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NORTH QUEENSLAND NATURALISTS' CLUB

Meets at Cairns Public School, Abbott Street, Cairns, usually on second Monday in March, June, September, and December, at 8 p.m.

ANNUAL GENERAL MEETING, MONDAY, 11th SEPTEMBER, 1944.

BUSINESS : Election of Officers, Balance Sheet, etc.

MEETINGS OF CLUB.

Monday, 12th June, 1944, Talk by Miss Jean Devanny on Green Island and Visitors. References also made to request by fishermen to publicly state specific identity of fish subject to price control, owing to confusion of vernacular names. Need for protection of Dugong was referred to, and botanical references in Legacy Club Book, "Living on the Land" criticised.

ELECTION OF MEMBERS.

New members elected : Miss Monica Osborne, Cairns, Miss Routledge, Cairns, and Mrs. B. Sganzerla were elected members.

HABITS OF SAWFLIES (PHILOMASTIX NANCARROWI). HYMENOPTERA, TENTHREDINIDAE.

(By MAURICE E. LEASK, Memb. N.Q.N.C. and F.N.C.V.)

In the big scrub near Herberton, N.Q., a small sawfly was observed tending its eggs and young larvae. This exhibition of social habits is worthy of further close examination.

The females of this species (1) select Wild Raspberry (2) scramblers and some deposit their eggs on each of the two plants. On both plants the habits of the adult coincide, though the different leaf arrangements necessitate minor adjustments. The following details refer to sawflies on **Rubus rosaefolius** in particular.

In the middle of May, the adult deposits her eggs on the under side of the tip of the terminal leaf of a composite stalklet. Usually from 30 to 40 eggs are deposited in a close group placed athwart the midrib; these eggs are circular discs, with a dark stripe on the tip. The fewer tube-like eggs, pale mauve in colour, may be infertile.

After ovipositing, the female retires to the junction of that leaf with its stem (Fig. A, 1), where she remains with wings outspread, clinging upside down, the head invariably directed toward the centre of the plant.

Several days later the eggs hatch, and within two days the tiny larvae have destroyed this terminal leaf. They proceed to crawl along the under side of the stem; on reaching the adult's legs they cross to the upper side.

When a few larvae have reached the first pair of leaves, making their way out of their tips, the female moves forward to mark the way, stopping just short of the stem junctions.. As the next larva reaches her middle leg, it may stop as though sensing the

(1) Philomastix nancarrowi Froggatt, determined by the Queensland Museum, Brisbane.
(2) Rubus rosaefolius Sm. and R. Hillii F. Muell, determined by N.Q.N.C.

appendage; then almost imperceptibly she moves that leg forward, thus assisting the larvae on to the junction, when it readily makes its way up the leaf-stalk.

Finally the adult takes up her position on the junction (Fig. A, 2) with her hind leg actually straddling two of the larvae, where she remains night and day, rain and fine until the larvae move forward to the second pair of leaves; she then waits on the second junction (Fig. A, 3). When touched she shakes vigorously from side to side, as though to frighten off the intruder.

When the three pairs of leaves are eaten, the rapidly-growing larvae (Fig. B, 4) and adult (Fig. B, 5) move down the plant, making towards its centre, the female now taking up her position on the junction of the branchlet with the main stem, there to await the move to the next branchlet. At this stage, or any earlier one, the female may die; six adults were observed on these food-plants, dead and fixed on the stem junctions, with larvae in various stages of development.

Among the sawflies, "maternal attendance" has been recorded previously for **Perga lewisii** Westwood (3) and for the genera **Dielocerus, Diglasinus** and **Pachylota** (4). Chas. C. Brittlebank raises an interesting point when he asks, "Is it the remains of a habit which goes to prove that some time in the past the larvae of this species of sawfly **(P. lewisi)** lived in companies, and were watched and fed by the parent fly as is common with our bees and wasps ?"

The habit has not yet been recorded for **Philomastix nancarrowi,** though Mr. H. Hacker was aware of it. However, the above observations do not indicate that the insect "fluttered" over its young, as may have been seen elsewhere.

