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Literature

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Rotatorian Fauna of Manchoukuo

By

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With 10 text-figures

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Introduction

Regarding the Rotatorian fauna of Manchoukuo, 22 species have been described by M. UÉNO (1936), M. YAMASAKI (1937, 1938), the present writer (1937), and himself jointly with T. INUKAI (1938). In addition to them 31 forms are reported in this paper. Thence 53 species in all belong to 16 families as described in the following.

The materials upon which the present investigation is based, were obtained by the writer from the reservoir and a pond at Hsinking, two weedy pools at Khailassu situated on the eastern slope of the Great Khingan Mountains, a weedy pond and two pools at Hailar, and many small basins distributed in the drainage area of the Gan, one of the upper tributaries of the Amur, during the scientific expedition to Manchoukuo, despatched by the Kanebo Company under the directions of Dr. Y. SATO and Dr. T. INUKAI in August—September, 1937. The others were taken by Mr. T. ISIWATA in June—July, 1937 from

several shallow dammed lakes in the volcanic region of Wutalienchih located at the southern foot of the Little Khingan Mountains.

All of the materials were taken with a plankton-net from small bodies of water at these localities. Water temperature at the time of collection was rather high excepting in the district of the Great Khingan Mountains comprising the regions of Khailassu and the Gan. Waters of the most localities were basic except those of Khailassu.

The writer's cordial thanks are due to the Kanebo Company and also to Dr. Y. SATO and Dr. T. INUKAI, professors of the Hokkaido Imperial University, for their great assistance, and also thanks must be extended to Mr. T. ISIWATA of the Institute of Scientific Research, Manchoukuo for his kindness in placing his plankton materials at the writer's disposal.

Systematic Part

Order PLOIMA

Family NOTOMMATIDAE

1. *Notommata aurita* (MÜLLER)

Jap. Name:—*Kogatawamusi*.

Hab.:—A weedy pool at Hailar, very rare.

2. *Monommata orbis* (MÜLLER)

Jap. Name:—*Asinagawamusi*.

Hab.: A drain in the region of the Gan, very rare.

Family BRACHIONIDAE

3. *Brachionus capsuliflorus* PALLAS (= *B. bakeri* MÜLLER)

Jap. Name:—*Kado-tubowamusi*.

Hab.:—Shallow lakes in the region of Wutalienchih, very rare; a weedy pool at Hailar, rare.

A reservoir in Kwantung Province (YAMASAKI, 1937); the Sungari at Harbin and Tsitsihar (UÉNO, 1936).

This species contains several varieties and intermediate forms between them, but the writer examined only two forms; the typical one occurring in the plankton of a dammed lake in Wutalienchih and a weedy pool at Hailar, and var. *brevispinus* EHRENBERG in the collection of another lake of the former locality in which blue-green algae were very abundant when collection was made. UÉNO reported the following three varieties besides the typical form from the

summer plankton of the Sungari; var. *brevispinus*, *rhenanus* (LAUTERBORN), and *rhenanus-entzii* (FRANCÉ).

4. *Brachionus calyciflorus* PALLAS Fig. 1
(=*B. pala* EHRENBERG)

Jap. Name:—*Tubowamusi*.

Hab.:—The reservoir and a pond at Hsinking rare; an eutrophic lake in the region of Wutalienchih rare.

The Sungari at Harbin and Tsitsihar (UÉNO, 1936).

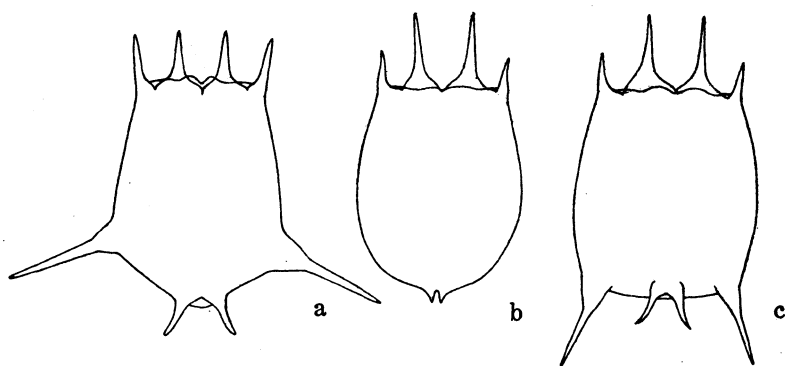


Fig. 1. *Brachionus calyciflorus* PALLAS × 120
a. f. *amphiceros* EHRENBERG from the region of Wutalienchih
b. var. *dorcas* GOSSE from Hsinking
c. var. *dorcas* f. *spinosus* WIERZEJSKI from Hsinking

