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## THE DISTRIBUTION OF ROTIFERA ON MOUNT DESERT ISLAND

BY FRANK J. MYERS

The following list of Rotifera is based on collections made during the summer months of 1922 to 1931 inclusive.

Mount Desert Island is situated on the coast of Maine and is the largest of a group of many islands east of Penobscot Bay. The most conspicuous and dominant rock, and the one that makes up the greatest mass, is granite. The highland consists of a ridge of mountains trending nearly east and west, sloping gradually on the north and abruptly on the south side. They are the only mountains fronting the Atlantic coast of the United States. The ridge is divided into peaks by nine transverse, parallel valleys that have been cut out by erosion and glaciation. In these valleys are situated a series of beautiful mountain lakes, from the waters of which most of the species of Rotifera listed herein were collected.

On account of the geological formation of Mount Desert Island, the various bodies of permanent water are poor in mineral salts, especially calcium carbonate. Needham and Lloyd (1), mention that waters rich in calcium salts maintain, as a rule, a more abundant life than do other waters. As pointed out by Haring and Myers (2), bodies of alkaline (hard) water generally contain an immense number of individual rotifers represented by relatively few species, while permanent bodies of acid (soft) water contain relatively few individuals representing many species.

The hydrogen ion concentration of all bodies of permanent water examined was below 7.0, except in the middle of the larger lakes where it ascended to 7.4. In the littoral region of these lakes, the hydrogen ion concentration varied between 6.4 and 6.8. In view of these facts, the rotatorian fauna of Mount Desert Island should be an acid fauna.

The impression that microscopic animals are essentially cosmopolitan and that their distribution is not a problem is no longer borne out by the facts, that is, so far as the Rotifera are concerned. The problem of distribution depends on the conditions of existence rather than on the means of distribution. That the rotifers enjoy a world-wide distribu-

tion, on account of the evident age of the group and the ease of transportation of the eggs of duration, is not to be gainsaid. That it is not possible to speak of any typical rotatorian fauna for any continent or zone, as was claimed by Rousselet (3), is not borne out by the results of recent investigations.

Only the order Ploima has been used here, for group index purposes, on account of the facility in collecting them, the more numerous habitats, and greater flexibility of the group as a whole.

The fresh-water ploimate rotifers may be roughly divided into three ecological groups.

Group 1. The Alkaline Fauna, containing all Rotifera tolerant of alkaline conditions and living in water having a  $p_H$  value of 7.0 and above.

Group 2. The Acid Fauna, containing all Rotifera tolerant of acid conditions and living in water having a  $p_H$  value of below 7.0.

Group 3. The Transcursion Fauna, containing all Rotifera that are tolerant of both alkaline and acid conditions.

While no sharp line of demarkation can be drawn between the acid fauna and the alkaline fauna, occasions where acid-water rotifers are found in slightly alkaline water and alkaline rotifers are found in slightly acid water are exceptions rather than the rule. So reliable is the distinction between these faunas that a glance at a collection from a given location will indicate its origin at once. Therefore, we can safely say that acid-water rotifers largely predominate in soft-water associations, and alkaline-water rotifers largely predominate in hard-water associations, with numerous transcursion rotifers in both associations.

In order to facilitate reference, locations yielding collections are numbered and the location number added after the record of each species, except where such species occurred in more than six locations, when it may be considered as being evenly distributed throughout the Island, and, in such cases the numbers after the records are omitted.

#### NAMES OF LOCATIONS

1.—The Barcelona, a meandering tide-plain stream on the north side of the Island. Average  $p_H$  value 6.0 to 6.4.

2.—Lake Wood, a small mountain lake on the north slope of the Island; elevation, 200 feet. Average  $p_H$  value 6.4 to 6.6.

3.—Lower Breakneck, a widespread of Duck Brook, formed by a beaver dam. Average  $p_H$  value 6.4 to 6.8.

4.—Eagle Lake, a mountain lake near the center of the Island; elevation, 275 feet. Average  $p_H$  value 6.6 to 7.2 in the middle.

5.—Somes Pond, a small lake formed by damming the outlet of Long Pond. Average  $p_H$  value 6.4.

