

J. E. SCHOEDLER: a short biography and his contributions to cladoceroLOGY

By

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ABSTRACT. J. E. SCHOEDLER, one of the first cladoceroLOGISTS in Germany, published on Cladocera between 1846 and 1877. This paper contains a) a numbered chronological list of papers in which SCHOEDLER dealt with taxa described by himself, together with an inventory of all of SCHOEDLER's taxa in each paper; b) a numbered alphabetical list of the taxa SCHOEDLER described, keyed to the particular papers of the former list, together with literature reference indicating the present status of each taxon; and c) a list of all of SCHOEDLER's Cladocera material kept in the Zoologisches Museum, Berlin.

J. Eduard SCHOEDLER lived and worked in the last century in Berlin. He was a high-school teacher, later professor at the Dorotheenstädtische Realschule in Berlin, where he taught Latin and natural history. It is all I managed to get to know of him, as there are no more data available about his life either in the Zoologisches Museum, Berlin, or in the archives of Berlin. He died on 19 November, 1886.

SCHOEDLER had worked exclusively with Cladocera. He published seven original papers on this group, which appeared between 1846 and 1877. On the basis of his publications it can be presumed that he started his collectings and studies in the early 1840s. His work was chiefly based upon material collected from various kinds of waters of Berlin and its vicinity, besides this SCHOEDLER once collected at the locality Frisches Haff, where he stayed for a short time in 1863. He was sent a considerably rich collection from Sweden, collected by G. CEDERSTRÖM from various parts of that country.

SCHOEDLER introduced 49 new names to science and a large part of them is represented by original specimens of his collection kept in the Zoologisches Museum, Berlin (see Table 3). This collection consists of only alcoholic specimens, and unfortunately there is no type designation made by him.

SCHOEDLER was one of the first cladoceroLOGISTS in Germany, being a prominent member of the 1st century P. M.: Europe in the cladoceroLOGY (FREY, 1982). Subsequent to him developed the so-called "Berlin School" of students of microcrustacea, including WELTNER, HARTWIG, PROTZ and later KEILHACK and RÜHE. It is to be regretted that this line had been interrupted by the First World War.

The aim of this paper is to publish a summary paper of SCHOEDLER's achievements on Cladocera, with special regards to his collection which sank almost fully into oblivion, where as it is almost completely extant. I hope the original specimens of this collection will be of great help in solving some problems in the taxonomy of Cladocera. The catalogue is divided into three parts, following the form of the paper on DADAY's Cladocera (FORRÓ and FREY, 1982). The first part is a list of papers in which SCHOEDLER either described new taxa or referred to those he had earlier described, together with an inventory of all of SCHOEDLER's taxa in each paper. Table 2 is a numbered alphabetical list by families, genera, and species

of the taxa described by SCHOEDLER, keyed to the particular papers in which they are described or mentioned, together with a literature reference indicating the present status of each taxon, and in Table 3 all his material kept in the Zoologisches Museum, Berlin is listed.

The golden opportunity for studies to prepare this paper arose during a one-month study tour in the German Democratic Republic. I wish to express my sincere appreciation to Dr H. -E. GRÜNER, Curator of Crustacea, Zoologisches Museum Berlin, for supporting my work and for helping me to hunt down any data on SCHOEDLER's biography. I would like to thank the Library of the Zoologisches Museum for help and advice. I also profited from discussions with Dr D. FLÖSSNER. I am most grateful to Drs U. LIEDER and P. FRENZEL for their help and comments.

Table 1 is a numbered, chronological list of papers by SCHOEDLER in which he either described new cladoceran taxa or else referred to those he had already described previously. An inventory of such taxa is given for each paper. As already mentioned above, SCHOEDLER published 7 original papers, but besides these he gave some lectures in the Gesellschaft naturforschender Freunde zu Berlin, which were reported on in the Sitzungsberichte of this society. Only those reports are listed here in which new taxa had been mentioned.

Paper 1 is a very detailed description of Acanthocercus rigidus, also including anatomy. The only publication of his in which phyllopods are also listed is Paper 2. It contains comments on daphniids and a list of other cladocerans from Moina to Polyphemus, listing some new names as well. There was one plate added to the text. Paper 3 is an extended version of the list given in the former paper, supplemented by two plates and 43 figures. Paper 4 is an elaborate extension of the former two papers, including three plates. This publication is a summary of the knowledge of that time regarding chydorids and polyphemids, giving description and figure(s) to his taxa. SCHOEDLER mentioned some new names without having seen original material, the decision being based only on published description and/or illustration.

Papers 5 and 6 are reports of his lectures given in the Gesellschaft naturforschender Freunde. These papers are essentially preliminary articles of papers 7 and 10. The new species of Paper 6, Bosmina Sarsii n. sp. and B. rotundata n. sp. are identical with B. longicornis and B. rotunda, respectively (RÜHE, 1913).

