



A Worldwide Checklist of Parasites of Staphylinidae

10

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Abstract

This chapter attempts to document all the parasites of Staphylinidae worldwide. It is based on a 1982 work of the author and considers all changes in Staphylinidae taxonomy; in higher classifications of *Laboulbeniales* (*Ascomycetes*), the most species-rich order of parasites (*Laboulbeniales*); and in the family Proctotrupidae (Hymenoptera). The host(s) and geographical distribution of the parasites (*sensu latissimo*) are documented by genus/species in descending species richness.

10.1 Introduction

Based on a previous work (Frank 1982), this chapter attempts to document all the parasites of Staphylinidae worldwide. Since that work was sent to press, there have been many changes. The higher classification of Staphylinidae has changed to include subfamilies Pselaphinae, Scaphidiinae, Scydmaeninae, etc. The higher classification of *Laboulbeniales* (*Ascomycetes*), the most species-rich order of parasites (*Laboulbeniales*), has changed (Tavares 1985; Benjamin 2001) etc., and the family Proctotrupidae (Hymenoptera) has been revised (Townes and Townes 1982). There have

been many additions of species and distributions of parasite/host records. All of these called for a new document, but yet the new document (here) is constrained by space. To conserve space, a parasite/host checklist is presented (there is no host/parasite checklist), and early references (before 1982) are not repeated if they were cited in the 1982 work. The objective is to report parasite/host associations to the species level for each country, as a basis for future investigation. This should help staphylinid specialists, who may be expected to know the classification of all staphylinids mentioned (but not that of their parasites), as well as mycologists, whose literature may fail to identify staphylinids below the level of genus (especially because their generic designation of staphylinids may be outdated). No new nomenclatural acts are made here. This chapter documents the host(s) and geographical distribution of the parasites (*sensu latissimo*) by genus/species in descending species richness as 70/510 (*Ascomycetes*, *Laboulbeniales*), 18/27 (Nematoda, Rhabditida), 11/21 (Insecta, Hymenoptera), and 7/23 (Nematoda, Tylenchida) and sundry smaller groups collectively with 33/34, for a grand total of 132/616.

10.2 Parasite/Host List

Phylum *Microsporidia*
Order *Dissociodihaplophasida*
Nosematidae

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Genus and species indet.: adult *Creophilus erythrocephalus* F., Australia (Meyer-Rochow 1972). This nosematid was reported from the eye of the host.

Phylum Ascomycota
Class Laboulbeniomycetes
Order Laboulbeniales

The available information suggests that *Laboulbeniales* are true external parasites, debilitating their insect hosts (Bro Larsen 1952; Scheloske 1969; Frank 1982; Tavares 1985). Currently divided into four families, of which only *Euceratomycetaceae* and *Laboulbeniaceae* contain parasites of Staphylinidae, and the latter contains all but one genus of them. The arrangement below lists genera alphabetically within the family *Laboulbeniaceae* and species alphabetically within genera, with their staphylinid hosts named alongside. Weir and Hammond (1997) calculated that about 26% of hosts in Asia and Europe are Staphylinidae, slightly exceeded only by Carabidae. Staphylinidae are hosts to 47 genera, whereas Carabidae are hosts to only 16 genera (Tavares 1985). There are now >2050 species of *Laboulbeniales* (Rossi and Santamaría 2012), and future knowledge is likely to expand the number enormously.

Euceratomycetaceae

Euceromyces Thaxter, 1931

E. terrestris (Thaxter, 1894): adult ?*Lathrobium terminatum*, Gravenhorst, ME, USA (Thaxter 1894, 1931).

Laboulbeniaceae

Acallomyces Thaxter, 1902

A. *gyrophaenae* (Thaxter 1931): adult “*Gyrophaena parcipennis*,” invalid species name, Jamaica (Thaxter 1931), *Gyrophaena* sp. indet., Japan (Sugiyama 1978a).
A. *homalotae* Thaxter, 1902: adult *Homalota* sp. (which may perhaps be referable to *Atheta*) NH, USA (Thaxter 1902); *Atheta transfuga* (Sharp) Japan (Sugiyama 1978b).

A. *platyolae* Thaxter, 1931: adult “*Platyola philippina*” invalid species name attributed to Bernhauer, Philippines (Thaxter 1931).

Acompsomyces Thaxter, 1901b

A. *stenichni* (Scheloske, 1969): adult *Stenichnus scutellaris* (Müller and Kunze) Germany, United Kingdom (Scheloske 1969, Weir 1994); *Stenichnus collaris* (Müller and Kunze) Poland, France (Majewski 1973b, 1994b, Santamaría and Rossi 1999).

= *Stigmatomyces stenichni* Scheloske, 1969, transferred to *Acompsomyces* by Tavares (1985).

Acrogynomyces Thaxter, 1931

A. *arietinus* Thaxter, 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

A. *ellipsoideus* Thaxter, 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

A. *eumicralis* Thaxter, 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

A. *eumicri* Thaxter, 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

A. *eumicricola* Thaxter, 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

A. *hamatus* Thaxter 1931: adult *Scydmaenus* sp. (under the name of synonym *Eumicrus*) Cameroon (Thaxter 1931).

Amorphomyces Thaxter, 1893

A. *biformis* Thaxter, 1931: adult *Falagria latemarginata* Bernhauer, Sumatra, Indonesia (Thaxter 1931).

A. *falagriae* Thaxter, 1893: adult *Falagria dissecta* Erichson, MA, USA (Thaxter 1893), and *Falagria* spp. in Argentina; OH, USA; Jamaica; and Spain (Spegazzini 1912, Thaxter 1931, Santamaría 2000).

A. *hernandoi* Santamaría, 2000: adult *Diglotta mersa* (Haliday) Spain (Santamaría 2000).

- A. *italicus* Spegazzini, 1915b: adult ?*Atheta*, Italy (Spegazzini 1915b, Thaxter 1931 who considered that the host might have been a species of *Carpelimus*); *Carpelimus mundus* (Sharp) Ecuador (Thaxter 1931, Rossi 1978); *Carpelimus exiguum* (Erichson) Cameroon (Thaxter 1931, Rossi 1978); *Carpelimus halophilus* (Kiesenwetter) Algeria (Maire 1920, Rossi 1978); *Carpelimus bilineatus* Stephens, *C. alutaceus* (Fauvel), *C. pusillus* (Gravenhorst), and *Thinobius* sp., Spain (Santamaría 2000), Hebei Province, China (Shen and Ye 2006).
- = A. *trogophloei* Spegazzini, 1917: adult *Carpelimus atramentarius* (Lynch) Argentina (Spegazzini 1917).
- = A. *stipitatus* Thaxter, 1931: adult *Carpelimus exiguum* (Erichson) Sumatra, Indonesia (Thaxter 1931).
- A. *minusculus* [original spelling was *minisculus*] Thaxter, 1931: adult *Ophioglossa bisulcata* (Erichson) as *Eudera bisulcata* (Erichson), Guatemala, and two “*Homalota*” spp., Sumatra, Indonesia (Thaxter 1931).
- A. *ophioglossae* Thaxter 1912a: adult *Ophioglossa* sp., Argentina (Thaxter 1912a, 1931), *Ophioglossa cava* Sharp, Argentina (Spegazzini 1917, Thaxter 1931).
- A. *pronomaee* Thaxter, 1931: adult perhaps *Pronomaea thaxteri* Bernhauer although published as “*Pronomaea sumatrensis* Bernhauer,” an invalid species name, Borneo (Thaxter 1931).
- A. *rubescens* Thaxter 1912a: adult *Diestota* sp. indet., Argentina (Thaxter 1912a), *Homalota* sp. indet., Argentina (Thaxter 1912a), *Atheta conformis* (Erichson) and A. *lurida* (Erichson), Argentina (Spegazzini 1917, Thaxter 1931), *Atheta* sp. indet., Argentina (Thaxter 1931).
- A. *schistogeniae* Thaxter, 1931: adult *Schistogenia crenicollis* Kraatz, Sarawak, Malaysia (Thaxter 1931).
- A. *stenusae* Thaxter, 1931: adult “*Stenus borneensis* Bernhauer,” an invalid name, Sarawak, Malaysia (Thaxter 1931).
- NOTE that A. *floridanus* Thaxter (1893) and A. *obliqueseptatus* Thaxter (1900) have been transferred to *Dioicomycetes*.
- Apateломыces* Thaxter, 1931
- A. *ogmocerus* Thaxter, 1931: adult *Ogmocerus* sp., Liberia (Thaxter, 1931).
- Aporomyces* Thaxter, 1931
- A. *perpusillus* (Spegazzini, 1917): adult *Rhopalopherus gestroi* Bernhauer, Argentina (Spegazzini 1917).
- Autophagomyces* Thaxter 1901b
- A. *castellinii* Rossi, 1982: adult *Trissemus punctipennis* (Raffray) Sierra Leone (Rossi 1982).
- A. *decarthricola* (Spegazzini, 1917): adult pselaphine, probably *Decarthon rubripenne* Raffray, Argentina (Spegazzini 1917, Thaxter 1931).
- A. *hammondii* Benjamin, 2001: adult scaphidiid indet., Sulawesi, Indonesia (Benjamin 2001).
- A. *tiwaiensis* Rossi, 1990: adult *Trissemus assuetus* Castellini, Sierra Leone (Rossi 1990).
- NOTE that A. *spegazzinii* was transferred to *Bordea* by Benjamin (2001).
- Balazucia* Benjamin, 1968b
- B. *bilateralis* Benjamin, 1968b: adult *Phloeonomus* sp., Mexico (Benjamin 1968b).
- B. *japonica* Terada, 1980: adult *Lordithon striatus* Olivier, Hokkaido, Japan (Terada 1980).
- Blasticomyces* Tavares, 1985
- B. *denigratus* Majewski and Sugiyama, 1986: adult *Lispinus coarticollis* Kraatz, Sabah, Malaysia (Majewski and Sugiyama 1986).
- B. *lispini* (Thaxter, 1915): adult *Nacaeus impressicollis* (Motschulsky) Java and Borneo, Indonesia, and Sri Lanka (Thaxter 1915, 1931) and Taiwan (Terada 1976); *Lispinus unipunctatus* Cameron and *Lispinus* sp., Sabah, Malaysia (Majewski and Sugiyama 1986); *Lispinus* sp. nr. *japonicus* Sharp, Iriomote Island, Japan (Majewski 1988b); *Eleusis* sp., Fujian and Suzhou provinces, China (Shen and Ye 2006).

- Bordea* Maire, 1916a (reinstated by Benjamin 2001). All reported hosts belong to Pselaphinae.
- B. allenii* Benjamin, 2001: adult *Cylindrarctus crinifer* Casey, LA, USA (Benjamin 2001).
- B. bryaxalis* (Thaxter, 1931): adult *Reichenbachia puncticollis* (LeConte) ME, USA (Thaxter 1931), *Reichenbachia borealis* Casey, IL and WI, USA (Benjamin 2001).
- B. castellinii* (Rossi, 1982): adult *Trissimus punctipennis* (Raffray) Sierra Leone (Rossi 1982, Benjamin 2001).
- B. coronata* Maire, 1916a: adult *Brachygluta aubei* Tournier, Algeria (Maire 1916a, Thaxter 1931), *Brachygluta perforata* (Aubé) Italy, *Brachygluta schuppeli* Aubé, Ibiza, Spain (Benjamin 2001).
- B. denotata* Haelewaters et al., 2014: adult *Bibloporus bicolor* (Denny), Netherlands (Haelewaters et al. 2014).
- B. formosana* (Sugiyama, 1982): adult of gen. et sp. indet. nr. *Lasinus*, Taiwan (Sugiyama 1982, Benjamin 2001, Shen and Ye 2006).
- B. gigantea* Benjamin, 2001: adult *Reichenbachia bicuspida* Park, Honduras (Benjamin 2001).
- B. neocoronata* Benjamin, 2001: adult *Decarthron defectum* Park, IL, USA (Benjamin 2001).
- B. platensis* Spegazzini, 1917 (formerly *Acallomyces (Bordea) platensis* Spegazzini 1917, so a change of status not of genus): adult pselaphine, Argentina (Spegazzini 1917), *Decarthron simplex* Raffray and *D. rubripenne* Raffray, Argentina (Benjamin 2001).
- B. retroflexa* Benjamin, 2001: *Melba* sp., MS, USA (Benjamin 2001).
- B. spinigera* Benjamin, 2001: adult *Reichenbachia spatulifer* Casey, MN, USA (Benjamin 2001).
- B. strangulata* (Thaxter, 1931): adult ?*Euconnus* (as *Eucomus*) Guatemala (Thaxter 1931).
- B. thaxteri* Benjamin, 2001: adult *Reichenbachia puncticollis* (LeConte) ME, USA (Benjamin 2001).
- B. tiwaiensis* (Rossi, 1990): adult *Trissimus assuetus* Castellini, Sierra Leone (Rossi 1990, Benjamin 2001).
- B. weirii* Benjamin, 2001: adult *Melba* sp. and *Melba thoracica* (Brendel) LA, USA and *Conoplectus canaliculatus* (LeConte) NY, USA (Benjamin 2001).
- Camptomyces* Thaxter, 1894. All reported hosts belong to *Astenus* (Paederinae).
- C. brunneomarginatus* Thaxter, 1926: adult *Astenus maculipennis* Kraatz, Philippines (Thaxter 1926).
- C. europaeus* Rossi and Cesari Rossi, 1980: adult *Astenus thoraciculus* Baudi, Italy (Rossi and Cesari Rossi 1980).
- C. falcatus* Thaxter, 1926: adult *Astenus* sp., Philippines (Thaxter 1926).
- C. guatemalensis* Thaxter 1926: adult *Astenus* sp., Guatemala (Thaxter 1926).
- C. melanopus* Thaxter, 1894: adult *Astenus prolixus* (Erichson), MA, USA (Thaxter 1894); adult *Astenus paranensis* Lynch, Argentina (Spegazzini 1917).
- C. recurvatus* Thaxter, 1926: adult *Astenus bimaculatus* (Erichson), Philippines (Thaxter 1926).
- C. subsigmoideus* Thaxter, 1926: adult *Astenus* sp., Philippines (Thaxter 1926).
- C. sumatrae* Thaxter, 1926: adult *Astenus kraatzi* Bernhauer, Sumatra, Indonesia (Thaxter 1926).
- Cantharomyces* Thaxter, 1890
- C. ancyrophori* Picard, 1917: adult *Ochthephilus flexuosus* (Mulsant and Rey) France (Picard 1917).
- C. andinus* Thaxter, 1918: adult *Carpelimus puncticollis* Solier, Chile (Thaxter 1918).
- C. aploderi* Huldén, 1983: adult *Aploderus caesus* (Erichson) Karelia (Russia) (Huldén 1983).
- C. bledii* Thaxter, 1890 and 1896: adult *Bledius assimilis* Casey, IL, USA (Thaxter 1890).
- C. chilensis* Thaxter, 1918: adult *Thinodromus signatus* (Erichson) Chile (Thaxter 1918).

- C. exiguus* Thaxter, 1931: adult *Carpelimus exiguus* (Erichson) Cameroon (Thaxter 1931), *Carpelimus exiguus* (Erichson) Japan (Sugiyama 1973, 1974) and South Korea (Lee 1986), *Carpelimus* sp., Gansu Province, China (Shen et al. 2004, Shen and Ye 2006).
- C. haytiensis* Thaxter, 1931: adult *Carpelimus fulvipes* (Erichson) Haiti (Thaxter 1931).
- C. japonicus* Sugiyama, 1973: adult *Thinodromus sericatus* (Sharp) Japan (Sugiyama 1973); adult *Carpelimus* sp., China (Shen et al. 2004, Shen and Ye 2006).
- C. magellanicus* Thaxter, 1918: adult ?genus of Aleocharinae (this identification seems improbable given the restriction of other species to Oxytelinae) Argentina (Thaxter 1918).
- C. numidicus* Maire, 1920: adult *Thinodromus mannerheimi* (Kolenati) Algeria (Maire 1920); *Thinodromus arcuatus* (Stephens) and *Carpelimus anthracinus* (Mulsant and Rey) Poland (Majewski 1983); *Thinodromus arcuatus* (Stephens) Italy and Slovakia (Rossi 1978, Rossi et al. 2010); *Thinodromus hirticollis* (Mulsant and Rey) Greece (Castaldo et al. 2004).
- C. occidentalis* Thaxter, 1893: adult *Bledius bellicus* Blackwelder (as *B. armatus* Say) although possibly a misidentification of *B. strenuus* Casey, UT, USA (Thaxter 1893, 1896, Herman 1976).
- C. orientalis* Spegazzini, 1915b: adult ?*Quedius* sp. Italy (this host seems improbable given restriction of other species to Oxytelinae) (Spegazzini 1915b); *Carpelimus subtilicornis* (Roubal) Germany (Scheloske 1969); *Carpelimus corticinus* (Gravenhorst) Karelia (Russia) and *Carpelimus elongatulus* (Erichson) Finland (Hulden 1983); *Carpelimus bilineatus* Stephens and *C. corticinus* (Gravenhorst) England, Poland (Weir and Beakes 1993, Majewski 1987); *Carpelimus corticinus* (Gravenhorst) and *C. foveolatus* (Sahlberg) Belgium (De Kesel and Haghebaert 1991); *Carpelimus corticinus* (Gravenhorst) Greece (Castaldo et al. 2004); *Carpelimus obesus* (Kiesenwetter) Czech Republic and Slovakia (Rossi et al. 2010).
- = *C. abbreviatus* Maire, 1920: adult *Carpelimus corticinus* (Gravenhorst) Algeria (Maire 1920).
- C. pacei* Rossi and Santamaría, 2000: adult *Spanioda andicola* Pace, Chile (Rossi and Santamaría 2000).
- C. platystethi* Thaxter, 1900: adult *Platystethus cornutus* (Gravenhorst) England (Thaxter 1900), Morocco (Maire 1916a); *Platystethus operosus* Sharp, Japan (Terada 1977); *Platystethus* sp., India (Kaur and Mukerji 1996) Tibet, China (Shen and Ye 2006).
- C. robustus* Majewski, 1987: adult *Carpelimus bilineatus* (Stephens) and *Carpelimus corticinus* (Gravenhorst) and *Carpelimus obesus* (Kiesenwetter) and *Carpelimus rivularis* (Motschulsky) Poland (Majewski 1987).
- C. thaxteri* Maire 1916b: adult *Thinodromus dilatatus* (Erichson) France (Maire 1916b); *Carpelimus bilineatus* (Stephens) and *Carpelimus rivularis* (Motschulsky) Belgium (De Kesel and Haghebaert 1991).
- C. trogophloezi* Spegazzini, 1917: adult *Carpelimus atramentarius* Lynch, Argentina (Spegazzini 1917).
- C. valdivianus* Thaxter, 1918: adult *Thinodromus grandipennis* (Bernhauer) Chile (Thaxter 1918).
- C. venetus* Spegazzini 1915b: adult ?genus, Italy (Spegazzini 1915b); *Carpelimus rivularis* (Motschulsky) Poland and Belgium (Siemaszko and Siemaszko 1932, De Kesel and Haghebaert 1991).
- Chaetomyces* Thaxter, 1892
- C. pinophili* Thaxter, 1893: adult *Pinophilus latipes* (Gravenhorst) southeastern USA (Thaxter 1893); *Pinophilus* sp., Nicaragua (Thaxter 1908); *Pinophilus suffusus* Erichson, Argentina (Spegazzini 1917); *Pinophilus* sp., Brazil (Rossi and Bergonzo 2008).
- = *C. borelli* (Colla, 1926): unidentified staphylinid, Bolivia (Colla 1926).
- Clematomyces* Thaxter, 1900
- = *Schizomeromyces* Thaxter, 1931

- C. argentinensis* Spegazzini, 1917: adult *Pinophilus suffusus* Erichson, Argentina (Spegazzini 1917).
- C. astenalis* (Thaxter, 1931): adult *Astenus fimetarius* Fauvel, Cameroon (Thaxter 1931).
- C. pinophili* Thaxter, 1900: adult *Pinophilus* sp., Burma (Thaxter 1900).
- Clonophoromyces* Thaxter, 1931
- C. grenadinus* Thaxter, 1931: adult probably of *Bryoporus obscurus* (Erichson) (as "Bryonomus serialis" in error) Grenada (Thaxter 1931).
- C. nipponicus* Terada and Tavares, 1993: adult *Bryoporus gracilis* (Sharp) Honshu, Japan (Terada and Tavares 1993); *Bryoporus testaceus* LeConte, MA, USA (Haelewaters et al. 2015).
- Compsomyces* Thaxter, 1894
= *Moschomycetes* Thaxter, 1894
- C. insignis* Thaxter, 1894: adult *Astenus prolixus* (Erichson) MA, USA (Thaxter 1894).
- C. lestevae* Thaxter, 1900: adult *Lesteva sicula* Gravenhorst ssp. *heeri* Fauvel, Scotland, England (Thaxter 1931) Belgium (De Kesel and Haghebaert 1991); *Lesteva hansenii* Lohse, France, Algeria, England (Maire 1916a, Balazuc 1873b); *Lesteva pubescens* Mannerheim, Scotland, Poland, Italy (Thaxter 1908, Majewski 1973b, Rossi 1978); *Lesteva villardi* Rey, France (Balazuc 1973b).
- C. macropoda* Thaxter, 1931 based on description by Spegazzini, 1917: adult *Astenus paranensis* Lynch, Argentina (Spegazzini 1917).
- C. palamini* Thaxter, 1931: adult *Palaminus* sp., Trinidad (Thaxter 1931).
- C. stilicopsis* Thaxter, 1931: on *Stilicopsis setigera* Sharp, Philippines (Thaxter 1931).
- C. verticillatus* (Thaxter 1890): adult *Astenus longiusculus* (Mannerheim) IL, ME, USA (Thaxter 1890); *Astenus paranensis* Lynch, Argentina (Spegazzini 1912); *Astenus signatus* Sahlberg, Argentina (Spegazzini 1917); *Astenus thoracicus* Baudi, Italy (Rossi and Cesari Rossi 1980); *Astenus martinezii* Uhagón, Spain (Santamaría 1995a).
- Corethromyces* Thaxter, 1892
- C. acanthoglossae* Thaxter, 1931: adult *Acanthoglossa intermixta* Eppelsheim, Cameroon (Thaxter 1931).
- C. acuminatus* Thaxter, 1931: adult *Diochus nanus* Erichson, Trinidad (Thaxter 1931).
- C. aequatorialis* Rossi and Weir, 2007: adult *Gnathymenus* sp., Ecuador (Rossi and Weir 2007).
- C. argentinus* Thaxter, 1912a: adult *Ochthephilum agile* Erichson, Argentina (Thaxter 1912a).
- C. armatus* Thaxter, 1912a: adult *Rugilus chilensis* (Solier) Argentina (Thaxter 1912a).
- C. bolivianus* Weir and Rossi, 2001: adult *Scopaeodes* sp., Bolivia (Weir and Rossi 2001).
- C. brasiliensis* Thaxter, 1900: adult *Ochthephilum brasiliandum* Lucas, Brazil and *Ochthephilum fasciatum* (Erichson) Venezuela and *Ochthephilum flohri* Sharp, Mexico and *Ochthephilum similipenne* Say, Mexico, and *Ochthephilum venustum* Sharp, Mexico (Thaxter 1900); *Ochthephilum paranense* Lynch, Argentina (Spegazzini 1912); *Ochthephilum basale* Blanchard, Argentina (Thaxter 1931).
- C. brunneolus* Thaxter, 1912a: adult *Rugilus elegans* Lynch, Argentina (Thaxter 1912a, 1931, Spegazzini 1917).
- = *C. sternalis* Spegazzini, 1917.
- C. buccalis* Thaxter, 1931: adult *Rugilus ceylanensis* (Kraatz) Sumatra, Indonesia (Thaxter 1931).
- C. calyculus* Thaxter, 1931: adult *Sepedophilus obesus* (Bohemian) Cameroon (Thaxter 1931).
- C. catalinae* (Thaxter, 1912a): adult *Sepedophilus testaceus* (F.) Argentina (Thaxter 1912a, Tavares 1985).
- C. chaetophilus* Thaxter, 1931: adult *Coproporus bernhaueri* Scheerpeltz (as *Coproporus ventralis* Bernhauer) Sumatra, Indonesia (Thaxter 1931).

