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Additions to the Rotatoria of New Zealand—Part IX

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Abstract

Two new species of the Rotatoria are described, and twelve species listed which have not previously been recorded in New Zealand.

INTRODUCTION

THIS paper describes one new species of the genus *Euchlanis*, and one of the genus *Pseudonotholca*. Some of the twelve species not previously found in New Zealand have come from saline and marine habitats which have not received much attention in the past from rotifer workers.

As in previous papers the animals have been listed in alphabetical order of genera and species. During the past year further systematic changes have been made in the Rotatoria, and it would appear that until some stability is reached alphabetical listing of species is preferable both for ease of reference, and for subsequent correlation.

None of the rotifers listed in this paper, except one variety, are included in "An Index to the Rotatoria of New Zealand and Outlying Islands from 1859 to 1959", Russell (1960).

ACKNOWLEDGMENTS

I have to thank the following who have sent me collections during the past year: Professor W. R. Philipson, of the University of Canterbury; Mr. I. A. E. Bayly, now of the University of Queensland. Dr. Violet Jolly, and Miss Ann Chapman, of Otago University; Mr. S. B. Haigh, of Henderson; Mr. W. Dukes, of Christchurch; and the New Zealand Oceanographic Institute, Wellington.

SLIDES

Microscope slides of all the rotifers listed in this paper, with the exception of *Ptygura melicerta* var. *socialis*, have been deposited in the collection of the Canterbury Museum, Christchurch.

* Editor's Note: Mr C. R. Russell died on August 31, 1961, after this paper was in the press.

Genus ASCOMORPHA Perty, 1850

Ascomorpha saltans Bartsch, 1870. Jahresh Ver. Naturk., Wurttemberg, 26: 234.

LOCALITY. Victoria Lake, Christchurch. Temp. 19°–21° C. pH 7. Moderately common. Total length, 114 microns. Trophi slightly asymmetric.

Genus ASPLANCHA Gosse, 1850

Asplanchna silvestrii Daday, 1902. Term. Fuz., 25: 438.

LOCALITY. Mayor Island. Moderately common. Total length, 400 microns. The shape of the animal and its trophi agree well with the type description. The genus requires careful revision, as it is possible that the small changes in trophi and other characteristics on which species are based may be due to environment.

Genus BRACHIONUS Pallas, 1766

Brachionus caudatus form *vulgatus* Ahlstrom, 1940. Bull. Amer. Mus. Nat. Hist. LXXVII: 156.

LOCALITY. Mayor Island, amongst plankton. Total length of body, 140 microns. Width, 100 microns. Moderately common.

Brachionus plicatilis Müller, 1786. Anim. Infus., p. 344.

LOCALITY. Brackish pools, Allans Beach, Otago. Temp. 21° C., pH 9.0. Common. Two sizes of animals were present: the larger having a body length of 250 microns, width 200 microns, and the length of spines from the laterals 12–15–20 microns. All the specimens were mictic females and were carrying eggs. The smaller variety is approximately 100 microns in body length; width 80 microns. The anterior spines being very variable in length and sometimes nearly obsolete. None of the smaller specimens were carrying eggs. In addition, many males were also present having a body length of approximately 70 microns. *Brachionus plicatilis* was recorded by Russell (1947) from a fresh water lake having a high pH, but was not common.

Genus COLLOTHECA Harring 1913

Collotheca spinata (Hood) 1893.

1893. *Floscularia spinata* Hood. Jour. Quek. Micr. Club. Ser. 2, 5: 281.

LOCALITY. Victoria Lake, Christchurch, on *Myriophyllum*. Temp. 19° C., pH 7.0. Small specimens. Common.

Genus ENCENTRUM Ehrenberg, 1838

Encentrum marinum (Dujardin) 1841.

1841. *Furcularia marina* Dujardin. Hist. Nat. Zooph., p. 649.

LOCALITY. Allans Beach, Otago. Temp. 8° C., pH 7.5. Moderately common. Length of body, 190 microns; length of toes, 26 microns. Trophi typical. The specimens were collected by Miss Ann Chapman, from saline ponds.

Genus EUCHLANIS Ehrenberg, 1831

Euchlanis forcipata n.sp.