Paper 7 contains descriptions of five new species without any figures. The same taxa were described and figured in paper 10, along with some remarks on further species.

Papers 8 and 9 are also reports on SCHOEDLER's lectures. In these three species of Bosmina are described. These new species (B. trigonalis, B. affinis and B. cederströmi) were mentioned only in these papers, later RÜHE (1913) resurrected them.

Paper 11, the last one, summarized the knowledge concerning the family Daphniidae, listing all daphniid species described up to that time.

Table 1. A chronological list of papers by SCHOEDLER in which he dealt with taxa described by himself

1. 1846. Ueber Acanthocercus rigidus, ein bisher noch unbekanntes Entomostracon aus der Familie der Cladoceren. - Archiv für Naturgeschichte, 12: 301-374.
New taxa: Acanthocercus n. gen., Acanthocercus rigidus n. sp.
2. 1858. Die Branchiopoden der Umgegend von Berlin. - Jahresbericht über die Louisenstädtische Realschule Berlin, 1858: 1-28.
Taxa already described: Acantholeberis rigida Schoedler
New taxa: Simiocephalus n. gen., Scapholeberis n. gen., Scapholeberis cornuta n. sp., Scapholeberis obtusa n. sp. - The new taxa listed below are merely mentioned in this paper: Lathonura spinosa n. sp., Chydorus nitidus n. sp., Camptocercus alonoides n. sp., Alona spinifera n. sp., Alona sulcata n. sp., Alona esocirostris n. sp., Pleuroxus ornatus n. sp., Pleuroxus striatus n. sp.
3. 1862. Die Lynceiden und Polyphemiden der Umgebung Berlins. - Jahresbericht über die Dorotheenstädtische Realschule Berlin, 1862: 1-26.
New taxa: Chydorus nitidus n. sp., Chydorus caelatus n. sp., Alona spinifera n. sp., Alona sulcata n. sp., Alona camptocercoides n. sp., Alona esocirostris n. sp.,

Table 1 (continued)

- New taxa (continued): Camptocercus Lilljeborgii n. sp., Camptocercus rectirostris n. sp., Camptocercus biserratus n. sp., Peracantha brevisrostris n. sp., Pleuroxus striatus n. sp., Pleuroxus ornatus n. sp., Pleuroxus transversus n. sp., Pleuroxus glaber n. sp.
4. 1863. Neue Beiträge zur Naturgeschichte der Cladoceren. - Berlin, 1-80.
Taxa already described: Alona spinifera Schoedler, Alona sulcata Schoedler, Alona camptocercoides Schoedler, Alona esocirostris Schoedler, Camptocercus Lilljeborgii Schoedler, Camptocercus rectirostris Schoedler, Camptocercus biserratus Schoedler, Peracantha brevisrostris Schoedler, Pleuroxus ornatus Schoedler, Pleuroxus striatus Schoedler, Pleuroxus transversus Schoedler, Rhyppophilus glaber (Schoedler).
New taxa: Chydorus nitidus n. sp., Chydorus caelatus n. sp., Alona Leydigii n. sp., Acroperus intermedius n. sp., Pleuroxus Bairdii n. sp., Rhyppophilus n. gen., Polyphe-mus Kochii n. sp., Bythotrephes Cederströmii n. sp.
5. 1863. Mittheilungen über die im Juli 1863 in dem frischen Haff beobachteten Cladoceren. - Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 17 November 1863.
New taxa: Hyalodaphnia Kahlbergiensis n. gen. et n. sp., Hyalodaphnia sima n. sp., Bosmina gibbera n. sp.
6. 1864. Über mehrere Hyalodaphnia-Arten und Bosminiden. - Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 16 Februar 1864.
New taxa: Hyalodaphnia Kahlbergiensis n. sp., Bosmina Sarsii n. sp., Bosmina rotundata n. sp.
7. 1865. Zur Diagnose einiger Daphniden. - Archiv für Naturgeschichte, 31: 283-285.
New taxa: Bosmina gibbera n. sp., Bosmina rotunda n. sp., Bosmina longicornis n. sp., Hyalodaphnia Berolensis n. sp., Hyalodaphnia Kahlbergiensis n. sp.
8. 1865. Über neue Cladoceren aus Schweden. - Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 21 Dezember 1865.
New taxa: Hyalodaphnia Cederströmi n. sp., Bosmina affinis n. sp., Bosmina rotunda n. sp., Bosmina trigonalis n. sp.
9. 1866. Über die Cladoceren-Sammlung von G. Cederström. - Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 17 Juli 1866.
New taxa: Bosmina Cederströmi n. sp.
10. 1866. Die Cladoceren des frischen Haffs nebst Bemerkungen über anderweitig vorkommende verwandte Arten. - Archiv für Naturgeschichte, 32: 1-56.
New taxa: Hyalodaphnia n. gen., Hyalodaphnia Kahlbergiensis n. sp., Hyalodaphnia Berolensis n. sp., Hyalodaphnia Cederströmii n. sp., Bosmina gibbera n. sp., Bosmina rotunda n. sp., Bosmina longicornis n. sp., Bosmina Londinensis n. sp.
11. 1877. Zur Naturgeschichte der Daphniden. - Jahresbericht über die Dorotheenstädtische Realschule Berlin, 1877, 1-24.
Taxa already described: Scapholeberis cornuta Schoedler, Scapholeberis obtusa Schoedler.
New taxa: Moina Lilljeborgii n. sp., Daphnia gravis n. sp., Daphnia Kingii n. sp., Daphnia cephalata n. sp., Daphnia Kisilkumensis n. sp., Simocephalus paradoxus n. sp., Ceriodaphnia Leydigii n. sp., Ceriodaphnia nitida n. sp.