Specimens obtained from the region of Wutalienchih and those collected by UÉNO from the Sungari, were all assignable to f. *amphiceros* EHRENBERG with elongate lateral spines, especially the former carried more laterally extending spines as shown in fig. 1 a. Individuals from Hsinking belonged to var. *dorcas* GOSSE differing from the typical form of this species in having two inner anterior spines longer than other lateral ones. In the plankton of the reservoir of the city f. *spinosus* WIERZEJSKI of this variety allied to f. *amphiceros* in bearing lateral spines, was also detected with this variety.

5. *Brachionus urceus* LINNÉ
(=*B. urceolaris* LINNÉ)

Jap. Name:—*Maru-tubowamusi**.

Hab.:—A dammed lake the region of in Wutalienchih, rare.

Shallow pools in the plain near Nungan (INUKAI & HADA, 1938);

* New Japanese name.

the Sungari at Tsitsihar (UÉNO, 1936); a small pool in the Mongolian steppe to the south of Hailar (HADA, 1937).

6. *Brachionus plicatilis* MÜLLER
(= *B. mülleri* EHRENBERG)

Jap. Name:—*Sizwo-tubowamusi**.

Hab.:—A shallow salt lake in the Mongolian steppe to the south-east of Hailar (HADA, 1937).

This species is euryhaline species, but has not been found in fresh water, occurring always in sea, brackish, and salt waters.

7. *Brachionus leydigii* CHON var. *tridentatus* SERNOV

Hab.:—The Sungari at Tsitsihar (UÉNO, 1936).

8. *Brachionus angularis* GOSSE

Jap. Name:—*Himetuno-tubowamusi**.

Hab.:—A pond at Hsinking, very rare; shallow lakes in the region of Wutalienchih, very rare; a weedy pond and pools at Hailar, rare. Reservoirs in Kwantung Province (YAMASAKI, 1937); a small shallow pool near Nungan (INUKAI & HADA, 1938); the Sungari at Tsitsihar (UÉNO, 1936).

This euryhaline species is widely spread in Manchurian waters which are generally basic. In Japan this species usually occurs in brackish waters, by no means in acidic ones. Uéno collected the variety of this species, *bidens* Plate, in the Sungari in June, 1934, but the writer could not find it in this study. The specimens of the present materials are intermediate forms between the just mentioned rounded variety and the typical angular form which is observed in brackish waters of Japan.

9. *Brachionus forficula* WIERZEJSKI Fig. 2

Hab.:—A dammed lake in the region of Wutalienchih, rare.

Two formae, *divergens* and *minor* after FADEEV (1925), were secured in the above recorded lake, in which water bloom composed with blue-green algae, *Microcystis* and *Anabaena*, was observed at the time of collection.

10. *Brachionus patulus* MÜLLER
(= *Noteus militaris* (EHRENBERG))

Jap. Name:—*Takogatawamusi*.

Hab.:—A weedy pool at Hailar, very rare.

A reservoir in Kwantung Province (YAMASAKI, 1937).