- C. *circinellus* Thaxter, 1931: adult *Medon planatus* Bernhauer, Sumatra, Indonesia (Thaxter 1931).
- C. *cornutus* Thaxter, 1931: adult *Sepedophilus obesus* (Bohemian) Cameroon (Thaxter 1931).
- C. *cryptobii* Thaxter, 1892: adult *Homaeotarsus pallipes* (Gravenhorst) VA, USA and *Homaeotarsus bicolor* (Gravenhorst) eastern USA (Thaxter 1892); *Cryptobium sharpi* Fauvel [perhaps misidentified] Burma (Spegazzini 1915a).
- C. *curtipes* Thaxter, 1931: adult *Lithocharis ochracea* (Gravenhorst) Cameroon (Thaxter 1931) and Iriomote Island, Japan (Majewski 1988b); *Medon* sp., Taiwan (Terada 1976, 1978; Shen and Ye 2006).
- C. *dacnochili* Thaxter, 1931: adult *Dacnochilus laetus* LeConte, Guatemala (Thaxter 1931).
- C. *decipiens* Thaxter, 1915: adult *Medon birmanus* Fauvel, Borneo, Indonesia (Thaxter 1915); *Lithocharis curtus* (Kraatz) Java, Indonesia, and Sarawak, Malaysia (Thaxter 1915, 1931).
- C. *diuchi* Thaxter, 1931: adult *Diochus nanus* Erichson, Trinidad (Thaxter 1931).
- C. *divergens* Thaxter, 1931: adult *Stilomedon triseriatus* Sharp, Guatemala (Thaxter 1931).
- C. *euaestheti* Thaxter, 1931: adult *Euaesthetus americanus* Erichson, MA, USA (Thaxter 1931).
- C. *filifer* Thaxter, 1931: adult *Stiliderus sculptipennis* (Kraatz) Philippines (Thaxter 1931).
- C. *flagellaris* Thaxter, 1931: adult *Stiliderus sculptipennis* (Kraatz) Philippines (Thaxter 1931).
- C. *flectatus* Thaxter, 1931: adult *Rugilus pruinosus* (Cameron) Sumatra, Indonesia (Thaxter 1931).
- C. *formicetorum* Spegazzini, 1917: adult *Heterothops formicetorum* Bernhauer, Argentina (Spegazzini 1917).
- C. *fuscipes* (Spegazzini, 1917): adult *Scopaeus lugubris* Lynch, Argentina (Spegazzini 1917, Thaxter 1931, Tavares 1985).
- C. *gracilicaulis* Thaxter, 1931: adult *Rugilus sericeus* (Motschulsky) Sumatra, Indonesia (Thaxter 1931).
- C. *grenadinus* Thaxter, 1931: adult *Diochus nanus* Erichson, Trinidad (Thaxter 1931).
- C. *guatemalensis* Thaxter, 1931: adult ? *Stilomedon*, Guatemala (Thaxter 1931).
- C. *hernandoi* Santamaría, 2006: adult *Medon* sp., Spain (Santamaría, 2006).
- C. *introversus* Thaxter, 1931: adult *Medon angulipennis* Eppelsheim, Cameroon (Thaxter 1931).
- C. *jacobinus* Thaxter, 1893: adult *Lobrathium jacobinum* (LeConte) CA, USA (Thaxter 1893); *Lobrathium collare* (Erichson) ME, USA (Thaxter 1896).
- C. *jamaicensis* Thaxter, 1931: adult *Stilomedon insularum* (Cameron) Jamaica (Thaxter 1931).
- C. *kamerunensis* Thaxter, 1931: adult “*Medon kamerunensis* Bernhauer,” invalid name, Cameroon (Thaxter 1931). [A *Medon* species with the same name was described by Scheerpeltz in 1971, but was based on a collection made in 1949, and no reference was made by Scheerpeltz to a prior use of that name, even as a manuscript name, by Bernhauer.]
- C. *laminifer* Thaxter, 1931: adult *Lithocharis ochracea* (Gravenhorst) Sarawak, Malaysia, and “*Medon sumatrensis* Bernhauer,” invalid name, Sumatra, Indonesia (Thaxter 1931).
- C. *lepidus* (Thaxter, 1931): adult *Sepedophilus kamerunensis* (Bernhauer), Cameroon (Thaxter 1931, Tavares 1985).
- C. *lingulatus* Thaxter, 1931: adult *Coproporus* sp., Sumatra, Indonesia (Thaxter 1931).
- C. *longicaulis* Thaxter, 1902: adult *Rugilus angulatus* (Erichson) MA, USA (Thaxter 1902); *Rugilus elegans* (Lynch) Argentina (Spegazzini 1917); *Rugilus cibratus* (Sharp) Guatemala (Thaxter 1931).
- C. *longicollis* Thaxter, 1931: adult “*Medon vulneratus* Bernhauer,” invalid name, Cameroon (Thaxter 1931).
- C. *luzonensis* Thaxter, 1931: adult *Stiliderus sculptipennis* (Kraatz) Philippines (Thaxter 1931).
- C. *macropus* Thaxter 1912a: adult *Heterothops thaxteri* Bernhauer, Argentina (Thaxter 1912a).

- C. medonis* Thaxter, 1915: adult *Lithocharis curtus* (Kraatz) Sarawak, Malaysia and Java, Indonesia (Thaxter 1915), *Medon birmanus* Fauvel, Sarawak, Malaysia (Thaxter 1915, 1931).
- C. minusculus* [original spelling was *minisculus*] Thaxter, 1931: adult *Scopaeus* sp., Argentina (Thaxter 1931).
- C. nanus* Thaxter, 1931: adult *Diochus nanus* Erichson, Trinidad (Thaxter 1931).
- C. obscuristipes* Santamaría, 2006: adult *Medon* sp., Spain (Santamaría 2006).
- C. obtusus* (Thaxter, 1900): adult *Leptobium illyricum* (Erichson), apparently from Algeria (Thaxter 1900), same host, Bosnia and Herzegovina (Bánhegyi 1960); *Leptobium melanocephalum* (Reiche and Saulcy), Israel (Siemaszko and Siemaszko 1932).
- C. ophitis* Thaxter, 1912a: adult *Opithes fauveti* Lynch, Argentina (Thaxter 1912a); *Opithes bergenzoii* Drugmand, Brazil (Rossi and Bergonzo 2008).
- C. orientalis* Thaxter, 1915: adult *Rugilus ceylanensis* (Kraatz) Java and Sumatra, Indonesia (Thaxter 1915).
- C. otongaensis* Rossi and Weir 2007: adult *Biocrypta* sp., Ecuador (Rossi and Weir 2007).
- C. palumboi* Rossi, 2010: adult *Sepedophilus* sp., Ecuador (Rossi 2010).
- C. perelegans* Thaxter, 1931: adult *Medon crassulum* Sharp, Trinidad (Thaxter 1931).
- C. piesticola* Thaxter, 1931: adult *Piestus bicornis* Laporte, Costa Rica, and *Piestus penicillatus* (Dalman) [as *P. striatus* (Gray)] Brazil, and *Piestus spinosus* (F.) [as *P. oxytelinus* (Perty)] Venezuela (Thaxter 1931); *Priochirus* sp., Peru (Sugiyama 1972).
- C. platensis* Thaxter, 1912a: adult *Lobrathium dimidiatum* (Say) Argentina and Uruguay and *Lobrathium nitidum* (Erichson) Argentina (Thaxter 1912a, 1931, Spegazzini 1912, 1917).
- = *C. xantholini* Spegazzini, 1912: adult *Xantholinus subtilis* (Bohemian), Argentina (Spegazzini 1912).
- C. podophilus* Spegazzini, 1917: adult *Rugilus elegans* (Lynch) Argentina (Spegazzini 1917).
- C. propinquus* (Thaxter, 1900): adult *Lathrobium* spp. (although all are probably *Leptobium* spp.) Europe (Thaxter 1900, 1908, 1931, Picard 1913b); *Leptobium illyricum* (Erichson) Algeria (Maire 1916a); *Leptobium gracile* (Gravenhorst) [as *L. guttulum* (Lacordaire)] Spain (Santamaría 1995a).
- C. protrudens* Thaxter, 1931: adult “*Medon sumatrensis* Bernhauer” invalid name, Sumatra, Indonesia (Thaxter 1931).
- C. psilotracheli* Thaxter, 1931: adult *Stiliderus crassus* (Kraatz) Sarawak, Malaysia (Thaxter 1931).
- C. pulchellus* Spegazzini, 1917: adult *Pinophilus bergi* Lynch, Argentina (Spegazzini 1917).
- C. purpurascens* Thaxter, 1900: adult *Biocrypta fulvipes* (Erichson) and *Ochthephilum* sp., Grenada (Thaxter 1900); *Ochthephilum densipenne* (Sharp) South Korea (Lee et al. 2005).
- C. pygmaeus* Thaxter, 1912a: adult *Rugilus chilensis* (Solier) Chile (Thaxter 1912a).
- C. rectus* Spegazzini, 1917: adult *Rugilus elegans* (Lynch) Argentina (Spegazzini 1917); *Rugilus ceylanensis* (Kraatz) and *Rugilus sericeus* (Motschulsky) Sumatra, Indonesia (Thaxter 1931).
- C. recurvatus* Thaxter, 1931: adult *Stiliderus crassus* (Kraatz) Sarawak, Malaysia (Thaxter 1931).
- C. rostellatus* Thaxter, 1931: adult *Sepedophilus obesus* (Bohemian) Cameroon (Thaxter 1931).
- C. rostratus* Thaxter, 1912a: adult *Heterothops* sp., Guatemala (Thaxter 1912a); *Heterothops formicetorum* Bernhauer, Argentina (Spegazzini 1917).
- C. sardous* Rossi and Cesari Rossi, 1980: adult *Pseudobium labile* (Erichson) Sardinia, Italy (Rossi and Cesari Rossi 1980).
- C. scimalii* W. Rossi and Cesari Rossi, 1978: adult *Scymbalium anale* (Nordmann) Italy (Rossi and Cesari Rossi 1978); adult *Lathrobium* sp., Guizhou Province, China (Shen and Ye 2006).

- C. sciopori* Thaxter, 1931: adult *Medon crassulum* Sharp, Trinidad (Thaxter 1931).
- C. scopaei* Thaxter, 1912a: adult *Scopaeus frater* Lynch, Argentina (Thaxter 1912a, Spegazzini 1917); Spain—but these Spanish specimens are later named as *S. striatus* (Santamaría 1992b, 1997).
- C. scopaeicola* Thaxter, 1931: adult *Scopaeus nitidulus* Motschulsky, Philippines (Thaxter 1931).
- C. seticola* Thaxter, 1931: adult “*Medon sumatrensis* Bernhauer,” invalid name, Sumatra, Indonesia (Thaxter 1931).
- C. setiger* Thaxter, 1893: adult *Lathrobium nitidulum* LeConte, MA, USA (Thaxter 1893, 1896, Saccardo 1895, Benjamin 1971).
- C. shazawae* Majewski and Sugiyama, 1985: adult *Ochthephilum densipenne* (Sharp) Japan (Majewski and Sugiyama 1985b) and South Korea (Lee and Park 1991).
- C. sigmoideus* Thaxter 1912a: adult *Rugilus elegans* (Lynch) Argentina (Thaxter 1912a, 1931, Spegazzini 1917).
- C. spectabilis* Thaxter, 1931: adult *Sepedophilus obesus* (Boheman), Cameroon (Thaxter 1931).
- C. speluncalis* (Maire 1916a): adult *Heterothops praevius* Erichson ssp. *nigrus* Kraatz, Algeria (Maire 1916a).
- C. stereocephalus* Thaxter 1931: adult *Stereocephalus seriatipennis* Lynch, Argentina (Lynch 1917).
- = *C. pallidus* (Spegazzini, 1917), homonym of *C. pallidus* Thaxter, 1893.
- C. stilici* Thaxter, 1901b: adult *Rugilus rufipes* Germar, Italy, Germany, Netherlands, Poland, Belgium (Thaxter 1901b, 1908, 1912a, Picard 1913b, Thaxter 1931, Middelhoek 1943b, Stadelmann and Poelt 1962, Scheloske 1969, Rossi 1975, Majewski 1980, De Kesel and Haghebaert 1991); *Rugilus similis* (Erichson) Poland and Belgium (Majewski 1980, De Kesel and Haghebaert 1991); *Rugilus angularis* (Erichson) MA, USA (Thaxter 1908); *Rugilus chilensis* (Solier) Argentina, Chile (Spegazzini 1912a); *Rugilus elegans* (Lynch) Argentina and Uruguay (Spegazzini 1917).
- C. stilicicola* (Thaxter, 1902): adult *Rugilus angularis* (Erichson) MA, USA (Thaxter 1902, 1912a, 1931); *Rugilus elegans* (Lynch) Argentina and Uruguay (Spegazzini 1917).
- C. strangulatus* Thaxter, 1931: adult *Stilomedon triseriatum* Sharp, Guatemala (Thaxter 1931).
- C. striatus* Santamaría, 1997: adult *Scopaeus* spp., Spain (Santamaría 1997).
- C. thayerae* Rossi and Weir, 2007: adult *Medon obscuriventer* Fairmaire and Germain, Chile (Rossi and Weir 2007).
- C. thinocharinus* Thaxter, 1915: adult *Thinocharis pygmaea* Kraatz and *Thinocharis curticeps* (invalid name attributed to Bernhauer), Java and Sumatra, Indonesia (Thaxter 1915).
- C. unciger* Thaxter, 1912a emended by Trotter 1926: adult *Rugilus elegans* (Lynch) Argentina (Thaxter 1912a).
- C. uncinulus* Thaxter, 1931: adult “*Stilicus thaxteri* Bernhauer,” invalid name, likely a species of *Rugilus*, Cameroon (Thaxter 1931).
- C. urophilus* (Spegazzini, 1917): adult *Scopaeus* sp., Argentina (Spegazzini 1917, Thaxter 1931).
- C. venezolanus* Thaxter, 1931: adult “*Stilicus venezolanus* Bernhauer,” invalid name, likely a species of *Rugilus*, Venezuela (Thaxter 1931).
- C. verrucifer* Spegazzini, 1917: adult *Rugilus elegans* (Lynch) Argentina (Spegazzini 1917, Thaxter 1931).
- C. vesiculifer* (Thaxter, 1931): adult *Sepedophilus obesus* (Boheman) Cameroon (Thaxter 1931, Tavares 1985).
- C. vilis* Thaxter, 1931: adult *Lithocharis vilis* (Kraatz) Sumatra, Indonesia (Thaxter 1931).

NOTE: Tavares (1985) transferred four species to *Sphaleromyces*: *S. indicus* Thaxter 1901b; *S. lathrobii* Thaxter, 1894; *S. occidentalis* Thaxter, 1895; and *S. rhinoceralis* (Thaxter, 1912a). She also resurrected the generic name *Rhadinomyces* Thaxter and transferred into it *C. pallidus*, *C. cristatus*, and *C. gracilis*.

- Cryptandromyces* Thaxter, 1912
 = *Peyerimhoffiella* Maire, 1916
- C. batrisi* (Thaxter, 1931): adult *Batrisus* sp., Cameroon (Thaxter 1931, Tavares 1985).
- C. batrisocenus* (Thaxter, 1931): adult *Batrisocenus difformipes* Raffray, and *Batrisocenus elevatus* Raffray, Sarawak and Borneo, Indonesia (Thaxter 1931, Tavares 1985).
- C. biblioplecti* Majewski, 1987: adult *Biblioplectus ambiguus* (Reichenbach) and *Plectophloeus fischeri* (Aubé) Poland (Majewski 1987, 1994a,b); “*Plectophloeus tuberculatus* Reichenbach” an invalid name, Spain (Santamaría 2001).
- C. bryaxidis* Majewski, 1999: adult *Bryaxis bulbifer* (Reichenbach) Poland (Majewski 1999); *Biblioporus bicolor* (Denny) and *Bryaxis baudueri* (Reitter), Spain (Santamaría 2001).
- C. caulinatus* (Thaxter, 1931): adult *Scydmaenus* sp. (as *Eumicrus* sp.) Cameroon (Thaxter 1931, Tavares 1985).
- C. euplecti* Santamaría, 2001: adult *Euplectus duponti* Aubé and *E. infirmus* Raffray, Spain; *E. sanguineus* Denny, Belgium; *E. karsteni* Reichenbach, France; *Plectophloeus zoufali* Machulka, Italy; and *Amauronyx kraatzii* Saulcy, Spain (Santamaría 2001).
- C. geniculatus* Thaxter, 1912: adult *Connophron* sp., Argentina (Thaxter 1912, 1931, Tavares 1985), *Euconnus* sp., Hainan Island, China (Shen and Ye 2006).
- C. incurvatus* (Thaxter 1931): adult *Scydmaenus* sp. (as *Eumicrus* sp.), Java and Sumatra, Indonesia (Thaxter 1931, Tavares 1985).
- C. isabellae* Rossi, 1990: adult *Scydmaenus* sp., Sierra Leone (Rossi 1990).
- C. javanus* Thaxter, 1915: adult of undetermined scydmaenine, Java, Indonesia and Japan (Thaxter 1915, Sugiyama 1973).
- C. nigromarginatus* Thaxter, 1931: adult *Scydmaenus* sp. (as *Eumicrus* sp.) Java, Indonesia and Cameroon (Thaxter 1931), and Congo Kinshasa (formerly Zaire) (Rossi and Santamaría 1992); *Scydmaenus suspicionis* Castellini, Sierra Leone (Rossi 1982).
- C. sarawakensis* (Thaxter, 1931): adult *Scydmaenus* sp. (as *Eumicrus* sp.) Sarawak, Malaysia (Thaxter 1931, Tavares 1985).
- C. scydmænarius* (Thaxter, 1931): adult *Scydmaenus* sp. (as *Eumicrus* sp.) Sarawak, Malaysia (Thaxter 1931, Tavares 1985).
- C. scydmænicola* (Spegazzini 1917): adult *Scydmaenus* sp. (as *Eumicrus* sp.) Argentina and Trinidad (Spegazzini 1917, Thaxter 1931, Tavares 1985).
- C. subsigmoideus* (Spegazzini, 1917): adult *Eurhexius putzeyssi* Schaufuss (as “*E. putzussi*”), Argentina (Spegazzini 1917, Thaxter 1931, Tavares 1985).
- C. zethopsi* (Thaxter, 1931): adult ?*Zethopsisinus* sp., Cameroon (Thaxter 1931, Tavares 1985).
- NOTE: Tavares (1985) separated the monotypic genus *Peyerimhoffiella* based on *P. elegans* Maire.
- Cucujomyces* Spegazzini, 1917
- C. phycophilus* Weir and Rossi, 1997: adult “*Macralymma brevipenne* Cameron” [invalid name, is perhaps *Macralymma punctiventris* Cameron] and *Omaliomimus conicus* (Fauvel) New Zealand (Weir and Rossi 1997); *Crymus kronei* (Kiesenwetter), Antipodes Islands, New Zealand (Hughes et al. 2004); *Macralymma punctiventris* Cameron, Auckland Islands, Antipodes Islands, New Zealand (Hughes et al. 2004); *Nesomalium campbellensis* Steel, Campbell Island, New Zealand (Hughes et al. 2004); *Nesomalium pacificum* (Kiesenwetter) Auckland Islands, New Zealand (Hughes et al. 2004); *Omaliomimus venator* (Broun) Auckland Islands, Antipodes Islands, Campbell Island, New Zealand (Hughes et al. 2004).
- Diandromyces* Thaxter, 1918
- D. chilensis* Thaxter 1918: adult *Leptoglossula sculpticollis* (Fauvel) Chile (Thaxter 1918).
- D. onorei* Rossi, 2010: adult *Hypotelus* sp., Ecuador (Rossi 2010).