Table 2 is an alphabetical listing by families, genera, and species of the taxa SCHOEDLER described. At the right are the detailed references to the papers listed in Table 1, the underlined numbers refer to the sequential numbers in this arrangement. Beneath the taxon as listed by SCHOEDLER is its name in current use, together with a literature reference in parentheses documenting any decisions that have been made since then.

Table 2. Cladocera taxa described by SCHOEDLER and their current use

BOSMINIDAE	
1. <u>Bosmina affinis</u> 1865	8
= <u>Bosmina (Eubosmina) mixta longicornis</u> (Schoedler, 1865) (LIEDER, in press)	
2. <u>Bosmina Cederströmi</u> 1865	8
= <u>Bosmina (Eubosmina) mixta cederströmi</u> (Schoedler, 1865)	9
3. <u>Bosmina gibbera</u> 1863	5
= <u>Bosmina (Eubosmina) coregoni gibbera</u> (Schoedler, 1863) (LIEDER, in press)	7: 283 10: 36-40, Taf. II, Fig. 9 Taf. III, Fig. 24
4. <u>Bosmina Londinensis</u> 1866	
= ?	10: 50
5. <u>Bosmina longicornis</u> 1865	7: 284
= <u>Bosmina (Eubosmina) mixta longicornis</u> (Schoedler, 1865) (LIEDER, in press)	10: 42-45, Taf. II, Figs 10-12
6. <u>Bosmina rotunda</u> 1865	7: 284
= <u>Bosmina (Eubosmina) coregoni coregoni</u> Baird, 1857 (LIEDER, in press)	8 10: 40-42, Taf. II, Figs 13-14
7. <u>Bosmina trigonalis</u> 1865	8
= <u>Bosmina (Eubosmina) coregoni gibbera</u> (Schoedler, 1863) (LIEDER, in press)	
CERCOPAGIDAE	
8. <u>Bythotrephes Cederströmi</u> 1863	4: 73-74
= <u>Bythotrephes longimanus</u> Leydig, 1860 (FLÖSSNER, 1972)	
CHYDORIDAE	
9. <u>Acroperus intermedius</u> 1863	4: 33
= <u>Acroperus elongatus</u> (Sars, 1862) (FLÖSSNER, 1972)	
10. <u>Alona camptocercoides</u> 1862	3: 24, Taf. I, Figs 8-10
= <u>Oxyurella tenuicaudis</u> (Sars, 1862) (SMIRNOV, 1971) (FLÖSSNER, 1972)	4: 24-25, Taf. II, Figs 8-10
11. <u>Alona esocirostris</u> 1862	2: 28
= <u>Graptoleberis testudinaria testudinaria</u> (Fischer, 1851) (SMIRNOV, 1971)	3: 24, Taf. I. Figs 26-27
= <u>Graptoleberis testudinaria</u> (Fischer, 1848) (FLÖSSNER, 1972)	4: 25-26, Taf. I, Figs 26-27
12. <u>Alona Leydigii</u> 1863	4: 27
= <u>Leydigia leydigi</u> (Schoedler, 1863) (SMIRNOV, 1971)	
= <u>Leydigia quadrangularis</u> (Leydig, 1860) (FLÖSSNER, 1972; incorrect designation)	
13. <u>Alona spinifera</u> 1862	2: 28
= <u>Biapertura affinis</u> (Leydig, 1860) (SMIRNOV, 1971)	3: 13-19, Taf. I, Figs 17-22

(Table 2, continued)

