Order **Trombidiformes** Reuter, 1909[1, 2]

Suborder **Sphaerolichida** OConnor, 1984 (2 superfamilies)[3]

Superfamily **Lordalychoidea** Grandjean, 1939 (2 families)

Family **Lordalychidae** Grandjean, 1939 (1 genus, 16 species)

Superfamily **Sphaerolichoidea** Berlese, 1913

Family **Sphaerolichidae** Berlese, 1913 (1 genus, 5 species)

Suborder **Prostigmata** Kramer, 1877 (4 infraorders, 40 superfamilies)

Infraorder **Labidostommatina** Krantz, 1978 (1 superfamily)

Superfamily **Labidostommatoidea** Oudemans, 1904 (1 family)

Family **Labidostommatidae** Oudemans, 1904 (5 genera, 51 species; †0/2)[4]

Infraorder **Eupodina** Krantz, 1978 (5 superfamilies)

Superfamily **Bdelloidea** Dugès, 1834 (2 families)

Family **Bdellidae** Dugès, 1834 (15 genera, 256 Species; †0/5)[5]

Family **Cunaxidae** Thor, 1902 (27 genera, 329 species)[6]

Superfamily **Eriophyoidea** Nalepa, 1898 (3 families)[7]

Family **Phytoptidae** Murray, 1877 (20 genera, 164 species)[8]

Family **Eriophyidae** Nalepa, 1898 (274 genera, 3,790 species)[9]

Family **Diptilomiopidae** Keifer, 1944 (63 genera, 450 species)

Superfamily **Eupodoidea** Koch, 1842 (9 families)[10]

Family **Cocceupodidae** Jesionowska, 2010 (3 genera, 23 species)[11]

Family **Eupodidae** Koch, 1842 (10 genera, 69 species)[12]

Family **Dendrochaetidae** Olivier, 2008 (1 genus, 1 species)[13]

Family **Eriorhynchidae** Qin & Halliday, 1997 (1 genus, 5 species)

Family **Pentapalpidae** Olivier & Theron, 2000 (1 genus, 1 species)

Family **Penthaleidae** Oudemans, 1931 (5 genera, 16 species)[14]

Family **Penthalodidae** Thor, 1933 (6 genera, 35 species; ; †0/1)[15]

Family **Rhagidiidae** Oudemans, 1922 (28 genera, 157 species; ; †1/1)

Family **Strandtmanniidae** Zacharda, 1979 (1 genus, 2 species)[16]

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1. **BY** Zhi-Qiang Zhang, Qing-Hai Fan, Vladimir Pesic, Harry Smit, Andre V. Bochkov, A. A. Khaustov, Anne Baker, Andreas Wohltmann, Tinghuan Wen, James W. Amrine, P. Beron, Jianzhen Lin, Grzegorz Gabrys & Robert Husband (for full auhor addresses, see **Contributor roles and addresses** after **References**). The title of this contribution should be cited as "Order Trombidiformes Reuter, 1909. *In*: Zhang, Z.-Q. (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness". Recent Trombididformes currently include 151 families, 2,235 genera, and 25,821 species, whereas fossil taxa include 10 genera and 24 species.
2. Higher classification and estimates of genera and species within families generally follow Walter *et al.* (2009), with revisions and updates as otherwise indicated. To be consistent with Beaulieu *et al.* (2011) and Schatz *et al.* (2011) in this volume, the rank cohort is not used and older names for higher taxa are used—also consistent with OConnor (1984) and Mironov & Bochkov (2009).
3. Based on Moraza (2008) and Walter *et al.* (2009), with updates.
4. Based on Dunlop & Bertrand (2011); throughout this paper, counts of genera and species are totals (Recent and fossil); †x/y refers x genera and y species, among the totals, are based on fossil.
5. Based on van der Schyff *et al.* (2003), Hernandes & Feres (2006), Hernandes *et al.* (2007), with updates.
6. Based on Den Heyer (2011).
7. Based on unpublished database of James Amrine.
8. One species of fossil (Dunlop *et al.* 2011).
9. Three species of fossil galls (Dunlop *et al.* 2011).
10. Species numbers do not include taxa that are evidently correctly placed in the Eupodoidea but are insufficiently defined for recognition. Many of these were described by C.L. Koch (see Thor & Willmann 1941). Jesionowska (2010) and Zacharda (1980) list species inquirendae for the Cocceupodidae and Rhagidiidae respectively.
11. Based on Jesionowska (2010).
12. Fain (1964) synonymized *Protereunetes* Berlese with *Ereynetes* Berlese. Despite Strandtmann (1970) reassigning eupodid species described in *Protereunetes* to *Eupodes* Koch, the generic name continued to be used by some authors. Fain's synonymy is accepted and *Protereunetes* is not here recognized as a eupodid genus.