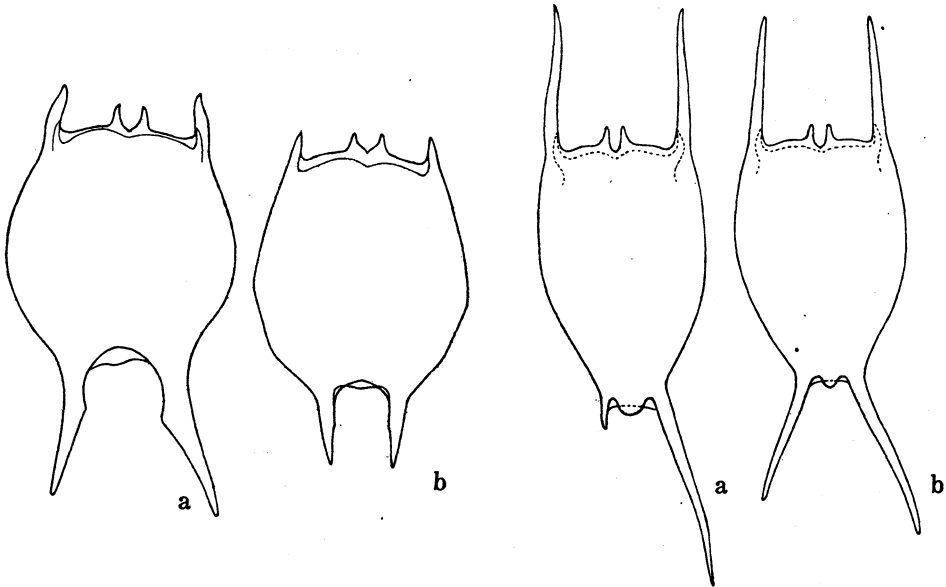


Fig. 2. *Brachionus forficula* WIERZEJSKI $\times 350$
a. f. *divergens*; b. f. *minor*

Fig. 3. *Schizocerca diversicornis* DADAY $\times 120$
a. typical form; b. intermediate one

11. *Schizocerca diversicornis* DADAY Fig. 3

Jap. Name:—*Tunowamusi*.

Hab.:—Several shallow lakes in the region of Wutalienchih, common.

The Sungari at Tsitsihar (UÉNO, 1936).

In general, this species more frequently occurred in plankton with scarce phytoplankton than in one with rich phytoplankton. From lakes of Wutalienchih were secured the typical form having short and long posterior spines and intermediate ones, showing gradual changes in the difference of two posterior spines from the former to var. *homoceros* WIERZEJSKI carrying those of an equal elongation. UÉNO recorded these two forms from the Sungari, but the writer has been unable to find the latter with equal posterior spines from the present specimens, though he examined specimens similar to the latter. It is difficult, in fact, to distinctly separate them into two group, because there is the gradual variation as above mentioned.

12. *Platygias quadricornis* (EHRENBERG) (=*Noteus quadricornis* EHRENBERG)

Jap. Name:—*Nekowamusi*.

Hab.:—A reservoir in Kwantung Province (YAMASAKI, 1937).

13. *Keratella quadrata* (MÜLLER)
 (= *Amuraea aculeata* EHRENBERG)

Jap. Name:—*Tuno-kamenokōwamusi*.

Hab.:—Shallow dammed lakes in the region of Wutalienchih, very rare; weedy pools at Hailar, very rare; small pools in the drainage area of the Gan, rare or common.

Everywhere in Manchoukuo (YAMASAKI, 1938); the Sungari at Tsitsihar (UÉNO, 1936).

This is a widespread species of the Rotatoria in Manchoukuo. The writer observed only the typical form and f. *divergens* VOIGT carrying long, outwardly curved posterior spines from the northern part of Manchoukuo, but YAMASAKI found besides these forms, f. *testudo* (EHRENBERG) having short posterior spines different in elongation, f. *valgoides* EDMONDSON & HUTCHINSON with a single right one, and f. *curvicornis* (EHRENBERG) without posterior pines from many localities.

14. *Keratella vulga* (EHRENBERG)

Hab.:—Several localities scattered all over Manchoukuo (YAMASAKI, 1938).

This species is closely allied to *K. quadrata*, but it can be distinguished by difference in width of the ends of the lorica: the anterior end of the lorica in this species is wider than the posterior one, while in the other species the anterior width of the lorica is narrow in comparison with the posterior one. In this species several forms are included. YAMASAKI observed formae *tropica-asymmetrica* (APSTEIN-BARROIS & DADAY), *asymmetrica* (BARROIS & DADAY), *monostrosa* (BARROIS & DADAY) and *reducta* Fadeev with the typical form in Manchurian waters. This species belongs to warm water forms, being widely distributed in the tropical and subtropical regions. According to YAMASAKI's report, this species appears even in the northern part of Manchoukuo in summer; therefore, this is one of the common Rotatoria in the summer plankton of Manchoukuo.

15. *Keratella cochlearis* (GOSSE)

Jap. Name:—*Kamenokōwamusi*.