6.—Pond Heath, sphagnum pools in marsh in the north side of the Island. Average  $p_H$  value 6.2.

7.—Bubble Pond, a mountain lake in erosion valley, between Cadillac and Pemetic Mountains; elevation, 325 feet. Average  $p_H$  value 6.6.

8.—The Tarn, a widespread formed by damming Duck Brook; situated in erosion valley between Champlain and Flying Squadron Mountains. Average  $p_H$  value 6.6 to 6.8.

9.—Aunt Bettie Pond, a decadent body of water in low land; on the northern slope of the Island. Average  $p_H$  value 6.2.

10.—Long Lake, the largest body of fresh water on the Island; bounded by Beech Mountain on the east and Western Mountain on the west. The northern third of the lake lies on the low northern slope; elevation, 58 feet. Average  $p_H$  value 6.6; 6.8; 7.0 in the middle.

11.—Echo Lake, a glacial lake in erosion valley lying between Beech Hill and Acadia Mountain; elevation, 90 feet. Average  $p_H$  value 6.4.

12.—Witch Hole, a small pond on the northeastern part of the Island; it is rapidly disappearing by plant encroachment; elevation, 340 feet. Average  $p_H$  value 6.2 to 6.6.

13.—Salisbury Cove, on north shore of the Island, marine. Average  $p_H$  value above 8.0.

14.—Half Moon Pond, a small decadent pond in the hills of the northeastern part of the Island. Average  $p_H$  value 6.6 to 6.8.

15.—Duck Brook, a mountain stream running from Eagle Lake to its outlet in Frenchmans Bay. Average  $p_H$  value 6.4.

16.—Upper Hadlock Lake, a small lake lying in erosion valley, on southern slope of the Island between Penobscot and Norumberg Mountains. Average  $p_H$  value 6.6 to 6.8.

17.—Spring-fed pool on hill in the town of Salisbury Cove. Average  $p_H$  value?

18.—Faun Pond, a small body of water in hills, on northeastern slope of the Island. Average  $p_H$  value 6.2 to 6.6.

19.—The Bowl, a pond near the top of a six-hundred foot elevation known as The Beehive, situated on the eastern shore of the Island. Average  $p_H$  value?

20.—Round Pond, a pond on the flats of the northern slope; emptying into Long Lake by a short connection. (Sometimes called Dark Pond.) Average  $p_H$  value 6.4.

21.—Northeastern arm of Long Lake, a shallow bay. Average  $p_H$  value 6.6.

22.—Ripple Pond, a widespread of stream connecting Long Lake with Somes Pond; formed by the site of an ancient dam. Average  $p_H$  value 6.4.

23.—Northeast Branch, a meandering tide-level stream emptying into Thomas Bay, on northern shore. Average  $p_H$  values 6.0 to salt water above 8.0.

24.—Toad Hole, a small round bay at the outlet of Long Lake. Average  $p_H$  value 6.6. to 6.8.

25.—Jordan Pond, a mountain lake, in erosion valley, between Pemetic and Jordan Mountains. Average  $p_H$  value 6.6.

26.—Ice Ponds, old artificial ponds near town of Manset. Average  $p_H$  value 6.2 to 6.8.

27.—Jordan Mountain Pond, a small body of water between summits of Penobscot and Sargent Mountains; elevation about 1000 feet. Average  $p_H$  value 6.4.

28.—Pond in town of Mount Desert. Average  $p_H$  value 6.6.

29.—Pond in marsh behind sea wall, on southern shore. Average  $p_H$  value 7.8.

30.—Frenchmans Bay, marine.

#### FAUNAL LIST

The following is a list of described species only. There are numerous species, new to science, to be described in later publications.

Abbreviations: *Ac.* = acid; *Ak.* = alkaline; *Tr.* = transcurSION.

Group abbreviations are omitted in cases where the individuals do not belong to the order Ploima.

