

SOME NOTES ON THE PROTOZOA OF REELFOOT LAKE¹

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This paper is a summary of seven weeks study during June, July, and August, 1937. Collections were made by dipping water from the lake. Water was taken to the laboratory in pint or quart screw-lid glass jars and examined within 24 hours. If vegetation was collected in the water, it was shaken in order to dislodge the protozoa. Part of the water from each collection was centrifuged, and the sediment was examined with a compound microscope.

Forty-six collections were made at twenty-four different stations. Some stations were visited only once and some as many as six times. No quantitative estimate was made on the protozoa present. The collections have been grouped under the following stations.

DESCRIPTIONS OF STATIONS AND DATES OF COLLECTIONS

Station 1. June 28, 1937. The pier at the Biological Station. This is on Bayou du Chien where the water is ordinarily stagnant, shaded, and shallow. A surface collection, but the surface vegetation (principally *Lemma*, *Spirodela* and *Wolffia*) was not included. Other collections June 29 and August 10, 1937, when the surface vegetation was included.

Station 2. June 28, 1937. From the south end of the lake. Collected while seining for fish. Contained *Oscillatoria*, *Hydrodictyon* and *Ceratophyllum*.

Station 3. June 29, 1937. At the bridge between the Biological Station and Walnut Log Lodge.

Station 4. July 1, 1937. From a tub in the laboratory in which turtles had been kept several weeks.

Station 5. July 1, 1937. Surface water from the middle of Upper Blue Basin. This is an area of clear water without vegetation and stumps. Other collections July 20, July 22, July 27, July 30, and August 4, 1937.

Station 6. July 2, 1937. From the surface of the lake near Spillway. The collection contained small floating vegetation.

Station 7. July 3, 1937. Surface water from a temporary pond near Bayou du Chien in the vicinity of Walnut Log. Other collections July 8 and July 16, 1937, when the pond was almost dried up.

Station 8. July 4, 1937. Clear water dipped from the channel just below the Spillway.

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Station 9. July 6, 1937. Collected with mosquito larvae from a sawgrass (*Zizaniopsis miliacea*) area near Upper Blue Basin.

Station 10. July 6, 1937. From another sawgrass area near Upper Blue Basin.

Station 11. July 10, 1937. From the surface of the channel between Walnut Log and the lake, about halfway out to the lake. Other collections July 21, July 27, August 4, August 10, and August 14, 1937.

Station 12. July 10, 1937. From the surface of the channel between Walnut Log and the lake. This site was designated as "Station I" during activities of the Biological Station in 1936. Other collections July 21, July 27 (a mixture of water from the surface and to a depth of three feet), July 30, August 4, August 10, and August 14, 1937.

Station 13. July 10, 1937. Surface water from near the "pointer" at the end of the channel between Walnut Log and the Lake. Contained *Ceratophyllum* and *Elodea*. Other collections July 21 and August 10, 1937.

Station 14. July 18, 1937. From an aquarium in the laboratory in which snails had been kept several weeks.

Station 15. July 22, 1937. A bottom collection from the middle of Upper Blue Basin where the water is about 10 feet deep.

Station 16. July 23, 1937. From the Spillway where water is shallow and very swift. There were many *Chironomus* larvae in the *Ulothrix*.

Station 17. July 23, 1937. Surface water from along the lake shore near Spillway.

Station 18. July 23, 1937. Surface water from along the lake shore near Samburg.

Station 19. July 25, 1937. Surface water from along the south shore of the Washout near Edgewater beach.

Station 20. July 25, 1937. Surface water from along the lake shore at Kennon's Camp. There was little vegetation here other than the cypress trees.

Station 21. July 30, 1937. Surface water from a narrow channel south of Upper Blue Basin.

Station 22. July 31, 1937. Surface water dipped from the surface at Snow Bar, a large area of clear water at the south end of the lake.

Station 23. July 30, 1937. Surface water from along the lake shore at Bryant's Camp. There was a thick growth of sawgrass and water lilies.

Station 24. August 1, 1937. Surface water from Johnson's Basin. It contained *Ceratophyllum* and *Utricularia* in abundance.

These stations have been considered as belonging to three types of habitat: Type I, open water in the deeper parts of the lake, Stations 5 and 22; Type II, lake shore, channels, bayous and adjacent basins

and ponds, Stations 1, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 23, and 24; Type III, ooze from the bottom of a deep part of Upper Blue Basin, Station 15.

DISTRIBUTION

The distribution of the genera of Protozoa according to the three types of habitat mentioned above is given in Table 1, and the distribution of the species—in as far as they were identified—is given by stations and by dates, when collections at the stations were made on more than one date, in the list following the table.

TABLE 1. *Distribution of some representative genera of Protozoa at Reelfoot Lake according to type of habitat*

TYPE I*	TYPE II†	TYPE III‡
Mastigophora: Trachelomonas (6)§ Euglena (5) Peranema (4) Peridinium (3)	Trachelomonas (33) Euglena (22) Phacus (19) Peranema (18) Peridinium (9) Anthophysa (7) Cryptomonas (7) Eudorina (5) Entosiphon (5) Leptocinclis (5) Petalomonas (5) Astasia (4)	Peridinium (1) Cryptomonas (1) Phacus (1) Trachelomonas (1) Ceratium (1) Euglena (1)
Sarcodina: Diffugia (4) Arcella (3) Amoeba (2) Actinophrys (1) Centropyxis (1)	Arcella (26) Diffugia (21) Amoeba (15) Centropyxis (7) Euglypha (4)	Diffugia (1)
Ciliata: Coleps (4) Vorticella (4)	Coleps (17) Halteria (17) Cyclidium (9) Spirostomum (9) Stentor (9) Paramecium (7) Stylonychia (7) Urocentrum (7) Vorticella (7) Lionotus (6) Loxodes (6) Aspidisca (5) Cinetochilum (4)	Halteria (1)

*Open water in the deeper parts of the lake.

†Lake shore, channels, bayous, adjacent basins and ponds.

‡Ooze from the bottom of a deep part of Upper Blue Basin.

§The numbers in parenthesis after the names of the genera indicate the number of collections in which these genera were found.

LIST OF SPECIES IDENTIFIED

Class 1. Mastigophora

Subclass 1. Phytomastigina

Order 1. Chrysomonadida

Family Isochrysidae

1. *Symura uvella*, 5(7/20).

Family Ochromonadidae

2. *Dinobryon sertularia*, 11(8/10), 13(8/10).