13. Alona spinifera 1862
= Alona rectangula Sars, 1862
(FLÖSSNER, 1972) 4: 18-19,
Taf. I, Figs 17-22
14. Alona sulcata 1862 2: 28
= Alona quadrangularis (O. F. Müller, 1785)
(SMIRNOV, 1971) 3: 21-24,
(FLÖSSNER, 1972) Taf. I, Figs 24-25
4: 21-24,
Taf. I, Figs 24-25
15. Camptocercus alonoides 1858 2: 28
= Oxyurella tenuicaudis (Sars, 1862)
(SMIRNOV, 1971)
16. Camptocercus biserratus 1862 3: 25, Taf. II, Fig. 42
= Camptocercus rectirostris biserratus Schoedler, 1862
(SMIRNOV, 1971) 4: 38, Taf. II, Fig. 42
= Camptocercus rectirostris Schoedler, 1862
(FLÖSSNER, 1972) Taf. III, Fig. 51
17. Camptocercus Lilljeborgii 1862 3: 24
= Camptocercus lilljeborgii lilljeborgii Schoedler, 1862
(SMIRNOV, 1971) 4: 36, Taf. III, Figs 46-48
= Camptocercus lilljeborgii Schoedler, 1862
(FLÖSSNER, 1972)
18. Camptocercus rectirostris 1862 3: 25, Taf. II, Fig. 43
= Camptocercus rectirostris Schoedler, 1862
(FLÖSSNER, 1972) 4: 37-38,
Taf. II, Fig. 43
= Camptocercus rectirostris rectirostris
(SMIRNOV, 1971) Taf. III, Figs 49-50
19. Chydorus caelatus 1862 3: 15, Taf. II, Fig. 44
= Chydorus sphaericus (O. F. Müller)
caelatus Schoedler, 1862 4: 15, Taf. II, Fig. 44
(SMIRNOV, 1971)
- = Chydorus sphaericus (O. F. Müller, 1785)
(FLÖSSNER, 1972)
20. Chydorus nitidus 1862 2: 28
= Chydorus sphaericus (O. F. Müller)
nitidus Schoedler, 1862 3: 14, Taf. I, Figs 1-4
(SMIRNOV, 1971) 4: 14, Taf. I, Figs 1-4
21. Peracantha brevirostris 1862 3: 25, Taf. II, Fig. 31
= Pleuroxus truncatus (O. F. Müller)
brevirostris (Schoedler, 1862)
(SMIRNOV, 1971) 4: 42, Taf. II, Fig. 31
= Peracantha truncata (O. F. Müller, 1785)
(FLÖSSNER, 1972)
22. Pleuroxus Bairdii 1863 4: 50-51
= Pleuroxus trigonellus trigonellus (O. F. Müller, 1785)
(SMIRNOV, 1971)
23. Pleuroxus glaber 1862 3: 26
= Pleuroxus uncinatus Baird, 1850 4: 55-56,
(SMIRNOV, 1971) Taf. III, Figs 54-56
(FLÖSSNER, 1972) Rhyppophilus glaber in 4
24. Pleuroxus ornatus 1862 2: 28
= Pleuroxus trigonellus trigonellus (O. F. Müller, 1785)
(SMIRNOV, 1971) 3: 25, Taf. II, Fig. 38
= Pleuroxus trigonellus (O. F. Müller, 1785)
(FLÖSSNER, 1972) 4: 47-48,
Taf. II, Fig. 32

(Table 2, continued)

25. Pleuroxus striatus 1862 2: 28
= Pleuroxus striatus Schoedler, 1862 3: 25, Taf. II, Fig. 37
(SMIRNOV, 1971) 4: 48, Taf. II, Fig. 37
(FLÖSSNER, 1972)
26. Pleuroxus transversus 1862 3: 26
= Alonella nana (Baird, 1850) 4: 50, Taf. III, Figs 52-53
(SMIRNOV, 1971)
(FLÖSSNER, 1972)
27. Rhyppophilus 1863 4: 54
= Pleuroxus Baird, 1843
(SMIRNOV, 1971)
(FLÖSSNER, 1972)

DAPHNIIDAE

28. Ceriodaphnia Leydigii 1877 11: 21-22, Fig. 12
= Ceriodaphnia megops Sars, 1862
(FLÖSSNER, 1972)
29. Ceriodaphnia nitida 1877 11: 22
= ?
30. Daphnia cephalata 1877 11: 13-14, Fig. 7
= Daphnia cephalata King, 1852
(HEBERT, 1977)
31. Daphnia gravis 1877 11: 11-12, Figs 3-4
= Daphnia carinata King, 1852
(HEBERT, 1977)
32. Daphnia Kingii 1877 11: 12-13, Fig. 5
= ?
33. Daphnia Kisilkumensis 1877 11: 16
= ?
34. Hyalodaphnia 1866 5:
= Daphnia s. str. O. F. Müller, emend. Johnson, 1952 10: 16-18
(FLÖSSNER, 1972)
35. Hyalodaphnia Berolensis 1865 7: 284-285
= Daphnia (Daphnia) cucullata Sars, 1862 10: 24-28,
(FLÖSSNER, 1972) Taf. I, Figs 4-5
Taf. II, Fig. 8
Taf. III, Fig. 8
36. Hyalodaphnia Cederströmii 1865 8: 9:
= Daphnia (Daphnia) cristata Sars, 1862 10: 31, Taf. I, Fig. 7
(FLÖSSNER, 1972)
37. Hyalodaphnia Kahlbergiensis 1863 5:
= Daphnia (Daphnia) cucullata Sars, 1862 6:
(FLÖSSNER, 1972) 7: 285
10: 18-24, Taf. I, Figs 1-3
38. Hyalodaphnia sima 1863 5:
= ?
39. Moina Lilljeborgii 1877 11: 5-6,
= Moina brachiata (Jurine, 1820) Figs 9, 9a-c, 10
(GOULDEN, 1968)

