



## Annotated list of the species-group taxa described in combination with *Chermes* Linnaeus 1758 (Hemiptera: Sternorrhyncha)

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### ABSTRACT

The genus-group name *Chermes* Linnaeus 1758 has been suppressed, but an accounting of the various nominal species described in combination with it has not been presented until now. Nominal species of *Chermes* are found in 13 families of three major lineages of Sternorrhyncha (Aphidomorpha, Coccoidea, Psylloidea). Eleven available names remain unplaceable (*incertae sedis nomina dubia*) and to date do not appear in the various Sternorrhyncha catalogues. In order to clarify their status, we here present an annotated list of the 137 nominal species-group names originally described in combination with *Chermes*. We provide the original bibliographic citation and an assessment of the current status of each name.

The genus name *Chermes* Linnaeus 1758 was suppressed under the Plenary Powers of the International Commission on Zoological Nomenclature (Evans and China 1965) following a petition by Victor Eastop (1963). Prior to that, the *Chermes* name had had an unfortunate history, having been used actively for three discrete groups of Sternorrhyncha (Hemiptera), aphids, including adelgids and phylloxerids (Aphidomorpha), psyllids (Psylloidea), and scale insects (Coccoidea), and having had three different species selected as type.

In addition, one unavailable name, *C. aceris* Geoffroy 1762, today refers to a whitefly species, *Aleurochiton aceris* (Modeer 1778) (Sternorrhyncha: Aleyrodidae), and one available name, *C. graminis* L. 1758, has been suggested as a psocid (Psocodea). Eastop (1963) describes the complex history of the genus.

In the 10<sup>th</sup> Edition of *Systema Naturae*, Linnaeus (1758:453) described the genus *Chermes* with the following characters: “*Rostrum pectorale*”

(rostrum on the breast), “*Antennae thorace longiores*” (antennae longer than thorax), “*Alae IV deflexae*” (four deflexed wings), “*Thorax gibbus*” (humped thorax), and “*Pedes saltatorii*” (jumping legs). The last of these characters leaves little doubt about the taxonomic affinity of *Chermes* to psyllids. The decision by Geoffroy (1762) to replace *Chermes* with *Psylla* was motivated by the use in French of the word “*kermès*” for some scale insects used for making dye. The use of *Psylla* was quickly adopted and largely accepted, with the exceptions of Scopoli (1763), Schrank (1789), Fabricius (1803), Schmidberger (1836), Zetterstedt (1828, 1840) and Thompson (1877).

The description of the antennae and legs in the original *Chermes* description excludes adelgids (Aphidomorpha: Adelgidae), but the largest number of species, including the most recently described, were proposed for that family. All but three of the *Chermes* species-group names proposed for aphids (*C. ulmi* L. 1758, *C. fagi* L. 1761 and *C. castaneae*

Haldeman 1850) are currently placed in the aphid family Adelgidae. Havill and Footitt (2007) provided a list of valid adelgid species but did not mention names they considered invalid.

Linnaeus (1758:455) defined the genus *Coccus* as follows: “*Rostrum pectorale*” (rostrum on the breast), “*Abdomen postice setosum*” (abdomen with posterior setae), and “*Alae II erectae masculi, Feminae apterae*” (males with 2 erect wings, females apterous). This definition still holds for most species of scale insects now included in the superfamily Coccoidea. In contrast, two characters of *Chermes*, as defined by Linnaeus (1758:453), wings deflexed numbering four and jumping legs, do not apply to scale insects. There certainly are none at present with four wings. Because Linnaeus’s description of *Coccus* was so precise, it is difficult to understand why many early authors listed or described scale insects in the genus *Chermes* for well over 100 years afterwards.

Linnaeus (1758) listed 14 species in his new genus *Chermes*. Nine of them are now considered as psyllids, two as aphids, and three remain uncertain with regard to their current taxonomic status. The first of Linnaeus’s (1758) species was *C. graminis*, a name of unknown taxonomic position. Linnaeus’s original observations of *C. graminis* may have been that of any of the Sternorrhyncha discussed here, or perhaps even a psocid (Psocodea), *Kolbia quisquiliarum* Bertkau 1882:129 according to Laing (1951) or *Trichopsoccus dalii* (McLachlan 1867:272) according to Pearman (as cited in Laing 1951). Currently, no psocid name has been formally combined with *Chermes* (Lienhard and Smithers 2002, Lienhard *pers. comm.*). The most recently described *Chermes* species was *C. ishiharai* Inouye 1936, today considered a subspecies of *Adelges pectinatae* (Cholodkovsky 1888).