    Jesionowska (2008) transferred *Hawaiieupodes* Strandtmann & Goff from the Eupodidae to the Penthalodidae. However, the unsettled diagnosis of the latter means that the new placement is also unsatisfactory. Consequently, the genus is here retained in the Eupodidae as originally assigned (Strandtmann & Goff 1978).

    Abou-Awad (1984) erected *Egypteupodes* on the basis of the absence of internal vertical setae (*iv*). Olivier and Theron (1997) synonymized the genus with *Eupodes* because they observed that, although minute, *iv* were present. However, because it is not clear whether these authors examined type material, *Egypteupodes* is included in the generic complement.
13. Published in 2008, 2009, too late to be included by Walter *et al.* (2009).
14. See first footnote for the Penthalodidae.

Superfamily **Halacaroidea** Murray, 1877 (2 families)
Family **Halacaridae** Murray, 1877 (63 genera, 1,118 species)[17]
Family **Pezidae** Harvey, 1990 (1 genus, 2 species)
Superfamily **Tydeoidea** Kramer, 1877 (4 families)[18]
Family **Triophtydeidae** André, 1980[19] (3 genera, 40 species)
Family **Ereynetidae** Oudemans, 1931 (29 genera, 180 species)
Family **Tydeidae** Kramer, 1877 (30 genera, 340 species; †1/2)
Family **Iolinidae** Pritchard, 1956 (36 genera, 125 species)
Infraorder **Anystina** van der Hammen, 1972 (2 hyporders, 22 superfamilies)
Hyporder **Anystae** Krantz, 1978 (5 superfamilies)
Superfamily **Adamystoidea** Cunliffe, 1957 (1 family)
Family **Adamystidae** Cunliffe, 1957 (4 genera, 20 species)[20]
Superfamily **Anystoidea** Oudemans, 1936 (3 families)
Family **Anystidae** Oudemans, 1936 (18 genera, 107 species; †2/5)[21]
Family **Pseudocheylidae** Oudemans, 1909 (3 genera, 15 species)[22]
Family **Teneriffiidae** Thor, 1911 (5 genera, 20 species)[23]
Superfamily **Caeculoidea** Berlese, 1883 (1 family)
Family **Caeculidae** Berlese, 1883 (7 genera, 73 species; †1/2)[24]
Superfamily **Pomerantzioidea** Baker, 1949 (1 family)
Family **Pomerantziidae** Baker, 1949 (2 genera, 6 species)[25]
Superfamily **Paratydeoidea** Baker, 1949 (1 family)
Family **Paratydeidae** Baker, 1949 (6 genera, 10 species)[26]
Family **Stigmocheylidae** Kethley, 1990 (1 genus, 4 species)[27]
Hyporder **Parasitengona** Oudemans, 1909 (17 superfamilies)[28]
Superfamily **Calyptostomatoidea** Oudemans, 1923 (1 family)[29]
Family **Calyptostomatidae** Oudemans, 1923 (1 genus, 6 species)
Superfamily **Erythraeoidea** Robineau-Desvoidy, 1828 (2 families)[30]
Family **Erythraeidae** Robineau-Desvoidy, 1828 (55 genera, 771 species)[31]
Family **Smarididae** Kramer, 1878 (10 genera, 53 species)[32]

