

Opilionological Record – a chronicle of harvestman taxonomy. Part 1: 1758–1804

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Abstract. Based on a firsthand parsing of the original literature, a Zoological Record-style tabulation of all nomenclatural acts regarding species of the order Opiliones is presented for the interval between 1758 and 1804. A total of 52 species was described as new, 14 of which are not Opiliones or remain unrecognizable (*nomina dubia*), six species have been synonymized (one revalidated), in all resulting in 33 valid species of Opiliones. Four genera were established, although no more than three were used simultaneously. The family Phalangita (Phalangiens) was described and coincides with the modern use of the order Opiliones. Of the current four recognized suborders of Opiliones, three (Cyphophthalmi, Eupnoi and Dyspnoi) were recorded. Laniatores remained unknown. A checklist is given for the order Opiliones up to 1804.

Keywords: Opiliones, 18th century, nomenclature, checklist

The early taxonomic history of the arachnid order Opiliones is not always accurately documented in the literature, where most authors only cite secondhand information with notable mistakes and omissions. The Zoological Record, which started to tabulate taxonomical data from 1864, is an excellent resource for later periods, but the 19th century is abbreviated and full of omissions. Therefore, a recension of this early output is of paramount importance for reliably establishing a systematic catalogue.

For this paper, I have parsed all references between 1758 and 1804, extracting all nomenclatural acts relevant for the species treated in the period. The chosen landmarks have been the starting point of the modern nomenclature (Linnaeus 1758) with the description of the very first species, *Phalangium opilio*, and the year 1804, the date of issue of two important papers (Latreille 1804; Hermann 1804) and the first solid appearance of the Cyphophthalmi in the literature.

Use of name Palpatores as a monophyletic group including Eupnoi + Dyspnoi has recently been both reaffirmed (e.g., Giribet et al. 2010) and denied (e.g., Giribet et al. 1999, 2002). I have used a safer, middle course here by considering Opiliones divided into four suborders, with Eupnoi and Dyspnoi taken separately.

METHODS

A chronological list of references in taxonomy of Opiliones from 1758 to 1804 is given in full as Table 1, without abbreviations. A table has been built charting the number of described species, including synonymies and revalidations, trying to mimic the Zoological Record style (Table 2). Also included are six numerical columns containing 1) increment to described species; 2) increment to the species considered junior synonyms; 3) increment to revalidated species, i.e., species taken out of synonymy; 4) increment of invalid species (not junior synonyms), because they do not belong to Opiliones, or because they are *nomina nuda*, unrecognizable and not listed in the official species list. The fifth column represents the total value to be added to the general count, adding columns 1 + 3 – 2 – 4. All these five columns can have values of 0 or 1. The sixth column is the cumulative count of valid species; values are integers.

I give a historical account, detailing the main results of the works included in the period. In that section, the original

spellings are retained, even if they conflict with modern usage, e.g., *Phalangium Opilio*, with capital O as used by Linnaeus, even though species names should be spelled with lower case o (International Code of Zoological Nomenclature [ICZN], Art. 28). Likewise, in that section only, I have conserved the original *Trogulus nepaeformis*, using the ligature -æ, which should be corrected to -ae (ICZN, Art. 32.5.2). In the checklist (Table 3), I have used the corrected forms *Phalangium opilio* and *Trogulus nepaeformis*.

RESULTS

A total of 22 references is listed in Table 1, ten written in French, nine in Latin, and three in German (although there is a mix of languages in some, with parts in Latin as well). The new taxa, combinations, and synonymies are tabulated in Table 2. A non-exhaustive list of species described in *Phalangium* that are not currently included in Opiliones is given in Table 4.

A total of 52 species was described as new, of which 14 (almost 27%) are unrecognizable or not Opiliones (a miscellany including other arachnids and even marine arthropods), a 15th (not counted among the 52) has been transferred from *Acarus* (see Table 4). Of the remaining 38 species, six have been synonymized (but 1 revalidated), leaving a total of 33 valid species of Opiliones by the end of 1804 (1 Cyphophthalmi, 26 Eupnoi, and six Dyspnoi). Of these 33 species, 14 were synonymized in later periods, that is, almost 60% (19 out of 33) of the species described in this period are valid now, 200 years later. Some had a great longevity and were synonymized only much later; for example, *Opilio hispidus* took more than 100 years to be synonymized with *Phalangium horridum*.

As expected, the bulk of the described species of *Phalangium* and related genera is European. Of the 52 new species, six do not have explicit provenance or are marine, 15 are from France, 13 from Germany, six from either Sweden/Denmark/Norway, two from Switzerland, one each from England, Romania, Russia and Slovenia, one widespread Holarctic, three Neotropical and two Indo-Malayan (see Table 2 for details). By the 1770s the first synonymies started to be proposed, and in the 1790s others followed, including Olivier (1792) and Latreille (1798), who proposed two conflicting junior synonyms for *Phalangium opilio*.

Table 1.—List of the works published between 1758–1804 carrying nomenclatural acts on Opiliones.

- 1758**
Linnaeus, C. 1758. *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. Editio decima, reformata. Tomus 1. Laurentius Salvius, Stockholm. Pp. [iv] + 1–824. [ICZN Art. 3: deemed to have been published 1 January 1758].
- 1763**
Scopoli, J.A. 1763. *Entomologia Carniolica exhibens insecta Carnioliae indigena et distributa in ordines, genera, species, varietates*. Methodo Linnaeana. Ioannis Thomae Trattner, Vindobonae [Vienna]. Pp. 38 unnumbered + 1–419 + 680 figs. [43 unnumbered plates].
- 1767**
Linnaeus, C. 1767. *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis locis*. Editio duodecima reformata. Tomus 1, pars 2. Stockholm Laurentius Salvius, Stockholm. Pp. 533–1327 + [37].
- 1772**
Pallas, P.S. 1772. *Phalangia, Araneae, Acari*. In *Spicilegia Zoologica. Continens quadrupedum, avium, amphibiorum, piscium, insectorum, molluscorum aliorumque marinorum*. Volume 1, Fascicle 9. Gott. August. Lange, Berolini [Berlin]. Pp. 28–50.
- 1775**
Fabricius, J.C. 1775. *Systema Entomologiae, Sistens Insectorum Classes, Ordines, Genera, Species, adiectis Synonymis, Locis, Descriptionibus, Observationibus*. Officina Libraria Kortii, Flensburgi et Lipsiae [Flensburg and Leipzig, Germany]. Pp. xxxii + 1–832.
- 1776**
Müller, O.F. 1776. *Zoologiae Danicae Prodrömus, seu Animalium Daniæ et Norvegiæ Indigenarum characteres, nomina, et synonyma imprimis popularium*. Heineck & Faber [printed by Hallager], Havniae [Copenhagen]. Pp. xxxii + 1–274.
- 1778**
Geer, C. de 1778. In *Mémoires pour servir à l'histoire des insectes*. Tome 7. Pierre Hesselberg, Stockholm. Pp. xii + 950, 49 pl.
- 1779**
Fabricius, J.C. 1779. *Reise nach Norwegen mit Bemerkungen aus der Naturhistorie und Oekonomie*. C.E. Bohn, Hamburg. Pp. lxiv + 388 + [12].
- 1781**
Fabricius, J.C. 1781. *Species insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca natalia, metamorphosin adiectis observationibus, descriptionibus*. C.E. Bohn, Hamburgi et Kilonii [Hamburg and Kiel, Germany]. Tome 1, Pp. 1–552.
- 1792**
Bosc, L.A.G. 1792. Description d'un *phalangium* et d'un *cinips*. Bulletin des Sciences, par la Société philomathique de Paris, 1 [de Juillet 1791, à Ventôse, an 7 (=1799)], 18. [Issued February 1792].
Olivier, G.A. 1792. Faucheur [encyclopedia article]. In *Encyclopédie Méthodique*. Tome 6 [“1791”], Histoire naturelle. Insectes. (D. Diderot & J. le R. D’Alembert, eds.). Charles Joseph Panckoucke (for the Société de Gens de Lettres, de Savants et d’Artistes), Paris. Pp. 455–461.
- 1793**
Fabricius, J.C. 1793. *Entomologia systematica emendata et aucta*. Secundum classes, ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Tome 2. Christ. Gottl. Prof. Hafniae [Copenhagen]. Pp. viii + 1–519.
- 1794**
Panzer, G.W.F. 1794. *Faunae Insectorum Germanicae initia oder Deutschlands Insecten*. Zweyter Jahrgang. XIII–XXIV Heft. Felseckersche Buchhandlung, Nürnberg. Pp. 1–284 + 284 pl.