In 1890, **P. nancarrowi** from Cairns (5) was first described as a new species. Last year the adult (6) was captured with its larvae, and a tendency to social habits might have been suspected.

These observations cover eight individual adults examined for a period of fifteen days until violently inclement weather destroyed many insects.

In addition, the Broad-leaved Raspberry, **Rubus Hillii** F. Muell. is recorded as a new food-plant for this sawfly.

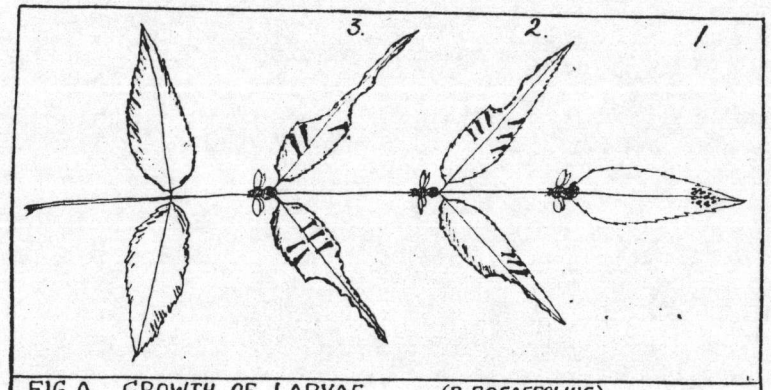


FIG. A. GROWTH OF LARVAE (R. ROSAEFOLIUS).

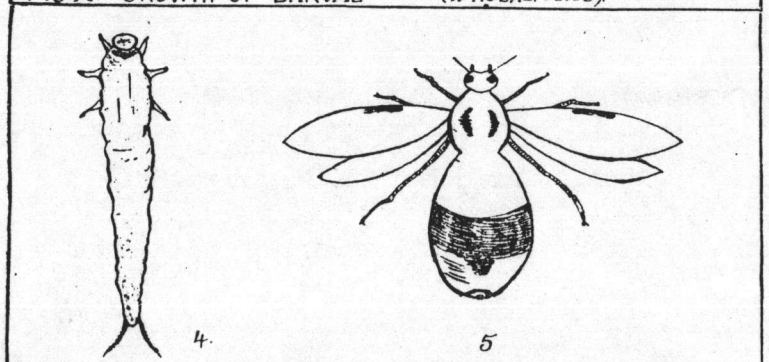


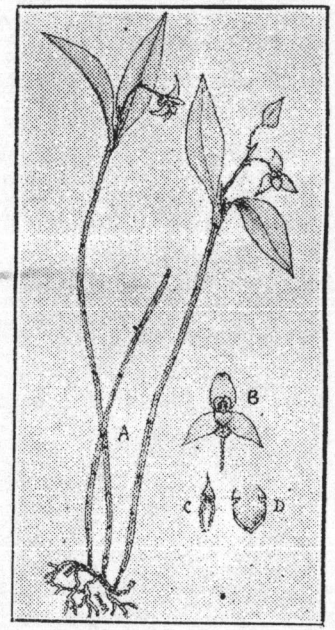
FIG. B. LARVA AND IMAGO. (PHILOMASTIX NANCARROWI)

(3) Froggatt, W.W., Notes on the Life History of Certain Sawflies (Genus Perga), with Description of a New Species. Proc. Linn. Soc. N.S.W. (2), V, 2, (Sept. 29, 1890), 283-288.

(4) Benson, R.B., On the Classification of Sawflies (Hymenoptera Symphyta). Trans. R. Ent. Soc. Lond., 87 (15), Oct. 25, 1938, 353-384, 47 t.f.s.

(5) Froggatt, W.W., Descriptions of a New Genus and Two New Species of Tenthredinidae. Proc. Linn. Soc. N.S.W. (2), V, 3, (Dec. 16), 487-490.

(6) Leask, M.F., Records of Two Sawflies, N.Q. Nat., Vol. XI, 69, (Sept. 1, 1943), 2.