(Table 2, continued)

40. Scapholeberis 1858 2: 23
= Scapholeberis Schoedler, 1858
(DUMONT & PENZAERT, 1983)
41. Scapholeberis cornuta 1858 2: 24
= Scapholeberis mucronata (O.F. Müller, 1785) 11: 23
(DUMONT & PENZAERT, 1983)
42. Scapholeberis obtusa 1858 2: 24-25, Figs 11-12
= Megafenestra aurita (Fischer, 1849) 11: 24
(DUMONT & PENZAERT, 1983)
43. Simocephalus 1858 2: 17-18
= Simocephalus Schoedler, 1858
(FLÖSSNER, 1972)
44. Simocephalus congener 1858 2: 20-21
= Simocephalus congener Schoedler, 1858
(SRÁMEK-HUSEK, 1962)
45. Simocephalus paradoxus 1877 11: 17-18, Fig. 8
= ?

MACROTHRICIDAE

46. Acanthocercus 1846 1: 306
= Acantholeberis Lilljeborg, 1853
(LILLJEBORG, 1853)
(FLÖSSNER, 1972)
47. Acanthocercus rigidus 1846 1: 307-373,
= Acantholeberis curvirostris (O.F. Müller, 1785) Taf. XI, XII
(FLÖSSNER, 1972) 2: 27
(SMIRNOV, 1976) [Listed as Acantholeberis
rigida in 2]
48. Lathonura spinosa 1858 2: 27, Taf. 1, Fig. 10
= Lathonura rectirostris (O.F. Müller, 1785)
(FLÖSSNER, 1972)
(SMIRNOV, 1976)

POLYPHEMIDAE

49. Polyphemus Kochii 1863 4: 70-71
= Polyphemus pediculus (Linnaeus, 1761)
(FLÖSSNER, 1972)

Table 3 is a list of the Cladocera material of SCHOEDLER deposited in the Zoologisches Museum, Berlin. The collection is composed of 416 tubes and 220 of them contain unidentified material, chiefly the collectings of Cederström. The collection contains alcoholic specimens only, which are from Germany (Berlin and its vicinity, Frisches Haff) and from Sweden, in accordance with his publications.

Out of the 49 cladoceran taxa SCHOEDLER described 24 have original specimens in the collection. I am of the opinion that SCHOEDLER himself designated no types. There are selected type specimens only of Bosmina, and I think these designations were most likely made by RÜHE.

This collection was accessed to the Zoologisches Museum in parts, as it is also reflected by the various catalogue numbers. The first part of the material was received by the museum prior to 1887 (Nos. 5520-5540), perhaps SCHOEDLER himself presented it to the Museum. The remaining parts were purchased by the Museum with the help of WELTNER.

The last part was registered in 1910 or 1911. Almost the entire material registered is still preserved, there are only 3 tubes lacking.

The material is listed in systematic order following that of FLÖSSNER (1972) and SMIRNOV (1976). In the catalogue first the name of the taxon and that of the author are given following the original labeling of SCHOEDLER, then follows the current valid name of the taxon. The next items are the number of tubes, the locality, and after semicolon the catalogue number.

Table 3. List of pertinent material

LEPTODORIDAE

Leptodora Lilljeborg, 1861

kindti (Focke, 1844) - 1 tube: Norbotten, Schweden; 5539.

Leptodora sp. - 19 tubes: Schweden, Cederström; 15204.

SIDIDAE

Sida Straus, 1820

crystallina (O.F. Müller, 1776) - 32 tubes: Berlin, Plötzensee, Schoedler, 24.X.1863; 5520 - Schweden, Cederström; 15117 - Rüdersdorf, Schoedler; 15118 - Frisches Haff, Schoedler; 15119.

elongata de Geer = S. crystallina (O.F. Müller, 1776) - 1 tube: Spree und Plötzensee, Berlin, Schoedler; 15120.

Diaphanosoma Fischer, 1850

brachyurum (Liévin, 1848) - 2 tubes: Schweden, Cederström; 15116.