- Diaphoromyces* Thaxter, 1926
- D. lispi* (Thaxter 1912a): adult *Nacaeus tenellus* (Erichson) Argentina, Guatemala (Thaxter 1912a, Spegazzini 1917, Thaxter 1926).
- D. ziophori* (Thaxter, 1916): *Piestus* sp. indet., Trinidad (Thaxter 1916, 1926, Tavares 1985).
- Diclonomyces* Thaxter, 1931
- D. eumicrophilus* (Thaxter, 1931): adult *Scydmaenus* sp. (as *Eumicrus* sp.) Cameroon (Thaxter 1915, 1931).
- D. stilocedonis* Thaxter, 1931: adult *Stilocedon strigicollis* Sharp, Guatemala (Thaxter 1931).
- D. subgaleatus* (Thaxter, 1915): adult scydmaenine, Java, Indonesia (Thaxter 1915, 1931).
- Dimeromyces* Thaxter, 1896
- = *Eudimeromyces* Thaxter, 1918
- = *Jeanneliomyces* Lepesme, 1945 (nomen nudum).
- D. copropori* Thaxter, 1920a: adult *Coproporus* sp. Cameroon (Thaxter 1920, 1924).
- D. gracilis* Thaxter, 1920a: adult aleocharine, Cameroon (Thaxter 1920a, 1924).
- D. gyrophaenae* Thaxter, 1920a: adult *Gyrophaena* sp., Cameroon (Thaxter 1920, 1924).
- D. osellae* Rossi, 2010: adult *Plesiomalota cotopaxiensis* Pace, Ecuador (Rossi 2010).
- D. roreri* Thaxter, 1920a: adult *Gyrophaena* sp., Trinidad (Thaxter 1920a, 1924).
- D. versicolor* Majewski and Sugiyama, 1985: adult *Pseudoplania spiniventris* (Bernhauer) Japan (Majewski and Sugiyama 1985b).
- NOTE: Lepesme (1945) reported “*Jeanneliomyces tachyoryctidi*” (nomen nudum) on larvae of a scydmaenine on Mount Elgon in Uganda.
- Dimorphomyces* Thaxter, 1893
- D. acutus* Sugiyama and Majewski, 1985: adult *Spatulonthus longicornis* (Stephens) Bali, Indonesia (Sugiyama and Majewski 1985a).
- D. argentinensis* Spegazzini, 1912: adult *Zyras argentinus* Lynch (as *Myrmecodia argentina*), Argentina (Spegazzini 1912, Thaxter 1924).
- D. baliensis* Sugiyama and Majewski, 1985: adult aleocharine (gen. et sp. indet.) Bali, Indonesia (Sugiyama and Majewski 1985a).
- D. bledii* Thaxter, 1920a: adult *Bledius emarginatus* (Say), KS, USA (Thaxter 1920a, 1924).
- D. brevirostris* Thaxter, 1920a: adult *Coproporus* sp., Guatemala, Brazil, Jamaica (Thaxter 1920a).
- D. carolinae* Rossi, 2010: adult *Parosus* sp., Ecuador (Rossi 2010).
- D. decipiens* (Thaxter, 1920a): adult *Eleusis* sp., Cameroon (Thaxter 1920a, 1924).
- D. denticulatus* Thaxter, 1893: adult *Falagria dissecta* Erichson, MA, USA (Thaxter 1893).
- D. eleusinus* Thaxter, 1920b: adult of *Inopeplus* (Salpingidae), not *Eleusis* (Staphylinidae), so do not count this parasite as having a staphylinid host.
- D. grenadinus* Thaxter, 1920a: adult ?genus of Aleocharinae, Grenada (Thaxter 1920a, 1924).
- D. muticus* Thaxter, 1894: adult *Falagria dissecta* Erichson, MA, ME, USA (Thaxter 1894, 1896, 1924).
- D. myrmedoniae* Thaxter, 1900: adult “*Myrmecodia flavigornis*,” invalid name, perhaps a species of *Zyras*, Guatemala (Thaxter 1900, 1908, 1924); *Tachyusa constricta* Erichson and *Gnypeta rubrior* Tottenham and *Mocyta fungi* (Gravenhorst) Poland (Majewski 1983); *Tachyusa balteata* Erichson, Greece and Italy (Castaldo et al. 2004).
- D. philippinensis* Rossi and Santamaría, 2000: adult *Pseudoplania drugmandi* Pace, Philippines (Rossi and Santamaría 2000).
- D. platensis* Spegazzini, 1917: adult *Apocellus parvipennis* Bernhauer, Argentina (Spegazzini 1917); *Apocellus* sp., Brazil (Rossi and Bergonzo 2008).
- = *D. vulgatissimus* Spegazzini, 1917: adult *Apocellus argentinus* Bernhauer and

- Apocellus mendozanus* Steinheil and *Apocellus opacus* Bernhauer, Argentina and Uruguay (Spegazzini 1917, Thaxter 1924).
 =*D. furcatus* Thaxter, 1920a: adult *Apocellus* sp., Guatemala (Thaxter 1920a).
- D. pygosteni* Thaxter, 1926: adult *Typhlonemys pubescens* (Wasmann) as “*Pygostenus kamerunensis*,” invalid name, but probably *Pygostenus thaxteri* Bernhauer, a synonym, Cameroon (Thaxter 1926).
- D. phloeoporae* Thaxter, 1900 (originally as *D. thleopora* but emended): adult *Phloeoporus corticalis* (Gravenhorst) Madeira (Thaxter 1900, 1908, 1924, Hincks 1960).
- D. rotundatus* Sugiyama and Majewski, 1985: adult *Spatulonthus longicornis* (Stephens) Bali, Indonesia (Sugiyama and Majewski 1985a).
- D. trogophloei* Spegazzini, 1917: adult *Carpelimus tenuipunctus* Bernhauer, Argentina (Spegazzini 1917).
- D. verticalis* Thaxter, 1912a: adult *Atheta lurida* (Erichson) Argentina and *Atheta* spp., Argentina and Guatemala and *Oxypoda* spp., Argentina (Thaxter 1912a, 1924, Spegazzini 1917).
- Dioicomycetes* Thaxter, 1901
- D. floridanus* (Thaxter, 1893): adult *Bledius basalis* LeConte, FL, USA (Thaxter 1893, 1901b, 1908); and *Bledius* sp., Ipswich, England, from Thaxter’s type series (Santamaría 2002).
- D. obliqueseptatus* (Thaxter, 1900): adult of genus nr. *Myrmecodia*, Brazil (Thaxter 1900, 1901b, 1908, Santamaría 2002).
- Diphymyces* Spegazzini, 1917
- D. penicillifer* Weir and Rossi, 1997: adult *Stenomalium helmsi* (Cameron) New Zealand (Weir and Rossi 1997), *Nesomalium pacificum* (Kiesenwetter) New Zealand; *Allodrepa decipiens* Steel, Antipodes Islands, New Zealand (Hughes et al. 2004).
- Diplomyces* Thaxter, 1895
- D. actobianus* Thaxter, 1895: adult *Erichsonius nanus* (Horn) MA, USA (Thaxter 1895, 1896, 1931).
- D. atanygnathi* Thaxter, 1931: adult *Atanygnathus pictus* Motschulsky [cited as *A. ruficollis* (Kraatz), a synonym], Cameroon [identification is unlikely because this is an Asian species], and Sarawak, Malaysia (Thaxter 1931).
- D. clavifer* Rossi and Cesari Rossi, 1978: adult *Erichsonius signaticornis* (Mulsant and Rey) Italy (Rossi and Cesari Rossi 1978); *Erichsonius cinerascens* (Gravenhorst) Finland, Sweden (Huldén 1983) Poland (Majewski 1983); *Erichsonius* sp., Spain (Santamaría 1999).
- Dipodomycetes* Thaxter, 1931
- D. phloeocharidis* Majewski, 1982: adult *Phloeocharis subtilissima* Mannerheim, Poland (Majewski 1982, Tavares 1985).
- Ecteinomycetes* Thaxter, 1902
- E. bonariensis* Spegazzini, 1917: adult *Pseudodinusa ?richteri* Bernhauer, Argentina (Spegazzini 1917). Tavares (1985) declared that the species does not belong to *Ecteinomycetes*, but did not transfer it elsewhere.
- Euceratomycetes* Thaxter, 1931
- E. terrestris* (Thaxter, 1894): adult *Lathrobium terminatum* Gravenhorst, ME, USA (Thaxter 1894, 1931); *Lathrobium angustatum* Lacordaire and *Lathrobium* sp., Spain (Santamaría 1995).
- Euhaplomyces* Thaxter, 1901b
- E. ancyrophori* Thaxter, 1901b: adult *Ochthephilus aureus* (Fauvel) Scotland, France (Thaxter 1901b, 1908, Picard 1913b, Hake 1923, Balazuc 1974).
- Eumonoicomycetes* Thaxter, 1901b
- E. papuanus* Thaxter, 1901b: adult *Oxytelus* sp., New Britain, and Sumatra, Indonesia (Thaxter

- 1901b, 1908, 1931); *Anotylus nitidulus* (Gravenhorst) Poland Poland (Majewski 1987); *Anotylus rugosus* (F.) Denmark (Rostrup 1916); *Platystethus* sp., Tibet, China (Shen and Ye 2006)
- = *E. argentinensis* Spegazzini, 1912: adult *Anotylus insignitus* (Gravenhorst), Uruguay, and *Platystethus fallax* Lynch, Argentina (Spegazzini 1912, 1917, Thaxter 1931). There exists some doubt about this synonymy and even about generic assignment (Tavares 1985).
- E. platystethi* Thaxter, 1931: adult *Platystethus spectabilis* Kraatz, Sumatra, Indonesia (Thaxter 1931).
- Euphoriomyces* Thaxter, 1931
- E. chaekyui* Lee and Na, 2011: adult *Scaphisoma rufum* Achard, South Korea (Lee and Na 2011).
- E. huggerii* Majewski, 1983: adult *Proteinus brachypterus* (F.) and *Acrulia inflata* (Gyllenhal) Poland (Majewski 1983).
- E. sugiyamae* Majewski, 1988a: adult *Scaphisoma rufum* Achard, Japan and South Korea (Majewski 1988a, Lee et al. 2007).
- Euzodiomyces* Thaxter, 1900
- E. capillarius* Cépède and Picard, 1908a: adult *Lobrathium multipunctum* (Gravenhorst) France, Belgium (Cépède and Picard presented in a talk in 1907 but published formally 1908a, 1908b, Thaxter 1931, Collart 1945, Balazuc 1973b); *Lathrobium geminum* Kraatz, Belgium (De Kesel and Rammeloo 1991); *Lobrathium anale* (Lucas) Algeria (Maire 1916a, Balazuc 1973b).
- E. lathrobii* Thaxter, 1900: adult *Lathrobium angusticolle* Boisduval and Lacordaire, France (Picard 1917, Lepesme 1941, Balazuc 1973b); *L. armatum* Say, IL and MO, USA (Benjamin and Shanor 1951, Balazuc 1973b); *L. brunnipes* (F.) Belgium, England, Germany (Thaxter 1908, Picard 1913b, Collart 1945, Scheloske 1969, De Kesel and Rammeloo 1991); *L. elongatum* (L.) Netherlands, Poland (Middelhoek 1943a, b, Stadelmann and Poelt 1962, Balazuc 1973b, Majewski 1994a), Belgium (De Kesel and Haghebaert 1991); *Lathrobium fovulum* Stephens, Germany (Scheloske 1969, Balazuc 1973b); *L. geminum* Kraatz, Netherlands, Germany (Middelhoek 1943b, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1973b); *L. impressum* Heer (= *L. filiforme* Gravenhorst) England, Poland (Thaxter 1900, 1908, Picard 1913b, Majewski 1973b, Balazuc 1973b); *L. laevipenne* Heer, Switzerland, Netherlands (Baumgartner 1923, Middelhoek 1943b, Stadelmann and Poelt 1962, Balazuc 1973b); *L. longulum* Gravenhorst, Germany (Scheloske 1969, Balazuc 1973b) Finland (Huldén 1983); *L. simile* LeConte, IL, USA (Benjamin and Shanor 1951, Balazuc 1973b); *L. zetterstedti* Rye (= *L. punctatum* Zetterstedt) England (Thaxter 1900, 1908, Cépède and Picard 1908b, Picard 1913b, Hake 1923); *Lathrobium* spp. indet. Germany, Japan, and MI, USA (Poelt 1952a, Stadelmann and Poelt 1962, Benjamin and Shanor 1951, Balazuc 1974, Sugiyama 1973, 1974); *Lobrathium analis* (Lucas) Algeria (Maire 1916a, Balazuc 1973b); *L. manueli* (Fauvel), Italy (Rossi 1975); *Lobrathium multipunctum* (Gravenhorst) Belgium (De Kesel and Rammeloo 1991); *Lobrathium yoshidai* Adachi, Japan (Majewski 1988a); *Lobrathium* sp., Morocco (Santamaría and Rossi 1999); *Homaeotarsus bicolor* (Gravenhorst) IL, USA (Benjamin and Shanor 1951, Balazuc 1973b); *Achenium humile* (Nicolai) Czech Republic (Rossi et al. 2010); *Xantholinus* sp. indet., Germany (Scheloske 1969, Balazuc 1973b); *Hemiquedius ferox* (LeConte), IL, USA (Benjamin and Shanor 1951, Balazuc 1973b).
- Haplomyces* Thaxter, 1893, reported only on *Bledius* spp. (Oxytelinae).
- H. californicus* Thaxter 1893: adult *Bledius ornatus* LeConte, CA, USA (Thaxter 1893, 1896).
- H. texanus* Thaxter, 1893: adult *Bledius bicornis* (Germar) Germany (Thaxter 1908, Picard

1913b, Balazuc 1974); *B. cribricollis* Heer, France (Maire 1916b, Thaxter 1931, Scheloske 1969); *B. gallicus* (Gravenhorst) [= *B. fracticornis* (Paykull)] Netherlands (Middelhoek 1943b, 1947a, Stadelmann and Poelt 1962, Balazuc 1974); *B. opacus* (Block) England (Thaxter 1908, Picard 1913, Hake 1923, Balazuc 1974); *B. spectabilis* Kraatz, France (Balazuc 1974); *B. subterraneus* Erichson, Germany (Thaxter 1906, Balazuc 1974); *B. unicornis* Germar (= *B. juvencus* Erichson) France (Thaxter 1908, Balazuc 1973); *Bledius cribricollis* Heer and *Bledius graellsi* Fauvel, Italy (Rossi and Cesari Rossi 1980); *Bledius atricapillus* (Germar) and *Bledius longulus* Erichson, Poland (Majewski 1984); *Bledius arcticus* Sahlberg, *Bledius diota* Schiødte, *Bledius filipes* Sharp, *Bledius gallicus* (Gravenhorst), *Bledius kutsae* Kangas, *Bledius longulus* Erichson, *Bledius opacus* (Block), *Bledius pallipes* (Gravenhorst), *Bledius poppiusi* Bernhauer, *Bledius vilis* Mäklin, Finland (Huldén 1983); *Bledius* sp., Heilongjiang, China (Shen and Ye 2006).

H. virginianus Thaxter, 1893: adult *Bledius emarginatus* (Say) VA, USA (Thaxter 1893, 1896). Balazuc (1974) denied the presence of this species in France, citing an earlier published claim to the contrary as a misidentification of *H. texanus*.

Idiomyces Thaxter, 1893, reported only on *Deleaster* spp. (Oxytelinae).

I. peyritschii Thaxter, 1893: adult *Deleaster dichrous* (Gravenhorst) (= *D. adustus* Küster) Austria, Germany, France, Hungary, Italy, Netherlands, Poland, Caucasus (Russia), Switzerland, United Kingdom, former Yugoslavia, Greece (Thaxter 1893, 1896, 1908, 1931, Picard 1913b, Baumgartner 1923, Hake 1923, Siemaszko and Siemaszko, 1932, Bánhegyi 1940, 1960, Middelhoek 1943, 1960, Stadelmann and Poelt 1963, Balazuc 1974, Rossi 1978, Weir 1994, De Kesel and Rammeloo 1991, Castaldo et al. 2004); *Deleaster yokoyamai* Adachi, Japan (Terada 1977).

Ilyomyces Picard, 1917, reported only on Steninae.

- I. dianoi* Weir: adult *Dianous* sp., Sulawesi, Indonesia (Weir 1995).
- I. lavagnei* (Picard 1913a): adult *Stenus aceris* Stephens (= *S. elegans* Fairmaire) France (Picard 1913a, 1917, Thaxter 1931, Lepesme 1941, Balazuc 1971c, 1974).
- I. mairei* Picard, 1917: adult *Stenus elegans* Rosenhauer, France (Picard 1917); *Stenus aceris* Stephens (= *S. elegans* Fairmaire) France (Thaxter 1931, Lepesme 1941, Balazuc 1971c, 1974); *Stenus clavicornis* (Scopoli) MA, USA (Haelewaters 2013, Haelewaters et al. 2015).
- I. victoriae* Weir: adult *Stenus* sp. Sulawesi, Indonesia (Weir 1995).

Kainomyces Thaxter, 1901, reported only on *Eleusis* (Osoriinae).

- K. alutellae* Thaxter, 1931: adult *Eleusis alutella* Fauvel, Cameroon (Thaxter 1931); *Eleusis coarctata* Sharp, Japan (Sugiyama 1973).
- K. hyalinus* Terada, 1978: adult *Eleusis humilis* (Erichson) Taiwan (Terada 1978, Shen and Ye 2006).
- K. isomali* Thaxter, 1901b: adult *Eleusis conradti* Fauvel, Tanzania (Thaxter 1901b); “*Eleusis schwabi* Bernhauer,” invalid name, and *Eleusis* sp. Cameroon (Thaxter 1931); adult *Eleusis kraatzi* Fauvel, Philippines and Sumatra, Indonesia (Thaxter 1931) and Taiwan (Sugiyama 1978a, Shen and Ye 2006); *Eleusis lunigera* Fauvel, Philippines and Sumatra, Indonesia (Thaxter 1931); *Eleusis* sp., Java, Indonesia and Sarawak, Malaysia (Thaxter 1931); “*Maseochara sumatreensis* Bernhauer,” invalid name (Thaxter 1931).

Kleidiomyces Thaxter, 1908, reported on Aleocharinae and Oxytelinae, perhaps by error.

- K. ambiguus* Rossi, 2010: adult *Anotylus* sp., Ecuador (Rossi 2010).
- K. furcillatus* (Thaxter, 1908): adult *Aleochara repetita* Sharp, Panama (Thaxter 1908, 1912a, 1931).

- K. hoplandiae* Thaxter 1931: adult “*Hoplandria carinicollis* Bernhauer,” invalid name, Trinidad, and “*Hoplandria quadridentata* Bernhauer,” invalid name, Grenada (Thaxter 1931).
- K. venezolanus* Thaxter 1931: adult “*Atheta venezolana* Bernhauer,” invalid name, Venezuela (Thaxter 1931).

Kyphomyces Tavares, 1985

- K. ansatus* (Thaxter, 1931): adult *Lithocharis ochracea* (Gravenhorst) and *Scopaeus apicipennis* Sharp, Trinidad (Thaxter, 1931).
- K. appendiculata* (Thaxter, 1931): adult *Coproporus sumatrensis* Bernhauer, Sumatra, Indonesia (Thaxter 1931).
- K. argentinensis* (Spegazzini, 1917): adult *Coproporus* sp. (as “*Coproporus argentinus*,” an invalid name) Argentina (Spegazzini 1917, Thaxter 1931, Tavares 1985).
- K. bicornis* (Thaxter, 1931): adult *Coproporus rutilus* (Erichson) Trinidad (Thaxter 1931).
- K. carinatus* (Thaxter, 1931): adult *Coproporus* sp., Sumatra, Indonesia (Thaxter 1931).
- K. copropori* (Thaxter, 1912a): *Coproporus rutilus* (Erichson) Argentina and Guatemala (Thaxter 1912a, 1931).
- K. devexirostris* (Spegazzini, 1917): adult *Coproporus* sp. (as “*Coproporus argentinus*”) (Spegazzini 1917); *Coproporus rutilus* (Erichson) as [*C. terminalis* (Erichson)] Trinidad (Thaxter 1931).
- K. filarius* (Thaxter, 1912a): adult *Coproporus rutilus* (Erichson) Argentina (Thaxter 1912a, 1931).
- K. grenadinus* (Thaxter, 1931): adult *Coproporus pulchellus* (Erichson) Grenada (Thaxter 1931).
- K. philippinus* (Thaxter, 1931): adult *Coproporus latus* Motschulsky, Philippines (Thaxter 1931).
- K. platensis* (Spegazzini, 1917): adult *Coproporus platensis* Bernhauer, Argentina (Spegazzini 1917); *Achenomorphus latro* (Sharp) Venezuela (Thaxter 1931).
- K. rhizophorus* (Thaxter, 1931): adult *Rugilus ceylanensis* (Kraatz), Sumatra, Indonesia (Thaxter 1931).

K. stilici (Thaxter, 1931): adult *Rugilus ceylanensis* (Kraatz), Sumatra, Indonesia (Thaxter 1931).

K. thinocharinus (Thaxter 1912a): adult *Thinocharis exilis* (Erichson) Argentina (Thaxter 1912a, 1931, Spegazzini 1917).