In all, 137 original species-group names have been proposed in combination with *Chermes*. Certain authors stand out for having established large numbers, namely Boisduval (16 scale insects), Cholodkovsky (12 aphids), and Linnaeus (12 psyllids). Geoffroy’s 1762 work was suppressed for the purposes of nomenclature by the ICZN, for failing to conform to binomial standards (Hemming 1954); this work thus contributes a large number of unavailable *Chermes* names.

Many of the nominal species described in combination with *Chermes* are themselves valid or can be associated with valid taxa, and are so listed in the principal Sternorrhyncha catalogues (Ben-Dov et al. 2013, Favret 2013, Ouvrard 2013). However, the scientific literature contains a number of *Chermes* names that have remained problematic, unclaimed by any taxonomic community. The present list is intended to clarify the status of the nominal species described within the genus *Chermes*, especially those that have not been treated elsewhere. The list contains 47 names currently placed as aphids (three families of Aphidomorpha), 30 as scale insects (five families of Coccoidea), and 29 as psyllids (five families of Psylloidea); 19 names are unavailable and 12 available names remain unplaced (here listed as *nomina dubia*). Table 1 summarizes the numbers.

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LIST OF *CHERMES* SPECIES

- abieticolens*** Thomas 1879: 156  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Pineus pinifoliae* (Fitch 1858: 741) (Aphidomorpha Adelgidae)
- abietis*** Linnaeus 1758: 453  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges abietis* (Aphidomorpha Adelgidae)
- abietislaricis*** Eckstein 1890: 88  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges abietis* (Linnaeus 1758: 453) and *Adelges laricis* Vallot 1836: 72 (Aphidomorpha Adelgidae)  
*Remarks:* *Chermes abietis-laricis* was considered by some authors as a species composed of two host-associated forms: *Chermes abietis* L. 1758 and *Adelges laricis* Vallot 1836, but it does not appear that Eckstein (1890) intended to describe his species in synonymy with the other two
- abietispiceae*** Stebbing 1903: 57  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges abietispiceae* (Aphidomorpha Adelgidae)  
*Remarks:* not treated by Havill and Footitt 2007
- aceris*** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Rhinocola aceris* (Psylloidea Aphalaridae)
- aceris ovatus*** Geoffroy 1762: 509  
*Objective status:* unavailable, suppressed (Hemming 1954)  
*Remarks:* this is the only reported whitefly species, available today as *Aleurochiton aceris* (Modeer 1778:21) (Aleyrodoidea Aleyrodidae)
- acutipennis*** Zetterstedt 1828: 554  
*Objective status:* available and valid  
*Subjective status:* valid as *Bactericera acutipennis* (Psylloidea Triozidae)
- affinis*** Zetterstedt 1828: 554  
*Objective status:* available and valid  
*Subjective status:* valid as *Aphalara affinis* (Psylloidea Aphalaridae)
- alni*** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Psylla alni* (Psylloidea Psyllidae)  
*Remarks:* Caldwell (1946) suggested Linnaeus's 1758 description might be attributed to *Prociphilus tessellatus* (Fitch 1851: 68) (Aphidomorpha Aphididae), whereas his 1761: 263 description would be *Psylla alni*. This interpretation is criticized by Eastop (1963: 142)."
- aloes*** Boisduval 1867: 327  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Aspidiotus nerii* Bouché 1833: 52 (Coccoidea Diaspididae)
- amygdali*** Fourcroy 1785: 228  
*Objective status:* available and valid  
*Subjective status:* synonym of *Sphaerolecanium prunastri* (Boyer de Fonscolombe 1834: 211) (Coccoidea Coccidae)
- angraeci*** Boisduval 1867: 337  
*Objective status:* unavailable, *nomen nudum*
- annellata*** Thomson 1877: 836  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Cacopsylla ambigua* (Foerster 1848: 74) (Psylloidea Psyllidae)
- anthurii*** Boisduval 1867: 328  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Saissetia coffeae* (Walker 1852: 1079) (Coccoidea Coccidae)
- arborum linearis*** Geoffroy 1762: 509  
*Objective status:* unavailable, suppressed (Hemming 1954)