15. **Penthalodidae**: Qin (1997) considered that *Protopenthalodes* Jesionowska would be better accommodated in either the Eupodidae or Penthaleidae, rather than the Penthalodidae as originally placed (Jesionowska 1989). However, he retained the genus in the latter until familial monophyly was resolved and a correct taxonomic position could be established.

    Jesionowska (2008) reassessed the importance of the epirostrum as a diagnostic familial character state and concluded that *Callipenthalodes* Qin, *Turanopenthalodes* Barilo and *Stereotydeus* Berlese should be removed from the Penthalodidae. Because she neither reassigned them to existing families nor erected new ones for them, these genera have been treated here as penthalodids.
16. Strandtmanniidae is considered a possible junior synonym of Rhagidiidae by Qin (1996).
17. Based on Bartsch (2009).
18. After Walter *et al.* (2009); we regret to note here that the data were not checked by a specialist.
19. H.M. André of Belgium (not M. André of France).
20. Based on Fuangarworn & Lekprayoon (2010).
21. Based on Meyer & Ueckermann (1987), Otto (1999, 2000), with updates.
22. Based on Ueckermann & Khanjani (2004).
23. Based on Judson (1994), Ueckermann & Khanjani (2002), Khanjani *et al.* (2011), with updates.
24. Based on Franz (1952), Coineau & Poinar (2001), with updates.
25. Based on Bochkov & Walter (2007).
26. Based on Seeman *et al.* (2000).
27. Based on Bochkov (2008a).
28. The classification above the family level is highly unsettled for this group (Zhang & Fan, 2007). One view is that water mites (Hydracarina) form a sister group to the rest of the terrestrial Parasitengona (Krantz 1978; Smith & Cook 1991; Witte 1991). A radically different view (Welbourn (1991), is that water mites and Trombidiina are considered sister groups, and together they form a sister group to Erythraeina (Erythraeoidea + Calyptostomatoidea). Walter *et al.* (2009) proposed Stygothrombiae for Stygothrombidioidea, which was not analysed in Witte (1991) and Welbourn (1991). Future analyses sampling all superfamilies of both water mites and terrestrial Parasitengona are much needed before any reliable classification of the Parasitengona at the ordinal level can be reached. Therefore we provide a list of superfamilies without choosing any higher classification.
29. Based on unpublished list of Beron, who also provided data for Erythraeoidea.
30. †*Pararainbowia martilli* Dunlop, 2007 is unplaced within the superfamily.
31. Based on Southcott (1961), Beron (2008) with updates. Dunlop *et al.* (2011) listed 13 species described from Baltic amber in 1854; these require checking.
32. Based on Southcott (1961), Zhang (2003), Beron (2008), Wohltmann (2010) with updates.

Family †**Proterythraeidae** Vercammen-Grandjean, 1973 (1 genus, 1 species; †1/1)

Superfamily **Amphotrombioidea** Zhang, 1998 (1 family)[33]

Family **Amphotrombiidae** Zhang, 1998 (1 genus, 1 species)

Superfamily **Allotanaupodoidea** Zhang & Fan, 2007 (1 family)[34]

Family **Allotanaupodidae** Zhang & Fan, 2007 (3 genera, 6 species)

Superfamily **Chyzerioidea** Womersley, 1954 (1 family)

Family **Chyzeriidae** Womersley, 1954 (11 genera, 30 species)[35]

Superfamily **Tanaupodoidea** Thor, 1935 (1 family)

Family **Tanaupodidae** Thor, 1935 (7 genera, 23 species; †1/1)[36]

Superfamily **Trombiculoidea** Ewing, 1929 (7 families)

