



Establishing the publication date of Strobl's "Die Dipteren von Steiermark. II. Theil" to improve stability of genus-group names in Scathophagidae (Diptera)

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Abstract

In *A catalog of the Diptera of America north of Mexico*, J.R. Vockeroth asserted that P. Gabriel Strobl's catalog "Die Dipteren von Steiermark. II. Theil" unexpectedly published manuscript versions of several genus-group names in Scathophagidae (Insecta, Diptera) prior to their formal proposal by Theodor Becker in "Dipterologische Studien. I. Scatomyzidae." This reversal of priority prompted controversial changes to nomenclature in the *Catalog*, affecting the genus-group names *Parallelomma*, *Amaurosoma*, *Nanna*, *Coniosternum*, and *Conisternum*. Through examination of contemporary bibliographies, it is shown that "Die Dipteren von Steiermark. II. Theil" was in fact published as a reprint by March 1894 ahead of the full volume of the journal, giving it priority over "Dipterologische Studien. I. Scatomyzidae" (published in May 1894) and supporting Vockeroth's nomenclature. Under the *International Code of Zoological Nomenclature*, the new names made available in Strobl's work should be attributed to Strobl rather than to Becker.

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Introduction

There has been much confusion and disagreement about the nomenclatural priority for genus-group names in Scathophagidae (Diptera) published in two separate 1894 works. Theodor Becker's (1894) "Dipterologische Studien. I. Scatomyzidae," published in Band 39 of *Berliner Entomologische Zeitschrift* (hereafter abbreviated as "the *Zeitschrift*"), was a comprehensive revision of the family "Scatomyzidae" (i.e., Scathophagidae). This monograph formally introduced two new nominal "stirps" (subfamilies), 19 new nominal genera, and 26 new nominal species. For each genus, new and pre-existing, a type species was duly stated.

The same year, P. Gabriel Strobl (1894) published "Die Dipteren von Steiermark. II. Theil," the second part of a faunistic catalog of Styrian Diptera, in Theil 30 of *Mittheilungen des Naturwissenschaftlichen Vereines für Steiermark* (hereafter abbreviated as "the *Mittheilungen*"). This part of the catalog included the groups "Cordylurinae" and "Scatophaginae," together equivalent to Becker's (1894) Scatomyzidae. Strobl's (1894) work drew on Becker's revision and used several of his new scientific names, albeit occasionally with alternative spellings (e.g., *Kochlearium* vs *Cochliarium*), attributing them to Becker. A few names attributed to Becker by Strobl (e.g., *Nanna*) are entirely absent from Becker's paper, with alternative ones (e.g., *Amaurosoma*) in their place.

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The timeline is such that both works must have been composed concurrently. It is clear from Strobl's statements that he was working from an earlier, unpublished version of Becker's revision. In a note at the beginning of "Gruppe 1. Cordylurinae," Strobl (1894: 77) wrote, "Alle meine Arten der 1. und 2. Gruppe wurden von dem neuesten Bearbeiter derselben, Herrn Theodor Becker, revidirt, resp. determinirt; die von ihm neu aufgestellten Arten führe ich bloß als neu unter Becker's Namen an, die neuen Gattungen vorläufig als Untergattungen." ["All of my species in the 1st and 2nd group were revised or determined by the most recent reviser, Mr. Theodor Becker; I only list the new species he created as new under Becker's name, and the new genera provisionally as subgenera."] Later, Strobl (1898: 254) lamented, "auffallender Weise hat er manche mir und Herrn Mik in litt. gegebene Namen durch ganz andere ersetzt, daher mehrere Änderungen in meiner Arbeit nöthig wurden." ["remarkably, he [Becker] replaced some of the in litt. names given to me and Mr. Mik with completely different ones, which meant that several changes were necessary in my work."]

In the dipterological literature (e.g., Strobl 1898, 1910; Coquillett 1910; Malloch 1919, 1931; Ségué 1952), the "finalized" forms of Becker's names were generally preferred over the manuscript versions used by Strobl (1894), and Becker's type designations for the new genera were treated as valid. This changed with the publication of *A catalog of the Diptera of America north of Mexico* in 1965. In the *Catalog's* section on "Scatophaginae" (as a subfamily of Anthomyiidae), Vockeroth (1965: 829, 837) asserted that Strobl (1894) was published first, making versions of Becker's new names available before their formal proposal later that year. This prompted Vockeroth to replace *Parallelomma* Becker, 1894 with *Cordilurina* James, 1955; *Chylizosoma* Hendel, 1924 with *Parallelomma* Becker in Strobl, 1894; *Amaurosoma* Becker, 1894 with *Nanna* Becker in Strobl, 1894; and *Coniosternum* Becker, 1894 with *Conisternum* Becker in Strobl, 1894.