- Adineta gracilis* Janson.  
*Adineta vaga* (Davis).  
*Albertia intrusor* Gosse, 4, *Tr.*  
*Ascomorpha eucadis* Perty, *Tr.*  
*Ascomorpha hyalina* (Kellicott), 12, *Tr.*  
*Ascomorpha saltans* Bartsch, *Tr.*  
*Ascomorpha volvocicola* (Plate), 12, 21, *Ak.*  
*Aspelta aper* (Harring), *Tr.*  
*Aspelta beltista* Harring and Myers, *Ac.*  
*Aspelta circinator* (Gosse), *Tr.*  
*Aspelta cyldona* Harring and Myers, marine.  
*Aspelta labri* Harring and Myers, 10, *Ac.*  
*Aspelta macra* Harring and Myers, 12, *Ac.*  
*Asplanchna herrickii* de Guerne, 2, 12, *Tr.*  
*Asplanchna priodonta* Gosse, 4, 10, 20, *Ak.*  
*Asplanchnopus hyalinus* Harring, 7, 8, *Tr.*  
*Asplanchnopus multiceps* (Schrank), 8, 15, *Ak.*  
*Beauchampia crucigera* (Doutrochet), 12, 18.  
*Birgea enantia* Harring and Myers, *Ac.*  
*Brachionus capsuliflorus* Pallas, 8, *Ak.*  
*Brachionus patulus* Müller, 9, *Ak.*  
*Brachionus plicatilis* Müller, 9, *Ak.*  
*Brachionus polycanthus* Ehrenberg, 1, 24, *Tr.*  
*Cephalodella apocolea* Myers, *Ac.*  
*Cephalodella auriculata* (Müller), *Tr.*  
*Cephalodella collactea* Myers, 12, *Ac.*  
*Cephalodella compressa* Myers, 12, 24, *Ac.*  
*Cephalodella crassipes* (Lord), 15, *Ak.*  
*Cephalodella cuneata* Myers, 23, *Ac.*  
*Cephalodella elegans* Myers, 1, 12, *Ac.*  
*Cephalodella elongata* Myers, *Ac.*  
*Cephalodella eva* (Gosse), *Tr.*  
*Cephalodella exigua* (Gosse), *Tr.*  
*Cephalodella forficata* (Ehrenberg), *Tr.*  
*Cephalodella forficula* (Ehrenberg), *Tr.*  
*Cephalodella galbina* Myers, 23, *Ac.*

- Cephalodella gibba* (Ehrenberg), *Tr.*  
*Cephalodella gracilis* (Ehrenberg), *Tr.*  
*Cephalodella hiulka* Myers, 12, *Ac.*  
*Cephalodella hoodii* (Gosse), 1, *Ak.*  
*Cephalodella hyalina* Myers, 8, 12, *Ac.*  
*Cephalodella innesi* Myers, 3, 4, *Ac.*  
*Cephalodella inquilina* Myers, *Ac.*  
*Cephalodella intuta* Myers, 1, 12, 24, *Ac.*  
*Cephalodella magalocephalia* (Glasscott), *Tr.*  
*Cephalodella mucronata* Myers, 9, 12, 14, 20, *Ac.*  
*Cephalodella nana* Myers, 2, 24, *Ac.*  
*Cephalodella nelitis* Myers, 12, 23, *Ac.*  
*Cephalodella physalis* Myers, 1, 12, 20, *Ac.*  
*Cephalodella plicata* Myers, 12, 14, 24, *Ac.*  
*Cephalodella sterea* (Gosse), 1, *Ak.*  
*Cephalodella stirgosa* Myers, 7, 12, *Ac.*  
*Cephalodella strepta* Myers, 12, 15, *Ac.*  
*Cephalodella tantilla* Myers, *Tr.*  
*Cephalodella tenuior* (Gosse), *Tr.*  
*Cephalodella ventripes* (Dixon-Nuttall), 1, 4, *Ak.*  
*Chromogaster ovalis* (Bergendal), *Tr.*  
*Collothea ambigua* (Hudson), 21.  
*Collothea atrochoides* (Wierzeski), 12.  
*Collothea campanulata* (Dobie).  
*Collothea conklini* (Montgomery), 4.  
*Collothea cornuta* (Dobie).  
*Collothea edentata* (Collins), 6.  
*Collothea heptabrachiata* (Schock), 3.  
*Collothea hoodii* (Hudson), 12.  
*Collothea mutabilis* (Hudson), 12, 20, 25.  
*Collothea tenuilobata* (Anderson), 18.  
*Collothea triolobata* (Collins), 25, 27.  
*Colurella adriatica* Ehrenberg, 24, *Tr.*  
*Colurella ambleytela* (Gosse), 13, marine.  
*Colurella bicuspidata* (Ehrenberg), *Tr.*  
*Colurella obtusa* (Gosse), *Tr.*  
*Colurella sulcata* (Stenroos), 18, *Tr.*  
*Colurella tessellata* (Glasscott), 2, 18, *Tr.*  
*Conochilus hippocrepis* (Schränk), *Tr.*  
*Conochilus unicornis* Rousset, 4, 23, 25, *Ak.*  
*Conochiloides dossuarius* (Hudson), 29, *Ak.*  
*Conochiloides natans* (Seligo), 12, *Ak.*  
*Cupelopagis vorax* (Leidy), 12, 23, 25, *Tr.*  
*Cyrtonia tuba* (Ehrenberg), 12, 24, *Tr.*  
*Dapidia calpidia* Myers, *Ac.*  
*Dicranophorus alcimus* Haring and Myers, *Ac.*  
*Dicranophorus artamus* Haring and Myers, *Ac.*  
*Dicranophorus aspondus* Haring and Myers, 2, *Ac.*