Laboulbenia Montagne and Robin, 1853

- L. achenii* Maire, 1920: adult *Achenium tenellum* Erichson, Algeria (Maire 1920).
- L. atlantica* Thaxter, 1908: adult *Lobrathium multipunctum* (Gravenhorst) Madeira, France, Belgium, Canary Islands (Thaxter 1908, Picard 1913b, Collart 1945, De Kesel and Rammeloo 1991, Arndt and Santamaría 2004) and on *Zergus schaumi* Wollaston (as “*Gargus schaumii* Woll.”) (Carabidae), Madeira (Thaxter 1908).
- L. atrosepta* Majewski, 1989: adult *Rugilus erichsoni* Fauvel, Poland (Majewski 1989).
- L. barbara* Middelhoek and Boelens, 1943: adult *Philonthus punctus* (Gravenhorst) Netherlands (Middelhoek 1943); *Philonthus fumarius* (Gravenhorst) Italy (Rossi 1975); *Spatulonthus longicornis* (Stephens) South Korea (Lee et al. 2005).
- L. bergiana* Spegazzini, 1917: adult *Pinophilus bergi* Lynch, Argentina (Spegazzini 1917).
- L. caifi* Thaxter, 1899: adult *Cafius seminitens* Horn and *C. canescens* Mäklin, CA, USA, and *C. bisulcatus* Solier, Chile (Thaxter 1899); *Cafius sericeus* (Holme) Great Britain, Italy, Spain (Thaxter 1899, 1908, Picard 1913b, Hake 1923, Colla 1926, 1934, Rossi 1978, Santamaría 1998); *Cafius xantholoma* (Gravenhorst) Belgium, France, Canary Islands (Collart 1945, Balazuc 1974, De Kesel and Rammeloo 1991, Arndt and Santamaría 2004); *Phucobius simulator* Sharp, Japan (Sugiyama 1973); *Cafius* sp., Hong Kong, China (Shen and Ye 2006).
- L. cristata* Thaxter, 1893: adult *Paederus littorarius* Gravenhorst and *P. obliteratus* LeConte, ME, USA (Thaxter 1893); *Paederus australis* Guérin-Méneville, Australia; *Paederus coarctatus* Erichson, Brazil; *Paederus duplex* Eppelsheim, Ethiopia; *Paederus erythoderus* Erichson, Mexico;

- Paederus luridiventris* Sharp, Panama; *Paederus rutilicornis* Erichson, Colombia (Thaxter 1908); *Paederus fuscipes* Curtis (= *P. longipennis* Erichson), India, Italy, Switzerland, France, Hungary, Japan, South Korea, Taiwan and Hunan, China, and Malaya, Malaysia, and Greece (Thaxter 1908, Picard 1913b, Spegazzini 1914, Baumgartner 1923, 1927, Colla 1925, 1926, 1934, Siemaszko and Siemaszko 1932, Bánhegyi 1940, Kurosa 1958, Stadelmann and Poelt 1962, Sugiyama 1973, Balazuc 1974, Sugiyama and Shazawa 1977, Sugiyama and Majewski 1985b, Lee 1986, Majewski 1988a, Castaldo et al. 2004, Shen and Ye 2006); *Paederus bruchi* Bernhauer, Argentina (Spegazzini 1912, 1917); *Paederus littoralis* Gravenhorst, Italy, Belgium, France, Hungary, former Yugoslavia, Switzerland, USSR (Picard 1913b, Spegazzini 1914, 1915a, Siemaszko and Siemaszko 1932, Colla 1926, 1934, Baumgartner 1934, Bánhegyi 1940, Lepesme 1941, Collart 1945, Stadelmann and Poelt 1962, Balazuc 1974, De Kesel and Rammeloo 1991, De Kesel and Haghebaert 1991); *Paederus riparius* (L.) Italy, France, Netherlands, Belgium, Hungary, Austria, Czech Republic, Poland (Picard 1913b, Spegazzini 1914, Siemaszko and Siemaszko 1932, Colla 1934, Kossen 1936, Bánhegyi 1940, Middelhoek 1943b, Collart 1945, Stadelmann and Poelt 1962, Balazuc 1974, De Kesel and Rammeloo 1991, Majewski 1994a, Rossi and Máca 2006); *Paederus madagascariensis* Erichson, Madagascar (Spegazzini 1915a, Balazuc 1982); *Paederus lusitanicus* Aubé, Portugal (Siemaszko and Siemaszko 1932); *Paederus limnophilus* Erichson, Poland (Siemaszko and Siemaszko 1932); *Paederus brevipennis* Lacordaire, Hungary, Germany (Banhegyi 1940, Poelt 1952a); *Paederus parallelus* Weise, Japan and South Korea (Sugiyama 1973, Lee 1986, Lee et al. 2002); *Paederus alternans* Walker, Malaya, Malaysia (Sugiyama and Majewski 1985b); *Paederus tamulus* Erichson, Bangladesh (Lepesme 1941) and Hainan Island, China (Shen and Ye 2006); *Paederidus rubrothoracicus* (Goeze (= *P. longicornis* Aubé) Italy, Poland, France, former Yugoslavia, Greece (Spegazzini 1915, Siemaszko and Siemaszko 1932, Colla 1934, Stadelmann and Poelt 1962, Balazuc 1974, Castaldo et al., 2004); *Paederidus ruficollis* (F.) (= *P. gemellus* Kraatz) Austria, France, Italy, Switzerland, Poland, Hungary, Germany (Thaxter 1893, 1896, Picard 1913b, Spegazzini 1914, Picard 1917, Baumgartner 1923, Siemaszko and Siemaszko 1932, Colla 1934, Bánhegyi 1940, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1974); *Megalopaederus poweri* (Sharp) Japan (Sugiyama 1973); *Paederus* sp., Spain (Santamaría 1992a).
- L. *dolicaontis* Maire, 1920: adult *Leptobium densiventre* (Fauvel) Algeria (Maire 1920); *Leptobium gracile* (Gravenhorst), Spain (Santamaría 1993).
- L. *dubia* Thaxter, 1902: adult *Philonthus politus* (L.) England (Thaxter 1902), Poland and Germany (Siemaszko and Siemaszko 1932, Scheloske 1969); *Philonthus fuscipennis* (Mannerheim) France, Belgium, Poland, Latvia (Picard 1917, Siemaszko and Siemaszko 1928, Briedis 1932, Collart 1945); *Philonthus mannerheimi* Fauvel, Poland, Germany (Siemaszko and Siemaszko 1928, Scheloske 1969); *Philonthus cognatus* (Stephens) Belgium (De Kesel and Rammeloo 1991); *Philonthus* spp. Turkey and Spain (Santamaría 1993, 1996a).
- = L. *philonthicola* Spegazzini, 1915a: adult *Philonthus fuscipennis* (Mannerheim) France (Lepesme 1941); *Philonthus decorus* (Gravenhorst) Germany (Scheloske 1969); *Philonthus politus* (L.) France (Balazuc 1974).
- L. *ecitonis* Blum, 1924: adult *Ectophya gracillima* Mann, and the host ant *Ecton hamatum* F. of this inquiline, Ecuador (Rossi 1991).
- L. *geodromici* Baumgartner, 1923: adult *Geodromicus plagiatus* (F.), Switzerland (Baumgartner 1923).

- L. gracilis* Spegazzini, 1915b: adult *Sunius* sp., Italy (Spegazzini 1915b).
- L. gregaria* Rossi, 2011: adult *Philonthus* sp., Ecuador (Rossi 2011).
- L. gridellii* Colla, 1926: adult *Platystethus spinosus* Erichson, Italy (Colla 1926).
- L. jarrigei* Balazuc, 1975: adult *Lispinus propinquus* Cameron, Reunion (Balazuc 1975, 1982).
- L. kenyensis* Rossi and Santamaría, 2000: adult *Mimogonus rossii* Bordoni, Kenya (Rossi and Santamaría 2000).
- L. lathropini* Thaxter, 1912a: adult *Lathropinus fulvipes* Erichson, Argentina (Thaxter 1912a). = *L. oedodactyli* Spegazzini, 1912: adult “*Latrobium*,” this misspelling corrected and name of parasite synonymized by Spegazzini (1917). *L. lathropinicola* Spegazzini, 1917: adult *Lathropinus major* Blanchard, Argentina (Spegazzini 1917).
- L. latonae* Thaxter, 1902: adult *Pseudocryptobium spinolae* (Guérin-Méneville) Colombia (Thaxter 1902, 1908); *Pseudocryptobium* sp., Ecuador (Proaño Castro and Rossi 2008).
- L. littoralis* De Kesel and Haelewaters, 2014: adult *Cafius xantholoma* (Gravenhorst) Belgium, Netherlands, France, Italy (De Kesel and Haelewaters 2014). [Until 2014, this species was frequently misidentified as *L. slackensis* Cépède and Picard, 1908a, a parasite of Carabidae].
- L. micrandra* Rossi, 2011: adult *Lobrathium* sp., Ecuador (Rossi 2011).
- L. moiwae* Terada, 1980: adult *Domene crassicornis* Sharp, Japan (Terada 1980).
- L. oedichiri* Thaxter, 1902: adult *Oedichirus* sp., Brazil (Thaxter 1903, 1908).
- L. oedodactyli* Thaxter, 1899: adult *Oedodactylus fuscobrunneus* Fairmaire and Germain, Chile, Argentina (Thaxter 1899, 1908, Spegazzini 1912).
- L. outambensis* Rossi, 1986: adult *Lobrathium* sp., Sierra Leone (Rossi 1986).
- L. parriaudi* Balazuc, 1974: adult *Bledius fergussoni* Joy (= *B. arenarius* (Paykull) France (Balazuc 1974); *Bledius* spp., Turkey and Spain (Santamaría 1989, 1996a).
- L. pedicellata* Thaxter, 1892: adult *Bembidion* sp. (Carabidae) ME, USA, but reported from *Aleochara tenuicornis* Kraatz, Algeria (Maire 1920).
- L. philonthi* Thaxter, 1893: adult *Philonthus aequalis* Horn, “Lake Superior,” USA, and *P. cunctans* Horn and *P. debilis* (Gravenhorst) “New England,” USA (Thaxter 1893); *Philonthus micans* (Gravenhorst) “New England,” USA, Poland, France, Italy (Thaxter 1893, 1896); *Philonthus furvus* Nordmann, Mexico and California, USA (Thaxter 1896); *Philonthus accedens* Sharp and *Philonthus occultus* Sharp, Guatemala, and *Philonthus incertus* Solsky and *Philonthus ochromerus* Sharp, Mexico (Thaxter 1908); *Philonthus convexicollis* Lynch, and *Philonthus hepaticus* Erichson, and *Philonthus parvimanus* Sharp) Argentina (Spegazzini 1912); *Philonthus quadraticeps* Boheman, Argentina (Spegazzini 1917); *Philonthus fulvipes* (F.) Germany, Poland, Turkey, Italy (Scheloske 1969, Majewski 1973a, Balazuc 1974, Rossi 1975); *Philonthus punctus* (Gravenhorst) France (Balazuc 1974); *Philonthus quisquiliarius* (Gyllenhal) (= *P. dimidiatus* Boisduval and Lacordaire), Germany, France (Scheloske 1969, Balazuc 1974); *Philonthus concinnus* (Gravenhorst) and *Philonthus nigritus* (Gravenhorst) and *Philonthus oblitus* Jarrige, Italy (Rossi 1975); *Philonthus rubripennis* (Stephens) and *Philonthus rufimanus* Erichson, Greece (Castaldo et al. 2004); *Philonthus wuesthoffi* Bernhauer, South Korea (Lee and Na 1998, Lee et al. 2002, 2011b), *Philonthus micans* (Gravenhorst) Netherlands (Haelewaters et al. 2014); *Philonthus fumarius* (Gravenhorst) Czech Republic (Rossi and Máca 2006); *Philonthus carbonarius* (Gravenhorst) and *P. lomatus* Erichson, MA, USA and *P. aurulentus* Horn, Quebec, Canada, and *Oligotergus fasciatus* (Nordmann) Venezuela (Haelewaters et al. 2015), *Philonthus*,

- Spatulonthus*, *Paragabrius*, Turkey and Spain (Santamaría et al. 1991, Santamaría 1996a).
- L. platyprosopi* Thaxter, 1902: adult *Platyprosopus beduinus* Nordmann, Sudan (Thaxter 1902, 1908).
- L. quedii* Thaxter, 1893: adult *Anaquedius vernix* (LeConte) as “*Quedius vernilis* LeC,” IL, USA (Thaxter 1893, 1896).
- L. richardii* Rossi and Santamaría, 2000: adult *Phlaeopterus castaneus* Casey, OR, USA and *Phlaeopterus* sp., ID, USA and *Vellica longipennis* Casey, CA, USA, and *Unamis* sp., CA and UT, USA (Rossi and Santamaría 2000).
- L. stenolophi* Spegazzini, 1914: adult *Spatulonthus longicornis* (Stephens) South Korea (Lee and Na 1998, Lee et al. 2002).
- L. subterranea* Thaxter, 1896: adult *Pseudanophthalmus* sp. (Carabidae) (Thaxter 1896); *Rugilus geniculatus* (Erichson), *Rugilus similis* (Erichson) and *R. orbiculatus* (Paykull), Europe (Thaxter 1908); *Rugilus similis* (Erichson) Finland (Huldén 1983); *Rugilus rufipes* Germar, Netherlands (Middelhoek 1943b); *Rugilus orbiculatus* (Paykull) Belgium (De Kesel and Haghebaert 1991).
- = ? *L. stilicicola* Spegazzini, 1915: adult *Rugilus fragilis* (Gravenhorst) [as *R. angustatus* (Fourcroy)] Italy (Spegazzini 1915), synonymized by Colla (1934); *Rugilus rufipes* Germar, Greece (Castaldo et al. 2004).
- L. taenodemae* Thaxter, 1899: adult *Taenodema cinerea* Sharp, Brazil (Thaxter 1899, 1908); *Taenodema* sp., Ecuador (Bernardi et al. 2014).
- L. trogacti* Rossi, 2011: adult *Trogactus* sp., Ecuador (Rossi 2011).
- L. vulgaris* Peyritsch, 1873: adult *Bembidion* spp. (Carabidae) and *Deleaster dichrous* (Gravenhorst) (Peyritsch 1873); *Lesteva villardi* Rey, France, some doubt of fungal identity (Balazuc 1974).
- NOTE: At least three species, *L. pedicicillata*, *L. subterranea*, and *L. vulgaris* seem to have Carabidae as primary hosts, with the issue divided for *L. atlantica*.
- Meionomyces* Thaxter, 1931
- M. astenalis* Thaxter 1931, adult *Astenus pulchellus* Kraatz, Sumatra, Indonesia (Thaxter 1931).
- M. asteni* Thaxter, 1931: adult *Astenus cognatus* Sharp, Guatemala (Thaxter 1931).
- M. astenicola* Thaxter, 1931: adult *Astenus pulchellus* Kraatz, Sumatra, Indonesia (Thaxter 1931).
- M. thaxterelli* Thaxter, 1931: adult *Octavius sulcicollis* (Bernhauer), Cameroon (Thaxter 1931).
- NOTE: *M. dibelonetus* Thaxter, 1931 was transferred to *Phaulomyces* by Tavares (1985).
- Mimeomyces* Thaxter, 1912
- M. andinus* (Spegazzini 1917): adult *Cheilocolpus impressifrons* (Solier), Argentina, Chile (Spegazzini 1917, Thaxter 1918, 1931).
- M. atropurpureus* (Thaxter, 1900): adult *Quedius basiventris* Sharp and *Q. graciliventris* Sharp, Panama (Thaxter 1900, 1931).
- M. brachydiri* (Thaxter, 1900): adult *Nordus antennatus* (Sharp), Peru (Thaxter 1900, 1908, 1931).
- M. chiriquensis* (Thaxter, 1901b): adult *Quedius flavicaudus* Sharp, Panama (Thaxter 1901b, 1912a, 1931).
- M. decipiens* Thaxter, 1912a: adult “*Quedius sorecocephalus* Bernhauer,” invalid name, Argentina (Thaxter 1912a, 1931).
- M. deplanatus* Tavares, 1985: adult “*Quedius sorecocephalus* Bernhauer,” invalid name, Argentina (Tavares 1985).
- M. formicetorum* (Spegazzini, 1917): adult *Heterothops formicetorum* Bernhauer, Argentina (Spegazzini 1917, Thaxter 1931, Tavares 1985).
- M. gregarius* Rossi, 2010: adult *Philonthus* sp., Ecuador (Rossi 2010).

- M. latonae* (Thaxter, 1901b): adult *Pseudocryptobium spinolae* (Guérin-Méneville), Colombia (Thaxter 1901b, 1908, 1931).
- M. macropus* (Thaxter, 1912a): adult *Heterothops thaxteri* Bernhauer, Argentina (Thaxter 1912a, 1931).
- M. quedionuchi* (Thaxter, 1901b): adult *Quedius impunctus* Solsky, Mexico and “*Quedius soreococephalus* Bernhauer” invalid name, Argentina (Thaxter 1901b, 1912a, 1931).
- M. trogactii* Rossi, 2010: adult *Trogactus* sp., Ecuador (Rossi 2010).
- M. valdivianus* (Thaxter 1918): adult *Cheilocolpus impressifrons* (Solier), Chile (Thaxter 1918, 1931).
- M. zealandicus* Middelhoek and Boelens, 1943b: *Heterothops binotatus* (Gravenhorst), Netherlands and *H. quadripunctulus* (Gravenhorst) Poland, Spain (Middelhoek and Boelens 1943b, Majewski 1989, Santamaría 1995a).

Misgomyces Thaxter, 1900

- M. dyschirii* Thaxter, 1931: on adults of the carabid genus *Dyschirius*, which often is associated with *Bledius* as a predator within its tunnels; *Bledius graellsii* Fauvel, Spain (Santamaría 1995b).
- = *M. lavagnei* Picard 1913b: adult *Bledius spectabilis* Kraatz, France, Italy (Picard 1913b, Maire 1916a, Scheloske 1969, Balazuc 1973b, Rossi 1975, Tavares 1985).

NOTE: Tavares (1985) transferred 14 species, all of which have staphylinid hosts, to other genera.

Monoicomycetes Thaxter, 1900

- M. aleocharae* Thaxter, 1901b: adult *Aleochara bohemani* Bernhauer and Scheerpeltz (= *A. rufipes* Boheman) Tanzania (Thaxter 1901b, 1908).
- M. amauroderae* Thaxter, 1915: adult *Amaurodera kraepelini* Fauvel, Java, Indonesia (Thaxter 1915, 1931).

- M. asymmetricus* Thaxter, 1931: adult *Atheta opaca* Fauvel (surely misidentified because host range is East Africa) and *Atheta platygaster* Kraatz and “*Homalota pseudocribrum* Bernhauer” (invalid name), all in Sumatra, Indonesia (Thaxter 1931).
- M. athetae* Thaxter, 1900: adult *Aloconota insecta* (Thomson) England, Poland (Thaxter 1900, Siemaszko and Siemaszko 1932); *Atheta cinnamoptera* (Thomson) England (Thaxter 1931); *Atheta tibialis* (Heer) Czech Republic (Rossi and Máca 2006); *Atheta aterrima* (Gravenhorst) and *Atheta gagatina* (Baudi) Poland (Majewski 1994a); *Mocyta fungi* (Gravenhorst) Poland (Majewski 1984); *Evanystes circellaris* (Gravenhorst) Germany (Scheloske 1969).
- M. barberi* Thaxter, 1931: adult *Oxytelus nimius* Casey, MD, USA (Thaxter 1931).
- M. benjamini* Santamaría, 1996b: adult *Atheta* sp., OR, USA (Santamaría 1996b).
- M. bolitocharae* Majewski, 1994: adult *Bolitochara obliqua* (Erichson) Poland (Majewski 1994b).
- M. britannicus* Thaxter, 1900: adult *Aloconota insecta* (Thomson) England (Thaxter 1900); “*Homalota* sp.” France, Germany (Picard 1917, Lepesme 1941, Scheloske 1969); *Atheta longicornis* (Gravenhorst) Finland and western Russia (Hulden 1983); *Atheta fungi* (Gravenhorst) Belgium (De Kesel and Haghebaert 1991); *Atheta* sp., Spain (Santamaría 1992a); *Acrotona pseudotenera* (Cameron) Netherlands (Haelewaters et al. 2014); *Drusilla canaliculata* (F.) Greece (Castaldo et al. 2004).
- M. californicus* (Thaxter, 1901b): adult *Oxytelus* sp., CA, USA (Thaxter 1901b, 1931); *Anotylus sculpturatus* (Gravenhorst) Belgium (De Kesel and Haghebaert 1991). According to Thaxter (1931) a record from *Anotylus inustus* (Gravenhorst) in Algeria by Maire (1920) is of some other fungal species, not *M. californicus*.
- M. caloderae* Thaxter, 1912b: adult *Calodera* spp., and *Atheta* sp., Argentina, and “*Atheta*

- chilensis* Bernhauer,” invalid name, Chile (Thaxter 1912b, 1931).
- = *M. ocaleae* Spegazzini, 1917: adult *Ocalea funebris* Lynch, Argentina (Spegazzini 1917, Thaxter 1931).
- M. ceylonensis* Santamaría, 1996b: adult *Atheta inornata* Kraatz, Sri Lanka (Santamaría 1996b).
- M. chosunensis* Lee, 1986: adult *Atheta* sp., South Korea (Lee 1986)
- M. denticulatus* Thaxter, 1915: adult *Stenomastax nigrescens* (Fauvel), Java, Indonesia, and *Atheta platygaster* Kraatz, Sumatra, Indonesia (Thaxter 1915, 1931); *Homalota* sp., Bali, Indonesia (Sugiyama and Majewski 1985a).
- M. diestotae* Thaxter, 1931: adult *Diestota testacea* (Kraatz), Sumatra, Indonesia (Thaxter 1931).
- M. doryloniae* Thaxter, 1931: adult *Ocyplanus amaneensis* (Eichelbaum) Cameroon (Thaxter 1931).
- M. dorylonillae* Thaxter, 1931: adult perhaps of *Dorylonilla spinipennis* Wasmann, Cameroon (Thaxter 1931).
- M. echidnoglossae* Thaxter 1901b: adult *Blepharymenus* sp. (as “*Echidnoglossa americana* Fauvel,” invalid name) Colorado, USA (Thaxter 1901b, 1908).
- M. eleusinus* Thaxter, 1931: adult “*Eleusis reynoldsi*” Bernhauer,” invalid name, Venezuela (Thaxter 1931).
- M. falagriae* Thaxter, 1931: adult *Falagria coarticollis* Fauvel, Cameroon, and *Falagria* spp. indet., Jamaica, and OH, USA (Thaxter 1931).
- M. focarilei* Rossi, 1981: adult *Leptusa piceata* Mulsant and Rey, Switzerland, and *L. montisgrappae* Pace, Italy (Rossi 1981).
- M. fragilis* Scheloske, 1969: adult *Ocalea picata* (Stephens) Germany (Scheloske 1969), France (Santamaría 1996b), Belgium (De Kesel and Haghebaert 1991); *Ocalea concolor* Kiesenwetter, Spain (Santamaría 1996b); *Oxypoda opaca* (Gravenhorst) Poland (Majewski 1994a).
- M. furcatus* (Thaxter, 1931): adult *Anotylus insignitus* (Gravenhorst) Jamaica, Haiti, Guatemala (Thaxter 1931); *Oxytelus laqueatus* (Marsham) Finland and western Russia (Huldén 1983).
- M. gibbosus* Thaxter, 1931: adult *Stenomastax cribrum* (Fauvel) Sumatra, Indonesia (Thaxter 1931).
- M. gnypetae* Thaxter, 1931: adult *Gnypeta modesta* Bernhauer, Sumatra, Indonesia (Thaxter 1931, Balazuc 1971b).
- M. homalotae* Thaxter, 1900: adult *Atheta dilutipennis* (Motschulsky) (as *Homalota putrescens* Wollaston, a synonym), Azores (Thaxter 1900, 1908, 1931, Siemaszko and Siemaszko 1932, Petch 1944, Hincks 1960, Balazuc 1974); *Atheta* sp., Argentina (Thaxter 1912a); *Atheta lurida* (Erichson) Argentina (Spegazzini 1917); *Atheta amicula* (Stephens) and *A. parens* Mulsant and Rey, and *A. pertyi* (Heer), Algeria (Maire 1920); *Atheta gagatina* (Baudi) and *A. triangulum* (Kraatz) Netherlands (Middelhoek 1943a, b); *Atheta xanthopus* (Thomson) Netherlands (Middelhoek 1947); *Atheta nigrifrons* (Erichson) Germany (Scheloske 1969); *Atheta transfigura* Sharp, Japan (Sugiyama 1978b); *Atheta paracrassicornis* Brundin, Finland (Huldén 1983); *Atheta lewisiana* Cameron and *Atheta reitteriana* Bernhauer, Japan (Majewski 1988a); *Atheta luridipennis* (Mannerheim) Czech Republic (Rossi et al. 2010); *Atheta cinnamoptera* (Thomson) and *Aloconota mihoki* (Bernhauer) Slovakia (Rossi et al. 2010); *Atheta aeneipennis* (Thomson) and *Atheta aterrima* (Gravenhorst) and *Tachyusa coarctata* (Erichson) Poland (Majewski 1994a); *Evanystes circellaris* (Gravenhorst) Germany (Scheloske 1969); “*Homalota* sp.” and *Carpelimus* sp. ME, NH, USA (Thaxter 1908); “*Homalota* sp.” Italy (Colla 1934); *Acrotona* sp., Congo-Kinshasa (Rossi and Santamaría 1992); *Drusilla canaliculata* (F.) England (Weir and Beakes 1993); *Geostiba oertzeni* (Eppelsheim); and *Atheta* sp., Greece (Castaldo et al. 2004).

