

The
North Queensland Naturalist

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

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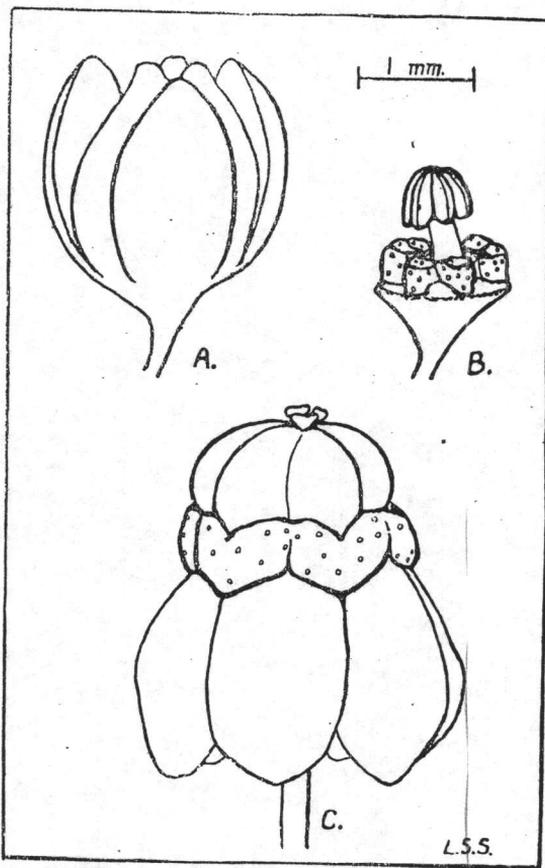
CAIRNS, 1st SEPTEMBER 1947

No. 84

**PHYLLANTHUS CLAMBOIDES (F. MUELL.) DIELS.
 A LITTLE KNOWN NORTH QUEENSLAND PLANT.**

(By L. S. SMITH, B.Sc., Botanic Museum and Herbarium, Brisbane.)

In 1876 Mueller described a plant, collected by Fitzalan from the Daintree River, as *Leichhardtia clamboides* and placed it in the family *Menispermaceae*. His choice of a generic name was unfortunate, as it is an illegitimate one, being a later homonym, and



PHYLLANTHUS CLAMBOIDES (F. Muell.) Diels.

A. Male flower. B. Male flower with perianth removed. C. Female flower.

tree River, as *Leichhardtia clamboides* and placed it in the family *Menispermaceae*. His choice of a generic name

must therefore be rejected under Art. 61 of the International Rules of Botanical Nomenclature. Robert Brown had

already validly published a genus *Leichhardtia* (misspelt *Leichardtia*) in 1849, which was later reduced to a synonym of *Marsdenia* R. Br. (Ascle. piadaceae). As Fitzalan's specimen bore male flowers only, as one might expect, it would be difficult to place the plant with any degree of certainty.

Diels, in his Monograph of the Menispermaceae (1910), followed Mueller in including *Leichhardtia* in the Menispermaceae but did not provide a new name for the genus. However, he admitted its doubtful position and makes the remark "... tamen a non re vera Euphorbiaceae quaedam sit drupis ignotis vix decidi potest."

Immediately following the publication of Pax and Hoffman's account of the Euphorbiaceae in Engler-Prantl Naturl. Pflanzenfam. 2 Aufl. 19c. 64 (1931), Diels finally appears to have recognised the true affinity of *Leichhardtia clambooides* with a small group of plants from New Guinea and the Solomon Islands, which comprised *Phyllanthus* Sect. *Nymania* (K. Schum.) J. J. Smith. In his paper entitled "Aufklärung der Gattung *Leichhardtia* F. Muell." (1931), he makes the new combination *Phyllanthus clambooides* as well as describing a few more allied species from New Guinea and listing those already known belonging to the section. One of the species mentioned, namely *P. insignis* (K. Schum.) J. J. Smith in Nova Guinea VIII. 781 (1912), requires a new name. The combination is a later homonym of *P. insignis*. Muell.-Arg. in DC, Prodr. XV, ii. 1271 (1866), and in consequence must be rejected. That this latter name was validly published has been kindly checked by Mr. H. K. C. Mair at the National Herbarium, Sydney. The new name *Phyllanthus schumanniana* L. S. Smith is hereby provided.

