

ART. XX.—*A Species of Daphnia new to New Zealand.*

By GILBERT ARCHEY, B.A.

[Read before the Philosophical Institute of Canterbury, 4th June, 1913.]

HITHERTO only three species of *Daphnidae* have been recorded from New Zealand. In 1878 Mr. G. M. Thomson* described a form which he named *Daphnia obtusata*, and which he said occurred "in great abundance in still water in neighbourhood of Dunedin from October to May." This has since been obtained in other parts of New Zealand, and is now placed under *Simocephalus*, to which genus Sars,† who had raised it from dried mud afterwards sent to him, pointed out it belonged. Thomson‡ again, in

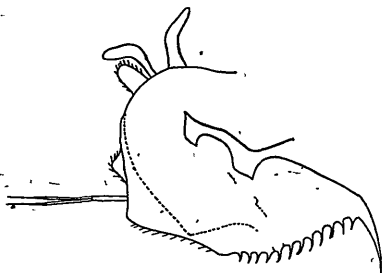


FIG. 1.—*Daphnia carinata* King : abdominal region; from the right side.

1883, described a new species of *Daphnia* under the name of *D. similis*. This form was obtained from a pool in Eyreton, North Canterbury. In 1894 dried mud from the same pool was forwarded to Sars, who obtained from it several kinds of *Entomostraca*, among which was the form *D. similis* of Thomson. Sars (*loc. cit.*) pointed out that the specific name *similis* had already been given by Professor Claus to another species of *Daphnia*; he therefore re-named the New Zealand species, after its discoverer, *D. thomsoni*. In his account he mentions the interesting fact that he had also raised the same species from mud collected at Knysna, Cape of Good Hope. He also describes a species of *Ceriodaphnia* (*C. sublaevis*) from the same mud that yielded *Simocephalus obtusata* and *Daphnia thomsoni*.

At the end of November, 1899, the late Mr. G. R. Marriner obtained a number of specimens of a *Daphnia* from a pool of water in a shingle-pit at Middleton, near Christchurch. These have not hitherto been fully examined, but comparing them with similar specimens collected recently by Mr. C. Barham Morris, of Oamaru, they appear to belong to *D. carinata* King,§ a form originally described in 1853 from specimens obtained from ponds and swamps around Sydney. Several varieties of the species were recorded by King. The forms collected in New Zealand appear closely to resemble the variety *cephalata*, of which King gives a sketch, but which he does not describe in the text.

* Thomson, G. M. : "On the New Zealand *Entomostraca*." Trans. N.Z. Inst., vol. 11, p. 261, pl. xi, fig. B, 2 a-e.

† Sars, G. O. : "Contributions to the Knowledge of the Fresh-water *Entomostraca* of New Zealand, as shown by Artificial Hatching from Dried Mud." Videnskabs-Selskabets, Skrifter i, Mathem-naturv. Klasse, 1894, No. 5.

‡ Thomson, G. M. : "On a New Species of *Daphnia*." Trans. N.Z. Inst., vol. 16, p. 240, pl. 13, figs. 6-9.

§ King, Rev. R. L. : "On some Species of *Daphnidae* found in New South Wales." Proc. Roy. Soc. Tasmania, vol. 2, part 2, January, 1853, pp. 242-53, pl. 1. And "On Some Australian *Entomostraca*—in Continuation," pp. 253-55, pl. vi, A, B.

Jules Richard* included *D. carinata* King in his "Revision des Cladocères," and remarked that Sars had "observed this species, of which he is about to publish a description." Sars, in his paper of 1894, referred to in the beginning of this paper, noted a certain similarity in appearance between *D. thomsoni* and *D. carinata*. He says, "The species (*D. thomsoni*) is very nearly allied to *D. carinata* King, of which I have had specimens for examination, differing somewhat, however, in the form of the rostrum and in the structure of the tail. The carina of the head is, moreover, far from being so strongly developed as in that species, and the spine of the carapace is also less elongated, sometimes even very short."

The specimens of *D. carinata* found at Middleton and at Oamaru, in New Zealand, are characterized by the expansion of the anterior half of the carapace into a large circular carina which surmounts the head and anterior portion of the body, ending under the head in a distinct rostrum. On the posterior surface of the rostrum, a short distance above its point, is a small angular depression to the level of which the very small antennules project. The posterior spine of the carapace is slightly less than one-half of the length of the carapace proper. The dorsal portion of the abdomen is provided with four median dorsal processes, the anterior two of which are somewhat longer and narrower than the posterior two, which are more rounded and setose.

This species has, up to the present, been recorded only from Middleton, near Christchurch, and from Oamaru.

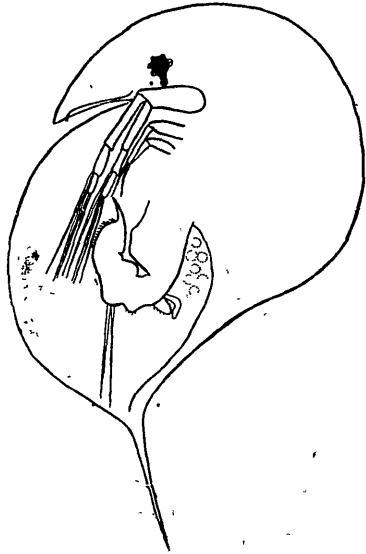


FIG. 2.—*Daphnia carinata* King; viewed from left side.

ART. XXI.—Diptera of the Kermadec Islands.

By DAVID MILLER.

[Read before the Otago Institute, 7th October, 1913.]

SOME time ago a collection of *Diptera* from the Kermadec Islands was sent to me for identification by Dr. Hilgendorf, of Lincoln College. These flies were collected on Sunday Island by Mr. W. L. Wallace, a member of Mr. R. B. Oliver's expedition to the Kermadecs during 1908. A number are common to the Kermadec Islands, Australia, and New Zealand, but there are no types of the last country among the collection.

Unfortunately, the greater part of this collection is seriously damaged, so that the following brief list is all that can be drawn up.

* Richard, J.: "Revision des Cladocères." Ann. des Sci. Nat., Zool., 8 sér., tom. 2, 1896, pp. 223-28, pl. 23, figs. 10, 11, 16.