Hab.:—The reservoir at Hsinking, frequent; several lakes in the region of Wutalienchih, rare or common; a weedy pond and pools at Hailar, rare; a number of small pools in the region of the Gan, rare.

A reservoir in Kwantung Province (YAMASAKI, 1937); a shallow pool in the central plain near Nungan (INUKAI & HADA, 1938);

the Sungari at Harbin and Tsitsihar (UÉNO, 1936).

The variety of this species, *tecta* (GOSSE) which lacks posterior spines, usually found with the typical form in the most materials. This is the most widely distributed species in the Rotatorian fauna described in the present paper.

16. *Anuraeopsis fissa* (GOSSE)

Hab.:—A pond at Hsinking, rare; an eutrophic lake in the region of Wutalienchih, common; a weedy pool at Hailar, rare.

Family MYTILINIDAE

17. *Mytilina ventralis* (EHRENBERG)
(=*Salpina macracantha* GOSSE)

Jap. Name:—*Yoroizwamusi*.

Hab.:—A weedy pond and a pool at Hailar, very rare; a weedy stream of the Gan, very rare.

Var. *brevispina* (EHRENBERG) was also examined in collections from Hailar with the typical form. The variety is different from the typical form only in having shorter spines of the lorica.

Family EUCHLANIDAE

18. *Euchlanis dilatata* EHRENBERG

Jap. Name:—*Haoriwamusi*.

Hab.:—A pond at Hsinking, rare; weedy pools at Khailassu, very rare; dammed lakes in the region of Wutalienchih, very rare; pools and a drain in the area of the Gan, rare.

The Sungari at Tsitsihar (UÉNO, 1936).

19. *Lecane luna* (MÜLLER)
(=*Cathypna luna* (MÜLLER))

Jap. Name:—*Tukigatawamusi*.

Hab.:—A weedy pool at Hailar, common; a small pool in the region of the Gan, very rare.

20. *Lecane scobia* HARRING & MYERS Fig. 4

Hab.:—A shallow lake in the region of Wutalienchih; very rare.

The specimens observed in this research are more

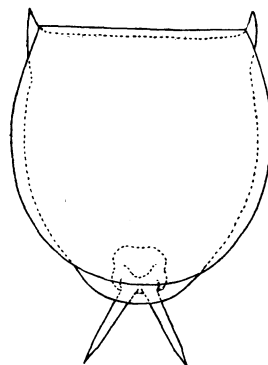


Fig. 4. *Lecane scobis* HARRING & MYERS ×550

or less rotund and smaller than those examined by HARRING & MYERS (1926) from the northern part of Canada.

21. *Monostyla lunaris* (HERNBERG)

Jap. Name :—*Tukigata-enagawamusi*.

Hab. :—Weedy pools at Khailassu, very rare ; shallow lakes in the region of Wutalienchih, very rare ; small pools in the drainage area of the Gan, rare.

This species shows variations in the shape of the anterior part of the lorica.

22. *Monostyla closterocerca* SCHMARDA Fig. 5

Hab. :—Weedy pools at Khailassu, very rare ; a weedy pond and pools at Hailar, common ; small pools and a drain in the region of the Gan, very rare.

This species is obviously a dweller in weedy basins, being found in plankton-catches taken only from such places.

23. *Monostyla furcata* MURRAY Fig. 6

Hab. :—A pond at Hsinking, very rare ; a weedy and pools at Hailar, rare.

24. *Monostyla hamata* STOKES Fig. 7

Hab. :—A weedy pond and a pool at Hailar, rare.