In this same paper Diels reduces *Phyllanthus* Sect. *Nymania* to a synonym of *Phyllanthus* Sect. *Leichhardtia* (F. Muell.) Diels, apparently basing the change on the fact that the generic name *Leichhardtia* (1876) is older than *Nymania* (1905). However, Art. 58 of the International Rules of Botanical Nomenclature states that the earliest name bearing sectional rank

must stand. As *Nymania* was reduced to sectional rank in 1912 and *Leichhardtia* in 1931, the former name must obviously be used for the section.

The combination *Phyllanthus clambooides* was made without female flowers of the plant having been seen. So far as I am aware, specimens of this plant have not been collected since the type gathering until a short time ago a specimen bearing both male and female flowers was received at the Queensland Herbarium, Brisbane, for identification, from the North Queensland Naturalists' Club. This specimen shows that Diels was correct in removing the species to the family Euphorbiaceae and placing it in the genus *Phyllanthus*. It also enables the following more complete description of the plant to be prepared.

Phyllanthus clambooides (F. Muell.)
Diels in Notizb. Bot. Gart. Berlin,
xi. 310 (1931).

Leichhardtia clambooides (F. Muell.)
Fragm. x. 68 (1876); F. M. Bail.
Queensl. Fl. i. 33 (1899); Diels in
Engl. Pflanzenreich iv. 94, 184
(1910) et fig. 66.

A shrub or small tree (?). **Branchlets** hollow, flexuous, glabrous, light to dark brown or sometimes blackish, more or less finely longitudinally striate, towards the apex angular, otherwise terete; internodes up to 4 cm. long but usually less. **Stipules** paired, persistent, attached by a broad base, broadly ovate and obtuse or more or less semilunar and rounded at the apex, 1-3 mm. long. **Petiole** glabrous, narrowly winged in the upper part, 3-5 mm. long. **Leaves** alternate, distichous, the lamina papyraceous to thinly coriaceous, drying dark green above and paler beneath or somewhat brownish, glabrous, lanceolate or elliptic-lanceolate, 7-14 cm. (18 cm. sec. Mueller) long, 3-6 cm. wide, obtusely acuminate at the apex, broadly cuneate or frequently, more or less rounded at the base, margin entire, often slightly recurved, midrib elevated on both surfaces, more so beneath, lateral nerves 8-12, curvedly ascending, more prominent beneath, secondary and tertiary nerves obscure above, slightly prominent beneath.

Inflorescences paniculate, many-flowered, 1-3 in each leaf axil or pseudo-terminal, bearing either male or female flowers, or when more than one in each axil sometimes the central one bearing female flowers and the lateral ones male flowers, male inflorescences up to 20 cm. long, female ones up to 12 cm. long; bracts minute, more or less denticulate, 0.25-0.775 mm. long; pedicels clustered or sometimes solitary, capillary, 3-7 mm. long, those of the female flowers slightly more robust. **Male flowers** greenish, in bud subglobular; perianth erect, glabrous, segments 6, obtuse, 1-nerved, imbricate, in two series, the outer ones elliptic, ca. 1.8 mm. long, the inner ones broader and obovate; glands of the disk 3, bilobed or bipartite, opposite the outer sepals, glabrous, fleshy, foveolate, ca. 0.75 mm. wide, 0.3-0.4 mm, thick and high; stamens 3, opposite the disk-glands, filaments united into a glabrous column ca. 0.5-0.6 mm. long, anthers subsessile cordate-ovate, very obtuse, ca. 0.5 mm. long, erect and opening by two longitudinal slits, connective broadened towards the base. **Female flowers** not seen in bud; perianth strongly reflexed, glabrous, segments 6, obtuse, 1-nerved, imbricate, in two series, the outer ones elliptic or oblong elliptic, ca. 2-2.5 mm. long, the inner ones broader and obovate; disk thick, fleshy, foveolate, ca. 0.5-0.7 mm. high, lobed around the base opposite the sinuses between the sepals and less so on the upper side opposite the mid-nerves of the sepals, more or less vertically grooved between the basal lobes; ovary glabrous, depressed globular, ca. 1.8 mm. diam., 1.25 mm. long, 3-furrowed with 3 shallower furrows midway between the main

ones, 3-celled; ovules pendulous from near the upper angles of the cells, 2 in each cell, collateral, carunculate; stigmas 3, subsessile, very broadly compressed-pyriform, truncate or emarginate at the apex. **Fruit** unknown.

QUEENSLAND:— Cook District: Daintree River, Fitzalan; Freshwater Creek near Cairns, L. Wright, N.Q.N.C. No. 10457, 7-10-1946 (Flowers greenish).