Table 1.—Continued.

- 1795**
Cuvier, G. 1795. Description de deux espèces nouvelles d’Insectes. Le Faucheur a 4–dentelures. *Magazin Encyclopédique*, N.S., Tome 1. Pp. 205–207 + pl. 2.
- 1796**
Latreille, P.A. 1796. *Précis des caractères génériques des insectes, disposés dans un ordre naturel*. Prévot, Bourdeaux, Brive, Paris. Pp. XII + 202 + VI, 1 table.
- 1798**
Herbst, J.F.W. 1798. *Naturgeschichte der Insecten-Gattung Opilio*. In *Natursystem der ungeflügelten Insekten*, Volume 2 [of 4]. (J.F.W. Herbst, ed.). G.A. Lange, Berlin. Pp. iv + 1–26 pp., 5 pl.
Latreille, P.A. 1798. *Mémoire pour servir de suite à l’histoire des insectes connus sous le nom de Faucheurs. Phalangium*. L. Bulletin des Sciences par la Société Philomathique, Paris. Volume 1(15), Pp. 113–115. [issue title pages: Prairial, an 6 (French Revolutionary Calendar) = June 1798].
- 1799**
Herbst, J.F.W. 1799. Fortsetzung der Naturgeschichte der Insectengattung *Opilio*. In Herbst, J.F.W., *Natursystem der ungeflügelten Insekten*, Volume 3 [of 4]. (J.F.W. Herbst, ed.). G.A. Lange, Berlin. Pp. iv + 1–30, pl. 6–10.
- 1802**
Latreille, P.A. 1802a. *Histoire naturelle des fourmis, et recueil de mémoires et d’observations sur les abeilles, les araignées, les faucheurs, et autres insectes*. Crapelet, Paris. Pp. xvi + 1–445, 12 pl. [Issued before 21 September 1802]
Latreille, P.A. 1802b. *Famille Troisième. Phalangiens*. In *Histoire naturelle, générale et particulière des Crustacés et des Insectes*. Volume 3. (C.S. Sonnini, ed.). F. Dufart, Paris. Pp. 60–62. [Issued 6 November 1802].
- 1804**
Hermann, J.F. 1804. *Mémoire aptérologique*. Published posthumously by Frédéric-Louis Hammer. F.G. Levraut, Strassburg. Pp. viii + 1–144, 9 pl.
Latreille, P.A. 1804. *Huitième genre-Dixième genre In Histoire naturelle, générale et particulière des Crustacés et des Insectes*. Volume 7. (C.S. Sonnini, ed.). F. Dufart, Paris. Pp. 314–329.

In the first 30 years following the launch of modern taxonomy, an average of one species was described each four to five years. In the early 1790s this rate increased to one species each year, and nearing the close of the century six to seven new species were recorded each year.

It is important to note that the generic names *Phalangium* and *Opilio* were not separate entities then, but conflicting usages of the same genus. Herbst (1798, 1799) used the latter as a replacement for the former because he considered that the former was likely to cause confusion due to a long history of usage of *Phalangium* for spiders as well as any other arachnid considered “fearsome.” All other authors followed Linnaeus using *Phalangium*. The use of *Phalangium* and *Opilio* as separate genera came only decades later with Koch (1848). Another usage strongly contrasting with the modern one is the treatment of *P. parietinum* and *P. opilio* as conspecific (which would only be universally disclaimed almost a century later) while using *P. cornutum* for what today we know as *P. opilio*.

Thus, all Opiliones were at one point in *Phalangium*, with the exceptions of a member of Dyspnoi, described in *Acarus* (Scopoli 1763) and the new genera *Trogulus* and *Siro*, erected

Table 2.—Nomenclatural acts regarding Opliones from 1758 to 1804. The non-Opliones originally included in *Phalangium* are only treated marginally.