Order 2. Cryptomonadida

Family Cryptomonadidae

3. *Cryptomonas ovata*, 7(7/8), 8, 10.
4. *Cryptomonas erosa*, 1(8/10), 8, 11(8/4), 11(8/10), 22, 24.
5. *Cryptomonas* spp., 11(7/10).
6. *Chilomonas paramecium*, 11(7/10), 13(7/10).

Order 3. Dinoflagellida

Family Peridiniidae

7. *Peridinium tabulatum*, 1(6/29), 1(8/10), 5(7/20), 5(7/22), 5(7/27), 7(7/8), 8, 11(8/4), 11(8/10), 12(8/4), 15, 24.
8. *Peridinium longicorni*, 5(7/20), 5(7/27), 7(7/3), 11(8/4), 15.

Family Gymnodiniidae

9. *Gymnodinium* spp., 11(8/4).
10. *Hemidinium nasutum*, 5(7/20).

Order 4. Phytomonadida

Family Volvocidae

11. *Eudorina elegans*, 7(7/3), 7(7/8), 10, 12(7/21), 13(7/10).
12. *Eudorina* spp., 1(6/28).
13. *Volvox spermatotheca*, 6, 10.
14. *Pandorina morum*, 7(7/3), 11(8/10).
15. *Spondylomorpha quaternarium*, 7(7/3), 7(7/8).

Order 5. Euglenoidida

Family Euglenidae

16. *Euglena viridis*, 1(6/28), 5(7/20), 11(8/14), 12(8/10), 13(8/10).
17. *Euglena deses*, 1(6/28), 2, 5(7/20), 5(7/30), 7(7/3), 8(7/4), 12(7/21).
18. *Euglena acus*, 5(7/12), 7(7/3), 7(7/8), 8(7/4), 11(7/10), 12(7/30), 15.
19. *Euglena spirogyra*, 1(6/28), 7(7/3), 7(7/8), 10(7/6), 11(8/14), 24(8/1).
20. *Euglena pisciformis*, 1(6/28).
21. *Euglena rubrum*, 3(6/29), 4, 6, 7(7/3), 8.
22. *Euglena oxyuris*, 5(7/20), 5(7/27), 7(7/3), 9, 11(8/10).
23. *Euglena ehrenbergii*, 11(7/10), 14, 24.
24. *Euglena tripteris*, 5(7/20), 12(7/30).
25. *Euglena minima*, 21.
26. *Euglena sanguinea*, 11(8/10), 24.
27. *Euglena torta*, 7(7/3), 11(8/10).
28. *Euglena gracilis*, 5(7/22), 5(7/27), 8, 12(7/21), 13(7/10).

29. *Euglena spiroides*, 8.
30. *Euglena polymorpha*, 11(8/10).
31. *Euglena* spp., 1(6/29), 3, 5(7/20), 5(7/27), 7(7/16), 9, 11(7/10), 12(7/30).
32. *Phacus triquetter*, 1(6/28), 2, 3, 5(7/20), 7(7/3), 7(7/8), 8, 9, 11(7/10), 11(7/21), 12(7/27).
33. *Phacus longicaudas*, 1(6/28), 2, 5(7/20), 7(7/3), 7(7/8), 9, 11(7/10), 11(8/14).
34. *Phacus pleuronectes*, 1(6/28), 1(8/10), 5(7/30), 10, 11(8/10), 12(7/21), 12(7/27), 12(8/10), 13(8/10), 24.
35. *Phacus acuminata*, 1(6/28), 7(7/16).
36. *Phacus pyrum*, 7(7/3), 8.
37. *Phacus alata*, 5(7/20), 10.
38. *Phacus* spp., 7(7/8), 11(7/10), 14, 15.
39. *Lepocinclis globosa*, 3.
40. *Lepocinclis ovum*, 3, 8.
41. *Lepocinclis* spp., 3, 10.
42. *Leptocinclis texta*, 1(8/10), 11(7/27), 11(8/10), 11(8/14), 24.
43. *Leptocinclis* spp., 11(8/10).
44. *Trachelomonas volvocina*, 1(6/28), 1(8/10), 2, 5(7/1), 5(7/20), 5(7/27), 5(7/30), 6, 11(7/10), 11(7/21), 11(7/27), 11(8/10), 11(8/14), 12(7/10), 12(7/21), 12(7/27), 12(7/30), 12(8/4), 12(8/10), 13(7/10), 13(7/21), 13(8/10), 14, 15, 21, 23.
45. *Trachelomonas roeborskii*, 1(6/28), 1(8/10), 7(7/20), 6, 7(7/3), 11(8/10), 12(17/21), 13(7/10), 13(8/10), 15, 16.
46. *Trachelomonas hispida*, 1(6/28), 4, 5(7/20), 5(7/27), 5(7/30), 6, 7(7/3), 7(7/8), 8, 10, 11(7/27), 11(8/4), 11(8/14), 12(7/21), 12(7/30), 12(8/10), 13(7/10), 13(7/21), 17, 21, 22, 23, 24.
47. *Trachelomonas armata*, 1(6/28), 5(7/1), 5(7/27), 5(7/30), 6, 7(7/8), 11(7/10), 11(8/10), 11(8/14), 12(7/27), 12(8/4), 12(8/10), 13(7/10).
48. *Trachelomonas ensifera*, 1(6/28), 7(7/3), 7(7/8).
49. *Trachelomonas teres*, 1(6/28).
50. *Trachelomonas piscatoris*, 1(6/28), 11(7/10).
51. *Trachelomonas creba*, 5(7/27), 11(7/27), 12(7/21).
52. *Trachelomonas creba dentata*, 1(6/28).
53. *Trachelomonas horrida*, 11(8/10), 12(8/4), 12(8/10), 13(7/10), 24.
54. *Trachelomonas volgensis*, 7(7/8).
55. *Trachelomonas bernardi*, 7(7/3).
56. *Trachelomonas obtusa*, 5(7/30), 7(7/3), 12(7/27).
57. *Trachelomonas helvetica*, 7(7/3).
58. *Trachelomonas acuminata*, 7(7/3).
59. *Trachelomonas oblonga*, 7(7/3), 8.
60. *Trachelomonas cylindrica*, 1(8/10), 8, 16, 24.
61. *Trachelomonas bulla*, 11(7/21).
62. *Trachelomonas intermedia*, 5(7/22), 5(7/20).
63. *Trachelomonas similis*, 5(7/20), 5(7/30), 12(8/10).
64. *Trachelomonas euchlora*, 5(7/27).
65. *Trachelomonas spiculifera*, 12(7/27).

