

**Bombyx.**

We have here imported three bumble bees, *B. virginalis*, *B. hortorum*, and *B. hortorum* var. *harrisellus*. While making some investigations into the harm or good that these bees do to the bean-crop I made the following observations that I think worth recording: Of sixteen specimens of *B. virginalis* that I watched, the whole sixteen bit through the base of the flower to get at the nectar. Of thirteen specimens of *B. hortorum* and of seventeen of *B. hortorum* var. *harrisellus*, the whole number climbed in through the mouth of the flower and got at the nectar by the legitimate means. It thus appears—and, indeed, it would appear from the structure of their probosces—that, as far as the bean goes, *B. virginalis* is useless or harmful, while the other two are useful.

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ART. XXVII.—*The Rotifera of New Zealand: a Revised and Expanded List.*

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[Read before the Philosophical Institute of Canterbury, 26th November, 1902.]

THE object of this paper is to make numerous corrections in the "Contribution to the Study of the Rotifera of New Zealand," which appeared in the "Transactions of the New Zealand Institute," vol. xxxi., p. 107, and at the same time to add to the list the names of some species that I have found since writing my last paper. The corrections referred to have been made largely at the suggestion of Mr. C. F. Rousselet, Curator of the Royal Microscopical Society, and partly as the result of my own further observations.

Order RHIZOTA.

Family FLOSCULARIDÆ.

Genus **Floscularia**.

- F. coronetta* (Hudson and Gosse, "Rotifera," p. 49): Found by Archdeacon Stock at the Hutt. Recorded, Trans. N.Z. Inst., vol. xxv., p. 193.
- F. ornata* (H. and G., p. 50): Found among water-lilies, Lincoln College.
- F. ambigua* (H. and G., p. 53): Found in lily pond at Mount Eden, Auckland.

## Family MELICERTIDÆ.

Genus *Melicerta*.

*M. ringens* (H. and G., p. 70): Found by Mr. A. Hamilton near Napier. Recorded in Trans. N.Z. Inst., vol. xii., p. 301.

## Order BELLOIDA.

## Family PHILODINADÆ.

Genus *Philodina*.

*P. erythrophthalma* (H. and G., p. 99): From Lincoln College pond.

*P. roseata* (H. and G., p. 99): From roofing-gutters and a cemented pond at Lincoln College. Very numerous at all times of the year.

*P. megalotrocha* (H. and G., p. 101): From Mount Eden, Auckland.

I found also at Lincoln College a Philodinian resembling probably a variety of this species. I named it provisionally *P. cloacata*. Its chief characteristics are as follows: Size equal to *P. megalotrocha*. Body plump, quickly contracting to the foot, which is slender and 4-jointed. Just anterior to the foot is a large dome-like projection showing like a knot in the outstretched foot. Under this the cloaca lies. The toes are particularly long. Corona ample. Jaws at right angles to length of body, usually greatly obscured. Teeth 2. Cloaca very large. No brain observed. Dorsal antenna multisetate, 3-jointed. Eyes oblong-oblique.

*P. microps* (H. and G., Supplement, p. 8): Lincoln College; common. Teeth 3, or 3 and 2.

Genus *Rotifer*.

*R. vulgaris* (H. and G., p. 104): Lincoln College.

*R. macrurus* (H. and G., p. 107): Taieri Beach. Trans. N.Z. Inst., vol. xxxi., p. 111.

Genus *Callidina*.

*C. bibamata* (H. and G., p. 111): From Lincoln College.

*C. quadridentis (mihi)*: Taieri Beach. Trans. N.Z. Inst., *loc. cit.*

*C. venusta*: A species with very long antennæ, a variety of which I found at Lincoln College.

The name is given by Mr. D. Bryce, 37, Brooke Road, Stoke-Newington Common, London, but I have no note of where he has recorded the species.

## Order P L O I M A .

## Sub-order IL-LORICATA.

## Family HYDATINADÆ.

Genus **Notops**.

*N. minor* (Rousselet, "Quekett's Journal," January, 1892) = *Postclausa circularis* and *Postclausa minuta (mihi)*. Trans. N.Z. Inst., *loc. cit.*

The two forms I figured represent different stages in the growth of the same animal.

Genus **Hydatina**.

*H. seuta* (H. and G., ii., p. 9) = *H. monops (mihi)*. Trans. N.Z. Inst. *loc. cit.*

My former description was made from a single dead specimen, from the front of whose brain the red jaws were protruding and were mistaken for the eye. I have since found other specimens at Lincoln College.

## Family NOTOMMATIDÆ.

Genus **Notommata**.

*N. pentophthalma (mihi)*. Trans. N.Z. Inst., *loc. cit.*

*N. tripus* (H. and G., ii., p. 22): From lily pond, Lincoln College.

*Proales decipiens* (H. and G., ii., p. 36): Near Lincoln.

*Diglena forcipata* (H. and G., ii., p. 50): Near Lincoln.