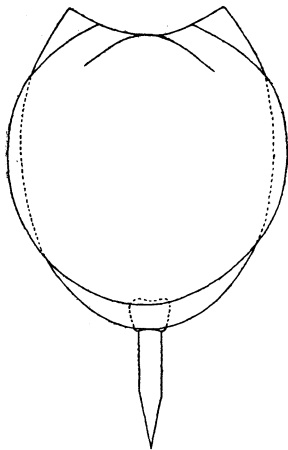


Fig. 5. *Monostyla closterocerca*
SCHMARDA × 600

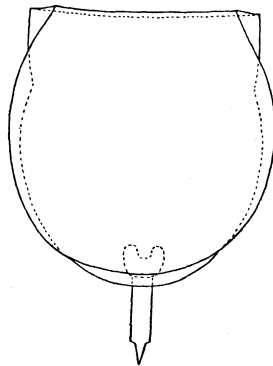


Fig. 6. *Monostyla furcata*
MURRAY × 580

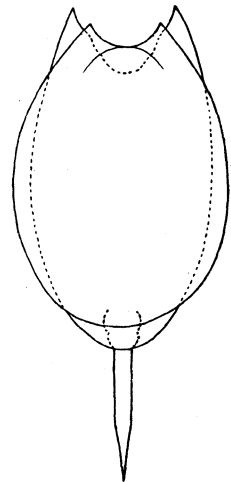
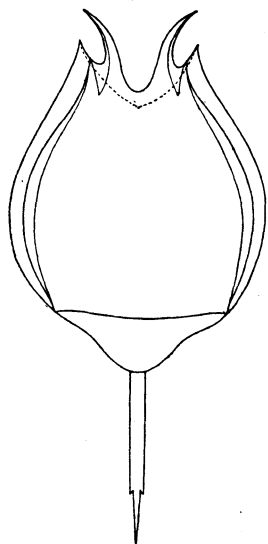
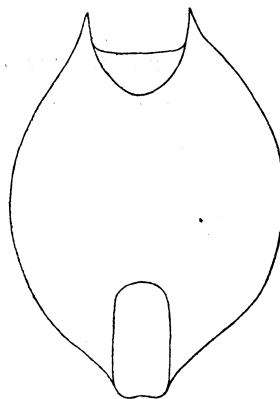


Fig. 7. *Monostyla hamata*
STOKES × 550

25. *Monostyla quadridentata* EHRENBERG Fig. 8Jap. Name:—*Tuno-utiwawamusi**

Hab.:—A weedy pond and a pool at Hailar, rare.

The specimens examined in this investigation bore great anterior spines.

Fig. 8. *Monostyla quadridentata* EHRENBERG
x 330Fig. 9. *Lepadella patella* (MÜLLER)
x 550

Family LEPADELLIDAE

26. *Lepadella patella* (MÜLLER) Fig. 9

Hab.:—A pond at Hsinking, rare; weedy pools at Khailassu, very rare; a ditch in the region of the Gan, very rare.

27. *Colurella bicuspidata* (EHRENBERG)

Hab.:—A pond at Hsinking, rare; a weedy pond and a pool at Hailar; common.

28. *Colurella colurus* (EHRENBERG)(=*Colurus compressus* LUCKES)

Hab.:—Small pools in the region of the Gan, very rare; a shallow lake in the volcanic region of Wutalienchih, very rare.

Family TRICHOTRIIDAE

29. *Trichotria pocillum* (MÜLLER)Jap. Name:—*Togenaga-oniwamusi**

Hab.:—Weedy pools at Khailassu, very rare; a weedy pond and a pool at Hailar, common; a branch stream of the Gan, rare.

30. *Trichotria tetractis* (EHRENBERG)

Hab.:—The Sungari at Tsitsihar (UENO, 1936).

Family TRICHOCERCIDAE

31. *Trichocerca capucina* (WIERZEJSKI & ZACHARIAS)
(=*Rattulus capucinus* (WIERZEJSKI & ZACHARIAS))

Jap. Name:—*Nezumiwamusi*.

Hab.:—Small pools in the drainage area of the Gan, very rare.

It is one of the common wheel animalcules in Japan, but it is very poor in Manchoukuo.

32. *Trichocerca pusilla* (JENNINGS)

Jap. Name:—*Hime-nezumiwamusi**

Hab.:—The reservoir and a pond at Hsinking, common; dammed lakes in the region of Wutalienchih, rare; a weedy pond and pools at Hailar, very rare.

Being a pelagic form, this species very rarely appeared in the materials obtained from weedy basins.

33. *Trichocerca iernis* (GOSSE)
(=*Rattulus gracilis* (TESSIN))

Hab.:—Shallow lakes in the region of Wutalienchih, very rare.

34. *Trichocerca cylindrica* (IMHOF)

Jap. Name:—*Hosonaga-nezumiwamusi**

Hab.:—Dammed lakes in the region of Wutalienchih, common; a weedy pool at Hailar, rare.

Reservoirs in Kuwantung Province (YAMASAKI, 1937).

