

ART. XXXIII.—Note on the Occurrence in New Zealand of Dipterous Insects belonging to the Family Blepharoceridæ.

By CHARLES CHILTON, M.A., D.Sc., F.L.S., Professor of Biology, Canterbury College.

[Read before the Philosophical Institute of Canterbury, 6th December, 1905.]

Plate XLVI.

SOME three years ago Mr. G. R. Marriner brought me some peculiar insect-larvæ that he had obtained from a mountain-stream near Lake Coleridge. Afterwards, in February, 1903, I collected similar larvæ in a rocky stream at Akaroa. These prove to belong to the Dipteran family *Blepharoceridæ*, a family that does not appear to have been hitherto recorded from New Zealand; and, though I have as yet been unable to collect the adult insects or to rear them from the larvæ, I have thought it desirable to give a brief description of the larvæ, with one or two notes on the family taken from Dr. Sharp's volume in the "Cambridge Natural History,"* in the hope that the attention of entomologists may be thereby directed to these insects.

The *Blepharoceridæ* constitute a small and little-known family of the *Diptera*, and are found in Europe (the Pyrenees, Alps, and Harz Mountains), and in North and South America. The adult insects resemble the *Empidæ*, but have strongly iridescent wings, and they execute aerial dances after the manner of midges.

The larvæ are very peculiar in appearance, and are aquatic, living in rapid rocky streams, clinging firmly to the rocks by means of suckers on the ventral surface. According to Dr. Sharp, they live only a short time when taken out of the highly aerated water in which they exist.

The larvæ that I have present a close resemblance to that of *Curupira torrentium*, Fritz Müller, from Brazil. They are about 7 mm. long and 2.5 mm. broad; dorsal surface moderately convex, ventral surface flat. The larva consists of six divisions, on the ventral surface of each of which is a rather large round sucker, and each division except the last bears one pair of projecting side lobes; the last division bears two pairs, and shows marks of being really composed of two divisions. The cephalothorax—i.e., the first segment—is larger than either of the four succeeding divisions, and is about the same size as the last; the mouth is situated on its ventral surface immediately in front of the sucker. The short antenna of two joints, slender, free

* "Insects," part ii, by David Sharp ("Cambridge Natural History"), London, 1899, pp. 464-66.

from hairs, projects slightly beyond the anterior margin. Small gills are situated around each sucker except the first, as described by Fritz Müller.

The dorsal surface of each division bears about twelve to fifteen stout, black, sharp spines projecting upwards at right angles to the surface, and the round post margin of the last segment is fringed with a row of slender black hairs. The side lobes are short, about half as broad as long, narrowing to the subacute extremity; they are lighter in colour than the body, and bear numerous stiff hairs of varying stoutness, but all more slender than the spines on the body. The colour of the body varies from dark-brown to black, the side lobes being light-brown. The larvæ live in rapid rocky streams, and by means of their suckers cling to the stones and boulders with considerable tenacity.

EXPLANATION OF PLATE XLVI.

Fig. 1. Dorsal view; × about ten times.

Fig. 2. Ventral view; × about ten times.

ART. XXXIV.—*Results of Dredging on the Continental Shelf of New Zealand.*

By R. MURDOCH and H. SUTER.

[Read before the Wellington Philosophical Society, 4th October, 1905.]

Plates XXI-XXVII.

THIS article is a sequel to Mr. Hedley's paper under the same heading and in this volume. All the shells here enumerated were obtained together with those described by Mr. Hedley and the Rev. W. H. Webster.

1. *Philine constricta*, n. sp. Plate XXI, fig. 1.

Shell small, thin, convolute, imperforate, spirally grooved, auriform, slightly contracted above. Sculpture consists of shallow fine spiral grooves, leaving broader bands between them, crossed by irregularly arranged incremental lines. Colour white. Spire concave. Protoconch minute, smooth. Whorls $1\frac{1}{2}$, very rapidly increasing, the last very large, contracted below the vertex. Aperture elongately oval, acuminate above. Outer lip sharp, lowly convex, microscopically transversely striated inside; lower lip regularly rounded. Inner lip forming a broadly spread callosity upon the body, narrow on the concave oblique and twisted columella. Altitude, 5 mm.; diameter, 3 mm.