DENDROBIUM ADAE

The above drawing by Mr. H. M. R. Rupp represents a young plant of **Dendrobium Adae** Bail. at the time of its first flowering. In Bailey's description of this species no mention is made of the tendency of the petals to close together after the flower expands, thus giving it somewhat of the appearance of a miniature **Lycaste** flower. Owing to this, the plant depicted was not recognised at first as **D. Adae,** and the grower proposed to name it D. lycastoides. Subsequently, however, the plant proved beyond question to belong to Bailey's species.

EDIBLE PLANTS OF NORTH QUEENSLAND.

By H. FLECKER. Continued

EUPHORBIACEAE :

55. **Antidesma Bunius** Spreng., Bignai.
Fruit useful for jam making (Bailey).
Fruit eaten by aboriginals (Roth).
56. **A. parvifolium** F. Muell.
Fruit useful for jam making (Bailey).
57. **A. erostre** F. Muell.
Fruit useful for jam making (Bailey).

58. **A. sinuatum** Benth.
Fruit useful for jam making (Bailey).
59. **Aleurites moluccana** Willd., Candle Nut.
Seeds eaten after roasting.
60. **Acalypha Wilkesiana** Muell. Arg., Native of South Sea Islands.
Young leaves and young shoots may be cooked and eaten.
61. **Ricinus communis** L., Castor Oil Plant. In East Indies, inflorescence and young fruits when boiled eaten, also ripe seeds when roasted.
62. **Omphalea queenslandiae** Bail.
Nut edible.
63. **Manihot utilissima** L., Cassava. Native of Brazil.
(Bitter and sweet cassava distinguishable by taste. Former poisonous if eaten raw.)
Commercial source of tapioca. Bitter cassava, crush roots thoroughly and wash mass with several changes of water. Both kinds cooked. Young leaf tips cooked.

MORACEAE :

64. **Ficus colossea** F. Muell., Bon-na-bool-ka.
Fruit eaten by aboriginals (Bailey).
65. **F. Cunninghamii** Miq., Mooleeah.
Fruit eaten (Roth).
66. **F. Henneana** Miq.
Fruit suitable for preserving (Bail.).
67. **F. retusa** L., Tunduli.
Fruit eaten by natives (Roth).
68. **F. ehretioides** Benth., Magura.
Fruit eaten by natives (Roth).
69. **F. opposita** Miq., Murn-tyul.
Fruit eaten raw (Roth).
70. **F. hispida** Benth., Wo-o.
Leaves eaten raw (Roth).
71. **F. esmeralda** Bail.
Fruit eaten by aboriginals (Roth).
72. **F. glomerata** Willd., Cluster Fig.
Fruit eaten by aboriginals (Roth).
73. **F. pleurocarpa** F. Muell.
Fruit eaten by aboriginals (Roth).

URTICACEAE :

74. **Elatostemma reticulatum** Wedd.
Used as spinach.

CELASTRACEAE :

(**Siphonodon pendulum** Bail., Weeping Ivory Wood. Although Roth reports fruit eaten raw, two native girls were seriously ill and a third died after eating it at Weipa Mission Station.)

SAPINDACEAE :

75. **Diploglottis Cunninghamii** Hook f., Australian Tamarind.
Arils used for jam making (Bailey).
76. **D. Cunninghamii** Hook f., var. Muelleri Bail., Queensland Tamarind.
Arils make excellent jam (Bailey).
77. **D. diphyllostegia** Bail.
Arils eaten raw and used for jam making (Q.A.J., Feb., 1939, p. 225).
78. **Litchi chinensis** Sonnerat. Litchi. Native of China.
Succulent part of fruit edible after shelling.
Same edible when dried like raisins in shells.

ANACARDIACEAE :

79. **Mangifera indica** L., Mango.
Juicy part of fruit edible. Also used for preserves and chutnees.
In East Indies leaves eaten as greens.
80. **Buchanania Muelleri** Engl., Bandai.
Fruit edible.

(To be Continued.)