Organism name	Author/year	Controlled term	Modifier	Sp. descry.	Synonym sp.	Revalidated sp.	Invalid sp.	Sp. diff.	Sp. cumulative
<i>Phalangium</i>	Linnaeus 1758	Gen. nov.	Of order Aptera, Type species <i>Phalangium opilio</i> , p. 618	0	0	0	0	0	
<i>Phalangium opilio</i>	Linnaeus 1758	Sp. nov.	Europa, America, p. 618	1	0	0	0	1	1
<i>Phalangium caudatum</i>	Linnaeus 1758	Sp. nov.	India, p. 619	1	0	0	1	0	1
<i>Phalangium reniforme</i>	Linnaeus 1758	Sp. nov.	America, p. 619	1	0	0	1	0	1
<i>Acarus nepaeformis</i>	Scopoli 1763	Sp. nov.	Carniola [Slovenia], p. 390	1	0	0	0	1	2
<i>Phalangium cornutum</i>	Linnaeus 1767	Sp. nov.	Germany, p. 1028	1	0	0	0	1	3
<i>Phalangium tricarinatum</i>	Linnaeus 1767	Sp. nov.	Germany, p. 1029	1	0	0	0	1	4
<i>Phalangium acaroides</i>	Linnaeus 1767	Sp. nov.	Tropical America, p. 1028	1	0	0	1	0	4
<i>Phalangium grossipes</i>	Linnaeus 1767	Sp. nov.	Norwegian Sea, p. 1027	1	0	0	1	0	4
<i>Phalangium balaenarum</i>	Linnaeus 1767	Sp. nov.	p. 1028	1	0	0	1	0	4
<i>Phalangium cancroides</i>	(Linnaeus 1758)	Comb. nov.	Transferred from <i>Acarus</i> , p. 1028	0	0	0	0	0	4
<i>Acarus cancroides</i>	Linnaeus 1758	Referred to	<i>Phalangium</i> , p. 1028	0	0	0	0	0	4
<i>Phalangium lunatum</i>	Pallas 1772	Sp. nov.	South America, p. 35, pl. 3, figs. 5, 6	1	0	0	1	0	4
<i>Phalangium arancoides</i>	Pallas 1772	Sp. nov.	Russia, p. 37, pl. 3, figs. 7-9	1	0	0	1	0	4
<i>Phalangium bimaculatum</i>	Fabricius 1775	Sp. nov.	England, p. 440	1	0	0	0	1	5
<i>Phalangium lugubre</i>	Müller 1776	Sp. nov.	Denmark and/or Norway, p. 192	1	0	0	0	1	6
<i>Phalangium mucronatum</i>	Müller 1776	Sp. nov.	Denmark and/or Norway, p. 192	1	0	0	1	0	6
<i>Phalangium parietinum</i>	De Geer 1778	Sp. nov.	[Sweden], p. 166, pl. 10, figs. 1-11	1	0	0	0	1	7
<i>Phalangium opilio</i>	Linnaeus 1758	Syn. Nov.	<i>Phalangium parietinum</i> De Geer 1778	0	0	0	0	0	7
<i>Phalangium parietinum</i>	De Geer 1778	New synonym	Of <i>Phalangium opilio</i> Linnaeus 1758, p. 459	0	1	0	0	-1	6
<i>Phalangium bimaculatum</i>	Fabricius 1775	Syn. nov.	<i>Phalangium lugubre</i> Müller 1776	0	0	0	0	0	6
<i>Phalangium lugubre</i>	Müller 1776	New synonym	Of <i>Phalangium bimaculatum</i> Fabricius 1775, p. 440	0	1	0	0	-1	5
<i>Phalangium coronatum</i>	Fabricius 1779	Sp. nov.	Norway, p. 339	1	0	0	0	1	6
<i>Phalangium diadema</i>	Fabricius 1779	Sp. nov.	Norway, p. 339	1	0	0	0	1	7
<i>Phalangium morio</i>	Fabricius 1779	Sp. nov.	Norway, p. 340	1	0	0	0	1	8
<i>Phalangium bilineatum</i>	Fabricius 1779	Sp. nov.	p. 360	1	0	0	1	0	8
<i>Phalangium cristatum</i>	Olivier 1792	Sp. nov.	France, p. 460	1	0	0	1	0	8
<i>Phalangium annulatum</i>	Olivier 1792	Sp. nov.	Switzerland, p. 459	1	0	0	0	1	9
<i>Phalangium carinatum</i>	(Linnaeus 1767)	Subseq. incorr.	for <i>Phalangium tricarinatum</i> , p. 460	0	0	0	0	0	9
		spelling							
<i>Phalangium diadema</i>	Fabricius 1779	Syn. nov.	<i>Phalangium coronatum</i> Fabricius 1779	0	0	0	0	0	9
<i>Phalangium coronatum</i>	Fabricius 1779	New synonym	Of <i>Phalangium diadema</i> Fabricius 1779, p. 339	0	1	0	0	-1	8
<i>Phalangium spinosum</i>	Bosc 1792	Sp. nov.	France, p. 18	1	0	0	0	1	9
<i>Phalangium bicolor</i>	Fabricius 1793	Sp. nov.	Switzerland, p. 429	1	0	0	0	1	10
<i>Phalangium carinatum</i>	(Linnaeus 1767)	Subseq. incorr.	for <i>Phalangium tricarinatum</i> , p. 431	0	0	0	0	0	10
		spelling							
<i>Phalangium helwigii</i>	Panzer 1794	Sp. nov.	Germany, p. 13, unnumb. pl.	1	0	0	0	1	11
<i>Phalangium horridum</i>	Panzer 1794	Sp. nov.	Germany, p. 21, unnumb. pl.	1	0	0	0	1	12
<i>Phalangium 4-dentatum</i>	Cuvier 1795	Sp. nov.	p. 206, pl. 2., fig. 4.	1	0	0	0	1	13
<i>Phalangium cornutum</i>	Linnaeus 1767	New synonym	Of <i>Phalangium opilio</i> Linnaeus 1758, p. 114	0	1	0	0	-1	12
<i>Phalangium opilio</i>	Linnaeus 1758	Syn. nov.	<i>Phalangium cornutum</i> Linnaeus 1767, p. 114	0	0	0	0	0	12
<i>Phalangium histrix</i>	Latreille 1798	Sp. nov.	Loc. not stated, p. 114	1	0	0	0	1	13
<i>Phalangium palliatum</i>	Latreille 1798	Sp. nov.	France, p. 114	1	0	0	0	1	14
<i>Phalangium rostratum</i>	Latreille 1798	Sp. nov.	Loc. not stated, p. 114	1	0	0	0	1	15
<i>Phalangium rotundum</i>	Latreille 1798	Sp. nov.	[France], p. 115	1	0	0	0	1	16

Table 2.—Continued.