Presumably due to the restrictions of the catalog format, Vockeroth did not explain how he came to the conclusion that Strobl (1894) has priority over Becker (1894). Indeed, in the *Catalog's* bibliography, both works are simply listed as having

Table 1. Various interpretations of the status of genus-group names in Scathophagidae attributed to Becker by Strobl (1894).

	Vockeroth (1965)	Michelsen (2001)	Šifner (2008)
<i>Conisternum</i>	AUTHOR CITATION: Becker in Strobl, 1894 TYPE SPECIES: <i>Cordilura obscura</i> Fallén, 1819 STATUS: Available, invalid; junior subjective synonym of <i>Scathophaga</i> Meigen, 1803	AUTHOR CITATION: Strobl, 1894 TYPE SPECIES: <i>Cordilura obscura</i> Fallén, 1819 STATUS: Available, valid; senior objective synonym of <i>Coniosternum</i> Becker, 1894	AUTHOR CITATION: Not given TYPE SPECIES: Not applicable STATUS: Unavailable; incorrect subsequent spelling of <i>Coniosternum</i> Becker, 1894
<i>Kochlearium</i>	Not treated	AUTHOR CITATION: Strobl, 1894 TYPE SPECIES: None STATUS: Unavailable, no available species originally included; treated under <i>Cochliarium</i> Becker, 1894	Not treated
<i>Megalophthalmus</i>	Not treated	AUTHOR CITATION: Strobl, 1894 TYPE SPECIES: None STATUS: Unavailable, no type species designated; treated under <i>Megaphthalma</i> Becker, 1894	Not treated
<i>Nanna</i>	AUTHOR CITATION: Becker in Strobl, 1894 TYPE SPECIES: <i>Cordilura flavipes</i> Fallén, 1819 STATUS: Available, valid; senior objective synonym of <i>Amaurosoma</i> Becker, 1894	AUTHOR CITATION: Strobl, 1894 TYPE SPECIES: <i>Cordilura flavipes</i> Fallén, 1819 STATUS: AVAILABLE, valid; senior objective synonym of <i>Amaurosoma</i> Becker, 1894	AUTHOR CITATION: Becker in Strobl, 1894 TYPE SPECIES: <i>Cordilura flavipes</i> Fallén, 1819 STATUS: AVAILABLE, invalid; junior objective synonym of <i>Amaurosoma</i> Becker, 1894
<i>Parallelomma</i>	AUTHOR CITATION: Becker in Strobl, 1894 TYPE SPECIES: <i>Cordilura vittata</i> Meigen, 1826 STATUS: Available, valid; senior subjective synonym of <i>Chylizosoma</i> Hendel, 1924; senior homonym of <i>Parallelomma</i> Becker, 1894	AUTHOR CITATION: Strobl, 1894 TYPE SPECIES: <i>Cordilura vittata</i> Meigen, 1826 STATUS: Available, valid; senior subjective synonym of <i>Chylizosoma</i> Hendel, 1924;	AUTHOR CITATION: Becker, 1894 TYPE SPECIES: <i>Cordilura albipes</i> Fallén, 1819 STATUS: Available, valid; senior subjective synonym of <i>Cordilurina</i> James, 1955

been published in 1894 (Coulson et al. 1965). This has led to ongoing doubt about the appropriateness of the nomenclatural changes he proposed. Many workers have accepted Vockeroth's (1965) interpretation of these two papers (e.g., Gorodkov 1986; Bernasconi et al. 2000; Kutty et al. 2007; Ozerov 2010a; Kahanpää & Haarto 2014; Ozerov & Krivosheina 2015, 2023), but others have continued to give priority to Becker's (1894) names and typifications (e.g., Šifner 1975, 2003, 2008; Püchel 1999; Bernasconi & Šifner 2021; Angell & Šifner 2024).

Michelsen (2001) and Šifner (2003), both starting from the premise that publication order of the two works is unknown, reached opposite conclusions about generic nomenclature in Scathophagidae (Table 1). Both works also raised the question of proper attribution for genus-group names introduced in Strobl (1894) and attributed by him to Becker.