Latona Straus, 1820

setifera (O.F. Müller, 1785) - 2 tubes: Schweden, Cederström; 15121.

Limnosida Sars, 1865

frontosa, Sars, 1865 - 1 tube: Schweden, Schoedler's Sammlung; 13755.

HOLOPEDIDAE

Holopedium Zaddach, 1855

gibberum Zaddach, 1855 - 16 tubes: Schweden, Cederström; 15114.

DAPHNIIDAE

Daphnia O.F. Müller, 1785

gracilis Hellich = D. (Daphnia) hyalina Leydig, 1860 - 3 tubes: Schweden, Cederström; 15106.

lacustris Sars = D. (Daphnia) hyalina Leydig, 1860 - 1 tube: Plötzensee, Schoedler; 9325.

longispina O.F. Müller, 1785 - 4 tubes: Grunewald, Barschsee; 9326 - no locality given; 9327.

magna Straus, 1820 - 1 tube: Köpenick, Schoedler; 9328.

pennata O.F. Müller = D. (Daphnia) pulex Leydig, 1860 - 1 tube: no locality given, Schoedler; 9329.

pulex de Geer = D. (Daphnia) pulex Leydig, 1860 - 6 tubes: Berlin, Schoedler; 5521 - Finckenkrug, Schoedler; 9330 - Zehlendorf, Schoedler; 9331 - no locality given, Schoedler; 9332 - Berlin, Thiergarten, Schoedler; 9333 - Berlin, Thiergarten, Schoedler; 9334.

Schaefferi Baird = D. (Ctenodaphnia) magna Straus, 1820 - 7 tubes: Rixdorf bei Berlin, Schoedler; 5522 - Tempelhof, Schoedler; 9337 - Zehlendorf, 1877, Schoedler; 9338 - Pfuhl in Zehlendorf, 10. VII.1877, Schoedler; 9340 - Pfuhl in Zehlendorf, 28. X.1877, Schoedler; 9341 - Rixdorf, Schoedler; 9342.

schoedleri Sars, 1862 - 3 tubes: Spree; 9343 - Spree, 1863, Schoedler; 9344.

(Table 3, continued)

Daphnia sp. - 5 tubes: Schweden, Cederström; 15110 - Gothland, Schweden, Cederström; 15110.

Hyalodaphnia Schoedler, 1866=

Daphnia s. str. O.F. Müller, 1785, emend. Johnson, 1952

Berolensis Schoedler = D. (Daphnia) cucullata Sars, 1862 - 2 tubes: Berlin, Schoedler; 9317.

Cederströmi Schoedler = D. (Daphnia) cristata Sars, 1862 - 1 tube: Schweden Cederström; 9320.

cucullata (Sars) = D. (Daphnia) cucullata Sars, 1862 - 1 tubes: no locality given, Schoedler; 9321.

galeata Sars, 1864 - 2 tubes: Schweden, Cederström; 9323.

Kahlbergiensis Schoedler, TYPUS = D. (Daphnia) cucullata Sars, 1862 - 3 tubes: Frisches Haff, Schoedler; 9324.

Kahlbergiensis Schoedler = D. (Daphnia) cucullata Sars, 1862 - 1 tube: no locality given, Schoedler; 15144.

sima = ? - 1 tube: Plötzensee, Schoedler; 9345.

Hyalodaphnia sp. - 17 tubes: Schweden, Cederström; 15042.

Ceriodaphnia Dana, 1853

laticaudata P.E. Müller, 1867 - 3 tubes: Grunewald und Rixdorf (Berlin), Schoedler, det. P. Frenzel, 1982; 15138.

megops Sars, 1862 - 3 tubes: Berlin, 1877, Schoedler; 15004.

quadrangula (O.F. Müller, 1785) - 3 tubes: Berlin, Thiergarten, Schoedler; 5533.

reticulata (Jurine, 1820) - 5 tubes: Berlin, Schoedler; 5532. - Rixdorf, Schoedler; 15145.

Ceriodaphnia sp. - 11 tubes: Plötzensee, Schoedler; 7808. - Plötzensee, Schoedler; 15139 - Schweden, Cederström; 15146.

Simocephalus Schoedler, 1858

vetulus (O.F. Müller, 1776) - 1 tube: Spree, Berlin, Schoedler; 5524.

exspinosus (Koch, 1841) - 1 tube : Berlin, Schoedler; 5526. - Finkenkrug, Berlin, Schoedler; 15126.

exspinosus var. congener Schoedler, 1858 - 1 tube: Berlin, Schoedler; 15125.

serrulatus (Koch, 1841) - 4 tubes: Berlin, in Graben bei Treptow, Schoedler; 5525. - Berlin, Schoedler; 15124.

Simocephalus sp. - 4 tubes: Schweden, Cederström; 15122.