Although Mueller described the species as a twining shrub, it seems probable that this was merely a guess on his part, based on the knowledge that this is the typical habit of members of the *Menispermaceae*. This is further borne out by the fact that probably the majority of Fitzalan's specimens were unaccompanied by notes. Actually all of the known species belonging to *Phyllanthus* Sect. *Nymanina* range from shrubs about 1 m. high to small trees of 6-7 m.

What appears to have been a cause of Mueller's incorrectly placing our plant is his mistaking the disk-glands of the male flowers for petals. In describing another North Queensland plant as *Callicoma Stutzeri* (now *Pullea Stutzeri* (F. Muell.) Gibbs, I notice he has also made the same error of describing disk-glands as petals. Whereas Mueller gives the number of these "petals" of *Leichhardtia clambooides* as 3, Diels (1910) raises the number to 6 in his account of the genus, while in the description of the species he refers to them as "staminodia (petals?)" and gives the number as 4-6. Actually, at times, the glands are so deeply divided that they look more like 3 pairs of glands rather than 3 single ones.

BARRINGTONIA ACUTANGULA AS FISH POISON. A PRACTICAL APPLICATION.

(By T. CARR, late Lieut., 17th PL. V.D.C.)

A practical demonstration of the use of the roots of *Barringtonia acutangula* was made by the 17th Platoon of the V.D.C. on 24th October, 1943. These roots are usually found in abundance along the head waters of the Mitchell River and its tributaries, and are known locally as "Freshwater Mangrove." Being found in the dry

bed and along the banks of the rivers, the roots are often exposed by the action of floods. Six men were able to collect eight corn sacks of roots, chopped into convenient lengths of about 15 inches, in an hour and five minutes on each side of the Little Mitchell River Road Crossing.

The Mitchell River above its junc-

tion with Rifle Creek towards the end of the year is reduced to a series of water holes, many of them deep and permanent. The water-hole selected for this experiment was 52 yards in length and about 25 yards wide at its widest point.

Before dusk on 23rd October, the eight bags of chopped roots were placed in position around the edge of the waterhole with lengths of wood to pound the roots upon. A few trunks and branches of the *Barringtonia* (about 150 lbs.) which were growing at the waterhole were chopped and split up and thrown into the centre of the waterhole, as it was feared that not enough roots had been prepared, but this precaution was found unnecessary.

At 5.10 a.m. next morning six men commenced pounding up the roots with tomahawks and axe heads and throwing the crushed roots into the water in front of them.

At 6.5 a.m., the water immediately in front of each man appeared slightly discoloured and when agitated froth arose to the surface. This was particularly pronounced in front of one man who was pounding up the roots thoroughly.

All the roots were crushed by 7.40 a.m. The first fish appeared on the surface at 7.45 a.m. just as breakfast was starting and almost immediately the whole surface of the water was teeming with fish.

Archer fish (*Toxotes chateurus*) were plentiful and many jumped clear of the water. Catfish (*Tandanus hyrtlii* and *T. mediobarbis*), one 25 lbs. in weight, appeared to be less tolerant of the poison than the other kinds. Gar (*Zenrchopterus dispar*) "black bream" and "finger-marks" appeared about the same time.

"Jew Fish" did not appear until 8 a.m., when a large water snake (*Natrix mairi*), also appeared. At 8.14 a.m., the only "Rock Cod" was caught. Fish were caught with two and three pronged spears which must be strong. Some fish were killed with an axe.

No attempt was made to stir up the water for the reason that more fish were obtained than were required, and with the large number of catfish and "jewfish" on the surface of the water it was not considered advisable. At 10.15 a.m., only a few fish were seen near the surface and at 11 a.m. with the exception of some fish, mostly catfish, which appeared as though they would not recover, many small fish were seen swimming about in quite a normal condition.

Three corn sacks of good edible fish, half of them cleaned and filleted were taken to Molloy and it is estimated that an equal amount was left behind on the banks of the waterhole. It is believed that if the water had been stirred up a much greater number of fish would have been taken.

A LARGE FORM OF *DENDROBUM RIGIDUM* R. BR.