- arecae** Boisduval 1868a: 282  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Fiorinia fioriniae* (Targioni Tozzetti 1867: 14) (Coccoidea Diaspididae)
- armiger** Annand 1924a: 5  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Pineus pinifoliae* (Fitch 1858: 741) (Aphidomorpha Adelgidae)
- arundinis** Leach in Risso 1826: 218  
*Objective status:* unavailable, *nomen nudum*
- aspidistrae** Signoret 1869: 844  
*Objective status:* unavailable, *nomen nudum*
- atratus** Buckton 1883: 39  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges laricis* Vallot 1836: 72 (Aphidomorpha Adelgidae)
- aurantii** Boisduval 1867: 338  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Parlatoria ziziphi* (Lucas 1853: xxix) (Coccoidea Diaspididae)
- bambusae** Boisduval 1869: 261  
*Objective status:* available and valid  
*Subjective status:* valid as *Bambusapis bambusae* (Coccoidea Asterolecaniidae)
- bauhini** Planchon 1864: 22  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Kermes ilicis* (Linnaeus 1758: 455) (Coccoidea Kermesidae)
- betulae** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Psylla betulae* (Psylloidea Psyllidae)
- bouvieri** Cholodkovsky 1902: 10  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges piceae* (Ratzeburg 1844: 204) (Aphidomorpha Adelgidae)
- Adelgidae)  
*Remarks:* described as *Chermes piceae* var. *bouvieri*
- buxi** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Psylla buxi* (Psylloidea Psyllidae)
- calthae** Linnaeus 1761: 263  
*Objective status:* available and valid  
*Subjective status:* valid as *Aphalara calthae* (Psylloidea Aphalaridae)
- carpini serico albo** Geoffroy 1762: 508  
*Objective status:* unavailable, suppressed (Hemming 1954)
- castanea** Goeze 1778: 329  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- castaneae** Haldeman 1850: 108  
*Objective status:* available and valid  
*Subjective status:* valid as *Phylloxera castaneae* (Aphidomorpha Phylloxeridae)
- cembrae** Cholodkovsky 1888: 47  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus cembrae* (Aphidomorpha Adelgidae)
- cerastii** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Trioza cerastii* (Psylloidea Triozidae)
- clematidis** Fourcroy 1785: 228  
*Objective status:* unavailable, *nomen nudum*
- clematidis oblongus** Geoffroy 1762: 506  
*Objective status:* unavailable, suppressed (Hemming 1954)
- coccineus** Ratzeburg 1843: 202  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges laricis* Vallot 1836: 72 (Aphidomorpha Adelgidae)

