Phylum **Rotifera** Cuvier, 1817 (2 classes)[1,2,3]

Class **Pararotatoria** Sudzuki, 1964 (1 order)

Order **Seisonacea** Wesenberg-Lund, 1899 (1 family)

Family **Seisonidae** Wesenberg-Lund, 1899 (2 genera, 3 species)

Class **Eurotatoria** De Ridder, 1957 (2 subclasses)

Subclass **Bdelloidea** Hudson, 1884 (4 families)

Family **Adinetidae** Hudson and Gosse, 1889 (2 genera, 20 species)

Family **Habrotrochidae** Bryce, 1910 (3 genera, 152 species)

Family **Philodinavidae** Harring, 1913 (3 genera, 6 species)

Family **Philodinidae** Ehrenberg, 1838 (12 genera, 283 species)

Subclass **Monogononta** Plate, 1889 (2 superorders)

Superorder **Pseudotrocha** Kutikova, 1970 (1 order)

Order **Ploima** Hudson and Gosse, 1886 (23 families)[4]

Family **Asciaporrectidae** De Smet, 2006 (1 genus, 3 species)

Family **Asplanchnidae** Eckstein, 1883 (3 genera, 15 species)

Family **Birgeidae** Harring and Myers, 1924 (1 genus, 1 species)

Family **Brachionidae** Ehrenberg, 1838 (7 genera, 170 species)[5]

Family **Clariaidae** Kutikova, Markevich and Spiridonov, 1990 (1 genus, 1 species)

Family **Cotylegaleatidae** De Smet, 2007 (1 genus, 1 species)[6]

Family **Dicranophoridae** Harring, 1913 (19 genera, 233 species)[7]

Family **Epiphanidae** Harring, 1913 (5 genera, 17 species)[8]

Family **Euchlanidae** Ehrenberg, 1838 (5 genera, 27 species)

Family **Gastropodidae** Harring, 1913 (2 genera, 12 species)

Family **Ituridae** Sudzuki, 1964 (1 genus, 6 species)

Family **Lecanidae** Remane, 1933 (1 genus, 201 species)[9]

Family **Lepadellidae** Harring, 1913 (5 genera, 163 species)

Family **Lindiidae** Harring and Myers, 1924 (1 genus, 16 species)

Family **Microcodidae** Hudson and Gosse, 1886 (1 genus, 1 species)

Family **Mytilinidae** Harring, 1913 (2 genera, 29 species)

Family **Notommatidae** Hudson and Gosse, 1886 (19 genera, 280 species)[10,11]

Family **Proalidae** Harring and Myers, 1924 (4 genera, 55 species)[12]

Family **Scaridiidae** Manfredi, 1927 (1 genus, 7 species)

Family **Synchaetidae** Hudson and Gosse, 1886 (3 genera, 56 species)[13]

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1. **BY** H. Segers (for full contact details, see **Author name and address** and addresses after **Cited references**). The title of this contribution should be cited as "Phylum Rotifera Cuvier, 1817. *In*: Zhang, Z.-Q. (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness".

   Unless indicated otherwise, the classification and diversity estimates follow Segers (2002; 2007; 2008) and Wallace *et al.* (2006). There is a general consensus that there are three main groups of rotifers, Seisonida with one family and three species, Bdelloidea with four families and 461 species, and Monogononta with 2 superorders, 3 orders, 30 families and 1583 species.
2. Molecular and ultrastructural evidence indicates that Acanthocephala is a taxon of highly adapted, endoparasitic rotifers (e.g., Garey *et al.* 1996; 1998; Mark Welch 2000; Giribert *et al.* 2000). A number of recent authors follow Ahlrichs (1997) who proposed the name Syndermata for the clade ("Rotifera", (Seisonacea, Acanthocephala)), after removal of Seisonacea from Rotifera. This proposition, being rather artificial, is not generally accepted (Mark Welch 2000; Segers 2002, Sørensen & Giribet 2006).
3. There is evidence that the known diversity of Rotifera is highly underestimated, by a factor up to fourteen (Fontaneto *et al.* 2007; Schröder & Walsh 2007; Suatoni *et al.* 2006; Walsh *et al*. 2009).
4. Markevich (1989) and Sørensen (2002) advocate a subdivision of Ploima in a number of subordinate taxa; more recent analysis, however, show that the available data are inconclusive (Sørensen & Giribet 2006).
5. For *Keratella*, however, see Segers & De Smet (2008a)
6. See De Smet (2007a)
7. De Smet (2007b) included
8. De Smet & Gibson (2007) included
9. Fontaneto *et al.* (2008) included
10. See Wilts *et al*. (2009); Jersabek et al (2011) included
11. For the position and taxonomy of *Pseudoploesoma*, see Segers & De Smet (2008b)
12. See Wilts *et al*. (2009)
13. For the position and taxonomy of *Pseudoploesoma*, see Segers & De Smet (2008b); De Paggi & Paggi (2011) included

Family **Tetrasiphonidae** Harring and Myers, 1924 (1 genus, 1 species)
Family **Trichocercidae** Harring, 1913 (3 genera, 72 species)
Family **Trichotriidae** Harring, 1913 (3 genera, 23 species)
Superorder **Gnesiotrocha** Kutikova, 1970 (2 orders)
Order **Flosculariacea** Harring, 1913 (5 families)
Family **Conochilidae** Harring, 1913 (2 genera, 7 species)
Family **Flosculariidae** Ehrenberg, 1838 (8 genera, 54 species)[14]
Family **Hexarthridae** Bartos, 1959 (1 genus, 18 species)
Family **Testudinellidae** Harring, 1913 (3 genera, 45 species)[15]
Family **Trochosphaeridae** Harring, 1913 (3 genera, 19 species)
Order **Collothecaceae** Harring, 1913 (2 families)
Family **Atrochidae** Harring, 1913 (3 genera, 4 species)
Family **Collothecidae** Harring, 1913 (2 genera, 47 species)

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