66. *Trachelomonas stokesiana*, 5(7/27), 12(7/27).
 67. *Trachelomonas globularis*, 6.
 68. *Trachelomonas westii*, 1(8/10), 3, 11(8/10), 12(8/4), 12(8/10),
 13(8/10).
 69. *Trachelomonas* spp., 1(6/29), 3, 5(7/27), 11(7/10), 12(7/27),
 13(7/10), 20.
 70. *Cryptoglena erosa*, 5(7/20), 5(7/22), 11(7/21), 15.
 71. *Ascoglena vaginicola*, 7(7/8).

Family Astasiidae

72. *Astasia captiva*, 7(7/16).
 73. *Astasia lagenula*, 5(7/20), 13(8/10).
 74. *Astasia mobilis*, 13(7/21).
 75. *Astasia*, spp., 12(7/21).
 76. *Peranema granulifera*, 12(7/27).
 77. *Peranema ovalis*, 1(8/10), 5(7/30), 7(7/3), 11(8/4), 12(7/21),
 12(8/4), 21, 24.
 78. *Peranema trichophorum*, 2, 5(7/1), 5(7/27), 7(7/8), 7(7/16), 10,
 11(7/10), 12(7/21), 13(7/10), 16, 20.
 79. *Petalomonas corinata*, 7(7/16).
 80. *Petalomonas abscissa*, 8.
 81. *Petalomonas augusta*, 1(8/10), 11(8/10).
 82. *Petalomonas mediocanollata*, 12(8/10).
 83. *Menoidium incurvum*, 22.

Family Heteronemidae

84. *Heteronema acutissimum*, 13(8/10).
 85. *Distigma proteus*, 12(7/10).
 86. *Entosiphon sulcatus*, (1(8/10), 9, 10, 13(8/10), 21, 24.
 87. *Entosiphon ovatum*, 12(7/21).
 88. *Anisonema pusillum*, 7(7/16).

Order 6. Chloromonadida

Family Chloromonadidae

89. *Gonyostomum depressum*, 1(6/28), 11(8/4).
 90. *Gonyostomum latum*, 11(7/21).

Subclass 2. Zoomastigina

Order 1. Pantostomatida

Family Rhizomastigidae

91. *Mastigamoeba longifilum*, 13(8/10).

Order 2. Protomonadida

Family Monadidae

92. *Anthophysa vegetans*, 3, 5(7/20), 7(7/3), 10, 11(7/21), 12(7/21),
 12(8/10).

Family Bodonidae

93. *Cercomonas longicauda*, 28.

Family Trypanosomatidae

94. *Oikomonas socialis*, 8.

Order 3. Polymastigida

Family Tetramitidae

95. *Tetramitus sulcatus*, 5(7/20).

Class 2. Sarcodina

Subclass 1. Rhizopoda

Order 1. Amoebae

Family Amoebidae

96. *Amoeba proteus*, 5(7/20), 6, 12(7/21), 16.
97. *Amoeba radiosa*, 5(7/20), 6, 12(7/21), 16.
98. *Amoeba beryllifera*, 6, 8.
99. *Amoeba guttula*, 7(7/16), 9, 12(7/21), 13(8/10).
100. *Amoeba limnicola*, 12(7/10).
101. *Amoeba alveolata*, 5(7/22).
102. *Amoeba stellata*, 22, 24.
103. *Amoeba limax*, 13(8/10), 23.
104. *Amoeba* spp., 1(8/10), 5(7/20), 5(7/27), 11(7/10), 11(8/10), 12(7/21), 12(7/30), 16, 24.

Order 2. Testacea

Family Arcellidae

105. *Arcella vulgaris*, 1(6/29), 1(8/10), 3, 5(7/30), 5(8/4), 6, 7(7/3), 8, 9, 11(7/10), 11(7/21), 11(7/27), 11(8/10), 11(8/14), 12(7/10), 12(7/21), 12(7/27), 12(7/30), 12(8/4), 12(8/10), 13(8/10), 17, 21, 22, 23, 24.
106. *Arcella discoides*, 1(6/28), 5(7/20), 5(7/27), 10, 12(7/10), 23, 24.
107. *Arcella hemispherica*, 1(8/10), 10, 11(8/10), 13(8/10).
108. *Arcella costata*, 24.
109. *Arcella arctocrea*, 1(8/10).
110. *Pyxidicula operculata*, 8.

Family Allogromiidae

111. *Pseudodifflugia archei*, 13(8/10).

Family Diffugiidae

112. *Difflugia corona*, 1(6/29), 1(8/10), 3, 4, 5(7/1), 5(7/27), 6, 11(8/10), 12(8/10), 13(8/10), 24.
113. *Difflugia cratera*, 1(6/28), 1(8/10), 15.
114. *Difflugia gramen*, 1(8/10), 8.
115. *Difflugia lobostoma*, 1(8/10), 5(7/20), 5(7/27), 5(8/4), 11(7/27), 11(8/10), 11(8/14), 12(7/21), 12(7/27), 12(7/30), 12(8/10), 19, 20, 23, 24.
116. *Difflugia oblonga*, 5(7/30), 12(7/30).
117. *Difflugia constricta*, 24.
118. *Difflugia globulosa*, 1(6/29), 1(8/10), 5(7/30), 6, 7(7/3), 10, 12(7/21), 13(7/21), 15.
119. *Difflugia curvicaulis*, 5(7/27).
120. *Difflugia acuminata*, 1(8/10), 23.
121. *Difflugia* spp., 1(6/28), 1(8/10), 5(7/21), 6, 10, 11(7/21), 13(8/10), 21, 24.
122. *Centropyxis aculeata*, 1(6/28), 1(8/10), 5(7/21), 6, 10, 11(7/21), 13(8/10), 21, 24.
123. *Phryganella hemisphaerica*, 16.

Family Euglyphidae

124. *Euglypha laevis*, 10, 12(8/4).
125. *Euglypha brachiata*, 21, 24.

Subclass 2. Actinopoda

Order 1. Heliozoa

126. *Actinosphaerium eichornii*, 12(7/27).
 127. *Actinophrys sol*, 5(7/20), 12(7/10), 12(7/21).
 128. *Raphidiophrys elegans*, 7(7/3).