- coloradensis** Gillette 1907: 16  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus coloradensis* (Aphidomorpha Adelgidae)
- coniferarum** Cholodkovsky 1889a: 222  
*Objective status:* unavailable, described in synonymy with *Pineus pini* (Goeze 1778: 328)  
*Remarks:* proposed as a new name should several other nominal species eventually be proven synonyms; of those, *Pineus pini* (Goeze 1778: 328) has priority (Aphidomorpha Adelgidae)
- consolidatus** Patch 1909: 137  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges laricis* Vallot 1836: 72 (Aphidomorpha Adelgidae)
- cooleyi** Gillette 1907: 3  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges cooleyi* (Aphidomorpha Adelgidae)
- corticalis** Kaltenbach 1843: 197  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Pineus strobi* (Hartig 1839: 643) (Aphidomorpha Adelgidae)
- corticalis** Kaltenbach 1860: 245  
*Objective status:* available and valid  
*Subjective status:* probably junior synonym of *Cryptococcus fagisuga* Lindinger 1936: 444 (Coccoidea Eriococcidae).  
 Note that previous version incorrectly suggested this edit for corticalis Kaltenbach 1843 whereas it should be for corticalis Kaltenbach 1860!
- coryli hemisphaericus** Geoffroy 1762: 507  
*Objective status:* unavailable, suppressed (Hemming 1954)
- coweni** Gillette 1907: 10  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges coweni* (Aphidomorpha Adelgidae)
- crataegi** Scopoli 1763: 139  
*Objective status:* available, *nomen dubium*
- Subjective status:* placement unknown  
*Remarks:* original description is of immature and leaf damage, the adult was not observed; Löw (1876: 206) suggests it is an aphid (Aphidomorpha Aphididae)
- crataegi** Schrank 1801: 142  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla crataegi* (Psylloidea Psyllidae)
- cycadicola** Boisduval 1867: 345  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Aspidiotus nerii* Bouché 1833: 52 (Coccoidea Diaspididae)
- cycadis** Boisduval 1867: 323  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Saissetia oleae* (Olivier 1791: 95) (Coccoidea Coccidae)
- dionis** Boisduval 1867: 327  
*Objective status:* available and valid  
*Subjective status:* valid as *Diaspis dionis* (Coccoidea Diaspididae)
- elegantula** Zetterstedt 1840: 310  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla elegantula* (Psylloidea Psyllidae)
- emerici** Planchon 1864: 21  
*Objective status:* available and valid  
*Subjective status:* valid as *Eulecanium emerici* (Coccoidea Coccidae)
- ericae** Boisduval 1867: 330  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Aspidiotus nerii* Bouché 1833: 52 (Coccoidea Diaspididae)
- evonymi** Scopoli 1763: 139  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- fagi** Linnaeus 1761: 263  
*Objective status:* available and valid  
*Subjective status:* valid as *Phyllaphis fagi*

(Aphidomorpha Aphididae)

*Remarks:* Linnaeus (1761) named *C. fagi* with reference to Réaumur (1737: 318). Geoffroy (1762: 497) and Linnaeus (1767: 735) then redescribed the species as *Aphis fagi* with the same indication to Réaumur. Some early authors treated *Chermes fagi* (L. 1761) and *Aphis fagi* (L. 1767) as separate species (e.g., Goeze 1778: 304 & 325 and Gmelin 1790: 2207 & 2213), and 1767 is sometimes used in the aphid literature as the date of original description (e.g., Remaudière and Remaudière 1997: 252)

**fagi** Kaltenbach 1874: 631

*Objective status:* available and valid

*Subjective status:* junior synonym of *Cryptococcus fagisuga* Lindinger 1936: 444 (Coccoidea Eriococcidae)

**ficus** Linnaeus 1758: 455

*Objective status:* available and valid

*Subjective status:* valid as *Homotoma ficus* (Psylloidea Homotomidae)

**filicum** Boisduval 1867: 335

*Objective status:* available and valid

*Subjective status:* junior synonym of *Saissetia coffeae* (Walker 1852: 1079) (Coccoidea Coccidae)

**floccus** Patch 1909: 137

*Objective status:* available and valid

*Subjective status:* valid as *Pineus floccus* (Aphidomorpha Adelgidae)

**fraxini** Linnaeus 1758: 454

*Objective status:* available and valid

*Subjective status:* valid as *Psyllopsis fraxini* (Psylloidea Liviidae)

**fraxini** Kaltenbach 1860: 259

*Objective status:* available and valid

*Subjective status:* valid as *Pseudochermes fraxini* (Coccoidea Eriococcidae)

**fulchironiae** Boisduval 1867: 330

*Objective status:* available and valid

*Subjective status:* valid as *Leucaspis fulchironiae* (Coccoidea Diaspididae)

**funitectus** Dreyfus 1888: 6

*Objective status:* available and valid

*Subjective status:* valid as *Adelges funitectus* (Aphidomorpha Adelgidae)

*Remarks:* *Adelges funitectus* has priority over the more frequently used *Adelges tsugae* Annand 1924b: 79 (Chrystal 1922, Carter 1971)

**fusca** Zetterstedt 1828: 552

*Objective status:* available and valid

*Subjective status:* valid as *Psylla fusca* (Psylloidea Psyllidae)

**geniculatus** Ratzeburg 1844: 202

*Objective status:* available and valid

*Subjective status:* valid as *Adelges geniculatus* (Aphidomorpha Adelgidae)