- Dicranophorus biastis* Harring and Myers, 12, *Ac.*  
*Dicranophorus capucinus* Harring and Myers, *Ac.*  
*Dicranophorus colastes* Harring and Myers, *Ac.*  
*Dicranophorus corystis* Harring and Myers, *Tr.*  
*Dicranophorus edestes* Harring and Myers, 1, 10, *Tr.*  
*Dicranophorus epicharis* Harring and Myers, 12, 20, *Tr.*  
*Dicranophorus forcipatus* (Müller), 1, *Ak.*  
*Dicranophorus grippus* Harring and Myers, 12, 21, *Ac.*  
*Dicranophorus isotheris* Harring and Myers, *Ac.*  
*Dicranophorus lütkeni* (Bergendal), *Tr.*  
*Dicranophorus pennatus* Harring and Myers, 24, *Ac.*  
*Dicranophorus ponerus* Harring and Myers, 3, *Tr.*  
*Dicranophorus proclastes* Harring and Myers, *Ac.*  
*Dicranophorus robustus* Harring and Myers, *Tr.*  
*Dicranophorus semnus* Harring and Myers, 3, *Ac.*  
*Dicranophorus tegillus* Harring and Myers, *Ac.*  
*Dicranophorus uncinatus* (Milne), 2, *Ac.*  
*Dipleuchlanis propatula* (Gosse), 2, 3, *Ak.*  
*Dissotrocha aculeata* (Ehrenberg).  
*Dissotrocha macrostyla* (Ehrenberg).  
*Diurella brachyura* (Gosse), *Tr.*  
*Diurella cavia* (Gosse), *Tr.*  
*Diurella collaris* (Rousselet), *Tr.*  
*Diurella insignis* Herrick, *Tr.*  
*Diurella porcellus* (Gosse), *Tr.*  
*Diurella rousseleti* (Voight), 12, *Tr.*  
*Diurella stylata* Eyferth, *Tr.*  
*Diurella sulcata* (Jennings), 1, 8, 19, *Tr.*  
*Diurella tigris* (Müller), *Tr.*  
*Diurella weberi* Jennings, 12, 24, *Ak.*  
*Dorystoma caudata* (Bilfinger), 1, 12, *Tr.*  
*Embata laticeps* (Murray).  
*Embata laticornis* (Murray).  
*Encentrum eristes* Harring and Myers, 13, marine.  
*Encentrum felis* (Müller), *Tr.*  
*Encentrum lacidum* Harring and Myers, 13, marine.  
*Encentrum marinum* (Dujardin), 13, marine.  
*Encentrum nesites* Harring and Myers, 13, marine.  
*Encentrum otois* Harring and Myers, 20, *Ac.*  
*Encentrum ricciæ* Harring, 1, 18, 25, *Tr.*  
*Encentrum zetetum* Harring and Myers, 15, *Ac.*  
*Eothina argus* Harring and Myers, 12, *Ac.*  
*Eothina elongata* (Ehrenberg), *Tr.*  
*Erignatha belodon* Harring and Myers, 3, 9, *Ac.*  
*Erignatha capula* Harring and Myers, 3, *Ac.*  
*Erignatha clastopis* (Gosse), *Tr.*  
*Erignatha tryphæa* Harring and Myers, *Ac.*  
*Euchlanis alata* Voronkov, *Tr.*