Class 3. Ciliata

Order 1. Holotrichida

Family Holophryidae

129. *Coleps hirtus*, 1(8/10), 3, 5(7/1), 5(7/27), 5(7/30), 5(8/4), 6, 7(7/3), 9, 11(7/10), 11(7/27), 11(8/10), 11(8/14), 12(7/21), 12(8/10), 13(7/10), 21.
 130. *Coleps uncinatus*, 3.
 131. *Coleps elongatus*, 1(8/10), 5(7/1), 11(8/14), 13(8/10).
 132. *Coleps bicuspis*, 14.
 133. *Coleps* spp., 9, 10, 12(7/21), 13(7/10), 24.
 134. *Prorodon teres*, 11(8/10).
 135. *Prorodon margaretifer*, 1(8/10).
 136. *Prorodon* spp., 11(8/4), 12(8/10).
 137. *Holophrya* spp., 3.
 138. *Trachelophyllum apiculatum*, 6.
 139. *Trachelophyllum clavatum*, 5(7/30).
 140. *Trachelophyllum pusillum*, 5(7/30).
 141. *Didinium nasatum*, 7(7/3).
 142. *Mesodinium acarus*, 24.
 143. *Flexiphyllum elongatum*, 9.
 144. *Liontopsis* spp., 12(7/10).
 145. *Chaenia* spp., 12(7/21).
 146. *Lacrymaria olor*, 24.
 147. *Tracheloceca* spp., 11(8/10).

Family Tracheliidae

148. *Lionotus fasciola*, 3, 11(7/27), 20.
 149. *Lionotus wzesniowskyi*, 4, 5(7/1), 6, 12(7/21).
 150. *Lionotus varsaziensis*, 11(7/10).
 151. *Amphileptus anser*, 9, 12(8/10), 13(8/10).
 152. *Dileptus anser*, 5(7/30), 17, 20.
 153. *Loxodes rostrum*, 1(8/10), 5(7/27), 11(8/10), 11(8/14), 17, 24.

Family Chilodontidae

154. *Nassula ornata*, 5(7/1), 9, 11(8/10), 13(8/10), 17, 20.
 155. *Nassula ambigua*, 1(8/10).
 156. *Nassula* spp., 5(7/1), 7(7/8).
 157. *Chilodon caudatus*, 9.
 158. *Chilodon cucullatus*, 20.
 159. *Chilodon* spp., 5(7/1).
 160. *Chilodonopsis crenula*, 7(7/3), 7(7/8), 10.
 161. *Chilodonopsis* spp., 5(7/1).

Family Urocentridae

162. *Urocentrum turbo*, 5(7/27), 9, 11(7/10), 11(8/10), 12(8/4), 12(8/10), 24.

Family Ophryoglenidae

163. *Colpoda campyla*, 2.
164. *Colpoda culcullus*, 7(7/3).
165. *Colpidium striatum*, 4, 5(7/22), 5(7/27), 11(7/21).
166. *Colpidium* spp., 7(7/8).
167. *Frontonia leucas*, 5(7/1), 6.
168. *Glaucoma rubescens*, 10.
169. *Uronema marinum*, 11(8/10), 12(7/30), 13(8/10).

Family Microthoracidae

170. *Microthorax sulcatus*, 1(8/10).
171. *Cinetochilum margaritaceum*, 1(8/10), 17, 20, 24.

Family Parameciidae

172. *Paramecium caudatum*, 1(8/10), 3, 5(7/20), 5(7/27), 7(7/8), 14, 17, 20, 22, 23.
173. *Paramecium aurelia*, 7(7/3).

Family Pleuronematidae

174. *Lembadion* spp., 13(8/10).
175. *Pleuronema chrysalis*, 13(8/10).
176. *Pleuronema* spp., 5(7/1).
177. *Cyclidium glaucoma*, 5(7/27), 6, 7(7/16), 8, 11(8/10), 12(8/4), 13(7/10), 20, 22, 24.
178. *Ctedoctema acanthocrypta*, 13(7/10).

Order 2. Heterotrichida

Family Plagiotomidae

179. *Spirostomum teres*, 1(8/10), 10, 11(8/10), 17.
180. *Spirostomum ambigua*, 11(8/14), 12(7/10), 12(8/4), 13(8/10), 20.

Family Bursariidae

181. *Condylostoma vorticella*, 7(7/3).

Family Stentoridae

182. *Stentor coeruleus*, 5(7/1), 5(7/27), 11(8/14), 12(7/21), 13(8/10).
183. *Stentor polymorphus*, 5(7/1), 5(7/27), 6, 7(7/3), 9, 12(8/4), 13(8/10), 17.
184. *Stentor igneus*, 1(8/10).

Order 3. Oligotrichida

Family Halteriidae

185. *Halteria grandinella*, 3, 5(7/20), 5(7/22), 6, 9, 10, 11(7/10), 11(7/21), 12(7/21), 13(7/10), 15, 17.
186. *Halteria* spp., 11(7/10).

Order 4. Hypotrichida

Family Oxytrichidae

187. *Stylonychia mytilis*, 3, 9, 10, 11(8/10), 12(7/21), 17, 22.
188. *Stylonychia* spp., 6.
189. *Oxytricha aeruginosa*, 7(7/3).
190. *Oxytricha pellionella*, 11(7/10), 11(8/10).
191. *Stichotricha secunda*, 7(7/3), 8.
192. *Pleurotricha lanceolata*, 12(7/21).
193. *Uroleptus mobilis*, 20.
194. *Urostyla trichiogaster*, 5(7/30).

Family Euplotidae

195. *Euplotes patella*, 22.

Family Aspidiscidae

196. *Aspidisca costata*, 1(8/10), 11(8/10), 13(8/10), 20, 24.197. *Aspidisca lynceaster*, 5(7/30).

Family Psilotrichidae

198. *Ballidina elongata*, 9.199. *Psilotricha acuminata*, 10.

Order 5. Peritrichida

Family Vorticellidae

200. *Vorticella campanula*, 1(6/29), 2, 5(7/1), 5(7/22), 5(7/30), 12(8/4), 13(7/10).201. *Vorticella microstoma*, 3, 22.202. *Vorticella monilata*, 9.203. *Vorticella nebulifera*, 11(8/14).204. *Vorticella* spp., 5(7/1), 9, 12(7/21).205. *Epistylis plicatilis*, 5(7/1), 5(7/27).207. *Opisthonecta* spp., 5(7/1).208. *Zoothamnium* spp., On an Odonata numph, *Epicordulia princeps*, collected at Caney Island, July, 1937.