35. *Trichocerca longiseta* (SCHRANK)

Hab.:—Weedy pools at Khailassu, very rare; weedy pools at Hailar, common; a weedy branch stream of the Gan and small pools near it, rare.

All specimens of this species were detected in the materials taken from weedy bodies of water in this research. It is distinct therefore, that this is a member of the inhabitants in the water plant vegetation.

36. *Diurella stylata* EYFERTH

Jap. Name:—*Toge-futaowamusi**.

Hab.:—The reservoir at Hsinking, rare; several lakes in the region of Wutalienchih, common; weedy pools at Hailar, rare.

Shallow pools in the plain near Nungan (INUKAI & HADA, 1938).

This is also one of the common species in the Rotatorian fauna of Manchoukuo.

Family GASTROPODIDAE

37. *Ascomorpha saltans* BARTSCH
(=*Sacculus saltans* (BARTSCH))

Jap. Name:—*Midoriwamusi**.

Hab.:—A weedy pool at Hailar, very rare.

Family SYNCHAETIDAE

38. *Synchaeta pectinata* EHRENBERG

Jap. Name:—*Fusawamusi*.

Hab.:—The reservoir and a pond at Hsinking, very rare.

39. *Synchaeta stylata* WIERZEJSKI

Jap. Name:—*Hosoasi-fusawamusi* or *Dorowamusi*.

Hab.:—A weedy pool at Hailar, very rare.

This species is common in Japanese waters, but very rare in Manchurian ones even in summer.

Family POLYARTHRIIDAE

40. *Polyarthra trigla* (EHRENBERG)
(=*P. platyptera* EHRENBERG)

Jap. Name:—*Haneudewamusi*.

Hab.:—The reservoir and a pond at Hsinking, rare or frequent; several lakes in the region of Wutalienchih, rare or common; weedy pools and a pond at Hailar, common.

Reservoirs in Kwantung Province (YAMASAKI, 1937); a shallow pool in the central plain near Nungan (INUKAI & HADA, 1938); the Sungari at Tsitsihar (UÉNO, 1936).

This cosmopolitan species occurs also every where in Manchoukuo.

Family PLOESOMIDAE

41. *Ploesoma truncatum* (LEVANDER)

Jap. Name :—*Suziwamusi*.

Hab. :—The reservoir at Hsinking, rare.

Reservoirs in Kwantung Province (YAMASAKI, 1937); the Sungari at Tsitsihar (UÉNO, 1936).

Family ASPLANCHNIDAE

42. *Asplanchna priodonta* GOSSE

Jap. Name :—*Fukurowamusi*.

Hab. :—Some lakes in the region of Wutalienchih, rare; a weedy pool at Hailar, rare.

Reservoirs in Kwantung Province (YAMASAKI, 1937).

43. *Asplanchna brightwellii* GOSSE

Hab. :—The reservoir at Hsinking, rare.

The sungar at Tsitsihar (UÉNO, 1936).

Order FLOSCULARIACEA

Family TESTUDINELLIDAE

44. *Testudinella patina* (HERMANN)
(=*Petrodina patina* (HERMANN))

Jap. Name :—*Hiratawamusi*.

Hab. :—A weedy pond and pools at Hailar, very rare.

45. *Pompholyx complanata* GOSSE

Hab. :—A reservoir in Kwantung Province (YAMASAKI, 1937).

46. *Pompholyx sulcata* HUDSON Fig. 10

Hab. :—Dammed lakes in the region of Wutalienchih, frequent.

This is the commonest species among the Rotatoria of the lakes in the above recorded locality.

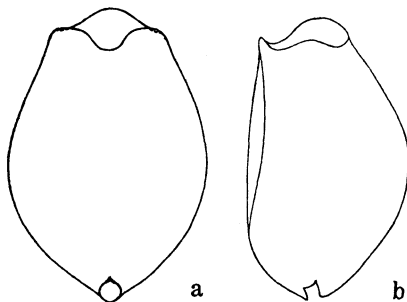


Fig. 10. *Pompholyx sulcata* HUDSON $\times 350$
a. dorsal view; b. side view

Family FILINIIDAE

47. *Filinia passa* (MÜLLER)
(=*Triarthra mystacina* EHRENBERG)

Jap. Name :—*Mituidewamusi*.