Scapholeberis Schoedler, 1858

cornuta Schoedler = S. mucronata (O.F. Müller, 1785) - 3 tubes: Plötzensee, Berlin, Schoedler; 5530. - Haff, Schoedler; 15129.

mucronata (O.F. Müller, 1785) - 3 tubes: Berlin, Plötzensee, Schoedler; 5529.

mucronata var. cornuta Schoedler = S. mucronata (O.F. Müller, 1785) - 3 tubes: Berlin, Schoedler; 15130.

obtusa Schoedler = Megafenestra aurita (Fischer, 1849) - 3 tubes: Berlin, Rixdorf, Schoedler; 5528. - Finkenkrug, Schoedler; 15128.

Scapholeberis sp. - 7 tubes: Schweden, Cederström; 15131.

MOINIDAE

Moina Baird, 1850

brachiata (Jurine, 1820) - 4 tubes: Berlin und Posen, Schoedler; 15132.

rectirostris Jurine = M. micrura Kurz, 1875 - 1 tube : Lagowitz, Posen, Schoedler; 5531. - Lagowitz, 1859, Posen, Schoedler; 15133.

Moina sp. - 2 tubes: no locality given, Schoedler; 15134. - Rixdorf, Schoedler; 15135.

BOSMINIDAE

Bosmina Baird, 1845

affinis Schoedler, 1865 - 1 tube: Jönköping Lan, 3. VIII. 1861, Cederström; 15056.

(Table 3, continued)

- coregoni typica (det. Rühle) - 1 tube: Schweden, Cederström; 15165.
cederströmi Schoedler, 1866 - 1 tube: Ostergothland, Schweden, & VIII. 1865, Cederström; 15056.
cornuta Jurine = B. (Bosmina) longirostris (O.F. Müller, 1785) - 1 tube: no locality given, Schoedler; 15164.
curvirostris Fischer = B. (Bosmina) longirostris (O.F. Müller, 1785) - 2 tubes: Spree, Schoedler; 15158.
gibbera Schoedler = TYPUS - 1 tube: Frisches Haff, Schoedler; 15167.
gibbera Schoedler - 1 tube: no locality, Schoedler; 15060.
lilljeborgi Sars und longispina Leydig - 1 tube: Schweden, 1864, Cederström; 15055.
longicornis Schoedler = TYPUS - 1 tube: Jönköping Lan, 8. VIII. 1861; 15061.
longicornis Schoedler - 1 tube : Ostergothland, Schweden, 8. VIII. 1865, Cederström; 15057. - Schweden, Cederström; 15159. (det. Rühle)
longirostris (O.F. Müller, 1785) - 5 tubes: Spree, Schoedler; 15058. - Mark, Schoedler; 15163. - Schweden, Cederström; 15162 (det. Rühle).
longispina Leydig, 1860 - 21 tubes: Schweden, Cederström; 15169. - [and B. mixta, det. Kofinek] - Schweden, Cederström; ? - [and longirostris, and mixta kessleri, det. Kofinek]
maritima P. E. Müller = B. (Eubosmina) longispina Leydig, 1860 - 1 tube: Schweden Cederström; 15168.
obtusirostris Sars = B. (Eubosmina) longispina Leydig, 1860 - 5 tubes: Schweden, Cederström; 15053. - Schweden, Cederström; 15054. - Schweden, Cederström; 15161. - Schweden, Cederström; 15164.
obtusirostris var. lacustris = B. (Eubosmina) longispina Leydig, 1860 - 2 tubes (det. Rühle): Schweden, Cederström; 15160.
rotunda Schoedler = TYPUS - 1 tube: Spree, Schoedler; 15166.
trigonalis Schoedler = TYPUS - 1 tube: Schweden Cederström, VII. 1859; 15059.
Bosmina sp. - 21 tubes: Schweden, Cederström; 15169.

MACROTHRICIDAE

Ophryoxus Sars, 1862

gracilis Sars, 1862 - 9 tubes: Schweden, Cederström; 13754.

Acantholeberis Lilljeborg, 1853

rigidus Schoedler = A. curvirostris (O.F. Müller, 1776) - 1 tube: Jungfernheide, Schoedler; 5538.

Macrothrix Baird, 1843

laticornis (Fischer, 1851) - 1 tube: Spree, 1863, Schoedler; 15172.

rosea Jurine = Echinisca rosea Liévin, 1848 - 1 tube: Grunewald, Schoedler; 15173.

Lathonura Lilljeborg, 1853

rectirostris (O.F. Müller, 1785) - 3 tubes: Schweden, Cederström; 15176. - no locality given, Schoedler; 15171.