Class 4. Suctoria

Family Acinetidae

209. *Acineta* spp., 11(8/4), 17.

Family Podophryidae

210. *Podophrya* spp., 3.KEY TO SUBCLASSES, ORDERS AND FAMILIES OF MASTIGOPHORA
FOUND AT REELFOOT LAKE (AFTER KUDO)

- 1 (20) With plant characteristics
predominatingSubclass 1, Phytomastigina...2
- 2 (5) Usually with cellulose shell composed of plates; always two
flagella, one of which is transverse...Order, Dinoflagellida.....3
- 3 (4) With body covered by a thick shell...Family, Peridiniidae
- 4 (3) With body naked or covered by a
thin shellFamily, Gymnodiniidae
- 5 (2) Without a cellulose shell composed of plates; no transverse
flagellum6
- 6 (11) With yellow or brown chromatophores; contractile vacuoles simple...7
- 7 (10) No cytopharynx; body not flattened..Order, Chryomonadida8
- 8 (9) With two equal flagella.....Family, Isochrysidae
- 9 (8) With two unequal flagella.....Family, Ochromonadidae
- 10 (7) With cytopharynx; body flattened....Order, Cryptomonadida
Family, Cryptomonadidae
- 11 (6) With green chromatophores; contractile vacuoles simple or complex.12
- 12 (13) No cytopharynx; vacuole simple.....Order, Phytomonadida
Family, Volvocidae
- 13 (12) With cytopharynx; vacuole complex.....14
- 14 (19) With starch-like granules
(paramylum)Order, Euglenoidida.....15

- 15 (16) With chromatophores and stigma..... Family, Euglenidae
- 16 (15) Without chromatophores or stigma.....17
- 17 (18) With one flagellum..... Family, Astasiidae
- 18 (17) With two flagella..... Family, Heteronemidae
- 19 (14) With oil droplets..... Order, Chloromonadida
- 20 (1) With animal characteristics
predominating Subclass 2, Zoomastigina....21
- 21 (22) With pseudopodia besides flagella.... Order, Pantostomatida
Family, Rhizomastigidae
- 22 (21) Without pseudopodia, but with flagella.....23
- 23 (28) With one or two flagella..... Order, Protomonadida24
- 24 (25) With one flagellum..... Family, Trypanosomatidae
- 25 (24) With two flagella26
- 26 (27) One primary flagellum, the other
secondary Family, Monadidae
- 27 (26) One primary flagellum, the other
trailing Family, Bodonidae
- 28 (23) With two to eight flagella..... Order, Polymastigida

KEY TO SUBCLASSES, ORDERS AND FAMILIES OF SARCODINA
FOUND AT REELFOOT LAKE (AFTER KUDO)

- 1 (10) Without an axial filament in the
pseudopodium Subclass 1, Rhizopoda2
- 2 (3) Without a test Order, Amoebaea
Family, Amoebidae
- 3 (2) With a test..... Order, Testacea4
- 4 (7) Test simple and membranous5
- 5 (6) Pseudopodia simply branched..... Family, Arcellidae
- 6 (5) Pseudopodia reticulate Family, Allogromiidae
- 7 (4) Test with foreign bodies, plates or scales.....8
- 8 (9) Chitinous test with foreign bodies.... Family, Diffugiidae
- 9 (8) Chitinous test with platelets or scales. Family, Euglyphidae
- 10 (1) With axial filament in the
pseudopodium Subclass, Actinopoda
Order, Heliozoa

KEY TO ORDERS AND FAMILIES OF CILIATA FOUND AT REELFOOT
LAKE (AFTER KUDO)

- 1 (16) Without adoral zone..... Order, Holotrichida2
- 2 (7) Cytostome usually close; oral membrane absent.....3
- 3 (4) With terminal cytostome..... Family, Holophryidae
- 4 (3) Cytostome not terminal5
- 5 (6) Anterior end with proboscis..... Family, Trachelinidae
- 6 (5) Usually with an oral basket; no
proboscis Family, Chilodontidae
- 7 (2) Cytostome usually opened; oral membrane present..... 8
- 8 (9) Cilia on two broad zones and on the
posterior tip Family, Urocentridae

9 (8) Cilia not arranged in zones.....	10
10 (13) With small circular or ellipsoidal peristome.....	11
11 (12) Cytostome in anterior half of body....	Family, Ophryoglenidae
12 (11) Cytostome in posterior half of body....	Family, Microthoracidae
13 (10) With large peristome	14
14 (15) Undulating membrane in cytopharynx. Family, Parameciidae	
15 (14) Huge undulating membrane in peristome	Family, Pleuronematidae
16 (1) With adoral zone	17
17 (30) Adoral zone turns to left.....	18
18 (23, 24) Cilia over the entire body.....	Order, Heterotrichida
19 (22) Adoral zone parallel to main body axis.....	20
20 (21) Peristome narrow and long.....	Family, Plagiotomidae
21 (20) Peristome wide, triangular, and deep..	Family, Bursariidae
22 (19) Adoral zone not parallel to main body axis	Family, Stentoridae
23 (18, 24) Cilia on body absent or only a few..	Order, Oligotrichida Family, Halteridae
24 (18, 23) Cilia or cirri on ventral side only..	Order, Hypotrichida
25 (26) With cilia and cirri.....	Family, Oxytrichidae
26 (25) With cirri only	27
27 (28, 29) With frontals, ventrals, anals, marginals	Family, Euplotidae
28 (27, 29) With frontals, ventrals, anals; without laterals	Family, Aspidiscidae
29 (27, 28) Frontals and ventrals much reduced	Family, Psilotrichidae
30 (17) Adoral zone turns to right.....	Order, Peritrichida Family, Vorticellidae

SUMMARY

1. Forty-six collections of protozoa were examined from 24 different stations.

2. These were grouped under three general types of environment: Type I, open water; Type II, lake shore, bayous, basins, etc.; Type III, ooze from the bottom of a deep part of the lake. The genera occurring most frequently in these three habitats are listed.