Hab. :—A pond at Hsinking, very rare.

48. *Filinia longiseta* (EHRENBERG)

Jap. Name:—*Naga-mituudewamusi*.

Hab.:—The reservoir and a pond at Hsinking, rare; several shallow lakes in the region of Wutalienchih, rare or frequent; a weedy pond and pools at Hailar, rare.

Reservoirs in Kwantung Province (YAMASAKI, 1937); the Sungari at Tsitsihar (UÉNO, 1936).

49. *Pedalia mira* (HUDSON)
(= *Pedalion mirum* HUDSON)

Jap. Name:—*Mizinkowamusi*.

Hab.:—A pond at Hsinking, rare.

Family CONOCHILIDAE

50. *Conochilus unicornis* ROUSSELET

Jap. Name:—*Tuno-temarizwamusi*.

Order COLIOTHECACEA

Family COLLOTHECIDAE

51. *Collotheca mutabilis* (HUDSON)
(= *Floscularia mutabilis* HUDSON)

Hab.:—The reservoir at Hsinking, rare; a weedy pool at Hailar, rare.

Order BDELLOIDA

Family PHILODINIDAE

52. *Rotaria rotatoria* (PALLAS)
(= *Rotifer vulgaris* SCHRANK)

Jap. Name:—*Hirugatawamusi*.

Hab.:—Dammed lakes in the region of Wutalienchih, very rare; a weedy drain in the drainage area of the Gan, rare.

53. *Rotaria neptunis* (EHRENBERG)

Jap. Name:—*Asinaga-hirugatawamusi**

Hab.:—Shallow lakes in the region of Wutalienchih, very rare.

Conclusion

Our knowledge on the Rotatorian fauna of Manchoukuo is incomplete at present on account of the presence of districts where researches on the Rotatoria have not been made, such as in Johol and the Amur District. In this paper there have been treated the species of Rotatoria hitherto recorded by UÉNO (1936), YAMASAKI (1937-38), INUKAI & HADA (1938), and the present writer (1937) from the plankton-collections of Manchoukuo and also found by the writer in plankton-catches taken from the central plain and the north-eastern part of this empire. Their distribution is shown altogether in the following table. Most of them are widespread and pelagic forms which comprise eupelagic ones of open water and littoral inhabitants or dwellers of weedy borders, because the writer's collections were mostly made in such small weedy basins.

The features of the Manchurian Rotatorian fauna may be briefly noted as follows: most species are cosmopolitan, while endemic forms are very sparse, and in the Rotatoria of Manchoukuo are included many euryhaline forms, most of which usually occur in fresh and brackish waters, such as *Brachionus capsuliflorus*, *B. calyciflorus*, *B. urceus*, *B. angularis*, *Keratella quadrata*, *K. cochlearis*, *Mytilina ventralis*, *Euchlanis dilatata*, *Lecane luna*, *Monostyla lunaris*, *M. quadridentata*, *Lepadella patella*, *Colurella colurus*, *Trichotria pocillum*, *Trichocerca capucina*, *T. longiseta*, *Synchaeta pectinata*, *S. stylata*, *Polyarthra trigla*, *Asplanchna priodonta*, *Testudinella patina*, *Pompholyx sulcata*, *Filinia longiseta*, *Fedalia mira*, *Conochilus unicornis*, *Collotheca mutabilis*, and *Rotaria rotatoria*. They are all eurythermal as well as euryhaline and widely distributed in the world. A few of them scarcely ever appear even in sea waters; for example, *Testudinella patina* was known from Kiel and *Colurella bicuspidata* from Bergen. *Branchionus plicatilis* which was collected by the writer from a small salt lake in the Mongolian steppe, also belongs to euryhaline forms, however, it is generally found in sea, brackish, and salt waters, not seen in fresh waters.

The occurrence of many euryhaline wheel animalcules in Manchoukuo is probably due to the fact that inland waters of this empire are usually alkaline in pH-rection because of a rather great amount of dissolved alkali salts, excepting the waters of the Great Khingan Mountains which are acidic or nearly neutral, that is to say, Manchurian waters containing more or less amount of alkali salts are similar to brackish ones in properties and compositions. Furthermore, the analogous factor of these waters as an enviromental substance for the Rotatoria is, in fact, explained by the appearance of a marine and brackish form, *B. plicatilis*, in Mongolian salt waters and of *B. angularis* in basic waters. The latter has been usually known only from brackish waters in Japan. It

seems to be due to the fact that Japan has in general no lakes with water containing alkali salts such as Manchurian waters.