Family **Johnstonianidae** Thor, 1935 (10 genera, 53 species)[37]

Family **Neotrombidiidae** Feider, 1959 (5 genera, 24 species)[38]

Family **Trombellidae** Leach, 1815 (19 genera, 41 species)[39]

Family **Leeuwenhoekiidae** Womersley, 1944 (33 genera, 230 species)

Family **Trombiculidae** Ewing, 1929 (152 genera, 3,100 species)[40]

Family **Walchiidae** Ewing, 1946 (19 genera, 298 species)

Family **Audyanidae** Southcott, 1987 (1 genus, 1 species)[41]

Superfamily **Trombidioidea** Leach, 1815 (4 families)

Family **Achaemenothrombiidae** Saboori, Wohltmann & Hakimitabar, 2010 (1 genus, 2 species)[42]

Family **Neothrombiidae** Feider, 1959 (16 genera, 25 species)[43]

Family **Microtrombidiidae** Thor, 1935 (126 genera, 437 species)[44]

Family **Trombidiidae** Leach, 1815 (25 genera, 253 species)[45]

Superfamily **Yurebilloidea** Southcott, 1996 (1 family)[46]

Family **Yurebillidae** Southcott, 1996 (1 genus, 1 species)[47]

Superfamily **Hydryphantoidea** Piersig, 1896 (8 families)[48]

Family **Hydryphantidae** Piersig, 1896 (51 genera, 329 species)

Family **Hydrodromidae** Viets, 1936 (2 genera, 28 species)

Family **Rhynchohydracaridae** Lundblad, 1936 (5 genera, 13 species)

Family **Teratothyadidae** Viets, 1929 (2 genera, 9 species)

Family **Ctenothyadidae** Lundblad, 1936 (2 genera, 3 species)

Family **Thermacaridae** Sokolow, 1927 (1 genera, 4 species)

Family **Zelandothyadidae** Cook, 1983 (2 genera, 3 species)

Family **Malgasacaridae** Tuzovskij, Gerecke & Goldschmidt 2007 (1 genus, 1 species)

Superfamily **Eylaoidea** Leach, 1815 (4 families)

Family **Eylaidae** Leach, 1815 (2 genera, 96 species)

Family **Limnocharidae** Grube, 1859 (5 genera, 44 species)

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33. Based on larval stage only with similarities to both early-derivative water mites and Trombidina (Zhang 1998),
34. This superfamily was missed in the chapter on Trombidiformes in the *Manual of Acarology*, third edition (Walter *et al.* 2009). Zhang & Fan (2007) provided a key to superfamilies of terrestrial Parasitengona (based on post-larval stages).
35. Based on Zhang & Saboori (1995); Haitlinger (1999), Saboori *et al.* (2005), with updates.
36. Based on Newell (1957), Welbourn, W.C. (1991), Judson & Makol (2009) with updates.
37. Based on Newell (1957, 1960), Wohltmann *et al.* (2004), with updates.
38. Based on Lindquist & Vercammen-Grandjean (1971), Vercammen-Grandjean (1973), Feider (1977), Beron (1995), with updates.
39. Based on Southcott (1987), Welbourn (1991), Harvey (1996), Saboori *et al.* (2005) with updates.
40. An estimate to be varified.
41. Also placed by some authors in Trombellidae (Southcott 1987).
42. Known from larvae only; Saboori *et al.* (2010) provided a key to families of Trombidioidea based on larvae.
43. Based on Zhang (1994), Zhang & Fan (2005), Haitlinger (2007), Saboori *et al.* (2008) and Mąkol *et al.* (2009), with updates.
44. Based on Southcott (1993, 1994), Gabryś (1999), Wohltmann (2006), Mąkol & Laydanowicz (2010) with updates; Eutrombidiidae is merged into Microtrombidiidae based on phylogenetic work of Wohltmann (2006).
45. Updated based on Mąkol (2007) and Mąkol & Sevsay (2011). Includes Podothrombiidae recognized in Mąkol (2007) and some earlier papers cited by Mąkol (2007). Dunlop *et al.* (2011) listed 5 species described from Baltic amber in 1854; these require checking.
46. Updated from Southcott (1993) and Mąkol & Gabryś (2005).
47. Described by Southcott (1996) from larval stage only, initially placed in Trombidioidea *s.l.*, but was excluded from Trombidioidea *s.s.* by Saboori *et al.* (2010). Here it is placed in Yurebilloidea Southcott, 1996; superfamily rank is used here for the first time; decision by Z. Zhang. Based on larval characters, this superfamily is very closely related to Trombidoidea sin its strict sense.
48. Davids *et al.* (2006) with updates.