- Euchlanis callysta* Myers, 1, 10, 12, Ac.  
*Euchlanis dilatata* Ehrenberg, Tr.  
*Euchlanis meneta* Myers, Tr.  
*Euchlanis parva* Rousselet, Tr.  
*Euchlanis pellucida* Haring, Ac.  
*Euchlanis phryne* Myers, 24, Ac.  
*Euchlanis triquetra* Ehrenberg, Tr.  
*Filina longiseta* (Ehrenberg), 4, Ak.  
*Floscularia conifera* (Hudson).  
*Floscularia janus* (Hudson).  
*Floscularia melicerta* (Ehrenberg), 12.  
*Floscularia ringens* (Linnæus).  
*Gastropus minor* (Rousselet), Tr.  
*Gastropus orbicularis* (Kellicott), 12, Ak.  
*Gastropus stylifer* Imhof, 12, 26, Ak.  
*Habrotrocha angusticollis* (Murray).  
*Habrotrocha collaris* (Ehrenberg).  
*Habrotrocha constricta* (Dujardin).  
*Habrotrocha eremita* (Bryce).  
*Habrotrocha lata* (Bryce).  
*Habrotrocha munda* (Bryce).  
*Harringia rousseleti* de Beauchamp, Tr.  
*Itura aurita* (Ehrenberg), 12, Ak.  
*Keratella paludosa* (Lucks), 8, Ak.  
*Keratella quadrata* (Müller), Tr.  
*Keratella serrulata* (Ehrenberg), Tr.  
*Lecane acronycha* Haring and Myers, Ac.  
*Lecane agilis* (Bryce), 14, 20, Tr.  
*Lecane aquila* Haring and Myers, 12, Ac.  
*Lecane arcula* Haring, 12, Tr.  
*Lecane brachydactyla* (Stenroos), Ac.  
*Lecane clara* (Bryce), Tr.  
*Lecane crepida* Haring, 24, Tr.  
*Lecane depressa* (Bryce), 12, Tr.  
*Lecane flexilis* (Gosse), Tr.  
*Lecane grandis* (Murray), 13, 30, marine.  
*Lecane halichysta* Haring and Myers, 12, Ac.  
*Lecane intrasinuata* (Olofsson), Ac.  
*Lecane jessupi* Haring, Ac.  
*Lecane lauterborni* Hauer, 8, 12, 20, Ac.  
*Lecane leontina* (Turner), Tr.  
*Lecane ligona* (Dunlop), 12, 15, Ac.  
*Lecane ludwigii* (Eckstein), Ak.  
*Lecane luna* (Müller), Tr.  
*Lecane mira* (Murray), Ac.  
*Lecane nana* (Murray), 12, Tr.  
*Lecane noithis* Haring and Myers, 26, Ac.  
*Lecane ohioensis* (Herrick), 8, 12, Ak.