In this work, I attempt to clarify and stabilize the nomenclature of genera in the family Scathophagidae by establishing accurate publication dates for Becker (1894) and Strobl (1894). I also consider the question of authorship of names that were attributed to Becker by Strobl (1894) under the *International Code of Zoological Nomenclature* (International Commission on Zoological Nomenclature 1999) (hereafter, "the Code"), an issue which parallels other similar cases in dipterology (Pont 1995; Steenis 2023).

Publication date of "Dipterologische Studien. I. Scatomyzidae"

Michelsen (2001) summarized the publication date information available from each journal. According to the cover page for Volume 39 of the *Zeitschrift*, the first issue, in which Becker (1894) appeared, was published by the end of May 1894. Therefore, the date of publication under Article 21.3.2 of the Code is 31 May 1894, unless evidence for an earlier existence is found. I have not found such evidence (Table 2), so I consider 31 May 1894 to be the date "Dipterologische Studien. I. Scatomyzidae" was published.

Publication date of "Die Dipteren von Steiermark. II. Theil"

As described by Michelsen (2001), the front matter of Theil 30 of the *Mittheilungen* refers to the Society's balance sheets being audited on 2 March 1894, meaning the journal was published sometime after that. Therefore, there is a period of approximately three months where Strobl (1894) could have been published, but Becker (1894) definitely had not been yet. However, the actual sequence of publication cannot be known from this information alone. In fact, without a month of publication, the publication date of the *Mittheilungen* is to be treated as 31 December 1894 under Article 21.3.2 of the Code, unless external evidence indicating an earlier date is available.

Theil 30 of the *Mittheilungen* appears to have been published in the second half of 1894, with *Naturae Novitates* and *Zoologischer Anzeiger* reporting its receipt in September of that year (Table 2), after the publication of Becker (1894). However, several articles from the volume were also printed on their own as reprints or "separates," and these appeared earlier. For example, *Zoologischer Anzeiger* (Bd. 17, Litteratur) indicated they had received the bibliographic section of the *Mittheilungen*, "Zoologische Litteratur der Steiermark 1893" (on p. 293) and the article "*Vipera ammodytes* in Steiermark" (on p. 336) by 26 July 1894, two months before the *Mittheilungen* itself. *Wiener Entomologische Zeitung* (Jahrg. 13, Heft 7, p. 229) refers to "Zoologische Litteratur" explicitly as a "Separat-Abdruck aus den Mittheil. des Naturwiss. Vereines für Steiermark", received by 30 August 1894.

Similarly, there is evidence of the dissemination of Strobl's (1894) work as a reprint ahead of the publication of the full volume of the *Mittheilungen* (Table 2). *Naturae Novitates* (Band 16, No. 6, p. 157) announced the publication of "Die Dipteren von Steiermark. II. Theil" in March 1894. Likewise, *Wiener entomologische Zeitung* (Jahrgang 13, Heft 4, p. 150) announced a "Separatabdruck" of Strobl's catalog on 20 April 1894. I have found no similar evidence of advance publication of Becker (1894) as a reprint. Thus, under the Code, Strobl (1894) is

Table 2. Dates for which three 1894 publications related to Scathophagidae were reported in the bibliographies of contemporary German-language journals.
The earliest reference(s) to each publication are shown in **boldface**.

Bibliographic source	<i>Berliner Entomologische Zeitschrift</i> Band 39, Heft 1		<i>Mittheilungen des Naturwissenschaftlichen Vereines für Steiermark</i> Theil 30		“Die Dipteren von Steiermark. II. Theil” Reprint	
	Issue & page of appearance	Date	Issue & page of appearance	Date	Issue & page of appearance	Date
<i>Naturae Novitates</i>	Bd. 16, No. 13: p. 321	July 1894 [first half]	Bd. 16, No. 18: 426	September 1894 [second half]	Bd. 16, No. 6: p. 157	March 1894 [second half]
<i>Zoologischer Anzeiger</i>	Bd. 17, Litt.: p. 264	28 June 1894	Bd. 17, Litt.: p. 405	September 1894*	-	-
<i>Zoologisches Centralblatt</i>	Jahrgang 1, No. 15: p. 560	26 August 1894	Jahrgang 1, No. 21/23: p. 800	7 January 1895†	-	-
<i>Wiener entomologische Zeitung</i>	Jahrgang 13, Heft 8: p. 257	31 October 1894	—	—	Jahrgang 13, Heft 4: p. 150	20 April 1894
<i>Archiv für Naturgeschichte</i>	Jahrgang 61, Band 2, Heft 2: p. 376	April 1897	Jahrgang 61, Band 2, Heft 2: p. 420	April 1897	-	-

**Zoologischer Anzeiger* listed “Zoologische Litteratur der Steiermark 1893” and “(*Vipera ammodytes* in Steiermark)” as received by 26 July 1894 (Bd. 17, Litteratur, pp. 293, 336). The *Mittheilungen* itself is listed later (p. 405) under the heading “September und October” accompanied by the note “erh.[alten] Sept”.