CHYDORIDAE

Eurycercus Baird, 1843

lamellatus (O.F. Müller, 1785) - 6 tubes: Schweden, Cederström, 27.V. 1861; 15147. - Schweden, Cederström, 12.VI. 1861; 15147. - Gothland, Schweden, Cederström; 15147. - Spree, Schoedler; 15175. - Berlin, Plötzensee, Schoedler; 5536.
Eurycercus sp. - 16 tubes: Schweden, Cederström; 15147.

Camptocercus Baird, 1843

biserratus Schoedler = C. rectirostris biserratus Schoedler, 1862 - 1 tube: no locality given, Schoedler; 15155.

lilljeborgi Schoedler, 1862 - 2 tubes: Spree, Schoedler; 15150.

(Table 3, continued)

rectirostris Schoedler, 1862 - 2 tubes: no locality given, Schoedler; 15149.
Camptocercus sp. - 15 tubes: Schweden, Cederström; 15147.

Acroperus Baird, 1843

harpae (Baird, 1835) - 1 tube: Spree, Schoedler; 15151.

leucocephalus Koch = A. harpae (Baird, 1835) - 2 tubes: Spree bei Berlin, Schoedler; 5535.

Acroperus sp. - 2 tubes: no locality given, Schoedler; 15185.

Alona Baird, 1850

affinis (Leydig, 1860) - 2 tubes: no locality given, Schoedler; 11955.

camptocercoides Schoedler = Oxyurella tenuicaudis (Sars, 1862) - 1 tube: no locality given, Schoedler; 11951.

lineata Fischer = A. costata Sars, 1862 (after Flössner, 1972) - 3 tubes: Charité Graben und Frisches Haff, Schoedler; 11952.

reticulata Baird - 1 tube: no locality given, Schoedler; 11953.

spinifera Schoedler = A. rectangularis Sars, 1862 - 2 tubes: Charité Graben, Berlin, Schoedler; 11950.

sulcata Schoedler = A. quadrangularis (O.F. Müller, 1785) - 1 tube: no locality given, Schoedler; 11954.

Alonella Sars, 1862

excisa (Fischer, 1854) - 2 tubes: Weissensee, Berlin, Schoedler; 15192.

exigua (Lilljeborg, 1853) - 1 tube: Weissensee, Berlin, Schoedler; 15191.

Peracantha Baird, 1843 =

Pleuroxus Baird, 1843

brevirostris Schoedler = Pleuroxus truncatus (O.F. Müller, 1785) - 1 tube: no locality given, Schoedler; 15157.

truncata (O.F. Müller) = Pleuroxus truncatus (O.F. Müller, 1785) - 3 tubes: Spree, Berlin, Schoedler; 5534. - no locality given, Schoedler; 15156.

Pleuroxus Baird, 1843

aduncus (Jurine, 1820) - 2 tubes: Spree, Berlin, 16.XII.1863, Schoedler; 13759.

trigonellus (O.F. Müller, 1785) - 1 tube: Berlin, Schoedler; 15193.

uncinatus Baird, 1850 - 2 tubes: Plötzensee, Berlin, Schoedler; 13758.

Pleuroxus sp. - 4 tubes: Ostergothland, Cederström; ?

Chydorus Leach, 1816

caelatus Schoedler = C. sphaericus (O.F. Müller) caelatus Schoedler, 1862 - 1 tube: Finkenkrug bei Berlin, Schoedler; 15198.

globosus Baird = Pseudochydorus globosus (Baird, 1843) - 1 tube: Schweden, Cederström; 15063.

sphaericus (O.F. Müller, 1785) - 7 tubes: Plötzensee, Berlin, Schoedler; 13757. - Berlin, Schoedler; 15197.

Chydorus sp. - 36 tubes: Schweden, Cederström; 15199. - Schweden, Cederström; ?

Chydoridae indet. - 31 tubes: Lagowitz, 1859, Schoedler; ? - Schweden, Cederström; ?

POLYPHEMIDAE

Polyphemus O.F. Müller, 1785

pediculus (Linnaeus, 1761) - 3 tubes: Spree, Berlin, Schoedler; 5540.

Polyphemus sp. - 22 tubes: Pichelsberge, 1861, Schoedler; 15152. - Schweden, Cederström; 15194.

(Table 3, continued)

CERCOPAGIDAE

Bythotrephes Leydig, 1860

cederströmi Schoedler = B. longimanus Leydig, 1860 - 8 tubes: Sjöen Saxen, Wermland, Schweden, 14. VII. 1863, Cederström; 5537. - Schweden, 19. VII. 1863, Cederström; 13752. - no locality given; ?

longimanus Leydig, 1860 - 1 tube: Schweden, Cederström; 15195.

Bythotrephes sp. - 12 tubes: Schweden, Cederström; 13753.

Cladocera indet. - 15 tubes: Schweden, Cederström; ? - Rixdorf, Schoedler; ? - Lagowitz, Posen, Schoedler; ? .

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