- Lecane pelatis* Harring and Myers, 12, 18, *Ac.*  
*Lecane pertica* Harring and Myers, 12, *Ac.*  
*Lecane ploenensis* (Voight), 3, *Tr.*  
*Lecane pycina* Harring and Myers, 7, *Ac.*  
*Lecane pyrrha* Harring and Myers, 2, *Ac.*  
*Lecane rhacois* Harring and Myers, *Tr.*  
*Lecane rhytida* Harring and Myers, 9, *Ac.*  
*Lecane saginata* Harring and Myers, 3, 12, *Ac.*  
*Lecane sagula* Harring and Myers, 12, *Tr.*  
*Lecane satyrus* Harring and Myers, *Ac.*  
*Lecane signifera* (Jennings), 12, 25, *Tr.*  
*Lecane stichæa* Harring, *Tr.*  
*Lecane stokesii* (Pell), 1, 12, 20, *Ak.*  
*Lecane tabida* Harring and Myers, 8, *Tr.*  
*Lecane tenuiseta* Harring, *Tr.*  
*Lecane tryphema* Harring and Myers, 9, *Ac.*  
*Lecane ungulata* (Gosse), *Tr.*  
*Lepadella acuminata* (Ehrenberg), 1, 12, *Tr.*  
*Lepadella benjamini* Harring, 2, *Ak.*  
*Lepadella cristata* (Rousselot), *Tr.*  
*Lepadella latusinus* (Hilgendorf), 1, *Tr.*  
*Lepadella ovalis* (Müller), *Tr.*  
*Lepadella patella* (Müller), *Tr.*  
*Lepadella quinquecostata* (Lucks), *Tr.*  
*Lepadella rhomboides* (Gosse), 4, 8, *Ak.*  
*Lepadella rhomboidula* (Bryce), 12, *Ac.*  
*Lepadella triptera* Ehrenberg, *Tr.*  
*Limnias ceratophylli* Schrank.  
*Limnias myriophylli* (Tatem).  
*Lindia annexa* Harring and Myers, 4, *Ac.*  
*Lindia fulva* Harring and Myers, *Ac.*  
*Lindia pallida* Harring and Myers, *Tr.*  
*Lindia truncata* (Jennings) 12, 20, *Tr.*  
*Macrochaetus collinsii* (Gosse), *Tr.*  
*Macrochaetus subquadtatus* Perty, 12, *Tr.*  
*Macrotrachela crucicornis* (Murray).  
*Macrotrachela cuthberti* Milne.  
*Macrotrachela ehrenbergi* (Janson).  
*Macrotrachela habita* (Bryce).  
*Macrotrachela multispinosa zickendrahti* (Richters).  
*Macrotrachela musciosa* Milne.  
*Macrotrachela nana* (Bryce).  
*Macrotrachela plicata* (Bryce).  
*Macrotrachela quadracornifera* Milne.  
*Microcodon clavus* Ehrenberg, *Tr.*  
*Mikrocodides chlæna* (Gosse), 1, 3, 4, *Tr.*  
*Mniobia symbiotica* (Zelinka).  
*Monommata appendiculata* Stenroos, *Ac.*