†*Zoologisches Centralblatt* listed “Zoologische Litteratur der Steiermark 1893” as received by 24 September 1894 (Jahrg. 1, No. 16, p. 623), and “(*Vipera ammodytes* in Steiermark)” by 22 October 1894 (Jahrg. 1, No. 17/18, p. 721). The remainder of the *Mittheilungen*, including “Die Dipteren von Steiermark” is listed later, in No. 21/23 (p. 800), published 7 January 1895.

considered published on 31 March 1894, prior to the publication of Becker (1894) on 31 May 1894 (as established above), supporting the nomenclatural changes proposed by Vockeroth (1965).

Attribution of genus-group names introduced by Strobl

Strobl (1894) attributed the genus-group names *Conisternum*, *Kochlearium*, *Megalophthalmus*, *Nanna*, and *Parallelomma* to Becker, so Vockeroth (1965) listed *Conisternum*, *Nanna*, and *Parallelomma* as having been authored by “Becker in Strobl” (Table 1). This authorship citation was followed by subsequent workers (e.g., Gorodkov 1986; Chandler 1998; Püchel 1999). However, Michelsen (2001: 324) advocated for attributing the names introduced in Strobl’s paper to Strobl alone, writing, “it is perfectly clear that [Strobl] alone was responsible for the use of Becker’s *in litt.* names ... the authorship of all these names should be attributed to Strobl alone.” Michelsen’s recommendation has sometimes been followed (e.g., Ozerov 2010b; Kahanpää & Haarto 2014; Ozerov & Krivosheina 2015) but not uniformly (e.g., Šifner 2003, 2008; Ozerov 2010a; Iwasa 2024).

The current rules of the *Code* are rather stringent regarding attribution, stating that nominal authorship can be assigned to someone other than the author of a publication only “if it is clear from the contents that some person other than an author of the work is alone responsible both for the name or act and for satisfying the criteria of availability other than actual publication” (Article 50.1.1). Both historical and contemporary attempts to give authorship to a person other than the authors of a publication have frequently failed to meet this standard (Steenis 2023). Accordingly, it is not uncommon that a name is intended to be attributed to someone other than the author of a publication, but because either the intended author was not responsible for the name, the intended author was not responsible for satisfying the criteria of availability, or their contribution was not made clear in the contents of the work, the proper author of the name under the *Code* is instead the author of the publication (Steenis 2023).

From Strobl’s (1894: 74) note referring to the “new species” and “new genera” created by the “recent reviser, Mr. Theodor Becker,” it is clear that Becker was responsible for the names Strobl attributed to him, even when they differ from the ones eventually published in Becker’s (1894) monograph. Did Becker also satisfy the criteria of availability for the new genus-group names in Strobl (1894)? In the case of a descriptive work—such as Meigen (1822), discussed in detail by Steenis (2023)—authorship can be assigned to a person other than the author of the work when the description is clearly attributed to someone else (see also Pont 1995). However, “Die Dipteren von Steiermark. II. Theil” is a purely faunistic catalog, with no descriptive content. The genus-group names introduced therein (excluding “*Kochlearium*”, which is a *nomen nudum*) are made available under the *Code* not from a description, but through an “indication,” in the form of “the use of one or more available specific names in combination with it, or clearly included under it” (Article 12.2.5).

Strobl used his own taxonomic judgment in deciding to use Becker’s names as valid in his catalog, explicitly stating that he had chosen to treat them not as genera but as subgenera. Furthermore, Becker (1894) placed *Parallelomma* in the stirps *Cordilurinae* Macquart, 1835 (as “*Cordylurinae*”) and placed *Cleigastra* Macquart, 1835 in *Cleigastrinae* Becker, 1894 (as “*Clidogastra*” and “*Clidogastrinae*”), but, in contrast, Strobl (1894) treated *Parallelomma* as a subgenus of *Cleigastra* and not of *Cordilura*. In the same vein, Strobl’s (1894) use of species in combination with the genera differs slightly from that of Becker (1894). Strobl’s concept of *Parallelomma* excluded

Becker’s (1894) type species, *Cordilura albipes* Fallén, 1819, which Strobl placed instead in *Cordilura sensu stricto*. Whether these additional taxonomic idiosyncrasies have their roots in an in-progress version of Becker’s revision or in Strobl’s personal judgment may be impossible to determine.