Organism name	Author/year	Controlled term	Modifier	Sp. descry.	Synonym sp.	Revalidated sp.	Invalid sp.	Sp. diff.	Sp. cumulative
<i>Phalangium muscorum</i>	Latreille 1798	Sp. nov.	[France], p. 114	1	0	0	1	0	16
<i>Opilio parietinus</i>	(De Geer 1778)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 12	0	0	0	0	0	16
<i>Phalangium parietinum</i>	De Geer 1778	Referred to	<i>Opilio</i> , p. 12	0	0	0	0	0	16
<i>Opilio cornutus</i>	(Linnaeus 1767)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 13	0	0	0	0	0	16
<i>Phalangium cornutum</i>	Linnaeus 1767	Removal from synonymy; referred to	With <i>Phalangium opilio</i> , p. 13; <i>Opilio</i> , p. 13	0	0	1	0	1	17
<i>Opilio bicolor</i>	(Fabricius 1793)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 15	0	0	0	0	0	17
<i>Phalangium bicolor</i>	Fabricius 1793	Referred to	<i>Opilio</i> , p. 15	0	0	0	0	0	17
<i>Opilio morio</i>	(Fabricius 1779)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 16	0	0	0	0	0	17
<i>Phalangium morio</i>	Fabricius 1779	Referred to	<i>Opilio</i> , p. 16	0	0	0	0	0	17
<i>Opilio Helwigii</i>	Panzer 1794	Comb. nov.	Transferred from <i>Phalangium</i> , p. 16	0	0	0	0	0	17
<i>Phalangium helwigii</i>	Panzer 1794	Referred to	<i>Opilio</i> , p. 16	0	0	0	0	0	17
<i>Opilio diadema</i>	(Fabricius 1779)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 25	0	0	0	0	0	17
<i>Phalangium diadema</i>	Fabricius 1779	Referred to	<i>Opilio</i> , p. 25	0	0	0	0	0	17
<i>Opilio horridus</i>	(Panzer 1794)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 7	0	0	0	0	0	17
<i>Phalangium horridum</i>	Panzer 1794	Referred to	<i>Opilio</i> , p. 7	0	0	0	0	0	17
<i>Opilio 4dentatus</i>	(Cuvier 1795)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 13	0	0	0	0	0	17
<i>Phalangium 4-dentatum</i>	Cuvier 1795	Referred to	<i>Opilio</i> , p. 13	0	0	0	0	0	17
<i>Opilio carinatus</i>	(Linnaeus 1767)	Comb nov; subseq. incorr. spelling	Transferred from <i>Phalangium</i> , p. 13; for <i>Phalangium tricarinatum</i>	0	0	0	0	0	17
<i>Phalangium tricarinatum</i>	Linnaeus 1767	Referred to	<i>Opilio</i> , p. 13	0	0	0	0	0	17
<i>Opilio fasciatus</i>	Herbst 1798	Sp. nov.	Germany, p. 23, pl. 4, figs. 1, 2.	1	0	0	0	1	18
<i>Opilio hispidus</i>	Herbst 1798	Sp. nov.	Germany, p. 20, pl. 3, figs. 1, 2.	1	0	0	0	1	19
<i>Opilio longipes</i>	Herbst 1798	Sp. nov.	Germany, p. 22, pl. 2, fig. 2.	1	0	0	0	1	20
<i>Opilio monocanta</i>	Herbst 1798	Sp. nov.	SE Asia, p. 19, pl. 2, fig. 1.	1	0	0	1	0	20
<i>Opilio alpinus</i>	Herbst 1799	Sp. nov.	France, p. 3, pl. 6, fig. 2.	1	0	0	0	1	21
<i>Opilio grossipes</i>	Herbst 1799	Sp. nov.	Germany, p. 1, pl. 6, fig. 1.	1	0	0	0	1	22
<i>Opilio hemisphaericus</i>	Herbst 1799	Sp. nov.	Germany, p. 11, pl. 9, fig. 2.	1	0	0	0	1	23
<i>Opilio palpinalis</i>	Herbst 1799	Sp. nov.	[Germany], p. 6, pl. 7, fig. 2.	1	0	0	0	1	24
<i>Opilio rupestris</i>	Herbst 1799	Sp. nov.	Germany, p. 4, pl. 7, fig. 1.	1	0	0	0	1	25
<i>Opilio scaber</i>	Herbst 1799	Sp. nov.	"Hungary" [now Romania], p. 15, pl. 8, fig. 2.	1	0	0	0	1	26
<i>Opilio spinosus</i>	Herbst 1799	Sp. nov.	Germany, p. 8, pl. 9, fig. 1.	1	0	0	0	1	27
<i>Opilio triangularis</i>	Herbst 1799	Sp. nov.	Germany, p. 9, pl. 10, fig. 2.	1	0	0	0	1	28
<i>Phalangita</i>	Latreille 1802	Fam. nov.	fam. n., Phalangita [Insecta Acera], p. 60	0	0	0	0	0	28
<i>Trogulus</i>	Latreille 1802	Gen. nov.	Of family Phalangita, type species not designated, p. 61	0	0	0	0	0	28
<i>Siro</i>	Latreille 1802	Gen. nov.	Of family Phalangita, type species <i>Siro rubens</i> , p. 62	0	0	0	0	0	28
<i>Siro rubens</i>	Latreille 1802	Sp. nov.	[France], p. 62	1	0	0	0	1	29
<i>Trogulus nepaeformis</i>	(Scopoli 1763)	Comb. nov.	Transferred from <i>Acarus</i> p. 61	0	0	0	0	0	29
<i>Acarus nepaeformis</i>	Scopoli 1763	Referred to	<i>Trogulus</i> , p. 61	0	0	0	0	0	29
<i>Trogulus rostratus</i>	(Latreille 1798)	Comb. nov.	Transferred from <i>Phalangium</i> , p. 61	0	0	0	0	0	29
<i>Phalangium rostratum</i>	Latreille 1798	Referred to	<i>Trogulus</i> , p. 61	0	0	0	0	0	29
<i>Phalangium rostratum</i>	Latreille 1798	New synonym	Of <i>Acarus nepaeformis</i> Scopoli 1763, p. 328	0	1	0	0	-1	28
<i>Acarus nepaeformis</i>	Scopoli 1763	Syn. nov.	<i>Phalangium rostratum</i> Latreille 1798	0	0	0	0	0	28
<i>Phalangium tricarinatum</i>	Linnaeus 1767	New synonym	Of <i>Acarus nepaeformis</i> Scopoli 1763, p. 327	0	1	0	0	-1	27

Table 2.—Continued.

Organism name	Author/year	Controlled term	Modifier	Sp. descri.	Synonym sp.	Revalidated sp.	Invalid sp.	Sp. diff.	Sp. cumulative
<i>Acarus nepeformis</i>	Scopoli 1763	Syn. nov.	<i>Phalangium tricarinatum</i> Linnaeus 1767, p. 327	0	0	0	0	0	27
<i>Phalangium chrysomelas</i>	Hermann 1804	Sp. nov.	[France], p. 108, pl. 8, fig. 3	1	0	0	0	1	28
<i>Phalangium cornigerum</i>	Hermann 1804	Sp. nov.	[France], p. 102, pl. 8, figs. 2E-G	1	0	0	0	1	29
<i>Phalangium melanotarsum</i>	Hermann 1804	Sp. nov.	[France], p. 103, pl. 5, fig. 2.	1	0	0	0	1	30
<i>Phalangium rufum</i>	Hermann 1804	Sp. nov.	[France], p. 109, pl. 8., fig. 1	1	0	0	0	1	31
<i>Phalangium spinulosum</i>	Hermann 1804	Sp. nov.	[France], p. 107, pl. 7, fig. 1	1	0	0	0	1	32
<i>Phalangium urnigerum</i>	Hammer in Hermann 1804	Sp. nov.	France, p. 110, pl. 9, figs. 2, 3	1	0	0	0	1	33
<i>Phalangium rubens</i>	Hermann 1804	Sp. nov.	[France], p. 105	1	0	0	1	0	33
<i>Phalangium uncatum</i>	Hermann 1804	Sp. nov.	[France], p. 106, pl. 8, fig. 5	1	0	0	1	0	33

by Latreille (1802b) at the end of the period considered here. A possible checklist of the Opiliones of the world as it would have been in 1804 is shown in Table 3, with the species described by Herbst included in *Phalangium* as opposed to *Opilio*. The species inquirendae have not been included. There is more than one possible checklist, depending on which of the synonymies to accept in the triangle involving *P. opilio*, *P. cornutum*, and *P. parietinum*, which could be mutually exclusive or not. Also, one could interpret differently the creation of the name *Opilio*, either as a junior synonym of *Phalangium* or as an unjustified replacement name.