**graminis** Linnaeus 1758: 453

*Objective status:* available, *nomen dubium*

*Subjective status:* placement unknown

**hibernaculorum** Boisduval 1867: 337

*Objective status:* available and valid

*Subjective status:* junior synonym of *Saissetia coffeae* (Walker 1852: 1079) (Coccoidea Coccidae)

**himalayensis** Stebbing 1910: 100

*Objective status:* unavailable, established in synonymy with *Adelges abietispiceae* (Stebbing 1903: 57) (Aphidomorpha Adelgidae)

**humuli** Schrank 1801: 141

*Objective status:* available, *nomen dubium*

*Subjective status:* placement unknown

**ishiharai** Inouye 1936: 75

*Objective status:* available and valid

*Subjective status:* valid as *Adelges pectinatae ishiharai* (Aphidomorpha Adelgidae)

*Remarks:* not treated by Havill and Footitt 2007

- japonicus** Monzen 1929: 71  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges japonicus*  
 (Aphidomorpha Adelgidae)
- junci** Schrank 1789: 615  
*Objective status:* available and valid  
*Subjective status:* valid as *Livia junci* (Psylloidea  
 Liviidae)
- kennedyae** Boisduval 1867: 326  
*Objective status:* available and valid  
*Subjective status:* valid as *Aspidiotus kennedyae*  
 (Coccoidea Diaspididae)
- lapidarius** Fabricius 1803: 306  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- lapponicus** Cholodkovsky 1889b: 390  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges lapponicus*  
 (Aphidomorpha Adelgidae)
- lariceti** Altum 1889: 279  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges laricis*  
 Vallot 1836: 72 (Aphidomorpha Adelgidae)  
*Remarks:* Börner (1908: 153) lists it as a *nomen nudum*, but Altum's footnote clarifies it as available
- lariciatus** Patch 1909: 137  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges lariciatus*  
 (Aphidomorpha Adelgidae)
- laricicola** Shinji 1930: 151  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges viridana* (Cholodkovsky 1896: 39)  
 (Aphidomorpha Adelgidae)
- laricifoliae** Fitch 1858: 752  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges abietis* (Linnaeus 1758: 454) (Aphidomorpha Adelgidae)
- lauri** Boisduval 1867: 340  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Coccus hesperidum* Linnaeus 1758: 455 (Coccoidea Coccidae)
- lichenis** Goeze 1778: 329  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown  
*Remarks:* Walker (1852: 922) suggested this species might be a psocid, referring to Geoffroy's (1762: 489) description of the larva of "*la psylle des pierres*", "larvae similar to adults except for the lack of wings", which does not match psyllid immature morphology. Löw (1882: 241) also suggested the species, as described by Gmelin (1790: 2214), might be a psocid, junior synonym to *Psylla lapidum* Fourcroy (1785: 224) [= *Psocus bipunctatus* (Linnaeus 1761: 384) per Albarda (1889: 232)]
- mali** Schmidberger 1836: 186  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla mali*  
 (Psylloidea Psyllidae)
- mannifer** Hardwick 1822: 182  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- mespili serico albo** Geoffroy 1762: 508  
*Objective status:* unavailable, suppressed  
 (Hemming 1954)
- miliaris** Boisduval 1869: 262  
*Objective status:* available and valid  
*Subjective status:* valid as *Bambusapis miliaris*  
 (Coccoidea Asterolecaniidae)
- montanus** Gillette 1907: 14  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Pineus pinifoliae* (Fitch 1858: 741) (Aphidomorpha Adelgidae)
- nebulosa** Zetterstedt 1828: 551  
*Objective status:* available and valid  
*Subjective status:* valid as *Craspidolepta nebulosa*  
 (Psylloidea Aphalaridae)