Nevertheless, *Conisternum*, *Megalophthalmus*, *Nanna*, and *Parallelomma* are all essentially Becker’s manuscript names made available by Strobl through his publication of them in his catalog. The *Code* is not explicit about what it means for someone to be “responsible” for the use of an available species name under a new genus-group name, but no excerpts from Becker’s unpublished revision appear in Strobl (1894). It is not “clear from the contents” of the work that Becker alone satisfied this criterion, as required by Article 50.1.1. Instead, the evidence presented above indicates that Strobl bears at least some of the responsibility. Therefore, although Strobl credited these names to Becker, I am in agreement with Michelsen (2001) that Article 50.1.1 does not apply, and these four nominal genera must be attributed to Strobl, 1894 rather than to “Becker in Strobl.”

Summary of genus-group names attributed to Becker by Strobl (1894)

The format of this list is adapted from that used by Evenhuis et al. (2010). Boldface is used to indicate genus-group names considered taxonomically valid, italics to indicate available but invalid names (i.e., junior homonyms or synonyms), and square brackets to indicate unavailable names. Ozerov & Krivosheina (2016, 2023) recently proposed synonymies affecting *Nanna* and *Parallelomma*, which have not yet been widely accepted. I base the “Current Status” of each genus-group name on the more conventional taxonomy used by Kahanpää & Haarto (2014), but note differences in the taxonomy of Ozerov & Krivosheina (2023) in the Remarks, when applicable.

***Conisternum* Strobl, 1894: 79.**

ORIGINALLY INCLUDED SPECIES: *Cordilura obscura* Fallén, 1819; “*Conisternum tintinerve*” [*nomen nudum*, see Michelsen (2001)].

TYPE SPECIES: *Cordilura obscura* Fallén, 1819, by monotypy.

CURRENT STATUS: Valid genus [*teste* Kahanpää & Haarto (2014: 349)].

REMARKS: Senior objective synonym of *Coniosternum* Becker, 1894 (type genus: *Cordilura obscura* Fallén, 1819, by original designation). Treated as a junior subjective synonym of *Scathophaga* Meigen, 1803 [type genus: *Musca merdaria* Fabricius, 1794 (= *Musca stercoraria* Linnaeus, 1758)] by Ozerov & Krivosheina (2023).

[*Kochlearium*] Strobl, 1894: 79.

ORIGINALLY INCLUDED SPECIES: “*Kochlearium lasiostoma*” [*nomen nudum*, see Michelsen (2001)].

CURRENT STATUS: Unavailable, as the name of the only included species is unavailable.

REMARKS: Treated under *Cochliarium* Becker, 1894 (= *Gimnomera* Rondani, 1866).

***Megalophthalmus* Strobl, 1894: 77** [as a subgenus of *Cordilura* Fallén, 1810 (as “*Cordylura*)].

ORIGINALLY INCLUDED SPECIES: *Cordilura unilineata* Zetterstedt, 1838; *Cordilura pallida* Fallén, 1819.

TYPE SPECIES: *Cordilura unilineata* Zetterstedt, 1838, by subsequent designation (Ozerov 2009: 421).

CURRENT STATUS: Preoccupied by Leach, 1830 (Crustacea); senior (but invalid) objective synonym of *Megaphthalmoides* Ringdahl, 1936 (type species: *Cordilura unilineata* Zetterstedt, 1838, by original designation) [*teste* Ozerov (2009: 421)].

REMARKS: *Megaphthalmoides* is treated either as a valid genus (e.g., Kahanpää & Haarto 2014; Bernasconi & Šifner 2021) or as a junior synonym of *Megaphthalma* Becker, 1894 (type species: *Cordilura pallida* Fallén, 1819, by original designation) (Ozerov & Krivosheina 2023).

Nanna Strobl, 1894: 78 [as a subgenus of *Cleigastra* Macquart, 1835 (as “*Clidogastra*”)].

ORIGINALLY INCLUDED SPECIES: *Cordilura flavipes* Fallén, 1819; *Cordilura armillata* Zetterstedt, 1846; *Cordilura cinerella* Zetterstedt, 1846.