- = *M. ternatus* Spegazzini, 1915b: adult ?genus, ? subfamily (Spegazzini 1915b, Thaxter 1931, Colla 1934, Stadelmann and Poelt 1962). Synonymy due to Santamaría (1994).
- M. infuscatus* Spegazzini, 1912: adult *Xantholinus subtilis* Boheman, Uruguay, and *X. bonariensis* Gemminger and Harold (= *X. gracilis* Boheman) and *X. andinus* Fauvel, Argentina (Spegazzini 1912, 1917, Thaxter 1912a, 1931); *Xantholinus longiventris* Heer, Poland (Majewski 1989); *Xantholinus* sp., Spain (Santamaría 1996b).
- M. invisibilis* Thaxter, 1900: adult *Homalota putrescens* Wollaston, a synonym of *Atheta dilutipennis* (Motschulsky), Azores (Thaxter 1900), but this host association was in the same publication attributed to *Monoicomycetes homalotae* (Thaxter 1900) presumably by confusion; this confusion was resolved by Thaxter (1931) in stating that the host of *M. invisibilis* in reality is *Oxytelus* sp.; *Anotylus hostilis* (Bernhauer) Sumatra, Indonesia, and *Anotylus sulcifer* (Fauvel) Venezuela (Thaxter 1931); *Oxytelus laqueatus* (Marsham) Poland (Siemaszko and Siemaszko 1932); *Anotylus insecurus* (Gravenhorst) and *Oxytelus piceus* (L.) Poland (Majewski 1994a); *Platystethus arenarius* (Fourcroy) Finland, Belgium (Hulden 1983, De Kesel and Haghebaert 1991); *Oxytelus* sp., Hainan Island, China (Shen and Ye 2006).
- = *M. affinis* Spegazzini, 1915b: adult ?genus, ? subfamily, Italy (Spegazzini 1915b, Thaxter 1931).
- = *M. argentinensis* (Spegazzini, 1912): adult *Platystethus fallax* Lynch, Argentina (Spegazzini 1912, 1917, Thaxter 1931).
- M. javanus* Thaxter, 1931: adult *Oxytelus* sp., Java, Indonesia (Thaxter 1931).
- M. labiatus* Majewski, 1984: adult *Mocyta fungi* (Gravenhorst) and *Gnypeta rubrior* Tottenham and *Thinonoma atra* (Gravenhorst) Poland (Majewski 1984); *Acrotona parvula* (Mannerheim) Poland (Majewski 1994a); *Atheta* sp. Spain and OR, USA (Santamaría 1996b).
- M. kamerunensis* Thaxter, 1931: adult ?genus nr. *Oxytelus*, Cameroon (Thaxter 1931).
- M. leptochiri* Thaxter, 1905: adult *Borolinus javanicus* (Laporte) and *B. minutus* (Laporte) Java, Indonesia (Thaxter 1905, 1908); *Borolinus bicornis* Nakane and Sawada, Japan (Terada 1977, Sugiyama 1978a); *Leptochirus* sp., Java and Sumatra, Indonesia (Thaxter 1905, 1908); *Priochirus unicolor* (Laporte) Java, Indonesia (Thaxter 1905, 1908); *Priochirus* sp., Taiwan (Sugiyama 1972, 1978a, Shen and Ye 2006); and *Priochirus silvestris* Bernhauer, Taiwan (Terada 1981, Shen and Ye 2006).
- M. leptotracheli* Thaxter, 1931: adult “*Leptotrachelia javana* Bernhauer,” invalid name, Java, Indonesia (Thaxter 1931).
- M. luxurians* Rossi and Santamaría, 1992: adult *Drusilla* sp., Congo-Kinshasa (formerly Zaire) (Rossi and Santamaría 1992).
- M. matthiatis* (Majewski, 1989): adult *Platystethus arenarius* (Fourcroy) Poland (Majewski 1989).
- M. myllaenae* Santamaría, 2006: adult *Myllaena elongata* (Matthews) Spain (Santamaría 2006), Netherlands (Haelewaters et al. 2014).
- M. nigrescens* Thaxter, 1902: adult *Calodera* sp., ME, NH, USA (Thaxter 1902, 1908, Scheloske 1969, Rossi 1978); *Tachysusa* sp., ME, NH, USA (Thaxter 1902, 1908, Scheloske 1969, Rossi 1978); *Meronera sharpi* Lynch, Argentina (Thaxter 1912a, Spegazzini 1917, Thaxter 1931, Scheloske 1969, Rossi 1978); *Ocalea funebris* Lynch, Argentina (Spegazzini 1912, Scheloske 1969); *Atheta inornata* Kraatz, Sri Lanka (Thaxter 1931, Scheloske 1969); *Falagria splendens* Kraatz, Italy (Rossi 1978); *Falagria nigra* (Gravenhorst) Poland (Majewski 1994a); *Atheta grata* Cameron and *Taxicera* sp., Japan (Majewski 1988a); *Atheta nigra* (Kraatz) England, Poland (Weir and Beakes 1993, Majewski 1994a); *Atheta intermedia* (Thomson) Czech Republic (Rossi et al. 2010); unidentified Aleocharinae, Poland, Spain (Majewski 1984, Santamaría 1992a); *Atheta pertyi* (Heer) and

- A. sordidula* (Erichson) Spain (Santamaría 1996b).
- M. osorianus* Thaxter, 1931: adult *Neosorius opaculus* (Eppelsheim) Cameroon (Thaxter 1931); *Neosorius arebianus* Cameron, Congo-Kinshasa (formerly Zaire) (Rossi and Santamaría 1992).
- M. oxypodae* Thaxter, 1902: adult *Oxypoda* sp., NH, USA (Thaxter 1902, 1908, 1931); *Atheta orbata* (Erichson) Balearic Is., Spain, and *Atheta nigritula* (Gravenhorst) Spain (Santamaría 1996b). *Brachygluta fossulata* (Reichenbach) Finland (Huldén 1983).
- M. oxytelis* Huldén, 1983: adult *Oxtelus fulvipes* Erichson, Finland (Huldén 1983).
- M. plagiuseae* Thaxter, 1931: adult *Neosilusa* sp., as “*Plagiusa gracilicornis* Bernhauer” invalid genus, Sumatra, Indonesia (Thaxter 1931); *Plagiusa* sp. [invalid genus in Staphylinidae, perhaps *Neosilusa* sp.] Japan (Majewski 1988a).
- M. ramosus* Thaxter, 1931: adult *Falagria latemarginata* Bernhauer, Sumatra, Indonesia (Thaxter 1931).
- M. sanctaehelena* Thaxter, 1900: adult *Oxytelus alutaceifrons* Wollaston, St. Helena (Thaxter 1900, 1908); *O. laqueatus* (Marsham) (= *O. luteipennis* Erichson) Germany (Picard 1913b, Maire 1916a, Siemaszko and Siemaszko 1932); *Oxytelus piceus* (L.) Algeria (Picard 1913b, Maire 1916a); *Oxytelus piceus* (L.) Finland (Huldén 1983); *Oxytelus ferrugineus* Kraatz, Sarawak, Malaysia, and “*Oxytelus semisulcatus* Bernhauer,” invalid name, Cameroon (Thaxter 1931); *Oxytelus lucens* Bernhauer, Taiwan (Sugiyama 1981, Shen and Ye 2006); *Oxytelus javanus* Cameron, Bali, Indonesia (Sugiyama and Majewski 1985a); *Oxytelus* sp., Sierra Leone (Rossi 1994).
- = *M. roccae* Colla, 1925: *Platystethus* sp. (as *Platistetus*) Italy (Colla 1925, Thaxter 1931).
- M. similis* Thaxter, 1905: adult ?*Homalota* sp., ME, USA (Thaxter 1905, 1908).
- M. singularis* Thaxter, 1931: adult *Oxytelus grandis* Eppelsheim, Cameroon (Thaxter 1931).
- M. stenusae* Thaxter, 1915: adult *Neosilusa ceylonica* (Kraatz) Java, Indonesia (Thaxter 1915, 1931).
- M. trogacti* Rossi, 2010: adult *Trogactus* sp., Ecuador (Rossi 2010).
- M. unilateralis* Spegazzini, 1915b: adult ?genus, ?subfamily, Italy (Spegazzini 1915b, Thaxter 1931, Stadelmann and Poelt 1962).
- M. venetus* Spegazzini, 1915: adult ?*Atheta*, Italy (Spegazzini 1915, Thaxter 1931).
- M. yamamotoi* Majewki and Sugiyama, 1985: adult *Thamiaraea diffinis* Sharp, Japan (Majewki and Sugiyama 1985b).
- M. zealandicus* Thaxter, 1918: adult *Atheta fungi* (Gravenhorst) New Zealand; *A. obtusidens* Eppelsheim, South Africa; *A. sumatrensis* Bernhauer, Sumatra, Indonesia, *Atheta* sp., Chile (Thaxter 1918, 1931); *Atheta pasadenae* Bernhauer (given as *A. pseudolaticollis* Erber and Hinterseher) Spain and CA, USA (Santamaría 1996b).
- Neohaplomyces* Benjamin, 1955
- N. cubensis* Benjamin, 1955: adult *Medon schwarzi* Blackwelder, Cuba (Benjamin 1955).
- N. medonalis* Benjamin, 1955: adult *Medon* sp., AZ, CA, USA (Benjamin 1955); *Medon brunneus* (Erichson) Turkey (Santamaría and Rossi 1999); *Medon* sp., Spain, Greece (Santamaría and Girbal 1987, Santamaría and Rossi 1999); *Thinocharis* sp., Madagascar (Santamaría and Rossi 1999).
- N. neomedonalis* Benjamin, 1955: adult *Medon schwarzi* Blackwelder, Cuba (Benjamin 1955);
- Osoriomyces* Terada, 1981
- O. rhizophorus* Terada, 1981: adult *Osorius formosae* Bernhauer, Taiwan (Terada 1981, Shen and Ye 2006).

- Peyerimhoffiella* Maire, 1916a
P. elegans Maire 1916a: adult *Brachygluta* spp., Algeria (Maire 1916a); *Brachygluta reichei* Motschulsky, *B. dichroa* (Saulcy), *B. lefebvrei* (Aubé), *B. fossulata* (Reichenbach), *B. xanthoptera* (Reichenbach), *Rybaxis longicornis* (Leach), *Tychus niger* (Paykull), *Bryaxis bulbifer* (Reichenbach), and *B. puncticollis* (Denny) Germany (Scheloske 1969); *Brachygluta fossulata* (Reichenbach) Finland (Huldén 1983) and Netherlands (Haelewaters et al. 2014); *Brachygluta xanthoptera* (Reichenbach) Belgium (De Kesel and Rammeloo 1991); *Brachygluta tibialis* (Aubé) Greece and Italy (Castaldo et al. 2004); *Brachygluta pandellei* (Saulcy), *Faronus besucheti* Castellini, *Rybaxis laminata* (Motchulsky), *Rybaxis longicornis* (Leach), and *Trissemus antennatus* (Aubé) Italy (Castaldo et al. 2004).
- = *R. brachyglutae* (Siemaszko and Siemaszko, 1926): adult *Brachygluta xanthoptera* (Reichenbach) Poland (Siemaszko and Siemaszko 1926, Scheloske 1969, Tavares 1985); *Brachygluta fossulata* (Reichenbach) Poland (Majewski 1994a,b).
- Peyritschiella* Thaxter, 1890
= *Dichomyces* Thaxter, 1893
= *Rheophila* Cépède and Picard, 1908
P. amazonica Thaxter, 1900: adult of unidentified staphylinid, ?Brazil (Thaxter 1900, 1908).
P. angolensis (Thaxter, 1900): adult *Philonthus* sp., Angola (Thaxter 1900).
P. anisopleura (Spegazzini, 1915b): adult *Philonthus hepaticus* Erichson, Argentina (Spegazzini 1915b, 1917).
P. argentinensis (Spegazzini, 1912): adult *Xantholinus subtilis* Boheman, Uruguay and Argentina (Spegazzini 1912, Thaxter 1931).
P. arimensis (Thaxter, 1931): adult *Belonuchus cognatus* Sharp, Trinidad (Thaxter 1931).
P. australiensis (Thaxter, 1901b): adult *Quedius ruficollis* (Gravenhorst) Australia (Thaxter 1901b, 1908).
- P. belonuchi* (Thaxter, 1901b): adult *Belonuchus fuscipes* Fauvel, New Guinea (Thaxter, 1901b, 1908)
- P. bicolor* (Thaxter, 1931): adult *Philonthus borneensis* Bernhauer, Sarawak, Malaysia and Philippines (Thaxter 1931).
- P. bifida* (Thaxter, 1901b): adult *Philonthus* sp., New Britain (Thaxter 1901b); *Philonthus micanticollis* Sharp, Japan (Sugiyama 1978b); *Bisnius* sp., Jiangsu Province, China (Shen and Ye 2006).
- P. biformis* (Thaxter, 1900): adult *Philonthus* sp., NY, USA, and *Philonthus umbratilis* (Gravenhorst) England and Scotland and Madeira and St. Pierre and Miquelon, Poland, Finland (Thaxter 1900, 1908, Hake 1923, Siemaszko and Siemaszko 1932, Stadelmann and Poelt 1962, Huldén 1983); *Philonthus micanticollis* Sharp, Japan and South Korea (Sugiyama 1973, Lee and Lee 1981, Lee et al. 2002), *Philonthus peliomerus* Kraatz, South Korea (Lee 1986).
- P. cafiana* (Thaxter, 1900): adult *Cafius puncticeps* White, South Africa (Thaxter 1900, 1908).
- P. chilensis* (Thaxter, 1918): adult *Cheilocolpus impressifrons* (Solier) Chile (Thaxter 1918, 1931).
- P. dubia* (Thaxter, 1900): adult *Philonthus* sp., NY, USA (Thaxter 1908); corrected to *Philonthus politus* (L.) (as *Philonthus aeneus* Rossi), NY and MA, USA and later Belgium and Germany (Thaxter 1900, 1908, Collart 1945, Scheloske 1969, De Kesel and Rammeloo 1991).
- P. eulissi* (Thaxter, 1931): adult *Eulissus chloropterus* Erichson, Australia (Spegazzini 1915b, Scheloske 1960); *Xantholinus illucens* Erichson, as "Eulyssus illucens," Trinidad and Grenada (Thaxter 1931).
- P. exilis* (Thaxter, 1900): adult *Bisnius fimetarius* (Gravenhorst) (as *Philonthus xanthomerus* Kraatz) Mexico (Thaxter 1900); *Belonuchus rufipennis* (F.) and *Philonthus oxyporinus* Sharp (Thaxter 1908).
- P. fumosa* (Thaxter, 1931): adult *Hesperus* sp., Sumatra, Indonesia (Thaxter 1931).

- P. furcifera* (Thaxter, 1893): adult *Philonthus debilis* (Gravenhorst) MA, USA (Thaxter 1893, Saccardo 1895, Benjamin 1971); *Philonthus centralis* Sharp, Mexico (Thaxter 1908); *Philonthus cinctipennis* Fauvel origin unstated (Thaxter 1908, Scheloske 1969); *Philonthus discoideus* (Gravenhorst) MA, USA, Scotland, Finland, Canary Islands, Algeria (Thaxter 1908, Picard 1913b, Maire 1916a, Thaxter 1931, Scheloske 1969, Huldén 1983 Arndt and Santamaría 2004); *Philonthus rectangulus* Sharp, Germany, Netherlands, Japan, South Korea, Poland (Thaxter 1908, Middelhoek 1943b, Stadelmann and Poelt 1962, Scheloske 1969, Sugiyama 1973, Lee 1986, Majewski 1989); *Philonthus oreophilus* Fauvel, Australia (Spegazzini 1915a, Scheloske 1969); *Philonthus convexicollis* Lynch and *Spatulonthus longicornis* (Stephens), Argentina (Spegazzini 1917); *Philonthus hepaticus* Erichson, Argentina and Uruguay (Spegazzini 1912, 1917); *Philonthus quisquiliarius* (Gyllenhal) Poland (Majewski 1989); *Philonthus amicus* Sharp, Japan (Sugiyama 1973) and South Korea (Lee 1986, Lee and Choi 1992); *Philonthus albipes* (Gravenhorst) and *Philonthus puella* Nordmann, Finland (Huldén 1983); *Philonthus rectangulus* Sharp, Japan (Sugiyama 1973) and South Korea (Lee 1986); *Philonthus flavocinctus* Motschulsky, Taiwan (Sugiyama and Shazawa 1977, Shen and Ye 2006); *Philonthus azabuensis* Dvořák, South Korea (Lee 1986); *Philonthus sericans* Sharp, Japan (Majewski 1988a); *Philonthus* sp., Hubei Province, China (Shen and Ye 2006); *Gabrius osseticus* (Kolenati) Austria (Stadelmann and Poelt 1962).
- P. gracilis* (Thaxter, 1915): adult *Hesperus* sp., Java, Indonesia (Thaxter 1915, 1931).
- P. heinemanniana* De Kesel, 1998: adult *Xantholinus longiventris* Heer, Belgium (De Kesel 1998); *Leptolinus nothus* (Erichson) Italy, Spain (Santamaría and Rossi 1999).
- P. homalotae* (Thaxter, 1901b): adult *Nehemitropia sordida* (Marsham), MA, USA (Thaxter 1901b, 1908); *Atheta* sp., South Korea (Lee and Choi 1992a); “aleocharine,” South Korea (Lee 1986).
- P. hybrida* (Thaxter, 1900): adult *Philonthus ventralis* (Gravenhorst) England, Madeira, North America (Thaxter 1900, 1908, Picard 1913b, Hake 1923); *Philonthus aeneipennis* Boheman, Gulf of Oman, Japan, Taiwan (Thaxter 1900, 1908, Terada 1976, 1978); *Philonthus gemellus* Kraatz, Sri Lanka (Thaxter 1908); *Philonthus ventralis* (Gravenhorst) Finland (Huldén 1983); *Philonthus tardus* Kraatz, South Korea (Lee 1986); *Philonthus* sp., Taiwan (Terada 1976, Shen and Ye 2006).
- P. infecta* (Thaxter, 1894): adult *Gyrohypnus fracticornis* (Müller) (as *Xantholinus obsidianus* Melsheimer) MA, USA, and *Xantholinus* sp., Argentina (Thaxter 1894, 1906, 1908, 1931); *Leptacinus* sp., China (Shen and Ye 2006).
- P. insignis* (Thaxter, 1900): adult of unknown subfamily and genus, Sarawak, Malaysia (Thaxter 1900).
- P. japonica* Terada, 1980: adult *Philonthus spadiceus* Sharp, Japan (Terada 1980); *Philonthus japonicus* Sharp, South Korea (Lee et al. 2011b).
- P. javanus* (Thaxter, 1900): adult *Philonthus* sp., ?Java, Indonesia (Thaxter 1900).
- P. lampropygii* Thaxter, 1931: adult *Philothalpus analis* (Erichson) Panama (Thaxter 1931).
- P. lepida* (Thaxter, 1931): adult *Philonthus circumductus* Fauvel, Philippines (Thaxter 1931).
- P. madagascariensis* (Thaxter, 1900): adult *Philonthus pollux* Fauvel (as “*Philonthus sikorae* Fauvel,” invalid name) Madagascar (Thaxter 1900); *Philonthus turbidus* Erichson, Egypt (Maire 1916b, Thaxter 1931).
- P. mexicana* (Thaxter, 1901b): adult *Philonthus atriceps* Sharp, Mexico (Thaxter 1901b, 1908).
- P. nigrescens* (Thaxter, 1893): adult *Philonthus debilis* (Gravenhorst) MA, USA (Thaxter 1893), Scotland, Germany (Scheloske 1969), and Finland (Huldén 1983); adult *Philonthus*