*Planoventer varicolor*: This is a genus I made for a specimen discovered some years ago. I have never found the animal since, and so leave the name in the meantime. Trans. N.Z. Inst., *loc. cit.*

Genus **Eosophora**.

*E. aurita* (H. and G., ii., p. 47): Taieri Ferry.

## Sub-order LORICATA.

## Family RATTULIDÆ.

Genus **Mastigocerca**.

*M. lophoessa* (H. and G., ii., p. 60) = *M. rectocaudatus (mihi)*. Trans. N.Z. Inst., *loc. cit.*

Genus **Rattulus**.

*R. tigris* (H. and G., ii., p. 65): From Lincoln College.

My specimens were longer and slenderer in body, foot, and mastax than those shown in Gosse's drawings.

*R. camolinus* (H. and G., ii., p. 66): From Lincoln College.

*R. or Cœlopus weberi*.

This is a peculiar little Rotifer that I found a single specimen of. It has a carina along the back of its lorica, and projecting from the front of this a horn-like spine. I therefore called my specimen *R. unicornuta*; but it had already been described by Dr. Weber in his "Faune Batavarienne du Bassin du Lemman" as *Cœlopus porcellus*. It was, however, clearly not this species, and it is likely that it will appear as *R.* or *Cœlopus weberi* in the monograph of the *Rattulidæ* that is about to be published by Dr. Jennings, of America.

#### Genus *Cœlopus*.

*C. tenuior* (H. and G., ii., p. 68) = *Mastigocerca flectocaudatus* (*mih*i). Trans. N.Z. Inst., *loc. cit.*

*C. brachyurus*, Gosse (H. and G., ii., p. 69).

#### Family DINOCHARIDÆ.

##### Genus *Dinocharis*.

*D. inornata* (*mih*i). Trans. N.Z. Inst., *loc. cit.*

I have seen other specimens of this species, and find them, in outline at least, and in marking of the lorica, exactly like those from which I made my former drawings.

#### Family SALPINIDÆ.

##### Genus *Diaschiza*.

*D. tenuior* (H. and G., ii., p. 81), found at Taieri Beach and Lincoln College = *D. taurocephalus* (*mih*i). Trans. N.Z. Inst., *loc. cit.*

The variety *tenua* of my species is not sufficiently different from *tenuior* to justify the new species. I have since found *taurocephalus*, and it is at least a very distinct variety of *tenuior*.

*D. semiaperta* (H. and G., ii., p. 80): Taieri Beach; Lincoln College.

*D. pacta* (H. and G., ii., p. 79): Waiholo Lake.

*D. ventripes* (Dixon-Nuttall)?

#### Family EUCHLANIDÆ.

##### Genus *Euchlanis*.

*E. dilatata* (H. and G., ii., p. 90): Lincoln College.

#### Family CATHYPNIDÆ.

##### Genus *Cathypna*.

*C. hudsoni* (Lord): I cannot find where recorded.

Very common; in pool, Mount Eden, Auckland.

Genus **Monostyla**.

- M. cornuta* (H. and G., ii., p. 98) : Lincoln College.  
*M. lunaris* (H. and G., ii., p. 98) : Waiholo Lake.

Family **COLURIDÆ**.Genus **Colurus**.

- C. amblytelus* or *caudatus* (H. and G., ii., p. 104).

I have found several specimens of one of these species at Lincoln College. All my specimens, however, showed two minute eyes, cervical or frontal, while the ventral opening of the lorica showed all gradations from the gradual opening figured by Gosse in *caudatus* to the sudden circular opening figured in *amblytelus*.

Genus **Metopidia**.

- M. acuminata* (H. and G., ii., p. 107) : Taieri Beach.  
*M. solidus* (H. and G., ii., p. 106).

This is by far the commonest species over the whole of these Islands. My variety *latusinus* was again met with. The *M. ovalis*, of Anderson and Shephard (Roy. Soc. Victoria, vol. xiv., n.s., part i., p. 69, 1892), is evidently a variety between my two varieties, and to bring the matter into line either *M. ovalis* should be regarded as a variety or my *latusinus* as a species. With the exception of *M. ovalis*, I have found no connecting-links between *solidus* proper and *latusinus*.

- M. triptera* (H. and G., ii., p. 108).

This charming little animal is common in the neighbourhood of Lincoln.

Family **PTERODINIDÆ**.Genus **Pterodina**.

- P. patina* (H. and G., ii., p. 112).

This species I found in water squeezed out of swamp moss near Lincoln, and in a small creek running into Lake Waiholo it was found in very large numbers.

Family **ANURÆIDÆ**.Genus **Anuræa**.

- A. hypelasma* (H. and G., ii., p. 103) : Auckland.

Genus **Notholca**.

- N. jugosa* (H. and G., Supplement, p. 56; Gosse, Journal R.M.S., 1887, p. 1) = *N. regularis* (*miki*). Trans. N.Z. Inst., *loc. cit.*

I have found at Lincoln many specimens of this species showing gradations between the two varieties *regularis* and *jugosa*.