- Monommata astia* Myers, 12, 20, *Tr.*  
*Monommata caudata* Myers, 9, *Ac.*  
*Monommata caeca* Myers, 19, *Ac.*  
*Monommata diaphora* Myers, 19, *Ac.*  
*Monommata enedra* Myers, 9, 12, *Ac.*  
*Monommata grandis* Tessin, *Tr.*  
*Monommata hyalina* Myers, 12, 20, *Ac.*  
*Monommata longiseta* (Müller), *Tr.*  
*Monommata maculata* (Harring and Myers), *Tr.*  
*Monostyla acus* Harring, 2, *Ac.*  
*Monostyla bifurca* Bryce, 3, 20, *Tr.*  
*Monostyla bulla* Gosse, *Tr.*  
*Monostyla closterocerca* Schmarda, *Tr.*  
*Monostyla crenata* Harring, *Tr.*  
*Monostyla elachis* Harring and Myers, *Tr.*  
*Monostyla furcata* Murray, 3, *Tr.*  
*Monostyla hamata* Stokes, *Tr.*  
*Monostyla lunaris* (Ehrenberg), *Tr.*  
*Monostyla monostyla* (Daday), 12, *Ac.*  
*Monostyla pygmæa* Daday, *Tr.*  
*Monostyla quadridentata* Ehrenberg, *Ac.*  
*Monostyla rhopalura* Harring and Myers, *Tr.*  
*Monostyla styrax* Harring and Myers, *Tr.*  
*Monostyla tethis* Harring and Myers, 9, *Ac.*  
*Monostyla vastita* Harring and Myers, 20, *Ac.*  
*Mytilina ventralis* Ehrenberg, 2, 28, *Ac.*  
*Notholca bostoniensis* Rousselet, 12, 14, *Tr.*  
*Notholca longispina* (Kellicott), 21, *Ac.*  
*Notholca striata* (Müller), 23, *Ac.*  
*Notommata cerberus* (Gosse), *Tr.*  
*Notommata codonella* Harring and Myers, 14, 20, *Ac.*  
*Notommata contorta* (Stokes), *Tr.*  
*Notommata copeus* Ehrenberg, *Tr.*  
*Notommata cyrtopus* Gosse, *Tr.*  
*Notommata doneta* Harring and Myers, 3, 12, 24, *Ac.*  
*Notommata falcinella* Harring and Myers, 7, 8, *Ac.*  
*Notommata lenis* Harring, 1, 12, *Tr.*  
*Notommata pachyura* (Gosse), *Tr.*  
*Notommata pachyura triangularis* (Kirkman), 12, *Tr.*  
*Notommata peridia* Harring and Myers, *Ac.*  
*Notommata pseudocerberus* de Beauchamp, *Tr.*  
*Notommata pygmæa* Harring and Myers, 10, 12, *Ac.*  
*Notommata telmate* Harring and Myers, 4, 8, 24, *Ac.*  
*Notommata tilhasa* Harring and Myers, 1, 12, *Ac.*  
*Notommata thopica* Harring and Myers, *Ac.*  
*Notommata saccigera* Ehrenberg, *Ac.*  
*Notommata silpha* (Gosse), 3, 12, 24, *Tr.*  
*Octotrocha speciosa* Thorpe.

- Philodina acuticornis* Murray.  
*Philodina citrina* Ehrenberg.  
*Philodina megalotrocha* Ehrenberg.  
*Philodina plena* (Bryce).  
*Platygias quadracornis* (Ehrenberg), 1, Ak.  
*Pleurotrocha petromyzon* Ehrenberg, Tr.  
*Pleurotrocha robusta* (Glasscott), Ac.  
*Plæsoma lenticulare* (Herrick), Tr.  
*Plæsoma triacanthum* (Bergendal), 4, 8, Tr.  
*Plæsoma truncatum* (Levander), 2, 12, Tr.  
*Polyarthra euryptera* Wierzeski, 2, Tr.  
*Polyarthra trigla* Ehrenberg, Tr.  
*Proales brevipes* Harring and Myers, 3, Tr.  
*Proales decipiens* (Ehrenberg), Tr.  
*Proales doliaris* (Rousselet), 12, 20, 24, 26, Ac.  
*Proales neapolitana* (Daday), 13, marine.  
*Proales parasita* (Ehrenberg), 21, Ak.  
*Proales reinhardti* (Ehrenberg), 13, marine.  
*Proales similis* de Beauchamp, 13, marine.  
*Proales sordida* Gosse, Tr.  
*Proalinopsis caudatus* (Collins), Tr.  
*Proalinopsis staurus* Harring and Myers, 1, 12, Ac.  
*Pseudoecistes rotifer* Stenroos, Tr.  
*Resticula anceps* Harring and Myers, 24, Ac.  
*Resticula melandocus* (Gosse), Tr.  
*Resticula nyssa* Harring and Myers, 12, Ac.  
*Rotaria elongata* (Weber).  
*Rotaria macroceros* (Gosse).  
*Rotaria macrura* Ehrenberg.  
*Rotaria mento* (Anderson).  
*Rotaria ovata* (Anderson).  
*Rotaria rotatoria* (Pallas).  
*Rotaria sordida* (Western).  
*Rotaria spicata* (Murray).  
*Rotaria tardigrada* (Ehrenberg).  
*Rousseletia corniculata* Harring, Tr.  
*Scaridium eudactylotum* Gosse, 22, Ak.  
*Scaridium longicaudum* (Müller), Tr.  
*Squatinella leydigii* (Zachrias), 12, 24, Ac.  
*Squatinella longispinata* (Tatem), Tr.  
*Squatinella mutica* (Ehrenberg), Tr.  
*Squatinella tenella* (Byrce), 12, 24, Tr.  
*Squatinella tridentata* (Fresenius), Tr.  
*Stephanoceros fimbriatus* (Goldfuss).  
*Streptognatha lepta* Harring and Myers, 12, 22, 20, 24, Ac.  
*Synchæta baltica* Ehrenberg, 13, marine.  
*Synchæta johanseni* Harring, 30, marine.  
*Synchæta oblonga* Ehrenberg, 4, 6, 12, Tr.