Family **Piersigiidae** Oudemans, 1902 (4 genera, 9 species)
Family **Apheviderulicidae** Gerecke, Smith & Cook, 1999 (1 genus, 3 species)
Superfamily **Hydrovolzioidea** Thor, 1905 (2 families)
Family **Hydrovolziidae** Thor, 1905 (3 genera, 16 species)
Family **Acherontacaridae** Cook, 1967 (2 genera, 19 species)
Superfamily **Hydrachnoidea** Leach, 1815 (1 family)
Family **Hydrachnidae** Leach, 1815 (1 genus, 131 species)
Superfamily **Lebertioidea** Thor, 1900 (10 families)
Family **Bandakiopsidae** Panesar, 2004 (3 genera, 4 species)
Family **Stygotoniidae** Cook, 1992 (1 genus, 1 species)
Family **Sperchontidae** Thor, 1900 (5 genera, 173 species)
Family **Rutripalpidae** Sokolow, 1934 (1 genus, 2 species)
Family **Teutonidae** Koenike, 1910 (2 genera, 6 species)
Family **Anisitsiellidae** Koenike, 1910 (29 genera, 159 species)
Family **Lebertiidae** Thor, 1900 (3 genera, 138 species)
Family **Acucapitidae** Wiles, 1996 (1 genus, 2 species)
Family **Oxidae** Viets, 1926 (2 genera, 126 species)
Family **Torrenticolidae** Piersig, 1902 (6 genera, 397 species)
Superfamily **Hygrobatoidea** Koch, 1842 (13 families)
Family **Pontarachnidae** Koenike, 1910 (2 genera, 40 species)
Family **Limnesiidae** Thor, 1900 (29 genera, 227 species)
Family **Omartacaridae** Cook, 1963 (2 genera, 14 species)
Family **Wettinidae** Cook, 1956 (4 genera, 9 species)
Family **Frontipodopsidae** Viets, 1931 (1 genus, 9 species)
Family **Ferradasiidae** Cook, 1980 (1 genus, 1 species)
Family **Lethaxonidae** Cook, Smith & Harvey, 2000 (3 genera, 16 species)
Family **Hygrobatidae** Koch, 1842 (82 genera, 846 species)
Family **Aturidae** Thor, 1900 (81 genera, 800 species)
Family **Feltriidae** Viets, 1926 (1 genus, 115 species)
Family **Unionicolidae** Oudemans, 1909 (18 genera, 477 species)
Family **Pionidae** Thor, 1900 (15 genera, 342 species)
Family **Astacocrotonidae** Thor, 1927 (1 genus, 1 species)
Superfamily **Arrenuroidea** Thor, 1900 (20 families)
Family **Momoniidae** Viets, 1926 (13 genera, 55 species)
Family **Nudomideopsidae** Smith, 1990 (3 genera, 31 species)
Family **Mideopsidae** Koenike, 1910 (8 genera, 113 species)
Family **Athienemanniidae** Viets, 1922 (16 genera, 43 species)
Family **Chappuisididae** Motas & Tanasachi, 1946 (2 genera, 13 species)
Family **Gretacaridae** Viets, 1978 (1 genus, 15 species)
Family **Neoacaridae** Motas & Tanasachi, 1947 (2 genera, 19 species)
Family **Mideidae** Thor, 1911 (2 genera, 6 species)
Family **Acalyptonotidae** Walter, 1911 (2 genera, 4 species)
Family **Kantacaridae** Imamura, 1959 (1 genus, 1 species)
Family **Nipponacaridae** Imamura, 1959 (1 genus, 3 species)
Family **Harpagopalpidae** Viets, 1924 (1 genus, 7 species)
Family **Arenohydracaridae** Cook, 1974 (1 genus, 3 species)
Family **Amoenacaridae** Smith & Cook, 1997 (1 genus, 3 species)
Family **Laversiidae** Cook, 1955 (1 genus, 1 species)
Family **Krendowskiidae** Viets, 1926 (4 genera, 52 species)
Family **Arrenuridae** Thor, 1900 (7 genera, 950 species)
Family **Bogatiidae** Motas & Tanasachi, 1948 (2 genera, 3 species)
Family **Hungarohydracaridae** Motas & Tanasachi, 1959 (5 genera, 17 species)
Family **Uchidastygacaridae** Imamura, 1956 (3 genera, 15 species)
Superfamily **Stygothrombidioidea** Thor, 1935 (1 family)