T. E. HUNT, Ipswich.

By air mail to-day, I received some very interesting flowers of *D. rigidum* R. Br., sent by Mr. Tierney of Cairns. I understand they came from plants collected in the Portland Roads area. They are much larger and more brightly marked than those usually seen and there seems to be a more definite tendency to produce a raceme rather than solitary flowers. One peduncle measured 2 cm. with four large flowers, each on a pedicel 1 cm. long. The sepals and petals are 9 mm. long and recurved. The petals are linear-spathulate, acute. The sepals and spur are densely covered outside with minute crimson dots. The

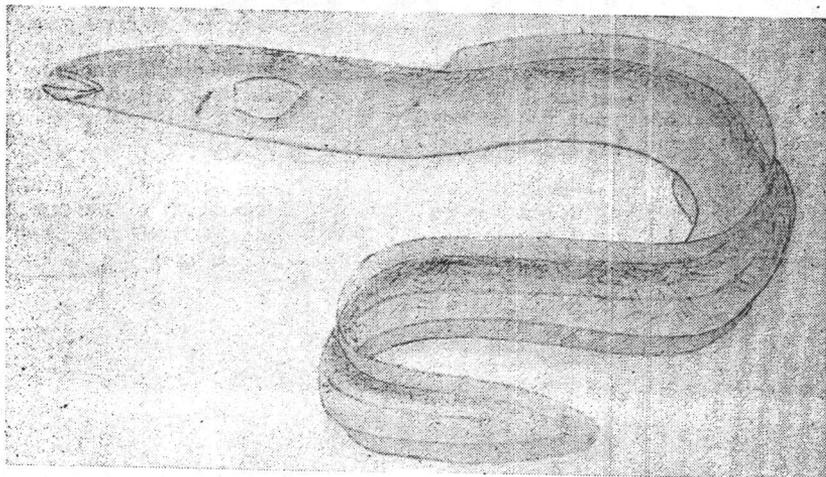
labellum is as long as the other segments. The lateral lobes are very strongly marked with bright crimson lines. The mid-lobe is very much larger than the laterals, is recurved, thick in texture and deep yellow with numerous dots and lines of crimson on both its upper and lower surfaces. The plate is whitish above with the typical three raised lines and there is a very fine channel on the under surface.

Altogether this is a superior form of a very attractive orchid but as it differs from the typical plant only in size and depth of colouring, it is not worthy of varietal standing.

FRESH WATER FISHES OF THE BARRON RIVER.

(BRUCE SHIPWAY, Perth, W.A.)

(Continued)



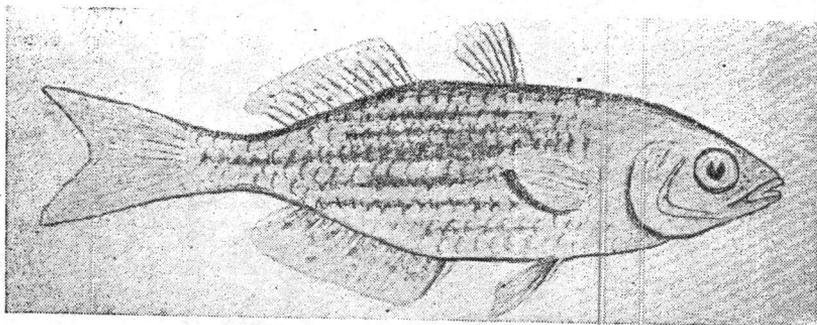
ANGUILLA REINHARDTII Stdr.

Family ANGUILLIDAE.

Anguilla reinhardtii Stdr. (Eel.)

Common above and below the Barron Falls and in billabongs. Colour, light brown with numerous patches of

dark brown parallel short stripes. The young are sometimes caught ascending rivers from the sea where the mature eels breed. Mostly carnivorous in habit and usually feed at dusk or night time. Length 4 feet.



MELANOTAENIA NIGRANS (Richardson)

Family ATHERINIDAE.

Melanotaenia nigrans (Richardson)

Jewel fish or Fresh water Sun Fish.

Considerable confusion exists regarding the name of this beautiful fish. It has been caught in various localities on the North-East coast of Australia and is subject to variation due to locality and age. It is known under the names of *Atherina nigrans*, *Strabo nigrofasciatus* and several others, none of which do justice to the colouration

of this little fish. It was exported to the U.S.A. by the Americans many years ago and is now a popular exotic aquarium fish in that country. It is a valuable destroyer of mosquito larvae with a rapacious appetite and penetrates into the smallest creeks and streams in search of food. It deposits adhesive eggs in dense patches of water plants. It reaches a length of 3 inches in the upper reaches of the Barron River and about 5 inches in the lower reaches.