TYPE SPECIES: *Cordilura flavipes* Fallén, 1819, by subsequent designation (Vockeroth 1965: 831).

CURRENT STATUS: Valid genus [*teste* Kahanpää & Haarto (2014: 350)].

REMARKS: Senior objective synonym of *Amaurosoma* Becker, 1894 (type species: *Cordilura flavipes* Fallén, 1819, by original designation). Treated as a junior subjective synonym of *Cleigastra* Macquart, 1835 [type species: *Cordilura apicalis* Meigen, 1826, by subsequent designation (Westwood 1840: 144)] by Ozerov & Krivosheina (2016, 2023).

Parallelomma Strobl, 1894: 78 [as a subgenus of *Cleigastra* Macquart, 1835 (as “*Clidogastra*”)].

ORIGINALLY INCLUDED SPECIES: *Cordilura vittata* Meigen, 1826.

TYPE SPECIES: *Cordilura vittata* Meigen, 1826 by monotypy.

CURRENT STATUS: Valid genus [*teste* Kahanpää & Haarto (2014: 348)].

REMARKS: Treated as a junior synonym of *Leptopa* Zetterstedt, 1838 (type species: *Leptopa filiformis* Zetterstedt, 1838, by monotypy) by Ozerov & Krivosheina (2023). This name is a senior homonym of *Parallelomma* Becker, 1894 (type species: *Cordilura albipes* Fallén, 1819 by original designation). As stated by Vockeroth (1965), *Parallelomma* Becker, 1894 is to be replaced by its junior subjective synonym *Cordilurina* James, 1955 (type species: *Cordilura vittipes* Loew, 1872, by original designation) when used as a valid genus (e.g., Bernasconi & Šifner 2021, as *Parallelomma*) or subgenus (e.g., Kahanpää & Haarto 2014, as *Cordilurina*).