The corona agrees with that of the genus. The body is a moderately high arc as shown in Fig. 2. The dorsal plate is ovate and has a fairly deep posterior V notch. There are no lateral sulci, and the edges of the dorsal plate may be turned down for a slight distance. The ventral edges of the dorsal plate are connected by a stiff membrane. The lateral edges of the dorsal plate generally are ornamented by small bosses as in *Testudinella patina*. The foot is robust, fairly long, and conical. It appears incapable of movement. The toes are short, and expanded towards their distyl ends; they terminate in sharp, in-turned conical protuberances as shown in Fig. 1. The toes have the general appearance of dental forceps.

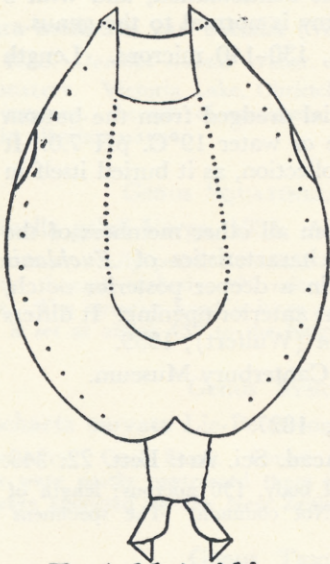


Fig 1. Ventral View

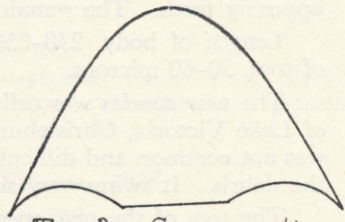


Fig 2 Cross-section.

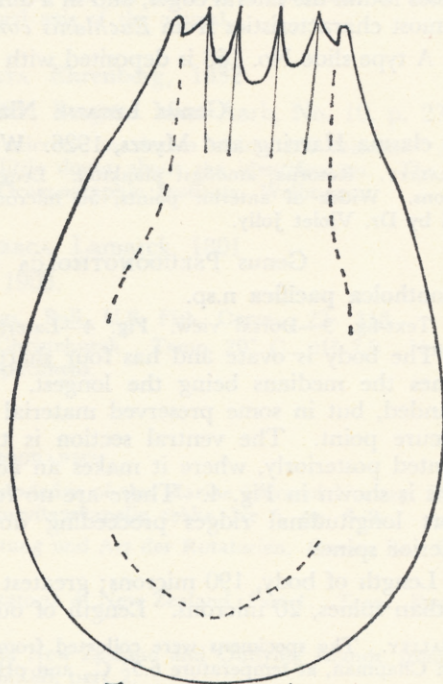


Fig 3 Dorsal View

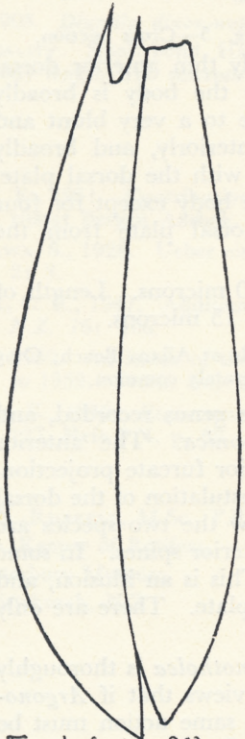


Fig 4 Lateral View

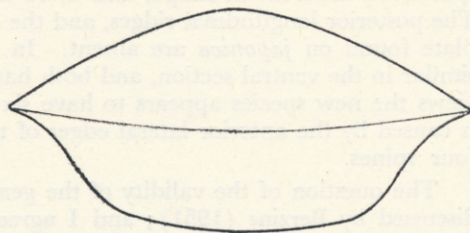


Fig 5 Cross-section.

Figs. 1, 2—*Euchlanis forcipata* n.sp.; Figs. 3, 4, 5—*Pseudonotholca pacifica* n.sp. The dimensions are indicated in the test.

The mastax is of the *deflexa* type without denticulation, and with 5 opposing teeth. The remainder of the anatomy is normal to the genus.

Length of body, 230–250 microns; width, 130–140 microns. Length of toes, 50–60 microns.

The new species was collected from material dredged from the bottom of Lake Victoria, Christchurch. Temperature of water 19°C. pH 7.0. It was not common and difficult to find in the collection, as it buried itself in the debris. It swims very slowly.