It is also a characteristic of the Manchurian Rotatorian fauna that a single tropical and subtropical form, *Keratella valga*, was occasionally found as a stenothermal species among numerous eurythermal ones in the summer plankton taken even from the northern part of Manchoukuo. This fact is probably related to the climate of Manchoukuo which is considerably variable.

A table showing the distribution of the Rotatoria in Manchoukuo.

	South	Central	North	Great Khingan Mts.	Mongolia
1. <i>Notomata aurita</i>	—	—	—	—	+
2. <i>Monommata orbis</i>	—	—	—	+	—
3. <i>Brachionus capsuliflorus</i>	+	+	+	—	—
4. <i>B. calyciflorus</i>	+	+	+	—	—
5. <i>B. urceus</i>	—	+	—	—	+
6. <i>B. plicatilis</i>	—	—	—	—	+
7. <i>B. leydigii</i>	—	+	—	—	—
8. <i>B. angularis</i>	+	+	+	—	+
9. <i>B. forficula</i>	—	—	+	—	—
10. <i>B. patulus</i>	+	—	—	—	+
11. <i>Schizocerca diversicornis</i>	—	+	+	—	—
12. <i>Platylas quadricornis</i>	+	—	—	—	—
13. <i>Keratella quadrata</i>	+	+	+	+	+
14. <i>K. valga</i>	+	+	—	—	+
15. <i>K. cochlearis</i>	+	+	+	+	+
16. <i>Anuraeopsis fissa</i>	—	+	+	—	+
17. <i>Mytilina ventralis</i>	—	—	—	—	+
18. <i>Euchlanis dilatata</i>	—	+	+	+	—
19. <i>Lecane luma</i>	—	—	—	+	+
20. <i>L. scobis</i>	—	—	+	—	—
21. <i>Monostyla lunaris</i>	—	—	+	+	—
22. <i>M. closteroerca</i>	—	—	—	+	+
23. <i>M. furcata</i>	—	+	—	—	+
24. <i>M. hamata</i>	—	—	—	—	+
25. <i>M. quadridentata</i>	—	—	—	—	+
26. <i>Lepadella patella</i>	—	+	—	+	—
27. <i>Colurella bicuspidata</i>	—	+	—	—	+
28. <i>C. colurus</i>	—	—	+	+	—

29. <i>Trichotria pocillum</i>	—	—	—	+	+
30. <i>T. tetractis</i>	—	+	—	—	—
31. <i>Trichocerca capucina</i>	—	—	—	+	—
32. <i>T. pusilla</i>	—	+	+	—	+
33. <i>T. iernis</i>	—	—	+	—	—
34. <i>T. cyāndrica</i>	+	—	+	—	+
35. <i>T. longiseta</i>	—	—	—	+	+
36. <i>Diurella stylata</i>	—	+	+	+	+
37. <i>Ascomorpha saltans</i>	—	—	—	—	+
38. <i>Synchaeta pectinata</i>	—	+	—	—	—
39. <i>S. stylata</i>	—	—	—	—	+
40. <i>Polyarthra trigla</i>	+	+	+	—	+
41. <i>Ploesoma truncatum</i>	+	+	—	—	—
42. <i>Asplanchna priodonta</i>	+	—	+	—	+
43. <i>A. brightwellii</i>	—	+	—	—	—
44. <i>Testudinella patina</i>	—	—	—	—	+
45. <i>Pompholyx complanata</i>	+	—	—	—	—
46. <i>P. sulcata</i>	—	—	+	—	—
47. <i>Fūmia passa</i>	—	+	—	—	—
48. <i>F. longiseta</i>	+	+	+	—	+
49. <i>Pedalia mira</i>	—	+	—	—	—
50. <i>Conochilus unicornis</i>	—	—	+	—	—
51. <i>Collotheca mutabiūs</i>	—	+	—	—	+
52. <i>Rotaria rotatoria</i>	—	—	+	+	—
53. <i>R. neptunia</i>	—	—	+	—	—
Number of detected species	14	25	23	14	28

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