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References

- Angell, C.S. & Šifner, F. (2024) Review and re-proposal of family-group names used for tribes of Scathophagidae (Diptera). In: Evenhuis, N.L. & Pape, T. (eds.), *Systema Dipterorum Nomenclatural Notes. IV. Bishop Museum Occasional Papers* 157: 23–28. [25 April 2025]
- Becker, T. (1894) Dipterologische Studien. I. Scatomyzidae. *Berliner Entomologische Zeitschrift* 39 (1): 77–196. <https://dx.doi.org/10.1002/mmnd.18940390108> [May 1894, see text]
- Bernasconi, M.V., Pawlowski, J., Valsangiacomo, C., Piffaretti, J.-C., & Ward, P.I. (2000) Phylogeny of the Scathophagidae (Diptera, Calyptratae) based on mitochondrial DNA sequences. *Molecular Phylogenetics and Evolution* 16 (2): 308–315. <https://dx.doi.org/10.1006/mpev.2000.0825> [August 2000]
- Bernasconi, M., & Šifner, F. (2021) Annotated supplements to catalogues of the family Scathophagidae (Diptera) in the world, with new taxonomic data, notes on some species and new list of species. *Linzer Biologische Beiträge* 52 (2): 1267–1306. [February 2021].
- Chandler, P.J. (1998) *Checklist of Insects of the British Isles (New Series), Part 1: Diptera (Incorporating a List of Irish Diptera)*. Royal Entomological Society, London. 234 pp.
- Coquillett, D.W. (1910) The type-species of the North American genera of Diptera. *Proceedings of the United States National Museum* 37 (1719): 499–647. <https://dx.doi.org/10.5479/si.00963801.37-1719.499> [4 August 1910; dated from Evenhuis (2018)]
- Coulson, J.R., Sabrosky, C.W., & Muller, I. (1965) Selected bibliography of North American Diptera, pp. 1117–1547. In: Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H., & Coulson, J.R. (eds.), *A catalog of the Diptera of America north of Mexico*. United States Department of Agriculture, Washington. [23 August 1965; dated from Evenhuis (2008)]
- Evenhuis, N.L. (1994) The publication and dating of P.A. Wytsman’s *Genera Insectorum*. *Archives of Natural History* 21 (1): 49–66. <https://dx.doi.org/10.3366/anh.1994.21.1.49>
- Evenhuis, N.L. (1997) *Litteratura taxonomica dipterorum (1758–1930)*. Backhuys Publishers, Leiden. x + 871 pp. [10 October 1997; dated from Evenhuis (2008)]
- Evenhuis, N.L. (2008) Dates of publication of regional and world Diptera catalogs. *Studia Dipterologica* 14 (2): 397–403. [29 October 2008]
- Evenhuis, N.L. (2018) Nomenclatural studies toward a world list of Diptera genus-group names. Part VI: Daniel William Coquillett. *Zootaxa* 4381 (1): 1–95. <https://dx.doi.org/10.11646/zootaxa.4703.1.1> [19 February 2010]
- Evenhuis, N.L., O’Hara, J.E., Pape, T., & Pont, A.C. (2010) Nomenclatural studies toward a world list of Diptera genus-group names. Part I: André-Jean-Baptiste Robineau-Desvoidy. *Zootaxa* 2373: 1–265. <https://dx.doi.org/10.11646/zootaxa.4703.1.1> [26 February 2010]
- Gorodkov, K.B. (1986) Family Scathophagidae, pp. 11–41. In: Soós, A. & Papp, L. (eds.), *Catalogue of Palaearctic Diptera. Vol. 11. Scathophagidae—Hypodermatidae*. Akadémiai Kiadó, Budapest. 346 pp. [1 March 1986; dated from Evenhuis (2008)]
- International Commission on Zoological Nomenclature (1999) *International code of zoological nomenclature*. Fourth edition. International Trust For Zoological Nomenclature, London. xxix + 306 pp.
- Iwasa, M. (2024) A review of the genus *Leptopa* Zetterstedt, 1838 (Diptera: Scathophagidae) from Japan, with descriptions of two new species. *Entomological Science* 27 (4): e12590. <https://dx.doi.org/10.1111/ens.12590> [20 November 2024]
- Kahanpää, J., & Haarto, A. (2014) Checklist of the families Scathophagidae, Fanniidae and Muscidae of Finland (Insecta, Diptera). *ZooKeys* 441: 347–367. <https://dx.doi.org/10.3897/zookeys.441.7142> [19 September 2014]
- Kutty, S.N., Bernasconi, M.V., Šifner, F., & Meier, R. (2007) Sensitivity analysis, molecular systematics and natural history evolution of Scathophagidae (Diptera: Cyclorhapha: Calyptratae). *Cladistics* 23 (1): 64–83. <https://dx.doi.org/10.1111/j.1096-0031.2006.00131.x> [26 February 2007]
- Malloch, J.R. (1919) The Diptera collected by the Canadian Expedition, 1913–1918. (Excluding the Tipulidae and Culicidae.), pp. 34–90, pls. 7–10. In: Anderson, R.M. (ed.),