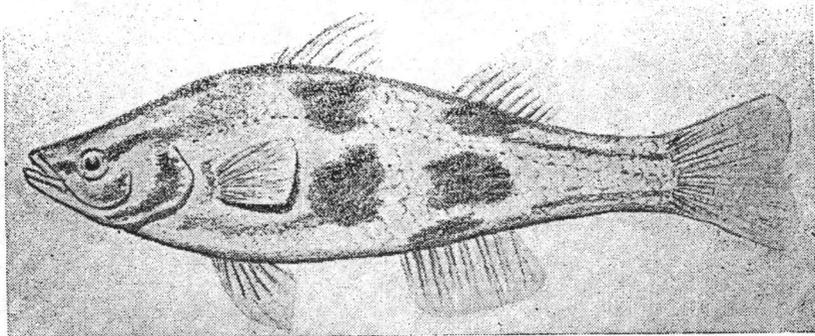
Family ATHERINIDAE.

Pseudomugil signifer (Kner.).

Blue-eye.

Common among the clumps of *Elo-dea* in the lower Barron River. This pretty little fish is noted for the development of the dorsal and ventral fins of the male during the breeding season. Normally of an olive-green with a silver belly and an iridescent blue circle around its eye, the male's fins become elongated and change colour to an opaque pale blue with a trace of

gold. The fish is a valued destroyer of mosquito larvae and the writer believes it was exported to the U.S.A. some years ago for this purpose. It deposits its adhesive eggs among water plants. It is a popular aquarium fish owing to its brilliant colouration and lively habits, but its nervous system is somewhat delicate and a sudden shock, such as tapping the glass of an aquarium is liable to cause death. It is a rapid consumer of oxygen and will not stand overcrowding. Length one and a half inches.



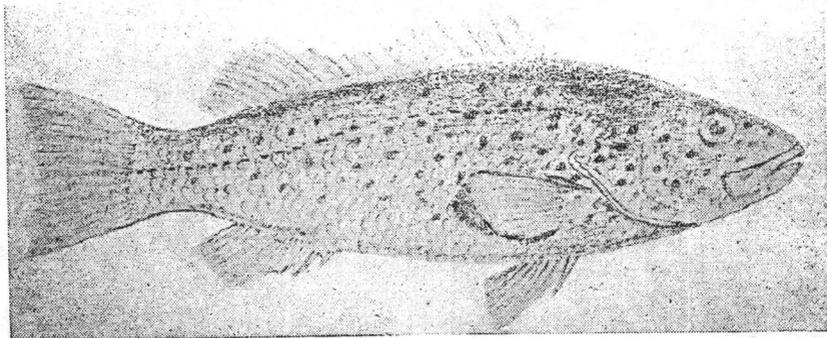
GLOSSAMIA GILLII (Steindachner)

Family APOGONIDAE.

Glossamia gillii (Steindachner)

Specimens were obtained in the lower reaches of the Barron River. The fish is brown in colour with large darker brown blotches. It frequents the deeper holes in the river and usu-

ally feeds off the bottom amongst dense patches of water plants. It is a fairly sluggish fish in its movements and is believed to belong to the "mouth-breeder" group, that is, one of the parents (information desired) carries the eggs in its mouth until they are hatched. Length 5 inches.



Therapon unicolor.

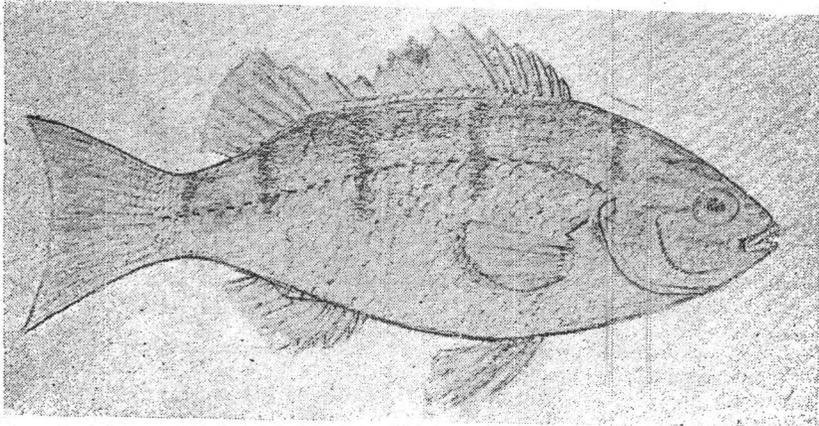
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Family KUHLIIDAE.

Kuhlia rupestris (Lacepede).
Flagtail.

Common below the falls in the Barron River and the Mulgrave River. Dark brown on the dorsal surfaces fading to a light shade on the belly. Two prominent vertical stripes on the extremities of the bilobed caudal fin are responsible for its popular name.