STEP-BY-STEP HISTORICAL ACCOUNT

Carolus Linnaeus (1758) defined a Classis V – Insecta (p. 339) containing among others the order 7 – Aptera (summary on p. 341 and complete description of species beginning on p. 608). He created (p. 618) the new genus #236 – *Phalangium*, containing three species of which only the first, *Phalangium Opilio* (p. 618), is presently regarded as a member of the Opiliones. *Phalangium Opilio* is thus the first of the Opiliones to be described and the first species of what today is known as Eupnoi. The other two species are today in Thelyphonida (*Phalangium caudatum*) and Amblypygi (*Phalangium reniforme*, a name suppressed by the ICZN).

The Italian-speaking Tyrolean (Austrian) physician and naturalist Giovanni Antonio Scopoli (1763) presented a work in Latin on the “insects” of Carniola (then part of Austria, and roughly corresponding to modern Slovenia), keeping the order Aptera of Linnaeus, but calling it Pedestria – Aptera (page 378). On p. 387, he started to list the species of the genus *Acarus*, from # 1056 to 1076. On page 390, he describes a new species # 1070, *Acarus Nepeformis*. This species is the first member of the present-day Dyspnoi to be described. The specific name appears written in two different spellings: *Nepeformis* (which would be the correct grammatical form) in the index and *Nepeformis* in the species heading. On p. 404, he cites *P. Opilio* (#1121) as the single species of the genus occurring in Carniola.

In the 12th edition of the *Systema Naturae*, Carolus Linnaeus (1767) once again treated the “Insecta Aptera” (starting on p. 1012). He listed the genus *Acarus* (starting on p. 1022) with 35 species, but overlooking Scopoli’s species. He also listed his genus *Phalangium* now with nine other species, only three of which are Opiliones (the others include even marine arthropods), introducing two new species: *Phalangium cornutum* (on p. 1028 which is universally regarded today as the male of his own *Phalangium opilio*) and *Phalangium tricarinatum* (on p. 1029, the second species of today’s Dyspnoi, which later would be included in *Trogulus* Latreille 1802). Among the six non-Opiliones species are *Phalangium cancroides* (transferred by Linnaeus from *Acarus*) and *Phalangium Acaroides* (new name, seemingly intended as a replacement for *Acarus scorpioides* Linnaeus 1758), both currently in Pseudoscorpiones; *Phalangium grossipes* and *Phalangium Balaenarum* (currently in Pycnogonida), and the two species of Amblypygi and Thelyphonida cited in 1758.

The German zoologist Peter Pallas published in his finely illustrated *Spicilegia Zoologica* a section on *Phalangium* (1772), but added no genuine Opiliones. He redescribed and illustrated the Linnean Amblypygi and Thelyphonida de-

Table 3.—Checklist of the valid species in the order Opiliones up to 1804. The species later proved extraneous to the Opiliones and the unrecognizable species are not included. The current suborders of Opiliones are included for familiarity. Some of the combinations of Herbst's *Opilio* species under *Phalangium* did not exist in 1804 and are included here as if done by a fictional author who prepared a checklist with the then available knowledge. The decision to consider *Opilio* as a genus separate from *Phalangium* was taken only much later.

Species name as if used in 1804	Current combination and/or synonymy
Cyphophthalmi	
<i>Siro rubens</i> Latreille, 1802	<i>Siro rubens</i> Latreille 1802
Dyspnoi	
<i>Phalangium bimaculatum</i> Fabricius, 1775 (= <i>Phalangium lugubre</i> Müller 1776)	<i>Nemastoma bimaculatum</i> (Fabricius, 1775)
<i>Phalangium chrysomelas</i> Hermann, 1804	<i>Mitostoma chrysomelas chrysomelas</i> (Hermann, 1804)
<i>Phalangium hellwigii</i> Panzer, 1794	<i>Ischyropsalis hellwigii hellwigii</i> Panzer, 1794
<i>Phalangium melanotarsum</i> Hermann, 1804	Junior synonym of <i>Trogulus nepaeformis</i> (Scopoli, 1763)
<i>Phalangium scabrum</i> (Herbst, 1799)	<i>Dicranolasma scabrum</i> (Herbst, 1799)
<i>Trogulus nepaeformis</i> (Scopoli, 1763) (= <i>Phalangium tricarinatum</i> Linnaeus, 1767; = <i>Phalangium rostratum</i> Latreille, 1798)	<i>Trogulus nepaeformis</i> (Scopoli, 1763)
Eupnoi	
<i>Phalangium alpinum</i> (Herbst, 1799)	Junior synonym of <i>Mitopus morio</i> (Fabricius 1779)
<i>Phalangium annulatum</i> Olivier, 1792	<i>Gyas annulatus</i> (Olivier, 1792)
<i>Phalangium bicolor</i> Fabricius, 1793	Junior synonym of <i>Gyas annulatus</i> (Olivier, 1792)
<i>Phalangium cornigerum</i> Hermann, 1804	Junior synonym of <i>Rilaena triangularis</i> (Herbst 1799)
<i>Phalangium diadema</i> Fabricius, 1779 (= <i>Phalangium coronatum</i> Fabricius, 1779)	<i>Megabunus diadema</i> (Fabricius 1779)
<i>Phalangium fasciatum</i> (Herbst, 1798)	Junior synonym of <i>Leiobunum rotundum</i> (Latreille, 1798)
<i>Phalangium grossipes</i> (Herbst, 1799)	Junior synonym of <i>Mitopus morio</i> (Fabricius 1779)
<i>Phalangium hemisphaericum</i> (Herbst, 1799)	Junior synonym of <i>Leiobunum rotundum</i> (Latreille, 1798)
<i>Phalangium hispidum</i> (Herbst, 1798)	Junior synonym of <i>Lacinius horridus</i> (Panzer 1794)
<i>Phalangium histrix</i> Latreille, 1798	Junior synonym of <i>Odiellus spinosus</i> (Bosc, 1792)
<i>Phalangium horridum</i> Panzer, 1794	<i>Lacinius horridus</i> (Panzer 1794)
<i>Phalangium longipes</i> (Herbst, 1799)	Junior synonym of <i>Opilio parietinus</i> (de Geer 1778)
<i>Phalangium morio</i> Fabricius, 1779	<i>Mitopus morio</i> (Fabricius 1779)
<i>Phalangium opilio</i> Linnaeus, 1758 (= <i>Phalangium cornutum</i> Linnaeus, 1767)	<i>Phalangium opilio</i> Linnaeus, 1758
<i>Phalangium palliatum</i> Latreille, 1798	Junior synonym of <i>Mitopus morio</i> (Fabricius 1779)
<i>Phalangium palpinale</i> (Herbst, 1799)	<i>Lophopilio palpinalis</i> (Herbst 1799)
<i>Phalangium parietinum</i> de Geer, 1778 (revalidated)	<i>Opilio parietinus</i> (de Geer 1778)
<i>Phalangium quadridentatum</i> Cuvier, 1795	<i>Homalenotus quadridentatus</i> (Cuvier 1795)
<i>Phalangium rotundum</i> Latreille, 1798	<i>Leiobunum rotundum</i> (Latreille, 1798)
<i>Phalangium rufum</i> Hermann, 1804	Junior synonym of <i>Opilio parietinus</i> (de Geer 1778)
<i>Phalangium rupestre</i> (Herbst, 1799)	<i>Leiobunum rupestre</i> (Herbst 1799)
<i>Phalangium spinosum</i> Bosc, 1792	<i>Odiellus spinosus</i> (Bosc, 1792)
<i>Phalangium spinosum</i> (Herbst, 1799) [junior secondary homonym of <i>Phalangium spinosum</i> Bosc, 1792]	<i>Astrobus spinosus</i> (Herbst 1799)
<i>Phalangium spinulosum</i> Hermann, 1804	Junior synonym of <i>Lophopilio palpinalis</i> (Herbst 1799)
<i>Phalangium triangulare</i> (Herbst, 1799)	<i>Rilaena triangularis</i> (Herbst 1799)
<i>Phalangium urnigerum</i> Hammer in Hermann, 1804	Junior synonym of <i>Mitopus morio</i> (Fabricius 1779)