- Report of the Canadian Arctic Expedition 1913–18. Volume 3. Insects, Part C: Diptera. Southern Party—1913–16.* J. de Labroquerie, Ottawa. [14 July 1919; dated from Evenhuis (1997)]
- Malloch, J.R. (1931) LIX.—Exotic Muscaridæ (Diptera).—XXXV. *The Annals and Magazine of Natural History* (10) 8 (47): 425–446.
<https://dx.doi.org/10.1080/00222933108673420>
- Meigen, J.W. (1822) *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten*. Dritter Theil. Schultz-Wundermann, Hamm. x + 416 pp., 11 pls.
<https://dx.doi.org/10.5962/bhl.title.65747> [before September 1822; dated from Evenhuis (1997)]
- Michelsen, V. (2001) Nomenclatorial notes on Scathophagidae (Diptera): The status of genus- and species-group names first proposed in “Die Dipteren von Steiermark. II. Theil.” by P. Gabriel Strobl, 1894. *Studia Dipterologica* 8 (1):323–326. [15 August 2001]
- Ozerov, A.L. (2009) New species of Scathophagidae (Diptera). *Russian Entomological Journal* 17 (4): 419–427. [30 April 2009]
- Ozerov, A.L. (2010a) Flies of the genus *Parallelomma* Becker in Strobl, 1894 (Diptera, Scathophagidae) of Russia. *Russian Entomological Journal* 18 (4): 309–317. [26 April 2010]
- Ozerov, A.L. (2010b) A review of Palaearctic species of the genus *Nanna* Strobl, 1894 (Diptera, Scathophagidae) with shining stripes or spots on scutum. *Far Eastern Entomologist* 214:1–8. [August 2010]
- Ozerov, A.L., & Krivosheina, M.G. (2015) A review of the genera *Cleigastra* Macquart, *Gonarticus* Becker, *Gonatherus* Rondani, *Hexamitocera* Becker, *Nanna* Strobl, *Orthacheta* Becker and *Spathephilus* Becker (Diptera, Scathophagidae) of Russia. *Zootaxa* 4012 (2): 201–257.
<http://dx.doi.org/10.11646/zootaxa.4012.2.1> [3 September 2015]
- Ozerov, A.L., & Krivosheina, M.G. (2016) To taxonomy of the genus *Cleigastra* Macquart, 1835 (Diptera: Scatophagidae) with description of two new species. *Russian Entomological Journal* 25 (1): 97–102. [23 March 2016]
- Ozerov, A.L., & Krivosheina, M.G. (2020) A review of the genus *Cordilura* Fallén, 1810 (Diptera: Scathophagidae) of Russia. *Russian Entomological Journal* 29 (4): 439–480.
<https://dx.doi.org/10.15298/rusentj.29.4.13> [22 December 2020]
- Ozerov, A.L., & Krivosheina, M.G. (2023) Contribution to the fauna of dung flies (Diptera: Scathophagidae) of Russia with a key to genera and a checklist of the Russian Scathophagidae. *Russian Entomological Journal* 32 (1): 95–122. <https://dx.doi.org/10.15298/rusentj.32.1.12> [28 March 2023]
- Pont, A.C. (1995) The dipterist C.R.W. Wiedemann (1770–1840). His life, work and collections. *Steenstrupia* 21 (2): 125–154.
- Püchel, F. (1999) Scathophagidae. In: Stark, A., & Menzel, F. (eds.), *Entomofauna Germanica* 2. Checkliste der Dipteren Deutschlands. *Studia Dipterologica Supplement* 2: 186–187. [10 February 1999]
- Séguy, E. (1952) Diptera. Fam. Scatophagidæ, pp. 1–107. In: Wytmsman, P. (ed.), *Genera insectorum*. Fascicule 209. Louis Desmet-Verteneuil, Bruxelles [= Brussels]. [14 March 1952; dated from Evenhuis (1994)]
- Šifner, F. (1975) Scatophagidae de Mongolie. *Annales Historico-Naturales Musei Nationalis Hungarici* 67: 219–228.
- Šifner, F. (2003) The family Scathophagidae (Diptera) of the Czech and Slovak Republics (with notes on selected Palaearctic taxa). *Acta Musei Nationalis Pragae, Series B, Natural History* 59 (1-2):1–90. [May 2003]
- Šifner, F. (2008) A catalogue of the Scathophagidae (Diptera) of the Palaearctic region, with notes on their taxonomy and faunistics. *Acta Entomologica Musei Nationalis Pragae* 48 (1): 111–196. [15 August 2008]
- Strobl, P.G. (1894) Die Dipteren von Steiermark. II. Theil. *Mittheilungen des Naturwissenschaftlichen Vereines für Steiermark* 30: 1–152. [March 1894, printed separately, see text]
- Strobl, P.G. (1898) Die Dipteren von Steiermark. IV. Theil. *Mittheilungen des Naturwissenschaftlichen Vereines für Steiermark* 34: 192–298.
- Strobl, P.G. (1910) Die Dipteren von Steiermark. II. Nachtrag. *Mittheilungen des Naturwissenschaftlichen Vereines für Steiermark* 46(1): 45–293.
- Steenis, J. van (2023) The ICZN code-compliant authorship for nominal species and genera-group names of Diptera (Insecta) with special reference to Meigen (1822). *Studia Dipterologica Supplement* 23: 265–277. [10 October 2023]
- Vockeroth, J.R. (1965) Subfamily Scatophaginae, pp. 826–842. In: Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H., & Coulson, J.R. (eds.), *A catalog of the Diptera of America north of Mexico*. United States Department of Agriculture, Washington. [23 August 1965; dated from Evenhuis (2008)]
- Vockeroth, J.R. (1987) Scathophagidae, pp. 1085–1098. In: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J.R., & Wood, D.M. (coordinators), *Manual of Nearctic Diptera*. Volume 2. Monograph No. 28. Agriculture Canada, Ottawa.
- Westwood, J.O. (1840) Synopsis of the genera of British insects. In: *An introduction to the modern classification of insects*. Volume 2. [Appendix.] Longman, Orme, Brown, Green and Longmans, London. 158 pp. [According to Evenhuis (1997), the final part of the Synopsis, which included the section on Diptera, was published on 6 June 1840]