3. A list of the Protozoa found at Reelfoot Lake is given. Two hundred and ten species were identified.

4. A key to the families of identified Protozoa is given.

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EXPLANATION OF PLATE I

1. *Entosiphon sulcatus*, after Conn.
2. *Anthophysa vegetans*, after Stein.
3. *Mastigamoeba reptans*, after Conn.
4. *Tetramitus sulcatus*, after Stein.
5. *Peridinium tabulatum*, after Kent.
6. ~~*Symura uvella*~~, after Conn.
7. *Ceratium longicorni*, after Kent.
8. *Hemidinium nasutum*, after Stein.
9. *Eudorina elegans*, after Stein.
10. *Euglena deses*, after Conn.
11. *Chilomonas paramecium*, after Conn.
12. *Cercomonas longicauda*, after Conn.
13. Unidentified.
14. *Peranema trichophorum*, after Conn.

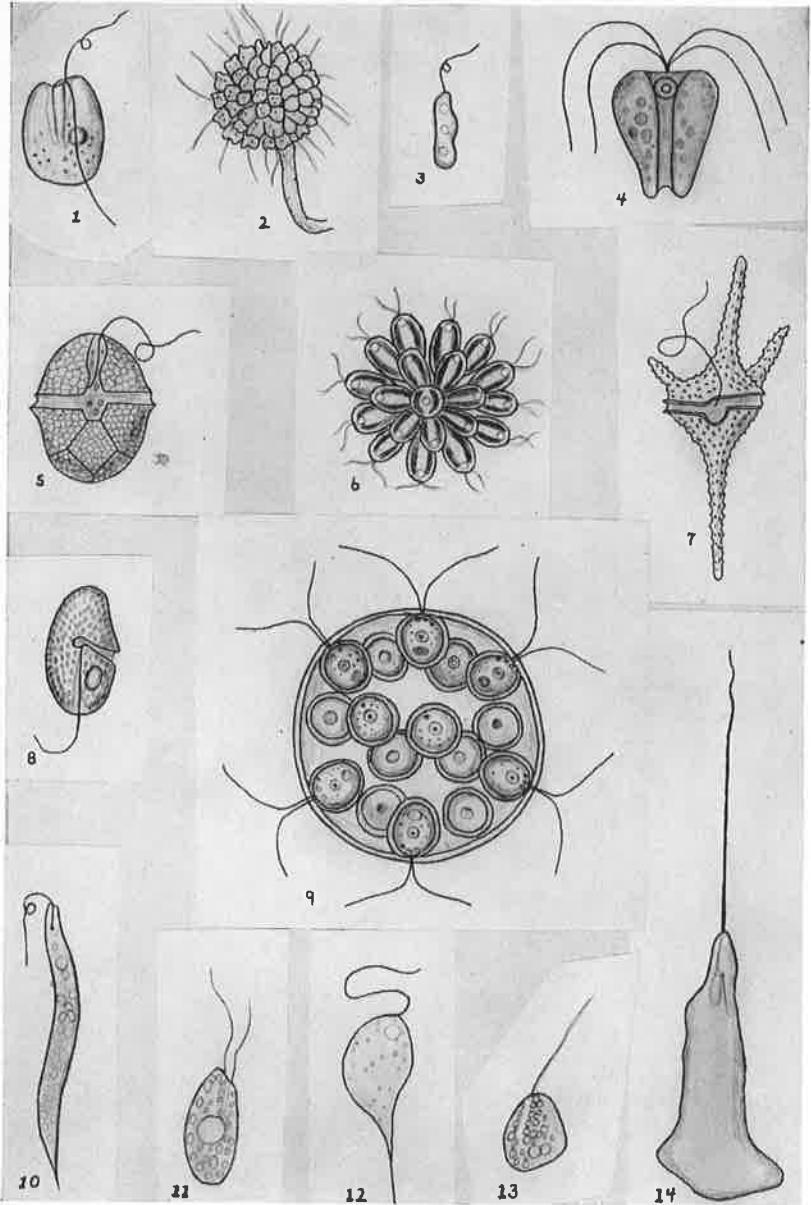


PLATE I

BEVEL

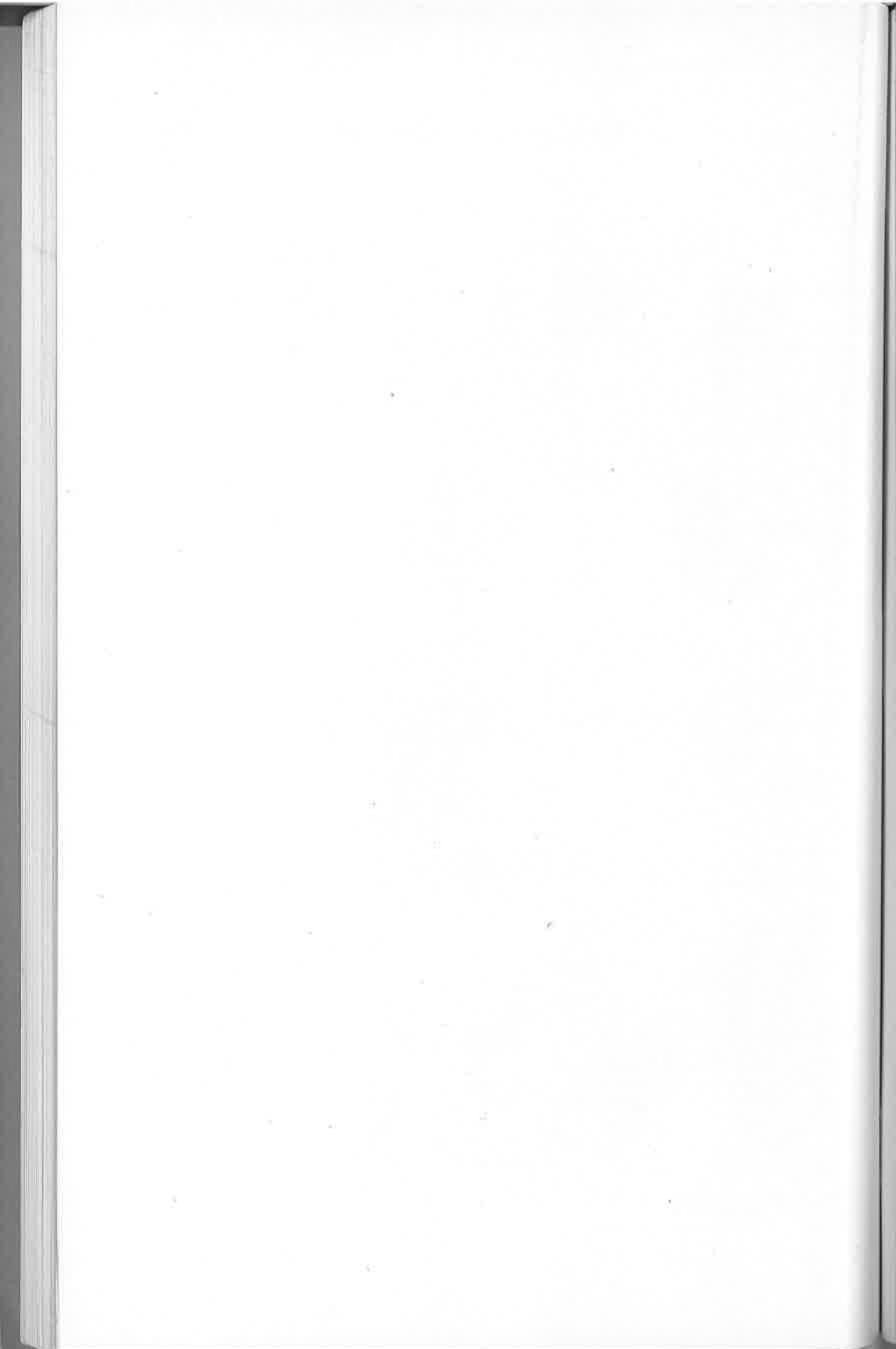


PLATE II

EXPLANATION OF
PLATE II

15. *Diffugia oblonga*, original.
16. *Arcella vulgaris*, after Leidy.
17. *Euglypha brachiata*, after
Leidy.
18. *Actinophrys sol*, after Leidy.
19. *Raphidiophrys elegans*, after
Leidy.
20. *Amoeba proteus*, after Leidy.
21. *Actinosphaerium eichornii*,
after Leidy.