scribed under *Phalangium* and described two species of his own: *P. lunatum* (currently *Phrynychus lunatus* – Amblypygi), and *P. araneoides* (Solifugae). The type locality of *P. araneoides* is often quoted as from South Africa because of the observation by Pallas that he judged the species illustrated by botanist Johannes Burmann in “picturas Capenses” the same as his. Pallas's detailed description is based on presumably Russian material in the Saint Petersburg Museum.

The Danish entomologist Johann Christian Fabricius (1775) divided the “insects” into eight classes, of which the fifth was Unogata, including genera today grouped in Odonata, Diplopoda, Chilopoda, Acari, Araneae, and Opiliones. He (Fabricius 1775:440–441) cited six species of his genus # 137, *Phalangium* (of which three are not Opiliones: *P. grossipes*, *P. reniforme*, *P. caudatum*), including *P. opilio*, *P. cornutum*, and describing from England the new species *Phalangium bimacu-*

latum, the first of the future genus *Nemastoma* C.L. Koch 1836, which would be described only 60 years later. He ignored *Phalangium tricarinatum*.

The Danish naturalist Otto Müller (1776) published a list of the fauna of Denmark and Norway, which were then united in a single country called Denmark–Norway (including Iceland, Greenland, and the Faroe Islands). On pp. 191–192, he listed the genus *Phalangium* with nine species, of which many are unrecognizable (four Linnean extraneous species + *P. mucronatum* and two species without a binomen, # 2298 and 2299). He included # 2292 – *Phalangium opilio* and the new species # 2297 – *Phalangium lugubre*, which is the fourth described species now placed in *Dyspnoi*, and the second that would later become *Nemastoma*.

The Swedish entomologist, Baron Charles de Geer (also spelled De Geer and DeGeer) published the seventh tome of

Table 4.—Species described in *OpilioPhalangium* but which are either not Opiliones or are unrecognizable (nomina dubia). 14 species have been originally described as new *OpilioPhalangium* and 1 has been transferred from *Acarus*.

Species name	Author/Year	Status
<i>Phalangium acaroides</i>	Linnaeus, 1767	Pseudoscorpiones
<i>Phalangium araneoides</i>	Pallas, 1772	Solifugae
<i>Phalangium balaenarum</i>	Linnaeus, 1767	Pycnogonida
<i>Phalangium bilineatum</i>	Fabricius, 1779	Opiliones - unrecognizable
<i>Phalangium cancroides</i>	(Linnaeus, 1758)	Pseudoscorpiones
<i>Phalangium caudatum</i>	Linnaeus, 1758	Thelyphonida
<i>Phalangium cristatum</i>	Olivier, 1792	Opiliones - unrecognizable
<i>Phalangium grossipes</i>	Linnaeus, 1767	Pycnogonida
<i>Phalangium lunatum</i>	Pallas, 1772	Amblypygi
<i>Opilio monocanta</i>	Herbst 1798	Opiliones - unrecognizable
<i>Phalangium mucronatum</i>	Müller, 1776	Opiliones - unrecognizable
<i>Phalangium muscorum</i>	Latreille, 1798	Opiliones - unrecognizable
<i>Phalangium reniforme</i>	Linnaeus, 1758	Amblypygi
<i>Phalangium rubens</i>	Hermann, 1804	Opiliones - unrecognizable
<i>Phalangium uncatum</i>	Hermann, 1804	Opiliones - unrecognizable

an entomological compendium (1778) written in French, treating many “Insecta Aptera.” In his Treizième Classe (which included the Arachnida and some Crustacea), he listed the genus *Phalangium* as the family 89 – *Le Faucheur*. He mentioned and illustrated only two species of *Phalangium*, the first, which he called *Faucheur des murailles* (which translates as “harvestman of the walls,” while Latin *parietinus* also means “of the walls”), bearing the new binomen *Phalangium parietinum* (p. 166). It would much later become the type of *Opilio* Herbst 1798. Also, he featured as a synonym Linnaeus’s *Phalangium Opilio*. De Geer did not explain why he considered his name as valid over the original, which had 20 years of precedence. He was the first of many authors to consider *Phalangium Opilio* as a synonym of *Phalangium parietinum* and to call “*P. cornutum*” the species that is today known as *Phalangium opilio*. On p. 173, he listed Linnaeus’s *Phalangium cornutum*, remarking that this species is rare in Sweden, but abundant in the Netherlands and Germany. Notably, de Geer was the first author who did not lump other arachnid orders together with harvestmen in the genus; his use of the word *Faucheur* implies that he considered *Phalangium* to consist only of Opiliones.

Fabricius (1779:330) considered Müller’s *Phalangium lugubre* as a synonym of his own *Phalangium bimaculatum*, a synonymy that was widely accepted for two centuries, until Gruber & Martens (1968) validated both species. He also described three new Norwegian species, *Phalangium morio* which would later become the type of *Mitopus* Thorell 1876, *Phalangium Diadema* (today placed in *Megabunus* Meade 1855), and *Phalangium bilineatum* (nomen dubium). He provided the name *Phalangium coronatum* for one of Müller’s non-binominal species; this also was later considered a nomen dubium. A little later, Fabricius (1781) gave a synopsis of *Phalangium* (his genus # 139), listing ten valid species (of which five are not opilionids, basically the other arachnids of Linnaeus and Pallas). In his species # 2, he followed the synonymy proposed by de Geer, differing in the recognition of the correct order of precedence, that is, *Phalangium parietinum* as a junior synonym to *Phalangium opilio*.