The lateral line is clearly marked and each scale has a dark edge. When one of these fish is caught on a fishing line the rest of the fish in the pool follow it to the surface and from then on, for quite some time, refuse to take the bait. Information is desired on the breeding habits of these fish. It is possible the fish breeds in salt or brackish water. Length 10 inches.



Therapon percooides (Gunther)

Family SERRANIDAE.

Therapon percooides (Gunther). Black Striped Grunter.

From the upper reaches of the Barron River. Dorsal surfaces dark blue grey shading to a pearly white on the lower surface with five narrow vertical black stripes. Two rows of dusky

spots on the soft dorsal and numerous blue spots on the caudal fin. This fish has been found as far afield as the Swan River, Perth, W.A., and derived its name from the peculiar noise it makes when captured. Its breeding habits are probably the same as *T. unicolor*. Reaches a length of six inches. (To be continued.)

CLUB ACTIVITIES

R. B. WILLIAMS

Three months have passed since these notes last appeared and in that time club activities have, if anything, shown signs of intensification.

Three field days have been conducted with the usual efficiency, both of transportation and organisation, and all were marked by excellent prevailing weather conditions. Scene of the first outing of the quarter was Barron Heads, easily accessible from Machan's Beach, after quite a brief walk. It was during the course of

this walk, in fact, that two of our members suffered an experience not at all enviable, in that they gained first hand experience of the caustic properties evidenced by the sap of that local menace, the Tar Tree.

In their enthusiasm over certain orchids they overlooked the presence of danger in the fallen branches of a tree felled in clearing operations, and it was not until the effects revealed themselves in the form of ugly red weals that they realised their mis-

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fortune. There is no accepted antidote for these burns, but the application of methylated spirits in this case effected some relief and has since been recommended by our two friends.

In June a slight alteration was made to the programme of walks and Upper Stoney Creek was chosen as our goal. The train journey from Cairns almost solved the transport problem, but not entirely, according to one brave soul—this confession being made at the top of a three hundred foot pinch on the mountain slopes above the railway line.

Few passengers on the range railway have a true conception of Stoney Creek Falls, the view from the bridge depriving them of a more magnificent sight only a few hundred feet away, hidden by the protruding out-crop.

Stoney Creek in its upper reaches is a placid stream wandering through densely-timbered country and only occasionally winding its way through rocky defiles, until, without warning, in a smooth glassy jet, it plunges over the upper falls before turning at right angles and appearing in full view for the less adventurous to see.

The last Sunday in July saw the club again in the field, this time at Campbell's Creek. For months Campbell's Creek has been discussed with interest, and Sunday's outing proved that interest was warranted. All agreed this area to be unexcelled for its wealth of tropical material, not to mention the delightful aspects of the creek itself, with long tumbling cascades and shady tree-lined pools.

From a rendezvous at the foot of the hills most of the party ascended to the second cascade before they were forced to turn back, not by the nature of the terrain, but the lateness of the hour.

Mention must be made here of a more recent club outing, in conjunction with the Junior Nature Lovers' Club, during the course of which the Kamerunga section of the Barron River was combed by these young enthusiasts, with several members of the senior organisation, and other school representatives, conducted a "bird spotting" expedition in that area. No less than fourteen different species were detected and eagerly noted, not to mention a multitude of other observations made by these sharp-eyed young people.

NORTH QUEENSLAND NATURALISTS' CLUB

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

ANNUAL MEETING, TUESDAY, 9th SEPTEMBER, 1947.

Business: Annual Report, Balance Sheet, Election of Officers, etc.

FIELD DAYS

25th May: Barron Heads. Attendance 29.

22nd June: Stoney Creek, Upper Reaches. Attendance 20.

27th July: Campbell Creek. Attendance, 25.

24th August: Walsh's Pyramid. Attendance 18.

28th September: Double Island

26th October: Grey Peaks.

23rd November: Stoney Creek Falls to Barron River.

MEETINGS

9th June: Notes on N.Q. Birds by Arthur J. Moran.

8th July: Social evening and conversation.

12th August: "Living on the Land," by Gordon B. Stephens.

NEW MEMBERS ELECTED

9th June: Messrs. J. H. Holliday, Box 456, Townsville; D.H.Q. Whaling, Buchan-street, Cairns; C. Freeman, Atzemi Flats, Ingham.

8th July: Mr. Arthur Fielding, Big Tableland, via Cooktown; Mrs. F. J. Irvine, Woree; junior member, Miss Hilda Irvine, Woree.