Family **Stygothrombiidae** Thor, 1935 (5 genera, 16 species)

Infraorder **Eleutherengona** Oudemans , 1909 (12 superfamilies)

Hyporder **Raphignathina** Kethley, 1982 (5 superfamilies)

Superfamily **Cheyletoidea** Leach, 1815 (5 families)

Family **Cheyletidae** Leach, 1815 (75 genera, 438 species)[49]

Family **Demodicidae** Nicolet, 1855 (7 genera, 108 species)[50]

Family **Harpirhynchidae** Dubinin, 1957 (14 genera, 93 species)[51]

Family **Psorergatidae** Dubinin, 1955 (3 genera, 73 species)[52]

Family **Syringophilidae** Lavoipierre, 1953 (63 genera, 259 species)[53]

Superfamily **Myobioidea** Mégnin, 1877 (1 family)

Family **Myobiidae** Mégnin, 1877 (54 genera, 503 species)[54]

Superfamily **Pterygosomatoidea** Oudemans, 1910 (1 family)

Family **Pterygosomatidae** Oudemans, 1910 (10 genera, 166 species)[55]

Superfamily **Raphignathoidea** Kramer 1877 (11 families)[56]

Family **Barbutiidae** Robaux, 1975 (1 genus, 5 species)[57]

Family **Caligonellidae** Grandjean, 1944 (5 genera, 50 species)[58]

Family **Camerobiidae** Southcott, 1957 (7 genera, 146 species; †0/1)[59]

Family **Cryptognathidae** Oudemans, 1902 (3 genera, 52 species)[60]

Family **Dasythyreidae** Walter & Gerson, 1998 (2 genera, 5 species)[61]

Family **Eupalopsellidae** Willmann, 1952 (5 genera, 40 species)[62]

Family **Homocaligidae** Wood, 1970 (2 genera, 8 species)[63]

Family **Mecognathidae** Gerson & Walter, 1998 (2 genera, 7 species)[64]

Family **Raphignathidae** Kramer, 1877 (3 genera, 57 species)[65]

Family **Stigmaeidae** Oudemans, 1931 (30 genera, 502 species)[66]

Family **Xenocaligonellididae** Gonzalez, 1978 (2 genera, 5 species)[67]

Superfamily **Tetranychoidea** Donnadieu 1875 (5 families)

Family **Allochaetophoridae** Reck, 1959 (1 genus, 2 species)[68]

Family **Linotetranidae** Baker & Pritchard, 1953 (4 genera, 16 species)[69]

Family **Tenuipalpidae** Berlese, 1913 (34 genera, 895 species)[70]