The Frenchman Guillaume Olivier published an article about harvestmen in the *Encyclopédie Méthodique* (Olivier 1792). He

was the first to remove from *Phalangium* the species *caudatum*, *reniforme*, and *lunatum*, to place them in the new genus *Phrynus* (though strangely, the authority on this is often given as Lamarck 1801) and transferred *P. araneoides* to *Galeodes*. He listed a total of nine species in *Phalangium*, all of which are Opiliones. He described one new species, 1. ‘Faucheur annulaire’ = *Phalangium annulatum*, from Switzerland (which would later become the type of *Gyas* Simon 1879), recognized both Norwegian species described by Fabricius (1779), 2. ‘Faucheur morio’ and 6. ‘Faucheur diadème’ (listing *Phalangium coronatum* Fabricius as a synonym, an act ignored by later authors), followed the precedence adopted by Fabricius (1781) (i.e., *Phalangium parietinum* as junior to 3. ‘Faucheur des murailles’ = *Phalangium opilio*.) He listed also Linnaeus’ 4. ‘Faucheur cornu’ = *Phalangium cornutum*; 8. ‘Faucheur carené’ = *Phalangium carinatum*, which is only a new name (unjustified emendation) for Linnaeus’s *Phalangium tricarinatum*; and 9. ‘Faucheur bimaculé’ = *Phalangium bimaculatum* Fabricius. In his list, there are finally 5. ‘Faucheur bilinéé’ = *Phalangium bilineatum* Fabricius (today a species inquirenda) from Norway and added a new species from Paris, 7. ‘Faucheur en-crête’ = *Phalangium cristatum*, which is also a species inquirenda.

In France, Louis Bosc (1792) described, without mentioning other species, a *Phalangium spinosum*, from around Paris, which today is the type of *Odiellus* Roewer 1923.

Fabricius (1793) recognized nine species of *Phalangium*, among them the Russian solpugid *Phalangium araneoides* Pallas, already removed to *Galeodes* by Olivier, and the nomen dubium *P. bilineatum*. Of the seven remnant species, he described one as new, *Phalangium bicolor* from Switzerland (later synonymized with Olivier’s species *Phalangium annulatum*) and listed the three species of Linnaeus (keeping Olivier’s unjustified emendation *carinatum*) and the two Norwegian species described earlier by himself (but spelling *bimaculatum* as *2maculatum*). Fabricius proposed a synonymy of an African solpugid with *Phalangium araneoides*. It seems that Fabricius was following Pallas in accepting an extremely wide species concept and distribution, producing an even less probable synonymy. A few years later, Fabricius (1798) cited the more accepted type locality for *Phalangium araneoides* as “Habitat in Russia australi.”

The German Georg Panzer did not mention any other *Phalangium* when he described the new species *Phalangium Hellwigii*, from Germany (1794, 8:13), today placed in *Ischyropsalis* C.L. Koch 1839; and *Phalangium horridum* (1794, 17:21), today in *Lacinius* Thorell 1876. Cuvier (1795) described the new species *Phalangium 4-dentatum* from France. Later this species was made the type of *Homalenotus* C.L.Koch 1839. The great French zoologist Pierre Latreille published (1796) the new genus *Siro*, without any included species, failing thus to comply with ICZN art. 12.2.5.; therefore *Siro* Latreille 1796 is an unavailable name, the first species indicated being described only in 1802 (see below).

The work of the German entomologist Johann Herbst (1798–1799) brought a major change. Herbst (1798:1) presented the state of the art for the genus *Phalangium*, created the new generic name *Opilio* to be used as a replacement for *Phalangium* and provided a long-winded explanation for doing so. Basically, he regarded the genus *Phalangium* as too heterogeneous and perhaps also the usage (*Phalangium* is a Latin word used by the Roman naturalist Pliny and many other pre-Linnaean authors for spiders regarded as “venomous”) very unfortunate. Rod Crawford (pers. comm.) noted: “Practically every author before Linnaeus had used that name for actual spiders that were considered dangerously venomous. Linnaeus, primarily a botanist, ignored previous usage, much to Herbst’s annoyance. Herbst had a very similar problem with the Fabricius amblypygid genus *Tarantula* (which most people in his day knew as the vernacular name of a wolf spider).” This could be regarded as an unjustified nomen novum. Contemporary authors ignored the name *Opilio* and continued to use *Phalangium*. Only much later was *Opilio* revived by Koch (1848). Simon (1879), in spite of regarding *Opilio* as a junior synonym of *Phalangium*, explicitly fixed *Phalangium parietinum* as the type species of *Opilio*, as noted by Crawford (1992). Herbst provided a list of the species of *Opilio* with 23 (12 + 11) species, long diagnoses, and profusely illustrated color plates. Among the contents may be cited: 1) the defense of de Geer’s precedence of *P. parietinum* vs. *P. opilio* against Fabricius and Olivier; 2) the description of the first tropical harvestman, *O. monocanta* (spelled *monocantha* on plate) from “Ostindien” [SE Asia] — this species obviously belongs in Gagrellinae as stated by Roewer (1923:1088), but Herbst’s description is insufficient to determine the species, and it should be listed as species inquirenda; 3) description of nine new species from Germany, one from Hungary (*Opilio scaber*, nominally as from historical Hungary, now Romania) and one from France. 180 years later, Martens (1978:156) concluded that *Opilio scaber* came from the Carpathian region, restricting the locus typicus to Sibiu, Romania. Herbst’s list is fairly complete, omitting the two synonymized species *P. opilio* and *P. lugubre*, the two species described by Bosc and Olivier in 1792, *P. annulatum* and *P. spinosum* and, as all previous authors did, *Acarus nepaeformis* and the genus *Siro*, which were not then recognized as opilionids.

Simultaneously with the work of Herbst, Pierre Latreille published a synopsis of the Opiliones (Latreille 1798), so that the two works do not mention each other. Latreille cites 10 species of *Phalangium*, of which five were new: *Phalangium rotundum*, which later became the type of *Leiobunum*; *P.*

histris, today in *Odiellus*; *P. palliatum* (a synonym of *P. morio*); *P. muscorum*; unidentifiable and *P. rostratum*; which later was transferred to *Trogulus*. He appears to have explicitly chosen a new alternative name to an existing species, *P. spinosum* for Cuvier’s *P. quadridentatum*, probably because he regarded the name as inadequate. He is the first to notice that *P. cornutum* and *P. opilio* are the male and female, respectively, of the same species; he correctly gave *P. opilio* priority, but did not mention *P. parietinum*, which he presumably considered a synonym.

Within a few months Latreille published two works on Opiliones, the first (1802a) repeating his 1798 paper, with a list of the *Phalangium* occurring in France, and the other (1802b) with an outline of the four genera of his new family Phalangita, considerably expanding the group with the addition of the new genera *Trogulus* (for the first time bringing *Acarus nepaeformis* Scopoli 1763 into Opiliones together with his own *Phalangium rostratum* Latreille 1798) and *Siro* (the first formal description of a cyphophthalm species, *Siro rubens*, making the genus *Siro* available). Also included was one non-harvestman, the solpugid *Galeodes* Olivier. In this paper, typified names of families are introduced between Linnaean orders and genera, being a very early example of this usage. This paper also marks the fixation of the spelling of the name *nepaeformis* vs. *nepeformis*, by the principle of the first reviser. ICZN Art. 24.2.3. mandates that the first reviser must “have cited them **together** and to have **selected** one spelling as correct”; however, Latreille’s choice has been universally followed and for the sake of stability, it is here recognized as a fixation of correct spelling.