- flavocinctus* Motschulsky, Japan (Sugiyama 1978b) and Taiwan (Shen and Ye 2006); *Philonthus* sp., Jiangxi Province, China (Shen and Ye 2006).
- = *P. inaequalis* (Thaxter, 1894): adult *Philonthus debilis* (Gravenhorst) MA and ME, USA (Thaxter 1894).
- P. pallida* (Thaxter, 1931): adult *Philonthus aeneipennis* Boheman, Philippines (Thaxter 1931).
- P. peruviana* (Thaxter, 1900): adult *Nordus simplex* (Sharp) Peru (Thaxter 1900); *Ploctiopterus laetus* Sharp, Brazil (Thaxter 1908).
- P. pretiosa* (Thaxter, 1931): adult “*Staphylinus sumatrensis* Bernhauer,” invalid name, Sumatra, Indonesia (Thaxter 1931).
- P. princeps* (Thaxter, 1895): adult *Philonthus sordidus* (Gravenhorst) Algeria, Germany, Italy, Netherlands, and MA and CA, USA (Thaxter 1895, 1896, 1908, Picard 1913b, Maire 1916a, Colla 1925, 1934, Middelhoek 1943a, Poelt 1952a, Stadelmann and Poelt 1962); *Philonthus cephalotes* (Gravenhorst) Belgium, Finland, Poland, Czech Republic (Thaxter 1908, Picard 1913b, Collart 1945, Middelhoek 1947a,b, Majewski 1973b, Huldén 1983, De Kesel and Rammeloo 1991, Rossi and Máca 2006); *Philonthus quadraticeps* Boheman, Argentina (Spegazzini 1912, 1917, Thaxter 1931); *Philonthus politus* (L.) Belgium (Collart 1945, De Kesel and Kammeloo 1991); *Philonthus bonariensis* Bernhauer, Argentina (Spegazzini 1917); *Philonthus tardus* Kraatz, South Korea (Lee 1986); *Philonthus* sp., Peru (Sugiyama 1972); *Spatulonthus longicornis* (Stephens) Madeira, Italy (Thaxter 1908, Colla 1934, Rossi 1975); *Quedionmacrus puniceipennis* Solsky, Mexico (Thaxter 1908).
- P. protea* Thaxter, 1900: adult *Anotylus rugosus* (F.), England, France, Poland, Romania, Hungary, Belgium, German, Italy, Netherlands, Czech Republic, Spain (Thaxter 1900, 1908, 1931, Cépède and Picard 1908b, Picard 1913b, 1917, Siemaszko and Siemaszko 1931, Lepesme 1941, Middelhoek 1943b, 1947b, Bánhegyi 1944, 1949, Collart 1945, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1973a, 1974, Rossi 1975, De Kesel and Rammeloo 1991, De Kesel and Haghebaert 1991, Weir 1994, Rossi and Máca 2006, and Santamaría 1992a as “*Styloxys rugosus*”); *Anotylus insecatus* (Gravenhorst) France, Poland, North Africa, and MA, USA (Picard 1913b, Thaxter 1931, Siemaszko and Siemaszko 1932, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1974; Haelewaters et al. 2015); *Bledius bicornis* (Germar) Europe, Germany (Thaxter 1900, 1908, Siemaszko and Siemaszko 1932, Stadelmann and Poelt 1962, Scheloske 1969); *Bledius spectabilis* Kraatz, North Africa, France, Austria (Picard 1913b, 1917, Thaxter 1931, Siemaszko and Siemaszko 1932, Lepesme 1941, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1974); *Manda mandibularis* (Gyllenhal) Europe (Thaxter 1900, 1908, Picard 1913b, Scheloske 1969); *Oxytelus fulvipes* Erichson, Poland (Siemaszko and Siemaszko 1932, Scheloske 1969); *Planeustomus miles* Scriba, Tunisia (Maire 1916b, Thaxter 1931, Siemaszko and Siemaszko 1932, Scheloske 1969); *Philonthus wuesthoffi* Bernhauer, Tibet (Lee et al. 2006).
- = *P. oxyteli* (Cépède and Picard, 1908a): adult *Anotylus rugosus* (F.) France (Cépède and Picard, 1908a).
- P. quedii* (Scheloske, 1969): adult *Quedius vexans* Eppelsheim, Germany (Scheloske 1969).
- P. staphylini* (Thaxter, 1931): adult “*Staphylinus sumatrensis* Bernhauer,” invalid name, Sumatra, Indonesia (Thaxter 1931).
- P. subinaequilatera* (Spegazzini, 1915a): adult *Philonthus abyssinus* Fauvel (= *P. holomelas* Eppelsheim) as “*Philonthus holomallus*,” Somalia (Spegazzini 1915a); *Philonthus convexcicollis* Lynch, Argentina (Spegazzini 1917); *Philonthus* sp., Spain (Santamaría 1999).

- P. thyrecephali* (Thaxter, 1931): adult “*Thyreocelphalus venezolanus*,” invalid name, Venezuela (Thaxter 1931).
- P. trichodoniae* (Thaxter, 1931): adult *Trichodonia schwabi* Wasmann, Cameroon (Thaxter 1931).
- P. vulgata* (Thaxter, 1900): adult *Philonthus varians* (Paykull) England (Thaxter 1900); *Philonthus flavolimbatus* Motschulsky, Mexico and Panama (Thaxter 1900, 1908); *Philonthus cruentatus* (Gmelin) Europe (Thaxter 1900, 1908, Picard 1913b); *Philonthus quisquiliarius* (Gyllenhal) England, France, Czech Republic (Thaxter 1900, 1908, Picard 1913b, Hake 1923, Balazuc 1974, Rossi et al. 2010); *Philonthus ebeninus* (Gravenhorst) Siberia, Russia, Europe (Thaxter 1908); *Philonthus hepaticus* Erichson, Argentina and Nicaragua (Thaxter 1908, Spegazzini 1912, 1917); *Philonthus agilis* (Gravenhorst) Austria and France (Thaxter 1908, Picard 1913b, Balazuc 1974); *Philonthus aeruginosus* Nordmann and *P. convexicollis* Lynch, Argentina (Spegazzini 1912, 1917); *Philonthus sanguinolentus* (Gravenhorst) France (Picard 1917, Lepesme 1941, Balazuc 1974); *Philonthus moquerysi* Fauvel, Cameroon (Thaxter 1931); *Philonthus albipes* (Gravenhorst) Netherlands (Middelhoek 1943a); *Philonthus cephalotes* (Gravenhorst) Netherlands (Middelhoek 1943b) and Finland (Huldén 1983); *Philonthus spinipes* Sharp, Japan (Sugiyama 1973) and South Korea (Lee et al. 1982, Lee 1986); *Philonthus minutus* Boheman, Algeria, Taiwan (Maire 1916a, Colla 1925, Sugiyama and Shazawa 1977); *Philonthus sordidus* (Gravenhorst) Germany, Uruguay, Netherlands (Spegazzini 1917, Middelhoek 1943a,b, Stadelmann and Poelt 1962, Scheloske 1969); *Philonthus politus* (Linnaeus), England (Hincks 1960); *Philonthus corruscus* (Gravenhorst) Slovakia (Rossi et al. 2010); *Philonthus solidus* Sharp, Japan (Majewski 1988a); *Philonthus subuliformis* (Gravenhorst) Finland (Huldén 1983); *Spatulonthus longicornis* (Stephens) St. Helena, Sri Lanka, Italy, Madeira, Scotland, Australia, Finland, Taiwan, Missouri (USA), and Bali (Indonesia) (Thaxter 1900, 1908, 1931, Picard 1913b, Colla 1925, 1926, Hincks 1960, Sugiyama and Shazawa 1977, Huldén 1983, Majewski and Sugiyama 1985a, Shen and Ye 2006); *Leptacinus* sp., Hainan, China (Shen and Ye 2006).
- P. xanthopygi* Thaxter, 1901b: adult *Xanthopygus calidus* (Erichson) (as synonym *X. solskyi* Sharp), perhaps Brazil (Thaxter 1901b).
- P. zyricola* Thaxter 1931: adult *Zyras sulcicollis* Fauvel, Cameroon (Thaxter 1931); *Zyras corniger* Bernhauer, Sierra Leone (Rossi 1994).
- Phaulomyces* Tavares, 1985
- P. dibelonetis* (Thaxter, 1931): adult “*Dibelonetes piceus* Bernhauer,” invalid name, Grenada (Thaxter 1931). Transferred from genus *Meionomyces* by Tavares (1985).
- P. euastethi* Thaxter, 1931: adult *Euaesthetus americanus* Erichson, MA, USA (Thaxter 1931); *Euaesthetus ruficapillus* Boisduval and Lacordaire, Germany, Poland (Scheloske 1969, Balazuc 1971c, Majewski 1994a), transferred from genus *Corethromyces* by Tavares (1985).
- P. leonensis* Rossi, 1994: adult *Pseudespeson rossii* Lecoq, Sierra Leone (Rossi 1994).
- Polyascomyces* Thaxter, 1900
- P. trichophyae* Thaxter, 1900: adult *Trichophya pilicornis* (Gyllenhal) England (Thaxter 1900).
- Porophoromyces* Thaxter, 1926
- P. tmesiphori* (Thaxter, 1926): adult *Tmesiphorus* sp., Cameroon (Thaxter 1926); *Centrophthalmus grandis* Pic, Sierra Leone (Rossi 1994).

NOTE: *P. formosanus* Sugiyama (1982) was transferred to *Bordea* by Benjamin (2001).

Pselaphidomyces Spegazzini, 1917

P. pselapti Spegazzini, 1917: adult *Pselaptus tuberculifer* Raffray, in nests of an ant, *Acromyrmex lundi* Guérin-Méneville, Argentina (Spegazzini 1917); *Reichenbachia puncticollis* (LeConte) (as *Bryaxis*) northeastern USA (Thaxter 1931).

Rhachomyces Thaxter, 1895

= *Acanthomyces* Thaxter, 1893 [preoccupied]

R. arbusculus Thaxter, 1896: adult of gen. and sp. nr. *Lathrobium*, Liberia (Thaxter 1896, 1931).

R. bordonii Rossi and Santamaría, 2000: adult *Medhiama schawalleri* Bordoni, Nepal, and *Yunna micophora* Bordoni, Yunnan, China, and *Nepalinus* sp. Burma, and *Atopolinus insulanus* Bordoni, Taiwan (Rossi and Santamaría 2000).

R. cayennensis Thaxter, 1900: adult *Ochthephilum* sp. indet., French Guiana (Thaxter 1900, 1908, 1931).

R. cryptobianus Thaxter, 1900: adult “*Cryptobium capitatum*,” invalid name, Brazil (Thaxter 1900, 1908, 1931).

R. dolicaontis Thaxter, 1896: adult *Dolicaon lathrobioides* Laporte, South Africa (Thaxter 1896, 1908, 1931).

R. falcatus Rossi and Proaño Castro, 2009: adult *Palaminus* sp., Ecuador (Rossi and Proaño Castro 2009).

R. feloi Rossi, 2006: adult *Domene benahoarensis* Oromí and Martín Canary Islands (Rossi 2006).

R. furcatus (Thaxter, 1893): adult *Othius punctulatus* (Goeze) [= *O. fulgidus* (Paykull) = *O. fulvipennis* (F.)] France, Germany, Italy, Poland, Algeria, western Russia, Slovakia (Thaxter 1908, 1931, Picard 1913b, Maire 1920, Siemaszko and Siemaszko 1928, 1932, Lepesme 1942, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1973b, Rossi 1975, Huldén 1983, De Kesel and Haghebaert 1991, Rossi et al. 2010); *O. angustus* Stephens [= *O. melanocephalus* (Gravenhorst)] England, Italy (Thaxter 1908, 1931, Rossi 1975); *O. myrmecophilus* Kiesenwetter, England, Germany, France, Belgium (Thaxter 1908,

Scheloske 1969, Balazuc 1973b, De Kesel and Rammeloo 1991, De Kesel and Haghebaert 1991); *O. lapidicola* Markel and Kiesenwetter, France, Finland, Czech Republic (Balazuc 1973b, Huldén 1983, Rossi and Máca 2006); *O. pilifer* Quedenfeldt, Maire 1916a, Algeria; *O. transsilvanicus* Ganglbauer, Romania (Bánhegyi 1949).

R. glyptomeri Thaxter, 1901b: adult *Glyptomerus cavicola* Müller, former Yugoslavia (Thaxter 1901b, 1908, 1931).

R. lasiophorus (Thaxter, 1892): adult of a carabid beetle *Atranus pubescens* (Dejean) CT, USA (Thaxter 1892, 1895, 1931), perhaps misidentified on *Othius punctulatus* (Goeze) in Germany (Stadelmann and Poelt 1962) and should be compared with *R. lathrobii* (Tavares 1985).

R. lathrobii Thaxter, 1895: adult *Lathrobium* sp., NH, USA, and *Lobrathium longiusculum* (Gravenhorst) NH, USA (Thaxter 1894, 1895, 1931).

R. medonalis Thaxter, 1931: adult “*Medon tristis* Bernhauer” invalid name, Grenada (Thaxter 1931).

R. occipi Sugiyama, 1973: adult *Ocyphus scutiger* Sharp, Japan (Sugiyama 1973).

R. oedochiri Thaxter, 1901b: *Oedochirus* sp., Brazil (Thaxter 1901b, 1908, 1931).

R. philonthinus Thaxter, 1900: adult *Spatulonthus longicornis* (Stephens) and *Philonthus* sp., UK (Thaxter 1900, 1908); *Philonthus albipes* (Gravenhorst) Sweden, Finland (Thaxter 1908, Huldén, 1983); *Philonthus cruentatus* Gmelin [= *P. bipustulatus* (Panzer)], Netherlands, France, Italy, Finland (Middelhoek 1943b, Balazuc 1973b, Rossi 1975, Huldén 1983); *Philonthus fulvipes* (F.) Finland, western Russia (Huldén 1983); *Philonthus fumarius* (Gravenhorst) and *Philonthus rectangulus* Sharp, Belgium (De Kesel and Haghebaert 1991); *Philonthus marginatus* (Strøm) Netherlands, France, Belgium, Poland (Middelhoek 1943b, Collart 1945, Balazuc 1973b, De Kesel and Rammeloo 1991, Majewski 1994a); *Philonthus rubripennis* (Stephens) and *Philonthus rigidicornis*

- (Gravenhorst) and *Spatulonthus longicornis* (Stephens) Finland and *Philonthus micans* (Gravenhorst) Finland, western Russia (Huldén 1983); *Philonthus minutus* Boheman (= *P. mutans* Sharp) China (Thaxter 1908); *Philonthus varians* (Paykull) England, France, Poland, Belgium, Germany, Netherlands (Siemaszko and Siemaszko 1932, Middelhoek 1943a, 1943b, 1947, Petch 1944, 1945, Shaw 1952, Scheloske 1969, Stadelmann and Poelt 1962, Balazuc 1973b, De Kesel and Rammeloo 1991, De Kesel and Haghebart 1991, Majewski 1994a); *Philonthus varius* (Gyllenhal) France (Balazuc 1973b); *Philonthus umbratilis* (Gravenhorst) and *Philonthus quisquiliarius* (Gyllenhal) Poland (Majewski 1994a); *Philonthus wuesthoffi* Bernhauer, Japan (Sugiyama 1973, 1974); *Philonthus micanticollis* Sharp, South Korea (Lee and Park 1991); *Philonthus* sp. indet., Romania (Bánhegyi 1949, Lee 1986); *Bisnius fimetarius* (Gravenhorst) western Russia (Huldén 1983) Poland, Czech Republic, Slovakia, and Belgium (Majewski 1994a, Rossi et al. 2010, De Kesel and Haghebaert 1991); *Gabrius exiguus* (Nordmann) Europe (Thaxter 1908), and *Gabrius fauveli* (Coquerel, Réunion (Balazuc 1982); *Gabrius* sp., Congo-Kinshasa (formerly Zaire) (Rossi and Santamaría 1992); *Amichrotus apicipennis* Sharp and *Amichrotus* sp., Japan (Thaxter 1908, Ishikawa 1952); *Diatrechus griveaudi* Jarrige and *Platydracus peyrierasi* Jarrige, Madagascar (Balazuc 1982); *Sepedophilus nitidicollis* (Jarrige), Réunion (Balazuc 1982); *Philonthus* sp., Tibet, China (Shen and Ye 2006).
- R. pilosellus* (Robin, 1871): adult *Lathrobium* sp., origin not stated but probably France (Robin 1871); transferred to *Rhachomyces* by Thaxter (1895); *Lathrobium castaneipenne* Kolenati and *L. elongatum* (L.) Poland (Siemaszko and Siemaszko 1932); *L. fulvipenne* (Gravenhorst) France, Belgium, Germany, Italy (Thaxter 1908, Picard 1913b, Collart 1947, Scheloske 1969, Rossi 1975; De Kesel and Rammeloo 1991); *Lathrobium geminum* Kraatz, Belgium (De Kesel and Rammeloo 1991).
- = *R. brevipes* (Thaxter 1893): adult *Lathrobium fulvipenne* (Gravenhorst) Germany (Thaxter 1893, 1895).
- R. venustus* Rossi and Proaño Castro, 2009: adult *Megalopinus robustus* (Motschulsky), Ecuador (Rossi and Proaño Castro 2009).
- Rhadinomyces* Thaxter, 1893. Generic name resurrected by Tavares (1985).
- R. pallidus* Thaxter, 1893: adult *Lathrobium punctulatum* LeConte and *L. angulare* LeConte, MA, USA, as well as *L. fulvipenne* (Gravenhorst) Germany (Thaxter 1893); *Lathrobium angustum* Boisduval and Lacordaire, England (Hake 1923), *Lathrobium brunnipes* (F.) France, England, Germany, Belgium (Picard 1913b, Thaxter 1931, Hincks 1960, Scheloske 1969, Balazuc 1973b, De Kesel and Rammeloo 1991); *Lathrobium magistrettorum* Koch, Switzerland (Rossi 1975); *Lathrobium fovulum* Stephens, Poland (Majewski 1984), *Lathrobium terminatum* Gravenhorst, Greece and western Russia (Castaldo et al. 2004) and Czech Republic (Rossi and Máca 2006); *Lathrobium pallipes* Sharp, Japan (Majewski and Sugiyama 1985b).
- = *R. cristatus* Thaxter, 1893: adult *Lathrobium nitidulum* LeConte, MA and ME, USA; *Lathrobium castaneipenne* Kolenati, Poland, Belgium, Germany (Siemaszko and Siemaszko 1932, Collart 1945, Stadelmann and Poelt 1962, De Kesel and Rammeloo 1991); *Lathrobium elongatum* (L.) Poland, Germany (Siemaszko and Siemaszko 1932, Stadelman and Poelt 1962); *Lathrobium elongatum* (L.) and *Lathrobium ripicola* Czwalina, Poland (Siemaszko and Siemaszko 1932); *Lathrobium terminatum* Gravenhorst, England (Hincks 1960); *Lathrobium fulvipenne* (Gravenhorst) and *L. geminum* Kraatz, Belgium (De Kesel and Rammeloo 1991); placed as subspecies of *R. pallidus* by Balazuc (1973b). The name *Lathrobium punctulatum* LeConte was

- recognized as that of a valid species by Watrous (1980); *Lathrobium* sp., Japan (Majewski and Sugiyama 1985b).
- R. gracilis* (Thaxter, 1912a) as a variety of *Corethromyces platensis* Thaxter, raised to a specific rank by Spegazzini (1917), transferred to *Rhadinomyces* by Tavares (1985): adult *Lobrathium nitidum* (Erichson) Argentina (Thaxter 1912a, Spegazzini 1917); *Lobrathium dimidiatum* (Say) and *Stereoccephalus seriaticornis* Lynch, Argentina (Spegazzini 1917).
- Rickia* Cavara, 1899**
= *Distichomyces* Thaxter, 1905
- R. carpanetoi* Rossi and Santamaría, 1992: adult *Euconnus* sp., Congo-Kinshasa (formerly Zaire) (Rossi and Santamaría 1992)
- R. compressa* Thaxter, 1915: adult *Leptochirus* sp., Java, Indonesia (Thaxter 1915, 1926).
- R. fastigiata* Thaxter, 1926: adult *Coproporus secretus* Bernhauer, Philippines (Thaxter 1926).
- R. huggeri* Balazuc, 1980: adult *Omalium riparium* (Thomson), Sweden, France, and *Omalium caesum* Gravenhorst, Italy, and *Omalium ferrugineum* Kraatz, Italy (Balazuc 1980).
- R. hyperborea* Balazuc, 1980: adult *Micralymma marinum* (Strøm) Norway, England (Balazuc 1980, Weir 1994); *Micralymma brevilingue* Schiødte, eastern Siberia (Russia) (Balazuc 1980, Tavares 1985).
- R. inclusa* Thaxter, 1916: adult *Coproporus latus* Motschulsky, Philippines (Thaxter 1916, 1926).
- R. introversa* Thaxter, 1916: adult *Coproporus latus* Motschulsky, Philippines (Thaxter 1916, 1926).
- R. kistneri* Rossi, 1991: adult *Mimaenictus wilsoni* Kistner and Jacobson, Malaysia (Rossi 1991).
- R. leptochiri* (Thaxter, 1908): adult *Leptochirus* spp., Java, Indonesia (Thaxter 1908, 1912, 1926); *Priochirus unicolor* (Laporte) Malaya, Malaysia (Sugiyama and Majewski 1985b).
- NOTE: *R. lisplini* Thaxter (1912a) was transferred to *Diaphoromyces* by Thaxter (1926).
- R. lordithonis* Majewski and Sugiyama, 1985): adult *Lordithon* sp., Japan (Majewski and Sugiyama 1985b).
- R. minutissima* Sugiyama and Yamamoto, 1982: adult *Lispinus* sp., Sabah, Malaysia (Sugiyama and Yamamoto 1982).
- R. nigrescens* Thaxter, 1916: adult *Coproporus hypocryptoides* Bernhauer, Sumatra, Indonesia (Thaxter 1915, 1926).
- R. nigrofimbriata* Thaxter, 1916: adult *Coproporus latus* Motschulsky, Philippines, and *Coproporus* sp., Sumatra, Indonesia (Thaxter 1916, 1926).
- R. pallescens* Thaxter, 1916: adult *Mimocyptus globulus* Cameron, host genus as "Mymocyphus," Philippines (Thaxter 1916, 1926).
- R. peyerimhoffii* Maire, 1916c: adult *Scaphisoma agaricinum* (L.) and *Scaphisoma flavonotatum* (Pic), Algeria (Maire 1916c, Thaxter 1926); *Scaphisoma agaricinum* (L.) Finland and western Russia and *Rickia inopinatum* Löbl, Finland (Hulden 1983); *Scaphisoma agaricinum* (L.), *Scaphisoma assimile* Erichson, *Scaphisoma boreale* (Lundblad), *Scaphisoma boleti* (Panzer), and *Scaphisoma subalpinum* Reitter, Poland (Majewski 1994a, b); *Scaphisoma* sp., Czech Republic (Rossi and Máca 2006); *Scaphisoma agaricinum* (L.) Greece, *Scaphisoma boleti* (Panzer) Italy, and *Scaphisoma loebli* Tamanini, Italy (Castaldo et al. 2004); *Scaphidium femorale* Lewis, South Korea (Lee et al., 2011a); *Scaphidium* sp., South Korea (Lee 1986).
- R. phloeonomi* Thaxter, 1926: adult *Phloeonomus singularis* Kraatz, Sumatra, Indonesia (Thaxter 1926); *Paraphloeostiba sonani* Bernhauer, Japan and Taiwan (Sugiyama 1978b, Shen and Ye 2006); *Paraphloeostiba* sp., Hainan Island, China (Shen and Ye 2006).
- R. proteini* Majewski, 1983: adult *Proteinus brachypterus* (F.) and *Proteinus macropterus* (Gyllenhal) Poland (Majewski 1983, 1994a); *Proteinus crassicornis* Sharp, Japan (Majewski 1988a).
- R. rostellata* Thaxter, 1926: adult *Holosus* sp., Sumatra, Indonesia (Thaxter 1926); *Holosus*