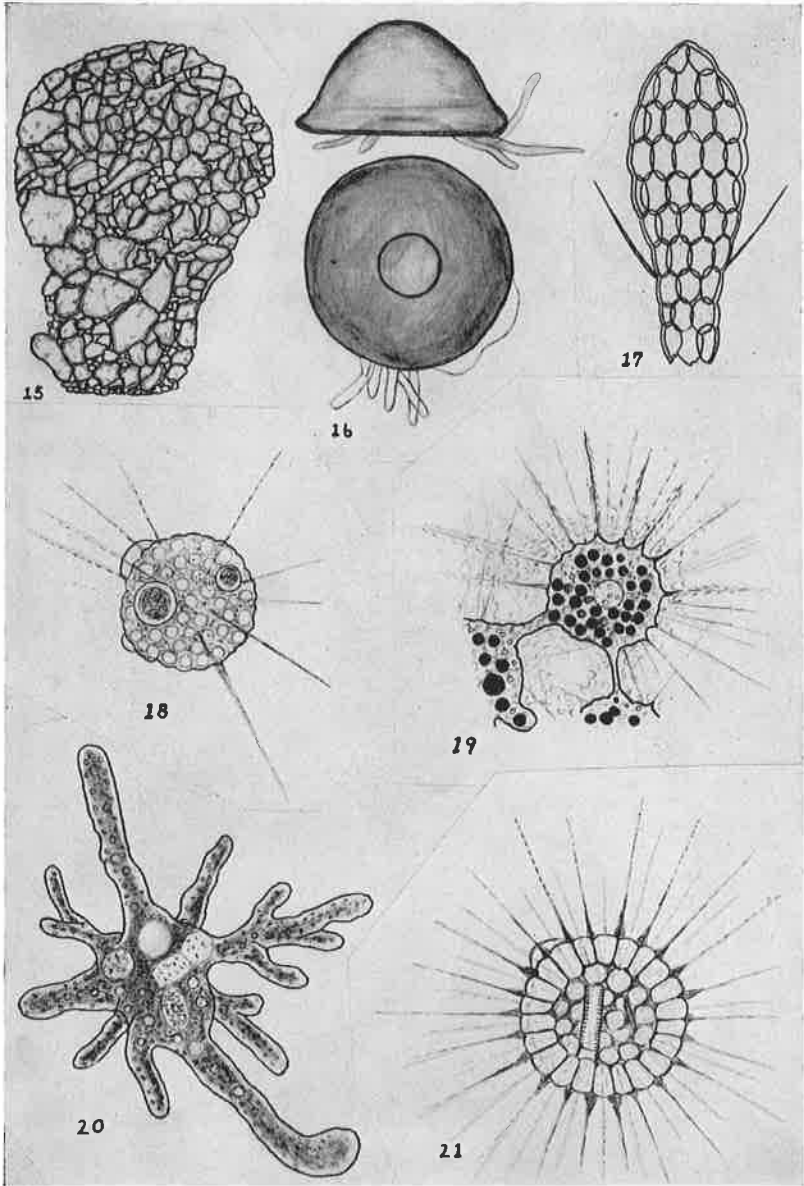


PLATE II

BEVEL

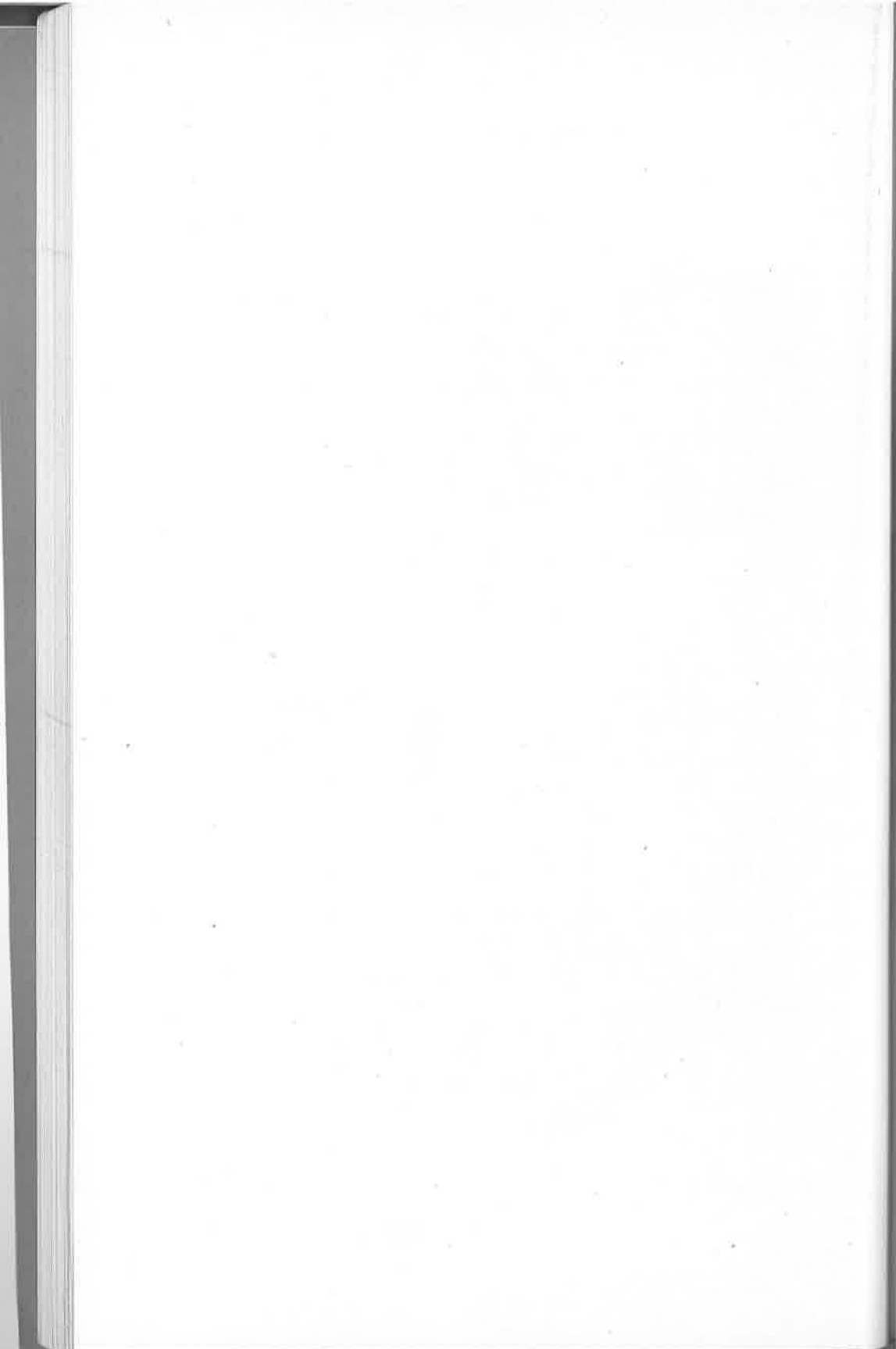


PLATE III

EXPLANATION OF
PLATE III

22. *Stentor polymorphus*, after Stein.
23. *Lionotus wrzesniowskyii*, after Conn.
24. *Coleps hirtus*, after Conn.
25. *Pleuronema chrysalis*, after Kent.
26. *Chilodon caudatus*, after Conn.
27. *Euplotes patella*, after Stein.
28. *Condylostoma vorticella*, after Butschli.