The toes of the new species separate it from all other members of the genus. In body form it has many of the characteristics of *Euchlanis deflexa*, but differs from it, besides the toes, in a deeper posterior notch, bosses round the lateral edges, and in a different anterior opening. It differs in most characteristics from *Euchlanis contorta* (Wulfert), 1939.

A type slide No. 168 is deposited with the Canterbury Museum.

GENUS LECANE Nitzsch, 1827

Lecane elasma Harring and Myers, 1926. Wis. Acad. Sci. Art. Lett. 22: 345.

LOCALITY. Rotorua, amongst plankton. Length of body, 130 microns; length of toes, 40 microns. Width of anterior points, 50 microns. Not common. The specimens were collected by Dr. Violet Jolly.

GENUS PSEUDONOTHOLCA Marukawa, 1928

Pseudonotholca pacifica n.sp.

Text-fig. 3—Dorsal view. Fig. 4—Lateral view. Fig. 5—Cross section.

The body is ovate and has four sharp, extremely thin anterior dorsal spines the medians being the longest. Posteriorly the body is broadly rounded, but in some preserved material may come to a very blunt and obscure point. The ventral section is truncate anteriorly, and broadly pointed posteriorly, where it makes an acute angle with the dorsal plate. This is shown in Fig. 4. There are no folds on the body except for four short longitudinal ridges proceeding down the dorsal plate from the anterior spines.

Length of body, 190 microns; greatest width, 120 microns. Length of median spines, 20 microns. Length of outer spines, 15 microns.

LOCALITY. The specimens were collected from saline pools at Allans Beach, Otago, by Miss Ann Chapman, at temperature 6.5° C., and pH 9.0. Moderately common.

This is apparently only the second species of the genus recorded, and differs in many respects from *Pseudonotholca japonica*. The anterior spines are different in shape, and there is no posterior furcate projection. The posterior longitudinal ridges, and the anterior pustulation of the dorsal plate found on *japonica* are absent. In lateral view the two species are similar in the ventral section, and both have four anterior spines. In some views the new species appears to have six spines. This is an illusion, and is caused by the anterior lateral edges of the dorsal plate. There are only four spines.

The question of the validity of the genus *Pseudonotholca* is thoroughly discussed by Berzins (1951); and I agree with his views that if *Argonotholca folicea* is to be separated from *Notholca* the same action must be taken with *Pseudonotholca japonica*. It may be, as Berzins states, that if the genus *Notholca* is carefully revised it will be possible to include both *Argonotholca* and *Pseudonotholca*.

A type slide No. 169, and two paratypes are deposited with the Canterbury Museum, Christchurch.

Genus *PTYGURA* Ehrenberg, 1832*Ptygura melicerta* var. *socialis* (Weber), 1888.

1888. *Oecistes socialis* Weber. Arch. Biol. Liege, 8: 655.

LOCALITY. Victoria Lake, Christchurch, amongst *Myriophyllum*. Temp. 13° C., pH 6.5. Fairly common. Length of specimens approximately 300 microns. This species is generally found in alkaline waters.

Genus *SQUATINELLA* Bory de St. Vincent, 1826*Squatinella geleii* Varga, 1933. Allattani Kozlemeneyck, 30.

LOCALITY. Lily pond, Botanical Gardens, Christchurch. Temp. 16° C. pH 6.0. Fairly common. Length of body, 120 microns. Length of foot, 22 microns. Length of toes, 10 microns. The anterior hood is large and robust, and the plate at the posterior of the dorsal section is set at about 45° to the longitudinal axis of the animal.

Genus *SYNCHAETA* Ehrenberg, 1832? *Synchaeta curvata* Lie-Pettersen, 1905. Bergens Mus. Aarb, No. 10, p. 27.

LOCALITY. Cook Strait. Length, 280 microns, maximum width, 100 microns. As the animals were partly contracted there is a little doubt about the identification. The specimens were collected by the New Zealand Oceanographic Institute, Wellington.

Genus *TRICHOCERCA* Lamarck, 1801*Trichocerca dixon-nuttalli* (Jennings), 1903.

1903. *Diurella dixon-nuttalli* Jennings. Bull. U.S. Fish. Comm., 22: 318.

LOCALITY. Small pond, Hagley Park, Christchurch. Temp. 20° C., pH 7.0. Not common. Body length, 100 microns. Typical specimens.

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