- olisthaeriformis* Motschulsky, Malaya, Malaysia (Sugiyama and Mochizuka 1979).
- R. rostrata* Thaxter, 1915: adult *Atanygnathus ruficollis* (Kraatz), generic name as *Tanygnathus*, Sarawak, Borneo, Java, Indonesia (Thaxter 1915, 1926).
- R. sakcae* Sugiyama and Majewski, 1985: adult *Lordithon affinis* (Cameron) and *Lordithon* sp., Malaya, Malaysia (Sugiyama and Majewski 1985b).
- R. scydmaeni* Thaxter, 1916: adult: “*Scydmaenus bicolor*” (perhaps *Euconnus bicolor* LeConte) ME, USA (Thaxter 1916, 1926).
- = *R. rhachomycoides* Spegazzini, 1917: indet. scydmaenine, Argentina (Spegazzini 1917, Thaxter 1926).
- R. seticola* Thaxter, 1926: adult *Coproporus* sp., Sumatra, Indonesia (Thaxter 1926).
- R. sugiyamae* Tavares, 1985, new name for *Rickia lispinae* Sugiyama 1973, not *Rickia lispini* Thaxter, 1912a: adult *Lispinus asper* Sharp, as “*Lispinus aper*,” Japan (Sugiyama 1973, Tavares 1985).
- R. tachini* Terada, 1980: adult *Tachinus impunctatus* Sharp, Japan (Terada 1980).
- R. wulaiensis* Sugiyama, 1978a: adult *Priocnirus tonkinensis* Bernhauer, Taiwan (Sugiyama 1978a, Shen and Ye 2006).
- R. zanettii* Rossi and Cesari Rossi, 1978: adult *Omalium excavatum* Stephens Italy (Rossi and Cesari Rossi, 1978); *Omalium laeviusculum* Gyllenhal, Scotland (Weir and Beakes 1993).
- Sandersoniomyces* Benjamin, 1968a
- S. divaricatus* Benjamin, 1968a: adult *Quedius* sp., CA, USA (Benjamin 1968a).
- Scaphidiomyces* Thaxter, 1912a. All known hosts belong to Scaphidiinae.
- S. baeocerae* Thaxter, 1912a: adult *Baeocera* sp., Argentina (Thaxter 1912a, 1931, Spegazzini 1917); *Scaphisoma unicolor* Achard, South Korea (Lee et al. 2011b).
- S. baeoceridii* (Thaxter, 1931): adult *Baeoceridium depressipes* Reitter, Cameroon (Thaxter 1931).
- S. platensis* (Spegazzini, 1917): adult scaphidiine, Argentina (Spegazzini 1917, Thaxter 1931).
- S. pusillus* Rossi, 2010: adult *Baeocera* sp., Ecuador (Rossi 2010).
- S. scaphicomae* Thaxter, 1931: adult *Scaphicoma* sp., Cameroon (Thaxter 1931).
- Scelophoromyces* Thaxter, 1912a
= *Skelophoromyces* Thaxter, 1931
- S. osorianus* Thaxter 1912a: adult *Osorius sexpunctatus* Bernhauer, Argentina, *Osorius intermedius* Erichson, Trinidad, and *Osorius* sp., Brazil? (Thaxter 1912a, 1931).
- Smelingomyces* Thaxter, 1908
- S. anomalus* (Thaxter, 1902): adult “*Conosoma pubescens* Paykull,” a name that was at that time erroneously applied to various species of *Sepedophilus* in MA, USA (Thaxter 1902, 1908); *Sepedophilus testaceus* (as *Conosoma testaceum* (F.), a synonym) Italy (Rossi and Cesari Rossi 1980) and Greece (Castaldo et al. 2004); *Sepedophilus* sp., Spain (Santamaría 1992a).
- S. chaetophilus* (Thaxter, 1931): adult *Coproporus bernhaueri* Scheerpeltz (as “*C. ventralis* Bernhauer,” an invalid name), Sumatra, Indonesia (Thaxter 1931).
- S. lingulatus* (Thaxter, 1931): adult *Coproporus* sp., Sumatra, Indonesia (Thaxter 1931).
- S. trinitatis* Thaxter, 1931: adult “*Conosoma trinidadense* Bernhauer,” an invalid name, likely a species of *Sepedophilus*, Trinidad (Thaxter 1931); *Sepedophilus tibialis* (Sharp) Japan (Terada 1977).
- Sphaleromyces* Thaxter, 1894
- Synonymized into *Corethromyces* by Thaxter (1912a p. 180) but resurrected by Tavares (1985) for the four species named below.
- S. indicus* Thaxter 1901b: adult *Pinophilus* sp., India and Burma (Thaxter 1901b), transferred to *Corethromyces* by Thaxter (1912a), transferred to *Sphaleromyces* by Tavares (1985).
- S. lathrobii* Thaxter, 1894: adult *Lathrobium nitidulum* LeConte and *L. punctulatum*

- LeConte, ME, USA (Thaxter 1894), transferred to *Corethromyces* by Thaxter (1912a), transferred to *Sphaleromyces* by Tavares (1985); *Lathrobium quadratum* (Paykull) Europe (Thaxter 1908, 1912a, 1931, Picard 1913b, Petch 1944, Hincks 1960; Majewski 1982); *Lathrobium* sp., Spain (Santamaría 1995).
- S. occidentalis* Thaxter, 1895: adult *Pinophilus densus* LeConte, UT, USA (Thaxter 1895), transferred to *Corethromyces* by Thaxter (1912a), transferred to *Sphaleromyces* by Tavares (1985).
- S. rhinoceralis* (Thaxter, 1912a): adult *Pinophilus suffusus* Erichson, Argentina (Thaxter 1912a), transferred to *Sphaleromyces* by Tavares (1985).
- Stemmatomyces* Thaxter, 1931
- S. euconni* (Picard, 1917): adult *Euconnus wetterhali* (Gyllenhal), France (Picard 1917); unidentified scydmaenine, Philippines (Thaxter 1931), transferred to *Stemmatomyces* (Tavares 1985).
- Stichomyces* Thaxter, 1901
- S. capensis* Thaxter, 1931: adult *Sepedophilus angustus* (Bernhauer) South Africa (Thaxter 1931).
- S. conosomatis* Thaxter, 1901b: adult *Sepedophilus testaceus* (F.) MA, ME, USA (Thaxter 1901b, Maire 1920, Thaxter 1931, Benjamin 1971) Greece (Castaldo et al. 2004); *Sepedophilus tibialis* Sharp, Japan (Terada 1977); *Sepedophilus littoreus* (L.) England and MA, USA (Weir and Beakes 1993, Haelewaters et al. 2015); *Sepedophilus bipustulatus* (Gravenhorst) Greece (Castaldo et al. 2004); *Sepedophilus pedicularius* (Gravenhorst) Belgium (De Kesel and Rammeloo 1991) and Italy (Castaldo et al. 2004); *Sepedophilus nigripennis* (Stephens) Belgium, Netherlands (De Kesel and Haelewaters 1991, Haelewaters et al. 2012).
- S. europaeus* Majewski, 1973a: adult *Sepedophilus testaceus* (F.) Poland (Majewski 1973a).
- S. sumatrae* Thaxter, 1931: adult *Sepedophilus tenue* (Bernhauer) Sumatra, Indonesia (Thaxter 1931).
- NOTE: *Stichomyces catalinae*, *S. lepidus*, and *S. vesiculifer* were transferred to *Corethromyces* by Tavares (1985).
- Stigmatomyces* Karsten, 1869
- S. caudicola* Spegazzini, 1917: adult *Stereoccephalus seriatipennis* Lynch, Argentina (Lynch 1917). Thaxter (1917) and Tavares (1985) suggested that the fungus belongs to *Corethromyces*, but made no transfer.
- S. montevidensis* Spegazzini, 1917: adult *Lobrathium dimidiatum* (Say), Argentina (Spegazzini 1917). Thaxter (1931) suggested close affinity to *Corethromyces*, whereas Tavares (1985) suggested it belongs to *Sphaleromyces*, but no transfer was made.
- NOTE: All the species described from Coleoptera were removed from *Stigmatomyces* by Tavares (1985), yet she did not assign the two above to another genus, so they are listed here lest they be forgotten.
- Sugiyamaemyces* Tavares and Balazuc, 1989
- S. oroussetii* Tavares and Balazuc, 1989: adult *Clidicus formicarius* Pascoe, Borneo (Tavares and Balazuc 1989).
- Symplectromyces* Thaxter, 1908
- S. lapponicus* Huldén, 1983: adult *Quedius boops* (Gravenhorst) Finland (Huldén, 1983).
- S. rarus* Huldén, 1983: adult *Quedius fuliginosus* (Gravenhorst) Finland (Huldén, 1983) and Poland (Majewski 1987).
- S. vulgaris* (Thaxter, 1908): adult *Quedius cinctus* (Paykull) [= *Q. impressus* (Panzer)] Portugal, *Q. cruentus* (Olivier), Europe, *Q. dubius* Heer, France, *Q. fulgidus* (F.) Germany, Spain, *Q. fuliginosus* (Gravenhorst) Germany, *Q. peregrinus* (Gravenhorst) Canada, *Q. ventralis* (Aragona) (= *Q. truncicola* Fairmaire and Laboulbène)

Great Britain, *Quedius* sp., India and Canada, and ?*Philonthus* sp., Hungary (Thaxter 1908); *Quedius collaris* (Erichson) Poland (Majewski 1974, 1990a), *Quedius longicornis* Kraatz, France and Germany (Scheloske 1969, Balazuc 1971b), *Q. maurorufus* (Gravenhorst) Germany (Scheloske 1969), *Q. mesomelinus* (Marsham) North America, former Yugoslavia, Netherlands, Poland, Germany, Italy, Belgium, Finland, Czech Republic (Middelhoek 1943a,b, Collart 1945, Stadelmann and Poelt 1962, Scheloske 1969, Balazuc 1974, Majewski 1974, 1990a, Huldén, 1983, De Kesel and Rammeloo 1991, Rossi et al. 2010); *Quedius fulgidus* (F.) and *Quedius xanthopus* Erichson, Poland (Majewski 1974, 1990a); *Quedius nitipennis* (Stephens) Belgium (De Kesel and Rammeloo 1991); *Q. ochropterus* Erichson and *Q. scitus* (Gravenhorst) Italy (Rossi 1978); *Quedius maurus* Sahlberg, Czech Republic (Rossi et al. 2010); *Quedius curtipennis* Bernhauer and *Quedius tristis* (Gravenhorst) Belgium (De Kesel and Haghebaert 1991).

Teratomyces Thaxter, 1893

- T. *actobii* Thaxter, 1894: adult *Erichsonius nanus* (Horn) MA, ME, USA (Thaxter 1894, 1896); *Erichsonius cinerascens* (Gravenhorst) England, Germany, Italy (Thaxter 1908, 1931, Hake 1923, Scheloske 1969, 1969, Balazuc 1971c, Rossi and Cesari Rossi 1980); *Erichsonius signaticornis* (Mulsant and Rey) England (Hake 1923); *Erichsonius brachycephalus* Frank, MA, USA (Haelewaters et al. 2015).
- = T. *atropurpureus* Maire, 1920; *Erichsonius signaticornis* (Mulsant and Rey) Mauretania (Maire 1920, Thaxter 1931).
- =T. *brevicaulis* Thaxter, 1894: adult *Erichsonius nanus* (Horn) ME, USA, and *Erichsonius basalis* (Motschulsky) Sri Lanka (Thaxter 1894, 1931); *Erichsonius cinerascens* (Gravenhorst) Finland and Karelia (Russia) (Huldén 1983) and Poland (Majewski 1994a).
- T. *atanygnathi* Thaxter, 1931: adult *Atanygnathus ruficollis* (Kraatz) Philippines and Sarawak, Malaysia (Thaxter 1931).



Fig. 10.1 *Teratomyces mirificus* Thaxter (Laboulbeniales) (marked by an asterisk*) on the margin of the abdomen of *Acylophorus zdenae* Smetana (Staphylininae) collected in Florida

- T. *heterothopsis* Rossi, 2010: adult *Heterothops* sp., Ecuador (Rossi 2010).
- T. *insignis* Thaxter, 1901b: adult *Quedius edwardsi* Sharp and *Quedius* sp., New Zealand (Thaxter 1901b, 1908, 1931).
- T. *mirificus* Thaxter, 1893: adult *Acylophorus pronus* Erichson, MA, ME, USA (Thaxter 1893, 1896); *Acylophorus glaberrimus* (Herbst), Spain (Santamaría and Rossi 1999) Greece (Castaldo et al. 2004); *Acylophorus bumbuae* Bordoni and *Acylophorus rossii* Bordoni, Sierra Leone (Rossi 1994); *Acylophorus* sp., Yunan Province, China (Shen and Ye 2006) (Fig. 10.1).
- T. *petiolatus* Thaxter, 1901b: adult *Quedius* sp., New Zealand (Thaxter 1901b, 1908).
- T. *philonthi* Thaxter, 1900: adult *Philonthus* sp., Hungary (conceivably this was a *Gabrius* sp. like the other recorded hosts because *Gabrius* at that time was considered a junior synonym of *Philonthus*) (Thaxter 1900, 1908, Picard 1917, Thaxter 1931); *Gabrius trossulus* (Nordmann), Netherlands, Germany, Finland (Middelhoek 1943a, b, Stadelmann and Poelt 1962, Scheloske 1969 Huldén 1983); *Gabrius pennatus* Sharp, Germany (Scheloske 1969); *Gabrius* sp., Congo-Kinshasa (formerly Zaire) (Rossi and Santamaría 1992); *Gabrius nigritulus* (Gravenhorst) Poland (Majewski 1984); *Gabrius nitidulus* (Gravenhorst) Belgium,

- England (De Kesel and Rammeloo 1991, Weir 1994).
- T. quedianus* Thaxter, 1896: adult *Hemiquedius ferox* (LeConte), MA, USA (Thaxter 1896, 1931); *Quedius fulgidus* (F.) Hungary (Moesz 1931, Bánhegyi 1940).
- T. zealandicus* Thaxter, 1894: adult *Quedius insolitus* Sharp, New Zealand (Thaxter 1894, 1906, 1931).
- Tetrandromyces* Thaxter, 1912
= *Dicrandromyces* Thaxter, 1931
= *Triandromyces* Thaxter, 1931 NOTE: These synonymies are disputed by Rossi and Santamaría (2000).
T. brachidae Thaxter, 1912a: adult *Brachida reyi* Sharp, Argentina (Thaxter 1912a, 1931).
T. weirianus Rossi and Santamaría, 2000: adult *Pseudoplandria drugmandi* Pace, Philippines (Rossi and Santamaría 2000).
- Zeugandromyces* Thaxter, 1912a
Z. australis Thaxter, 1912a: adult *Scopaeus laevis* Sharp, Argentina (Thaxter 1912a, 1915, 1931).
Z. orientalis (Thaxter, 1931): adult *Scopaeus nitidulus* Motschulsky (as *S. subfasciatus* Kraatz) Philippines (Thaxter 1931); *Scopaeus currax* Sharp, Japan (Majewski and Sugiyama 1985b); *Scopaeus dilutus* Motschulsky, Malaya, Malaysia (Sugiyama and Majewski 1985b).
Z. pseudomedalis (Thaxter, 1931): adult *Lithocharis thoracica* (Casey) ME, USA (Thaxter 1931, Tavares 1985).
Z. stilici (Thaxter, 1915): adult *Rugilus ceylanensis* (Kraatz) (as *Stilicus*) Sarawak, Malaysia; Sumatra, Indonesia; and Sri Lanka (Thaxter 1915, 1931, Tavares 1985); “*Stilicus*” sp., Yunan, China (Shen and Ye 2006).
- NOTE: These four species were transferred here from *Stigmatomyces* by Tavares (1985).
- Order Pyxidiophorales
Pyxidiophoraceae
- Entomocosma* Spegazzini, 1918
?*Entomocosma* sp.: adult “*Tachinus pallipes*” (but see Campbell 1973), MA, USA (Thaxter 1920).
- Thaxteriola* Spegazzini, 1918
T. infuscata Spegazzini, 1918: adult *Belonuchus haemorrhoidalis* (F.) and *Philonthus convexuscollis* Lynch, Argentina (Spegazzini 1918).
- ORDER AND FAMILY NOT ASSIGNED
Chantransiopsis Thaxter, 1914. In *Ascomycota* but order and family not assigned as of 2013.
C. bonaerensis Spegazzini, 1918: adult *Xantholinus subtilis* Boheman and *Nacaeus tenellus* (Erichson), although the latter is possibly *Lispinus spegazzinii* Bernhauer, Argentina (Spegazzini 1918).
C. decumbens Thaxter, 1914: adult of unidentified genus, Java, Indonesia (Thaxter 1914).
C. platensis Spegazzini, 1918: adult *Belonuchus haemorrhoidalis* (F.) Argentina (Spegazzini 1918).
C. stipatus Thaxter, 1914: adult of genus near *Tachinus*, Java, Indonesia (Thaxter 1914).
C. xantholini Thaxter, 1914: adult *Xantholinus* sp., MA, USA (Thaxter 1914).
- Class Sordariomycetes
Order Hypocreales
Clavicipitaceae
Beauveria Vuillemin, 1912
B. bassiana (Balsamo) Vuillemin, 1912: adult *Tachyporus hypnorum* (F.) and *Anotylus rugosus* F. and *Gyrohypnus angustatus* (Stephens) Denmark (Steenberg et al. 1996).
- Metarhizium* Sorokin, 1883
M. anisopliae (Metchnikoff) Sorokin, 1883: adult *Anotylus rugosus* (F.) and *Anotylus insecatus* (Gravenhorst) Denmark (Steenberg et al. 1996).
- Cordycipitaceae
Cordyceps Link, 1833

- C. confragosa* (Mains) (synonymn *Lecanillium lecanii* (Zimmerman) Zare and Gams, 1861): adult *Tachyporus chrysomelinus* (L.) Denmark (Steenberg et al. 1996). *Actinocephalus* Stein, 1848
- Ophiocordycipitaceae*
- Hirsutella* Patouillard, 1892
- H. eleutheratorum* (Nees) Petch, 1932 [= *H. guignardi* (Maheu, 1906)]: adult *Quedius mesomelinus* (Marsham) France (Maheu 1906).
- Subphylum Entomophthoromycotina [is not assigned to a phylum]
- Order Entomophthorales
- Entomophthoraceae
- Pandora* Humber, 1989
- P. philonthi* (Balazy, 1993): adult *Anotylus rugosus* (F.) Belgium (Steenberg et al. 1996).
- Zoophthora* Battko, 1964
- Z. anglica* (Petch, 1944): adult of unidentified staphylinid genus, England (Leatherdale 1958).
- Basidiobolaceae*
- This genus has been characterized as a toxic black mold, perhaps not specific to its apparent hosts.
- Basidiobolus* Eidam, 1886
- = *Amphoromorpha* Thaxter, 1914
- B. entomophila* (Thaxter, 1914): adult *Diochus conicollis* Motschulsky, Philippines (Thaxter 1914, 1920b).
- B. mirabilis* (Siemaszko and Siemaszko, 1928): *Philonthus politus* L. [an erroneous citation by Stadelmann and Poelt 1962—not recorded from this host].
- B. subminuta* (Spegazzini, 1918): adult *Echiaster depressus* Solier, Argentina (Spegazzini 1918).
- Phylum Apicomplexa
- Class Conoidasida
- Order Eugregarinorida
- Actinocephalidae
- Members of Actinocephalidae are parasites in the digestive system of the host. When they are present in large numbers, they are likely to have a debilitating effect.
- A. crassus* (Ellis, 1912): adult *Leptochirus edax* Sharp, Guatemala (Ellis 1913).
- A. stelliformis* (Schneider, 1875): larva and adult *Ocypus olens* (Müller) France (Schneider 1875) and adult *Philonthus tenuicornis* Mulsant and Rey, Poland (Foerster 1938), and adult *Staphylinus caesareus* Cederhjelm and *Staphylinus erythropterus* L., Poland (Wellmer 1911).
- Stylocystis* Léger, 1899
- S. ensifera* (Ellis, 1912): adult *Leptochirum edax* Sharp, Guatemala (Ellis 1913), and *Anotylus tetracarinatus* (Block) Poland (Foerster 1938).
- Gregarinidae*
- Members of Gregarinidae are parasites in the digestive system of the host. When they are present in large numbers, they are likely to have a debilitating effect.
- Gregarina* Dufour, 1828
- G. omalina* Foerster, 1938: adult *Omalium rivulare* (Paykull) and *Heterothops dissimilis* (Gravenhorst) Poland (Foerster 1938).
- Phylum Platyhelminthes
- Class Cestoda
- Choanotaeniidae
- Choanotaenia* Railliet, 1896
- C. infundibulum* (Bloch, 1779): adult *Apocellus sphaericollis* (Say) is an intermediate host of this cestode (which is a parasite of domestic chickens) USA (Horsfall and Jones 1937).
- Hymenolepididae
- Soricinia* Spassky and Spasskaya, 1954
- S. diaphana* (Cholodowsky, 1906): adult *Tachinus pallipes* (Erichson) is an intermediate host of this cestode (which is a parasite of *Sorex* shrews) Czechoslovakia (Prokopíč 1967).
- Variolepis* Spassky and Spasskaya, 1954
- S. variabilis* (Mayhew, 1925): adult *Oxytelus* sp. is an intermediate host of this cestode (which is a parasite of *Corvus* crows) USA (Jones 1934).

Phylum Nematoda
Class Secernentea
Order Tylenchida

Most members of Tylenchida are parasites of plants. Those listed are parasites of insects, apparently attacking the larval or pupal stage and exiting from the adult.

Allantonematidae

Members of Allantonematidae are endoparasites. They may have severe consequences on host fitness, including female sterility, reduced male fertility and mating success, and reduced survival.