- nigrita** Zetterstedt 1828: 556  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla nigrita*  
 (Psylloidea Psyllidae)
- nordmannianae** Eckstein 1890: 90  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges nordmannianae*  
 (Aphidomorpha Adelgidae)
- obtectus** Ratzeburg 1844: 200  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges piceae* (Ratzeburg 1844: 204) (Aphidomorpha Adelgidae)
- occidentalis** Cholodkovsky 1910: 281  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges viridis* (Ratzeburg 1843: 202) (Aphidomorpha Adelgidae)
- orientalis** Dreyfus 1888: 3  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus orientalis*  
 (Aphidomorpha Adelgidae)
- pandani** Boisduval 1868b: 301  
*Objective status:* available and valid  
*Subjective status:* valid as *Aspidiotus pandani*  
 (Coccoidea Diaspididae)
- pectinatae** Cholodkovsky 1888: 47  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges pectinatae*  
 (Aphidomorpha Adelgidae)
- persicae** Fabricius 1777: 304  
*Objective status:* available and valid  
*Subjective status:* valid as *Parthenolecanium persicae* (Coccoidea Coccidae)
- persicae oblongus** Geoffroy 1762: 506  
*Objective status:* unavailable, suppressed  
 (Hemming 1954)
- persicae rotundus** Geoffroy 1762: 506  
*Objective status:* unavailable, suppressed  
 (Hemming 1954)
- piceae** Ratzeburg 1844: 204  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges piceae*  
 (Aphidomorpha Adelgidae)
- picta** Zetterstedt 1828: 553  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Aphalara calthae* (Linnaeus 1761: 263) (Psylloidea Aphalaridae)
- pineoides** Cholodkovsky 1903: 263  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus pineoides*  
 (Aphidomorpha Adelgidae)
- pini** Goeze 1778: 263  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus pini*  
 (Aphidomorpha Adelgidae)  
*Remarks:* the species is usually attributed to Macquart (1819: 86) but Goeze provides a valid binomial and an indication to both Geoffroy (1762) and Linnaeus (1746).
- pinifoliae** Fitch 1858: 741  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus pinifoliae*  
 (Aphidomorpha Adelgidae)
- populi** Del Guercio 1900: 81  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- praecox** Cholodkovsky 1898: 28  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus praecox*  
 (Aphidomorpha Adelgidae)  
*Remarks:* not treated by Havill and Footitt 2007
- pruni** Scopoli 1763: 140  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla pruni*  
 (Psylloidea Psyllidae)
- pulchra** Zetterstedt 1840: 309  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla pulchra*  
 (Psylloidea Psyllidae)



- punctiformis** Boisduval 1867: 330  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- pyri** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla pyri* (Psylloidea Psyllidae)
- quercus** Linnaeus 1758: 453  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown
- quercus** Fourcroy 1785: 229  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Eulacanium tiliae* (Linnaeus 1758: 456) (Coccoidea Coccidae)
- radicum purpureus** Geoffroy 1762: 504  
*Objective status:* unavailable, suppressed (Hemming 1954)
- reniformis** Fourcroy 1785: 230  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Kermes quercus* (Linnaeus 1758: 455) (Coccoidea Kermesidae)
- rhamni** Schrank 1801: 141  
*Objective status:* available and valid  
*Subjective status:* valid as *Trioza rhamni* (Psylloidea Triozidae)  
*Remarks:* described as *Chermes ramni*; the spelling *rhamni* is preserved under Article 33.3.1 of the ICZN (1999)
- roboris** Fourcroy 1785: 229  
*Objective status:* available and valid  
*Subjective status:* valid as *Kermes roboris* (Coccoidea Kermesidae)
- rotundus quercus** Olivier 1792: 440  
*Objective status:* unavailable, trinomial  
*Remarks:* the available name of the species described by Olivier is *Eulacanium tiliae* (Linnaeus 1758: 456) (Coccoidea Coccidae)
- salicis** Linnaeus 1758: 454  
*Objective status:* unavailable, *nomen nudum*
- salicis** Linnaeus 1761: 264  
*Objective status:* available, *nomen dubium*  
*Subjective status:* *nomen dubium* as *Trioza salicis* (L.) (Löw 1882: 249) (Psylloidea Triozidae)
- salicis** Olivier 1792: 439  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Eulacanium tiliae* (Linnaeus 1758: 456) (Coccoidea Coccidae)
- senecionis** Scopoli 1763: 140  
*Objective status:* available and valid  
*Subjective status:* valid as *Trioza senecionis* (Psylloidea Triozidae)
- sericeus** Fourcroy 1785: 230  
*Objective status:* available and valid  
*Subjective status:* valid as *Pulvinaria sericea* (Coccoidea Coccidae)
- sibiricus** Cholodkovsky 1889b: 388  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Pineus cembrae* (Cholodkovsky 1888: 47) (Aphidomorpha Adelgidae)
- similis** Gillette 1907: 15  
*Objective status:* available and valid  
*Subjective status:* valid as *Pineus similis* (Aphidomorpha Adelgidae)
- sorbi** Linnaeus 1767: 738  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla sorbi* (Psylloidea Psyllidae)
- strobi** Ratzeburg 1844: 203  
*Objective status:* available, junior objective synonym of *Pineus strobi* (Hartig 1839: 643) (Aphidomorpha Adelgidae)  
*Remarks:* Ratzeburg (1844) correctly indicates a Hartig (1839) authorship, but Eastop and Hille Ris Lambers (1976: 188) designate *Chermes strobi* Ratzeburg 1844 (= *Coccus strobis* Hartig