- Synchæta pectinata* Ehrenberg, *Tr.*  
*Synchæta stylata* Wierzejski, 4, 6, *Ak.*  
*Synchæta tremula* (Müller), 12, *Tr.*  
*Taprocampa annulosa* Gosse, *Tr.*  
*Taprocampa selenura* Gosse, 8, 12, *Tr.*  
*Testudinella incisa* (Ternetz), *Tr.*  
*Testudinella parva* (Ternetz), *Tr.*  
*Testudinella parva bidentata* (Ternetz), *Tr.*  
*Testudinella patina* (Hermann), 10, 29, *Ak.*  
*Tetrasiphon hydrocora* Ehrenberg, 3, 9, 12, *Ac.*  
*Trichocerca bicristata* (Gosse), *Tr.*  
*Trichocerca bicuspes* (Pell), 12, 28, *Ak.*  
*Trichocerca capucina* (Wierzejski and Zachrias), 12, 28, *Ak.*  
*Trichocerca carinata* (Ehrenberg), 1, 12, *Ak.*  
*Trichocerca curvata* (Levander), 30, marine.  
*Trichocerca cylindrica* (Imhof), 1, 12, *Ak.*  
*Trichocerca elongata* (Gosse), 8, *Tr.*  
*Trichocerca flava* (Voronkov), 1, 12, 19, 24, *Tr.*  
*Trichocerca iernis* (Gosse), 2, 12, *Tr.*  
*Trichocerca lata* (Jennings), *Tr.*  
*Trichocerca longiseta* (Schrank), *Tr.*  
*Trichocerca marina* (Daday), 13, marine.  
*Trichocerca mucosa* (Stokes), 4, *Tr.*  
*Trichocerca multirinis* (Kellicott), 8, 21, 26, *Ak.*  
*Trichocerca pusilla* (Jennings), 6, 7, 20, 24, *Tr.*  
*Trichocerca scipio* (Gosse), *Tr.*  
*Trichotria similis* (Stenroos), *Tr.*  
*Trichotria tatractis* (Ehrenberg), *Tr.*  
*Tylotrocha monopus* (Jennings), *Tr.*

Rotifers of the orders Flosculariacea, Collotheceacea, and Bdelloida were not especially searched for. Individuals were recorded, however, when observed, in order to make the faunal list as complete as possible. Counting the species of the above orders, and also the undescribed species considered to be valid, we have a total of four hundred and forty-nine. This is a large number for an island of only one hundred and five miles in area.

Collections made over a period of time in the lakes of the Yahara basin, Wisconsin, gave forty-seven alkaline Ploima and ninety-one trans-cursion species; the acid-water rotifers were missing, not one individual being recorded.

Such typical alkaline-water genera, as *Asplanchna*, *Brachionus*, *Filina*, *Mytilina*, *Lacinularia*, and *Sinantherina* were nearly or entirely absent in the Mount Desert collections, while they were abundant in the collections from the lakes of the Yahara basin.

The faunal list from Mount Desert Island agrees with those of Atlantic County and the Pine Barrens, New Jersey, expanses composed of deep silicious deposit surrounded by alkaline areas. It also agrees with that of Vilas County, Wisconsin, a large area composed of deep glacial drift.

In view of these facts, the rotifer fauna of Mount Desert Island may be considered as an acid fauna, correlated to the hydrogen ion concentration of the various bodies of water as indicated by their  $p_H$  values.

#### LITERATURE CITED

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