In Buffon’s Natural History, Latreille (1804) provided a list of 12 species of *Phalangium*, with some tentative synonymies. He uncharacteristically (although correctly) uses for the first time Cuvier’s name *P. quadridentatum*, listing his own species *P. spinosum* as a junior synonym. He also equates, although tentatively, his *P. palliatum* with Fabricius’ *P. morio*, *P. annulatum* Olivier 1792 = *P. bicolor* Fabricius 1793, *Opilio hispidus* Herbst 1798 = *P. horridum* Panzer 1794. When treating the genus *Trogulus*, he synonymized his own *Phalangium rostratum* and *Phalangium tricaratum* Linnaeus (which he calls “carinatum” like many other authors) with *Acarus nepaeformis* Scopoli 1763, which he chose to call neither *nepeformis* nor *nepaeformis*, but a third spelling *nepiformis*, corresponding to the spelling of the modern sound of “nepaeformis.” In this work, Latreille (1804:329) also mentions the Cyphophthalmi. But his text is highly misleading, giving the impression that *Siro rubens* is a new species, although it had been properly described by himself two years before. Follows his text: “Je le nommerai ciron rougeâtre (*Siro rubens*). Je ne crois pas qu’il ait été décrit.” which translates as: “I will call it red mite (*Siro rubens*). I do not think it has been described.” Perhaps this anomaly was due to Sonnini using a version Latreille had submitted to him years earlier.

The period considered here ends with the Mémoire Aptérologique of the deceased young Frenchman Jean-Frédéric Hermann (1804) posthumously published by Hammer. He heavily criticized the heterogeneous composition of *Phalangium* sensu Linnaeus and followed Olivier in removing all extraneous species, leaving only those corresponding to the vernacular name *faucheur*. He did not use Latreille’s name

Phalangita, including *Phalangium* in the “family” Holarctica. He considered *P. parietinum* to be a synonym of *P. opilio*, and *P. cornutum* a good species, like de Geer and Fabricius, *contra* Latreille. He described nine new species, including 1) *Phalangium cornigerum*, now under synonymy in *Rilaena*; 2) *Phalangium melanotarsum*, now under synonymy in *Trogulus*; 3) *P. rubens* (spelled like this in the description, p. 105, but as *Phalangium rubicundum* in the index, on p. 97) — this species is not the same as Latreille’s *Siro rubens*, has never been cited again, and it is unrecognizable beyond clearly belonging to Eupnoi; 4) *Phalangium uncatum*, unrecognizable (immature); 5) *Phalangium spinulosum*, now under synonymy in *Lophopilio*; 6) *Phalangium chrysomelas*, today in *Mitostoma*; 7) *P. rufum*, now under synonymy in *Opilio*; 8) a *Phalangium annulatum*, based on scattered drawings and inserted as new by the editor, never cited again, which either is the same-named species by Olivier or a homonym; and 9) *P. urnigerum*, now under synonymy in *Mitopus*. “In the same publication Hermann described two species, *Acarus testudinarius* (pp. 80–82, Pl. IX, fig. 1) and *Acarus crassipes* (p. 80) that were erroneously interpreted by Lamarck (1838:95) as belonging to the genus *Siro*.” (Giribet 2000).

Thus, at the beginning of the 19th century, what are today Eupnoi, Dyspnoi, and Cyphophthalmi, as well as what would later become the main European genera, had already been recognized, and there was a nucleus of 15–20 species of *Phalangium* universally recognized among the taxonomists. The non-Opiliones had already been purged from the list. The immediate post-Linnean generation of entomologists was gradually being replaced as its beacons died off: de Geer (1778), Müller (1784), Hermann (1794), Herbst (1807), Fabricius (1808), Pallas (1811), Olivier (1814), Bosc (1828), with only Latreille enduring another three decades. The order Opiliones had not yet received this name, and members from the tropics were virtually unknown. That, however, was about to change with the travels of the scientific French ships around the world (1817–1820) and the Brazilian expedition of Spix and von Martius (1817–1820).

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LITERATURE CITED

- Crawford, R.L. 1992. Catalogue of the genera and type species of the harvestman superfamily Phalangioidea (Arachnida). *Burke Museum Contributions in Anthropology and Natural History* 8:1–60.
- Fabricius, J.C. 1798. *Supplementum Entomologiae Systematicae*. Proft et Storch, Hafniae [Copenhagen].
- Giribet, G. 2000. Catalogue of the Cyphophthalmi of the World (Arachnida, Opiliones). *Revista Ibérica de Aracnología* 2:49–76.
- Giribet, G., M. Rambla, S. Carranza, J. Bagnà, M. Riutort & C. Ribera. 1999. Phylogeny of the arachnid order Opiliones (Arthropoda) inferred from combined approach of compile 18S and partial 28S ribosomal DNA sequences and morphology. *Molecular Phylogenetics and Evolution* 11:296–307.
- Giribet, G., G.D. Edgecombe, W.C. Wheeler & C. Babbitt. 2002. Phylogeny of the Arachnida and Opiliones: a combined approach using morphological and molecular sequence data. *Cladistics* 18:5–70.
- Giribet, G., L. Vogt, A. Pérez-G., P. Sharma & A.B. Kury. 2010. A multilocus approach to harvestman (Arachnida: Opiliones) phylogeny with emphasis on biogeography and the systematics of Laniatores. *Cladistics* 26:408–437.
- Gruber, J. & J. Martens. 1968. *Morphologie, Systematik und Ökologie der Gattung Nemastoma* C.L. Koch (s.str.) (Opiliones, Nemastomatidae). *Senckenbergiana biologica* 49:137–172.
- International Commission on Zoological Nomenclature [ICZN]. 1999. *International Code of Zoological Nomenclature*. Fourth Edition. International Trust for Zoological Nomenclature, London. 335 pp.
- Koch, C.L. 1848. *Die Arachniden getreu nach der Natur abgebildet und beschrieben*. Volume 15. J.L. Lotzbeck, Nürnberg.
- Martens, J. 1978. *Spinnentiere, Arachnida: Weberknechte, Opiliones*. In *Die Tierwelt Deutschlands*. (K. Senglaub, H.J. Hannemann & H. Schumann, eds.). Volume 64, pp. 1–464. Gustav Fischer, Jena.
- Roewer, C.F. 1923. *Die Weberknechte der Erde*. Systematische Bearbeitung der bisher bekannten Opiliones. Gustav Fischer, Jena.
- Simon, E. 1879. *Les Arachnides de France*. Tome 7. Contenant les ordres des Chernetes, Scorpiones et Opiliones. Librairie Encyclopédique de Roret, Paris. Pp. 1–332, pl. 17–24 [Opiliones pp. 116–332, pl. 21–24].

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