Family **Tetranychidae** Donnadieu 1875 (95 genera, 1,270 species)[71]

Family **Tuckerellidae** Baker & Pritchard, 1953 (1 genus, 28 species)[72]

Hyporder **Heterostigmata** Berlese, 1899 (7 superfamilies)

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49. Based on Bochkov (2005) with additions.
50. Based on Bochkov (2009) with modifications.
51. Based on a unpublished database of A.V. Bochkov.
52. Based on Giesen (1990).
53. Based on Skoracki (2011) with additions.
54. Based on Bochkov (2009).
55. Based on Bochkov (2008b) with additions.
56. Based on a unpublished database of Q.-H. Fan.
57. Based on Fan *et al.* (2003) with additions.
58. Based on Fan (2005).
59. Based on Fan (2005) and Fan & Walter (2011) with additions.
60. Based on Doğan & Dönel (2010) and Fan (2005).
61. Based on Walter & Gerson (1998) with additions.
62. Based on Fan (2005) with additions.
63. Based on Fan (1997, 2005).
64. Based on Fan & Zhang (2005) and Fan (2005).
65. Based on Fan (2005) with additions.
66. Based on Fan & Zhang (2005), Meyer & Ueckermann (1989) and Fan (2005) with additions.
67. Based on Fan (2005).
68. Based on Meyer & Ueckermann (1997).
69. Baed on Bagheri *et al*. (2008) and Khanjani *et al*. (2011), with updates.
70. Based on Mesa *et al*. (2009) and Beard & Gerson (2009), with updates by Q.-H. Fan.
71. Based on Spider Mites Web (http://www.ensam.inra.fr/CBGP/spmweb/index.php). Dunlop *et al*. (2011) listed 2 species described from Baltic amber in 1854; these require checking.
72. Based on Meyer & Ueckermann (1997) with additions.

Superfamily **Dolichocyboidea** Mahunka, 1970 (1 family)
Family **Dolichocybidae** Mahunka, 1970 (6 genera, 37 species)[73]
Family **Crotalomorphidae** Lindquist & Krantz, 2002 (1 genus, 1 species)
Superfamily **Heterocheyloidea** Trägårdh, 1950 (1 family)
Family **Heterocheylidae** Trägårdh, 1950 (1 genus, 25 species)
Superfamily **Pyemotoidea** Oudemans, 1937 (4 families)
Family **Acarophenacidae** Cross, 1965 (7 genera, 31 species; †1/1)
Family **Caraboacaridae** Mahunka, 1970 (2 genera, 7 species)
Family **Resinacaridae** Mahunka, 1976 (2 genera, 2 species; †1/1)
Family **Pyemotidae** Oudemans, 1937 (1 genus, 24, species; †1/1)[74]
Superfamily **Pygmephoroidea** Cross, 1965 (4 families)[75]
Family **Pygmephoridae** Cross, 1965 (27 genera, 310 species)
Family **Scutacaridae** Oudemans, 1916 (24 genera, 802 species)
Family **Microdispidae** Cross, 1965 (17 genera, 109 species)
Family **Neopygmephoridae** Cross, 1965 (17 genera, 248 species)
Superfamily **Tarsocheyloidea** Atyeo & Baker, 1964 (1 family)
Family **Tarsocheylidae** Atyeo & Baker, 1964 (2 genera, 3 species)
Superfamily **Tarsonemoidea** Kramer, 1877 (2 families)
Family **Podapolipidae** Ewing, 1922 (30 genera, 239 species)
Family **Tarsonemidae** Kramer, 1877 (41 genera, 566 species)[76]
Superfamily **Trochometridioidea** Mahunka 1970 (2 families)
Family **Trochometridiidae** Mahunka 1970 (2 genera, 6 species)[77]
Family **Athyreacaridae** Lindquist, Kaliszewski & Rack, 1990 (1 genus, 1 species)
Hyporder incertae sedis
Superfamily **Cloacaroidea** Camin, Moss, Oliver & Singer, 1967 (2 families)[78]
Family **Cloacaridae** Camin, Moss, Oliver & Singer, 1967 (6 genera, 14 species)
Family **Epimyodicidae** Fain, Lukoschus & Rosmalen, 1982 (1 genus, 4 species)

