs is the large *Lethocerus indicus* Stal., an aquatic species which is frequently taken around lights. The waterstriders (*Gerridae*) can be seen on the surface of any still water moving rapidly over the surface of the water when disturbed. In the waters themselves are to be found the carnivorous *Notonectidae*.

(To be continued)

ADDENDA ET CORRIGENDA.

(Figures after plants indicate observed flowering months).

Vol. 1, No. 9, p. 6. Before *Wilkiea* add (P.) *coriacea*, White.

Thornton Peak (Brass).

No. 10, p. 6. Before (*Garcinia*) *Gibbsiae* add (G.) *Brassii*, White.

Thornton Peak (Brass).

No. 11, p. 7. *Euphorbia prostrata*. For Introduced read Pantropical.

P. 8. Before *Glochidion* add (P.) *Brassii*, White, 3.

Thornton Peak (Brass).

No. 12, p. 7. After *Dimorphocalyx* add *Thwaites*.

P. 8. *Ficus infectoria*. For *Moolleah* read var. *Forbesii*, King. *Moolleah*, 3 to 11. After locs. *Mapoon*, add (F.M.B.), *Green Is.* (Wright), *Cairns* (Flecker).

Vol. 2, p. 16. *Chenopodium ambrosioides*. For Introduced read Trop. Amer.

Vol. 4, p. 3. After (*Acacia*) *Whitei*, add *Marden*.

P. 7. After *Ostrearia* add *Baillon*.

CENSUS OF NORTH QUEENSLAND PLANTS—(Continued)

(Figures after plants indicate observed flowering months).

Zizyphus, Juss.

Oenopia, Mill. Wine Jujube.

Is. of G. of Carp. (R.Br.), Thursday and other Is of Torres Str. (F.M.B.)

jujuba, Lam. Common Jujube. Torres Str. (Dubouzet).

Dallachya, F.v.M.

vitiensis, F.v.M. Murtillam.

Somerset (F.M.B.), Daintree R. (Kajewski).

Schistocarpha, F.v.M. 9.

Johnsoni, F.v.M.

Boonjie (Kajewski), Mt. Bartle Frere (Johnson).

Colubrina, L. C. Rich.

asiatica, Brongn. 3 to 6, 11 to 1.

C. York (M'Gillivray), Howick's Gp. (F.v.M.), Daintree R. (Kajewski), Green I. (Bates), Cairns (Flecker), C. Grafton (A. Cunn.) Russell R. (F.M.B.), Rockingham B. (F.M.B.), Pt. Denison (F.M.B.)

- Alphitonia**, Reissek.
excelsa, Reissek. Red Almond, 3, 4. Sweers I. (F.M.B.), Batavia R. R. (Ward), Mt. Mulligan (Flecker), Cairns (Cowley), L. Barrine (Flecker), Pt. Denison (F.M.B.)
 var *franguloides*, Maraticoola. Boar Pocket, nr. Barron R., (J. F. Bail), Jordan Cr., Innisfail Dist. (Mocatta).
Whitei, Braid.
 Daintree R. (Kajewski).
Petriei, Braid et White. Whiteleaf. 9, 10.
 Thursday I. (Francis), Cairns (Francis), Clayton's Cr. (Flecker)
Emmenospermum, F.v.M.
alphitonioides, F.v.M. Jingull. Barron R. (Francis), Cairns (F.M.B.), Gadgarra (Kajewski), Rockingham B. (Dall.)
Gouania, L.
Hillii, F.v.M.
 Daintree R. (Hill).
australiana, F.v.M.
 Mulgrave R. (F.M.B.), Rockingham B. (Dall.)
Sageretia, Brongn.
hamora, Brongn.
 Freshwater Cr. (Francis).

FAMILY VITACEAE.

- Cissus**, L.
antarctica, Vent.
 var. *pubescens*, Domin.
 Gadgarra (Kajewski).
Tetrastigma, Planch.
nitens, F.v.M.
 Gadgarra (Kajewski), Herbert (F.v.M.)
Vitis, L.
cordata, Wall. 8.
 Range Rd. (Flecker), Barnard Is. (M'Gillivray), Burdekin R. (F.v.M.)
adnata, Wall.
 Ras. Barron R. (Cowley).
saponaria, Seem.
 Walsh R. (Barclay-Millar), Torres Str. (R.Br.), C. York (M'Gillivray), Piper's I. (M'Gillivray).
trifolia, L. Lorwora. 1.
 Staaten R. (F.M.B.), Nassau R. (F.M.B.), Palmer R. (F.M.B.), C. York (M'Gillivray), P. Charlotte B. (F.M.B.), Cooktown, (F.M.B.), Bullock Paddock, Brooklyn Stn. (Flecker), Butcher's Hill (F.M.B.)

- strigosa*, F.M.B.
 Ras. abt. Barron R. (Nugent).
brachypoda, F.v.M.
 Rockingham B. (Dall.)
penninervis, F.v.M.
 Campbell's Cr. (Flecker), Rockingham B. (Dall.)
clematidea, F.v.M. Mor-bir. 2, 3, 6, 10, 12.
 Mt. Mulligan (Flecker), C. Bedford (F.M.B.), Cooktown (F.M.B.), Green I. (Flecker), Ras. abt. Cairns (Nugent), Mt. Bartle Frere (Flecker).
japonica, Willd.
 Endeavour R. (Planchon), Ras. abt. Barron R. (Cowley).
acetosa, F.v.M., Mbau-nu.
 Mabuig I. (Macgregor), Palmer R. (F.M.B.), Batavia R. (F.M.B.), C. York (F.M.B.), P. Charlotte B. (F.M.B.), C. Bedford (F.M.B.), Cooktown (F.M.B.), Butcher's Hill (F.M.B.), Bloomfield R. (F.M.B.)
hypoglauca, F.v.M. Water Vine. 12.
 Palmer R. (F.M.B.), C. Bedford (F.M.B.), Cooktown (F.M.B.), Bloomfield R. (F.M.B.), Cairns (F.M.B.)
opaca, F.v.M. Pepper-vine. 12.
 Mt. Mulligan (Flecker), Cooktown (F.M.B.)
Gardineri, F.M.B.
 Walsh R. (Gardiner).

- Leea**, L.
sambucina, Willd. Kalet.
 Is. of Howick's Gp. (F.v.M.)
FAMILY ARALIACEAE, Vent.
Delarbrea, Vieill. Blue Delarbrea.
Michieana, F.v.M. 1.
 Mt. Spurgeon (Flecker), Mulgrave R. (F.M.B.), Rockingham B. (F.M.B.).

- Aralia**, L.
Macdowallii, F.v.M.
 Russell R. (Hill).
Pentapanax, Seem.
Willmottii, F.v.M. 10.
 Mt. Bartle Frere (Kajewski), Mt. Bellenden Ker, 5,000 ft. (Sayer and Davidson).
Mackinlaya, F.v.M.
macrosciada, F.v.M. 9, 10.
 Smithfield Ra. (Flecker), Fitzroy I. (M'Gillivray), Clayton's Cr. (Flecker), Campbell's Cr. (Flecker), Dunk I. (M'Gillivray), Rockingham B. (Dall.), Pt. Molle (Fitzalan).

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