- 1839) as the type species for *Eopineus* Steffan 1968, thereby making it available
- strobilobius** Kaltenbach 1843: 203  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Adelges laricis* Vallot 1836: 72 (Aphidomorpha Adelgidae)
- tardoides** Cholodkovsky 1911: 175  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges tardoides* (Aphidomorpha Adelgidae)  
*Remarks:* described as *Chermes lapponicus* var. *tardoides*
- tardus** Dreyfus 1888: 3  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges tardus* (Aphidomorpha Adelgidae)
- taxi** Buckton 1886: 327  
*Objective status:* available, *nomen dubium*  
*Subjective status:* placement unknown  
*Remarks:* *Pseudococcus taxi* in Lindinger (1912: 320) (Coccoidea Pseudococcidae)
- tiliae hemisphaericus** Geoffroy 1762: 507  
*Objective status:* unavailable, suppressed (Hemming 1954)
- ulmi** Linnaeus 1758: 453  
*Objective status:* available and valid  
*Subjective status:* valid as *Eriosoma ulmi* (Aphidomorpha Aphididae)
- ulmi** Fourcroy 1785: 229  
*Objective status:* available and valid  
*Subjective status:* junior synonym of *Eulacanium tiliae* (Linnaeus 1758: 456) (Coccoidea Coccidae)
- urticae** Linnaeus 1758: 454  
*Objective status:* available and valid  
*Subjective status:* valid as *Trioza urticae* (Psylloidea Triozidae)
- vermilio** Planchon 1864: 19  
*Objective status:* available and valid  
*Subjective status:* valid as *Kermes vermilio* (Coccoidea Kermesidae)
- viridanus** Cholodkovsky 1896: 39  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges viridanus* (Aphidomorpha Adelgidae)
- viridis** Ratzeburg 1843: 202  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges viridis* (Aphidomorpha Adelgidae)
- viridula** Zetterstedt 1828: 555  
*Objective status:* available and valid  
*Subjective status:* valid as *Trioza viridula* (Psylloidea Triozidae)
- viridulus** Cholodkovsky 1911: 175  
*Objective status:* available and valid  
*Subjective status:* valid as *Adelges viridulus* (Aphidomorpha Adelgidae)
- vitis oblongus** Geoffroy 1762: 506  
*Objective status:* unavailable, suppressed (Hemming 1954)
- zetterstedti** Thomson 1877: 832  
*Objective status:* available and valid  
*Subjective status:* valid as *Cacopsylla zetterstedti* (Psylloidea Psyllidae)

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Table 1. Summary of nomenclatural and taxonomic statuses of species-group names proposed in combination with *Chermes* Linnaeus 1758.

	Aphids	Scale insects	Psyllids	Unplaced	Total
Subjectively valid	30	11	26	na	67
Subjectively invalid	16	19	2	na	37
<i>Nomina dubia</i>	0	0	1	12	13
Objectively valid	46	30	29	12	117
Objectively invalid	1	0	0	0	1
Available	47	30	29	12	118
Unavailable	na	na	na	19	19
All names	47	30	29	31	137