29. *Spirostomum teres*, after Conn.
30. *Aspidisca costata*, after Kent.
31. *Vorticella nebulifera*, after Kent.
32. *Microthorax sulcatus*, after Kent.
33. *Stylonychia mytilis*, after Kent.
34. *Psilotricha acuminata*, after Kent.
35. *Colpoda campyla*, after Conn.
36. *Halteria grandinella*, after Kent.
37. *Urocentrum turbo*, after Kent.

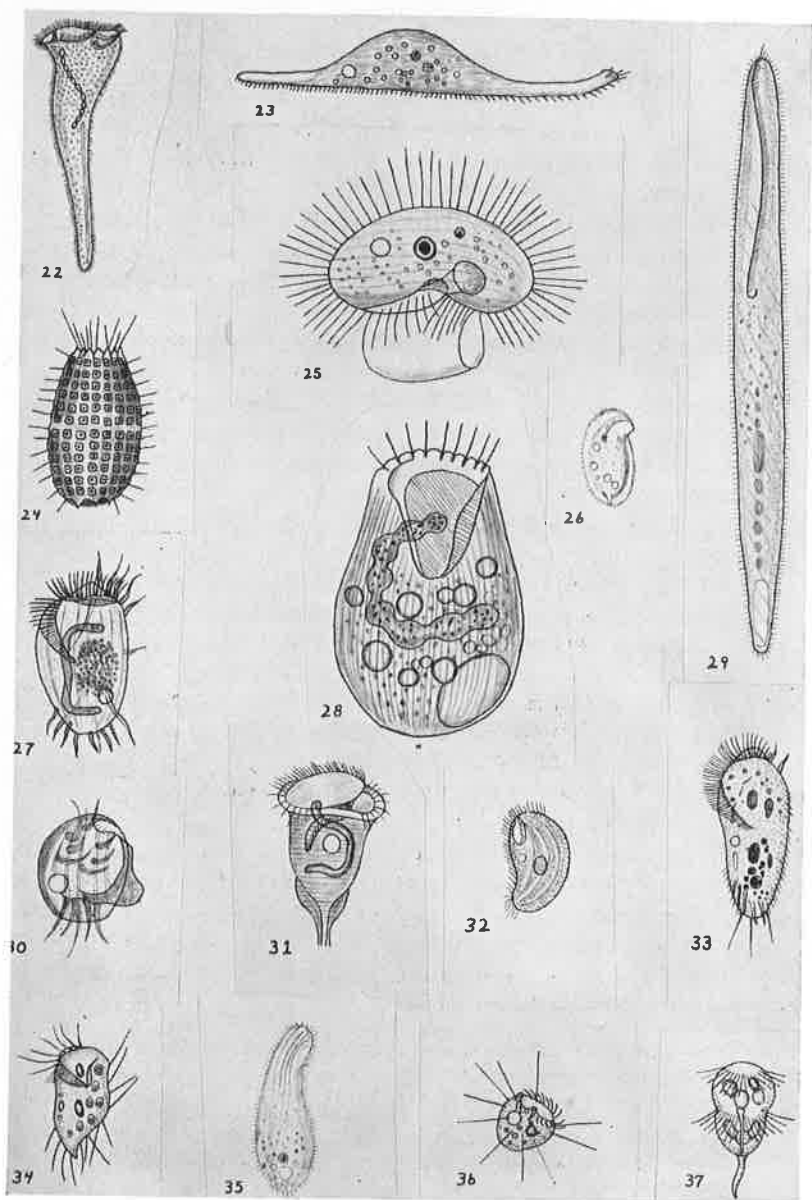


PLATE III

BEVEL