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73. Based on Hajiqanbar & Khaustov (2010) and Rahiminejad *et al.* (2011).
74. Based on Yu *et al*. (2010) and a recent fossil species in Khaustov & Perkovsky (2010).
75. The system of Pygmephoroidea follows Khaustov (2008).
76. Based on Lin & Zhang (2002) with updates.
77. Based on Mortazavi *et al.* (2011).
78. Based on Bochkov & OConnor (2008), see this work for discussion about position of this superfamily.

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Contributor roles and addresses (order of authors based on the amount of data contributed)

Zhi-Qiang Zhang (coordination, higher taxonomy and superfamilies/families not covered by others) New Zealand Arthropod Collection, Landcare Research, Private Bag 92170, Auckland, New Zealand; zhangz@landcareresearch.co.nz
Qing-Hai Fan (Raphignathoidea & Tetranychoidea) Plant Health & Environment Laboratory, MAF Biosecurity New Zealand, 231 Morrin Road, St Johns, PO Box 2095, Auckland 1072, New Zealand; qinghai.fan@maf.govt.nz
Vladimir Pesic (fresh water mite families except Limnesiidae, Unionicolidae, Arrenuridae, Pionidae) Department of Biology, University of Montenegro, Cetinjski put b.b., 81000 Podgorica, Montenegro; vladopesic@gmail.com
Harry Smit (fresh water mite families specially Limnesiidae, Unionicolidae, Arrenuridae, Pionidae) Netherlands Centre for Biodiversity Naturalis, P.O. Box 9517, 2300 RA Leiden, The Netherlands; Harry.Smit@ncbnaturalis.nl
Andre V. Bochkov (Cheyletoidea, Myobioidea, Pomerantizioidea, Pterygosomatoidea & Stygmochelidae) Zoological Institute of the Russian Academy of Sciences, Universitetskaya Embankment 1, 199034 St. Petersburg, Russia; andrevbochkov@gmail.com
A. A. Khaustov (Pygmephoroidea, Acarophenacidae, Caraboacaridae & Trochometridiidae) Nikita Botanical Gardens, National Scientific Center, Yalta, 98648 Ukraine; alkhaustov@mail.ru
Anne Baker (Eupodoidea) Department of Entomology, The Natural History Museum, London SW7 5BD, UK
Andreas Wohltmann (Tanaupodidae, Chyzeriidae, Johnstonianidae, Trombellidae, Microtrombidiidae) Findorffstr. 11, D-27721 Ritterhude, Germany; wohltman@uni-bremen.de
Tinghuan Wen (Trombiculidae, Leeuwenhoekiidae & Walchiidae) Shanghai Medical School, Fudan University, Shanghai, China
James W. Amrine (Eriophyoidea) Division of Plant and Soil Sciences, P.O. Box 6108, West Virginia University, Morgantown, WV 26506-6018, USA
P. Beron (Calyptostomatidae, Erythraeidae & Smarididae) National Museum of Natural History, Sofia, Hungary; beron@mail.bg
Jianzhen Lin (Tarsonemidae & Bdellidae) Research Institute of Plant Protection, Fujian Academy of Agricultural Sciences, Fuzhou 350013, China
Grzegorz Gabrys (Microtrombidiidae) Department of Zoology, University of Zielona Góra, Szafrana 1, 65-516 Zielona Góra, Poland; g.gabrys@wnb.uz.zgora.pl
Robert Husband (Podapolipidae) Biology Department, Adrian College, Adrian, Michigan 49221, U.S.A.; husbandadrian@aol.com