Allantonema Leuckart, 1887

A. philonthi Wachek, 1955: adult *Gabrius osseticus* Kolenati and *Philonthus debilis* (Gravenhorst) and *Bisnius fimetarius* (Gravenhorst) Germany (Wachek 1955).

Metaparasytlenchus Wachek, 1955

M. boopini Wachek, 1955: adult *Carpelimus fuliginosus* (Gravenhorst) Germany (Wachek 1955).

Palaeoallantonema Poinar, 2011. A fossil genus.

The species named below was detected next to an adult staphylinid beetle, from which it was thought to have emerged, in Dominican amber dated as 20–30 MY old.

P. dominicana Poinar, 2011: near to an adult *Neoxantholinus* in amber, Dominican Republic (Poinar and Brodzinsky 1986, Poinar 2011).

Parasytlenchoides Wachek, 1955

P. koernerii Wachek, 1955: adult *Anotylus tetracarinatus* (Block) Germany (Wachek 1955).

P. paederi Wachek, 1955: adult *Paederus littoralis* Gravenhorst, Germany (Wachek 1955).

P. rheocharae Wachek, 1955: adult *Aleochara spadicea* (Erichson) Germany (Wachek 1955)

P. steni Wachek, 1955: adult *Stenus biguttatus* (L.) and *Stenus bimaculatus* and *Stenus boops*

(Ljungh) and *Stenus pallitarsis* Stephens, Germany (Wachek 1955).

P. sp. indet.: adult *Tachyporus hypnorum* (F.) Germany (Lipkow 1968).

Proparasytlenchus Wachek, 1955. These attack pupae of their hosts and emerge from adults.

P. athetae Wachek, 1955: adult *Nehemitropia sordida* (Marsham) Germany (Wachek 1955); *Aloconota* sp., France, and *Plataraea brunnea* (F.) Germany (Puthz 1982).

P. medonis Wachek, 1955: adult *Medon ripicola* (Kraatz), Germany (Wachek 1955).

P. mymedoniae Wachek, 1955: adult *Zyras lugens* (Gravenhorst) Germany (Wachek 1955).

P. oxyteli Wachek, 1955: adult *Anotylus cornutus* (Gravenhorst) Germany (Wachek 1955).

P. platystethi Wachek, 1955: adult *Platystethus cornutus* (Gravenhorst) Germany (Wachek 1955).

P. trogophloezi Wachek, 1955: adult *Carpelimus bilineatus* Stephens, Germany (Wachek 1955).

P. californicus Poinar et al. 2015: adult *Tarphiota geniculata* (Mäklin) CA, USA, but likely infected the prepupa or pupa (Poinar et al. 2015)

Stictylus Thorne, 1941

= *Sphaerulariopsis* Wachek, 1955

S. philonthi auct.: typographical error by some authors, not Wachek, no such species.

Entaphelenchidae

The female parasite of *Entaphelenchus* is free-living until it invades the pupa of the host; *Entaphelenchus* has not been found in host larvae. Details of the development of *Roveaphelenchus* are unknown.

Entaphelenchus Wachek, 1955

E. aliantae Wachek, 1955: adult *Alianta incana* (Erichson) Germany (Wachek 1955).

E. bledii Wachek, 1955: adult *Bledius opacus* (Block) Germany (Wachek 1955).

E. oxyteli Wachek, 1955: adult *Oxytelus piceus* (L.) Germany (Wachek 1955).

- E. philonthi* Wachek, 1955: adult *Philonthus concinnus* (Gravenhorst) and *Bisnius fumetarius* (Gravenhorst) and *Philonthus fulvipes* (F.) Germany (Wachek 1955).
- E. platystethi* Wachek, 1955: adult *Platystethus cornutus* (Gravenhorst), Germany (Wachek 1955).
- E. xantholini* Wachek, 1955: adult *Gyrohypnus punctulatus* (Paykull) and *Xantholinus tricolor* (F.) Germany (Wachek 1955).
- Roveaphelenchus* Nickle, 1970
- R. jonesi* Nickle, 1970: adult of *Aleochara tristis* Gravenhorst NE, USA (Nickle 1970a).
- Order Rhabditida**
- Most members of Rhabditida are parasites of plants. Those listed are parasites of insects, apparently attacking the larval or pupal stage and exiting from the adult.
- Diplogastridae**
- Acrostichus* Rahm, 1928
- A. monhysterooides* (Bütschli, 1874): adult *Oxytelus* sp. and *Aleochara* sp., Germany (Sachs 1950) and *Atheta* sp. Germany (Sachs 1950).
- Allodiplogaster* Paramonov and Sobolev, 1954
- A. henrichae* (Sachs, 1950): adult *Oxytelus* sp. and *Atheta* sp. Germany (Sachs 1950).
- Diplogaster* Schultze, 1857
- D. coprophages* de Man, 1876: adult *Oxytelus* sp. and *Aleochara* sp. and *Atheta* sp. Germany and *Emus hirtus* (L.) Germany (Sachs 1950).
- Diplogasteritus* Paramonov, 1952
- D. zurstrasseni* (Sachs, 1950): adult *Emus hirtus* (L.) Germany (Sachs 1950).
- Diplogastrellus* Paramonov, 1952
- D. gracilis* (Bütschli, 1874): adult *Quedius cinctus* (Paykull) Germany (Hirschmann 1952).
- Goffartia* Hirschman, 1952
- G. heteroceri* Hirschmann, 1952: adult *Paederus riparius* (L.) Germany (Hirschmann 1952).
- Mesodiplogaster* Weingartner, 1955
- M. maupasi* (Potts, 1910) [= *M. entomophaga* (Steiner, 1929)]: adult *Drusilla canaliculata* (F.) Netherlands (Schuurmans Stekhoven 1929).
- Rhabditoides* Rahm, 1928
- R. stigmatus* (Steiner, 1930): adult *Lordithon thoracicus* (F.) Germany (Körner 1954).
- Neodiplogastridae**
- Fictor* Paramonov, 1952
- F. stercorarius* (Bovien, 1937): adult *Aleochara* sp. and *Emus hirtus* (L.) Germany (Sachs 1950).
- Glauxinema* Allgén, 1947
- G. schwemmlei* (Sachs, 1950): adult *Oxytelus* sp., Germany (Sachs 1950).
- Koerneria* Meyl, 1960
- K. erlangensis* (Sachs, 1950): adult *Aleochara* sp. and *Atheta* sp. Germany (Sachs 1950).
- Panagrolaimidae**
- Halicephalobus* Timm, 1956
- H. similigaster* (Andrássy, 1952): *Euryusa sinuata* Erichson and *Batrisodes* sp., Germany (Köhler 2012).
- Peloderidae**
- Coarctadera* Dougherty, 1953
- C. coarctata* (Leuckart, 1891): adult *Anotylus sculpturatus* (Gravenhorst) England (Triffitt and Oldham 1927); *Oxytelus* sp. and *Atheta* sp. and *Emus hirtus* (L.) Germany (Sachs 1950).
- C. tretzeli* (Sachs, 1950): *Emus hirtus* (L.) Germany (Sachs 1950).
- C. voelki* (Sachs, 1950): *Emus hirtus* (L.) Germany (Sachs 1950).

Rhabditidae

Caenorhabditis Osche, 1952*C. dolichura* (Schneider, 1866): adult *Aleochara* sp., Germany (Sachs 1950).*Diploscapter* Cobb, 1913*D. lycostoma* Völk, 1950: adult *Philonthus quisquiliarius* (Gyllenhal) Germany (Völk 1950).*Oscheius* Andrassy, 1976*O. wohlgemuthi* (Völk, 1950): adult *Philonthus quisquiliarius* (Gyllenhal) Germany (Völk 1950).*Rhabditis* Dujardin, 1845*R. aspera* Bütschli, 1873: adult *Philonthus quisquiliarius* (Gyllenhal) Germany (Völk 1950).*R. cylindrica* Cobb, 1898 [= *R. neuhausi* (Sachs, 1950)]: adult *Oxytelus* sp. and *Aleochara* sp. and *Atheta* sp. Germany (Sachs 1950).*R. gracilicauda* de Man, 1876: adult *Oxytelus* sp. and *Atheta* sp., Germany (Sachs 1950).*R. hartmanni* Sachs, 1950: adult *Aleochara* sp., Germany (Sachs 1950).*R. labiata* Völk, 1950: adult *Philonthus quisquiliarius* (Gyllenhal) Germany (Völk 1950).*R. longispina* Reiter, 1928: adult *Philonthus fulvipes* (F.) Germany (Hirschmann 1952).*R. spiculigera* Steiner, 1936: adult *Oxytelus* sp. and *Aleochara* sp. and *Atheta* sp., Germany (Sachs 1950).*R.* sp. indet.: adult *Spatulonthus longicornis* (Stephens) HI, USA (Zwaluwenburg 1928).*Rhabditophanes* Fuchs, 1930= *Cheilobus* Cobb, 1924, not Rafinesque, 1817*R. aphodii* (Sachs, 1950): adult *Emus hirtus* (L.) Germany (Sachs 1950).

Class Adenophorea

Order Mermithida

Mermithidae

Members of Mermithidae attack the immature stages of insects, develop within the hosts, and kill the host from which they emerge. Thus, they are parasitoids.

Oesophagomeris Artyukhovsky, 1969*Oesophagomeris* sp.: larva of *Philonthus splendens* (F.) Germany (Lipkow 1982).*Orthomeris* Poinar, 1965*O. oedobranchus* Poinar, 1965: larva of *Omalium caesum* Gravenhorst, England (Poinar 1965, 1975). This mermithid also attacks dipterous hosts and has a wider distribution including Australia.

Nemata Incertae Sedis

Agamonema Diesing, 1851 [a collective group of larval nematodes]*A. migrans* Christie, 1930: larva, perhaps of *Tachinus luridus* Erichson (although as "T. flavipes") VA, USA (Christie 1930). This nematode also attacks Silphidae and Scarabaeidae.

Phylum Nematomorpha

Class Gordioidea

Gordiidae

Gordius Linnaeus, 1758*G. aquaticus* Linnaeus, 1766: adult *Creophilus maxillosus* (L.) Austria (Assmuss 1858, Zwaluwenburg 1928).

Phylum Arthropoda

Class Arachnida

Order Sarcoptiformes

Histiostomatidae

Histiostoma Kramer, 1876*H. sapromyzarum* (Dufour, 1839): adult *Quedius mesomelinus* (Marsham) France (Théodoridès 1954, 1955).*H.* sp. indet.: adult *Paederus ruficollis* (Fabricius) France (Théodoridès 1955).

Order Prostigmata

Pyemotidae

Pygmephorus Kramer, 1877

Pygmephorus sp.: adult of *Platystethus cornutus* (Gravenhorst) Iraq (Shamshuddin et al. 1967). The authors suggest that these mites may be predators.

Scutacaridae

Imparipes Berlese, 1903

Imparipes armatus Karafiat, 1959: adult of *Platyprosopus mexicanus* Sharp, Mexico (Smetana 1982).

Order Mesostigmata

Eviphididae

Thinoseius Halbert, 1920

T. fucicola (Halbert, 1920): adult of *Cafius xantholoma* (Gravenhorst), England (Egglishaw 1966).

Family indet. of Gamasina

Genus and species indet.: adult of *Staphylinus dimidiaticornis* Gemminger (= *S. parumtomentosus* Stein) Wales (Green and Wilkinson 1950).

Class Insecta

Order Coleoptera

Colydiidae

Aglenus Erichson, 1845

A. brunneus (Gyllenhal, 1813): this eyeless, wingless beetle is phoretic on a cucujid beetle and on *Xylodromus concinnus* (Marsham) in England (Woodroffe 1967).

Order Diptera

There seem to be no valid records of Diptera as parasitoids of Staphylinidae.

Order Hymenoptera

Ichneumonidae

The large family Ichneumonidae has thus far been reported to attack only two species of Staphylinidae. Its larvae are parasitoids of host larvae.

Barycnemis Förster, 1869

B. blediator (Aubert, 1970): larva of *Bledius* sp., France (Aubert 1970, Horstmann 1981); *Bledius spectabilis* Kraatz, England (Wyatt 1982).

Phygadeuon Gravenhorst, 1829

P. subspinosis (Gravenhorst, 1829) [= *P. grandiceps* Thomson, 1884]: a record from a larva of *Quedius ochripennis* Ménétriers, France (Falcoz 1924), is suspect because Muesebeck et al. (1951) state that members of *Phygadeuon* are parasitoids of muscoid Diptera.

Braconidae

Braconidae are a large family of parasitoid wasps. Their specialization to host is at least somewhat phylogenetic because some subfamilies attack larvae of Coleoptera, whereas others attack eggs or larvae of Hymenoptera, Diptera, or Lepidoptera. Here are noted some that attack adult staphylinids.

Blacus Nees, 1818

B. ruficornis (Nees, 1811): adult *Tachyporus obtusus* (L.) Germany (Lipkow 1965, 1968).

Centistes Haliday, 1835

C. cuspidatus (Haliday, 1833) [= *C. lucidator* (Nees, 1834)]: adult of *Tachyporus chrysomelinus* (L.) and *T. hypnorum* (F.) and *T. obscurus* (L.) and *T. solutus* Erichson, Germany (Lipkow 1965, 1968).

Perilitus Nees, 1818

P. sp. indet.: adult *Paederus alfierii* Koch, Egypt (Kamal 1951).

Eulophidae

Eulophidae are a large family attacking eggs or larvae of Coleoptera and of many other orders.

Necremnus Thomson, 1878

N. cosconius (Walker, 1839) [= *N. amempsimus* (Walker, 1839)]: larva of *Quedius brevis* Erichson, England (Donisthorpe 1938). The wasp emerged in the laboratory from the pupal stage of a specimen collected in the field as a larva.

Myrmaridae

All known species of Myrmaridae are minute parasitoids of insect eggs of orders Heteroptera,

Homoptera, Psocoptera, Coleoptera, Diptera, and Orthoptera.

Litus Haliday, 1833

L. krygeri Kieffer, 1913: egg of *Ocypus olens* (Müller) ?France (Paulian 1941).

Diapriidae

These very small wasps are parasitoids of larvae and pupae of many insects.

Spilomicrus Westwood, 1832

S. stigmatical Westwood, 1832 [= *S. tripartitus* Kieffer, 1911]: larva of *Quedius puncticollis* (Thomson 1867) France (Paulian 1941). Two wasps emerged in the laboratory from the pupal stage of larvae collected in the field.

Proctotrupidae

Townes and Townes (1982) revised the family Proctotrupidae (= Serphidae) and found that virtually all the species associated with Staphylinidae had been misidentified or mis-assigned to genus by earlier authors. For that reason, the list of species and their hosts provided by Townes and Townes (1982) is accepted, and records published after 1981 are added. Eggs are oviposited into host larvae, and wasp larvae develop as endoparasitoids. Hosts of the vast majority of species (> 300) of Proctotrupidae are unknown.

Cryptoserphus Kieffer, 1907

C. aculeator (Haliday, 1839): early records from *Creophilus maxillosus* are due to nomenclatural confusion.

Exallonyx Kieffer, 1904

E. ater (Gravenhorst, 1807): larva of *Creophilus maxillosus* (L.) England, Mongolia; *Ocypus olens* (Müller) Mongolia.

E. brevicornis (Haliday 1839): larva of *Quedius vexans* Eppelsheim, Czechoslovakia.

E. confusus Nixon, 1938: the species has been much confused in the literature, so literature records of hosts before 1982 should be discounted.

E. crenicornis (Nees, 1834): larva of *Staphylinus* sp., Sweden.

E. ligatus (Nees 1834): the species has been much confused with *E. trifoveatus* and *E. quadriceps*, so literature records of hosts before 1982 should not be accepted without reexamination of parasitoid specimens.

E. longicornis (Nees, 1834): larva of "Staphylinidae," Germany.

E. microcerus Kieffer 1908: larva of "Tachyporini," Sweden; *Xantholinus* ? *linearis* (Olivier) Sweden.

E. obsoletus (Say, 1836): larva of "Staphylinus" sp." USA, *Platydracus violaceus* (Gravenhorst), MI and NY, USA; *Quedius laevigatus* (Gyllenhal), Ohio, USA (Hoebeke and Kovarik 1988).

E. pallidistigma Morley, 1911: larva of *Ocypus ater* (Gravenhorst) Germany.

E. quadriceps (Ashmead, 1893): larva of *Quedius* sp. England.

E. trifoveatus Kieffer, 1904: larva of *Quedius* sp., Denmark, *Quedius* sp., Germany; *Quedius vexans* Eppelsheim, Czechoslovakia; *Philonthus turbidus* Erichson, Hawaii.

Phaneroserphus Pschorner-Walcher, 1958

P. calcar (Haliday, 1839): larva of *Bolitochara obliqua* Erichson, England; *Quedius simplicifrons* Fairmaire, Germany.

Platygastridae

Most of the Platygastridae are parasitoids of larvae of Cecidomyiidae (Diptera). This record is unusual.

Trimorus Förster, 1856

T. fulvimanus (Kieffer, 1908): egg of *Acylophorus wagenscheiberi* Kiesenwetter, Poland (Staniec 2005).

10.3 Conclusion

The methods of detection of insect and nematode parasitoids differ sharply from the methods for detection of fungal parasites. Anyone who rears staphylinid larvae may encounter adult Hymenoptera or nematodes emerging from the resultant pupal or adult beetles. The easiest way

to encounter *Laboulbeniales* is to examine a pinned and labeled insect collection. This may account for a relatively larger number of host/parasitoid records of *Laboulbeniales*. It is obvious that a team approach, involving specialists in disparate taxa, will be the most productive and reliable in terms of accurate identification. The best way to advance the study of parasites of Staphylinidae in general may be for a young staphylinid specialist to establish a *database* of all the parasites, perhaps using this text as a basis. Then, that person should collaborate with specialists in the various parasite groups and urge staphylinid collectors to send parasites to those specialists. Construction of a useful computerized database was not possible before the first version (Frank 1982), and now this writer is retired. Construction of the database should be supported by the constructor's institution to ensure that it is not abandoned at change of personnel or with retirement. In the coming years, the available information will expand enormously.

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References¹

- Arndt E, Santamaría S (2004) Laboulbeniales (Ascomycota) of the Canary Islands. *Vieraea* 32:107–115
- Aubert J-F (1970) Ichneumonides pétiolées inédites. *Bull Soc Entomol Mulhouse* 1970:65–73
- Balazuc J (1980) Laboulbéniales nouvelles (Ascomycètes), parasites de coléoptères et de diptères. *Bull Mus Hist Nat, Paris* (ser. 4, Botanique) 2:209–219
- Balazuc J (1982) Laboulbeniales (Ascomycetes) de Madagascar, des Comores et des Mascareignes. *Bull Mens Soc Linnéenne Lyon* 51:6–27
- Balazy S (1993) Entomophthorales. Flora of Poland (Flora Polska). *Fungi (Mycota)* 24:1–356
- Benjamin RK (2001) *Autophagomyces, Bordea* and a new genus, *Rossiomyces* (Laboulbeniales). *El Aliso* 19:99–136
- Bernardi M, Barragán A, Rossi W (2014) New records of Laboulbeniales (Fungi, Ascomycetes) from Ecuador and other countries. *Webbia: J Pl Taxon Geog* 69:281–290
- Blum G (1924) Zwei neue Laboulbenien aus Brasilien. *Centralbl Bakteriol Parasitenk und Infektionskrankheiten, 2-Abt.* 62:300–302
- Castaldo D, Rossi W, Sabatini F (2004) Contribution to the knowledge of the Laboulbeniales from Greece. *Pl Biosyst* 138:261–269
- Cavara F (1899) Di una nuova Laboulbeniaceae: *Rickia Wasmannii*, nov. gen. e nov. spec. *Malpighia* 13:173–188
- De Kesel A (1998) *Peyritschella heinemanniana* sp. nov. (Ascomycetes, Laboulbeniales), a new ectoparasitic species from *Xantholinus longiventris* (Coleoptera, Staphylinidae). In: Fraiture A. (ed) Paul Heinemann Memorial Symposium. *Belg J Bot* 131(2):176–180
- De Kesel A, Haelewaters D (2014) *Laboulbenia slackensis* and *L. littoralis* sp. nov. (Ascomycota, Laboulbeniales), two sibling species as a result of ecological speciation. *Mycologia* 106:407–414
- De Kesel A, Haghebaert G (1991) Laboulbeniales (Ascomycetes) of Belgian Staphylinidae (Coleoptera). *Bull Ann Soc Roy Entomol Belg* 127:253–270
- De Kesel A, Rammeloo K (1991) Checklist of the Laboulbeniales (Ascomycetes) of Belgium. *Belg J Bot* 124:204–214
- Falcoz L (1924) Observations biologiques sur divers insectes des environs de Vienne en Dauphiné. *Bull Soc Entomol Fr* 1924:221–224
- Frank JH (1982) The parasites of the Staphylinidae (Coleoptera). A contribution towards an encyclopedia of the Staphylinidae. *Univ Fla Agr Exp Stn, Tech Bull* 824: i–vii, 1–118
- Haelewaters D (2013) First record of the genus *Ilyomyces* for North America parasitizing *Stenus clavicornis*. *Bull Insectol* 66:269–272
- Haelewaters D, van Wielink P, van Zuijlen VW et al (2012) New records of Laboulbeniales for the Netherlands. *Entomol Ber* 72:175–183
- Haelewaters D, Vorst O, De Kesel A (2014) New and interesting Laboulbeniales (Fungi, Ascomycota) from the Netherlands. *Nova Hedwigia* 98:113–125
- Haelewaters D, Zhao SY, De Kesel A et al (2015) Laboulbeniales (Ascomycetes) of the Boston Harbor Islands I: Species parasitizing Coccinellidae and Staphylinidae, with comments on typification. *North-east Nat* 22:459–477
- Hoebeka ER, Kovarik PW (1988) *Exallonyx obsoletus* (Hymenoptera: Serphidae), a larval parasite of the rove beetle *Quedius laevigatus* (Coleoptera: Staphylinidae). *Entomol News* 99:217–220

¹ Note: Almost all pre-1981 references may be found cited in Frank (1982). The parasites of the Staphylinidae (free online at: <http://ufdc.ufl.edu/UF00027462>). Those earlier references are not repeated below to save space.

- Horsfall MW, Jones MF (1937) The life history of *Choanotaenia infundibulum*, a cestode parasitic in chickens. J Parasitol 23:435–450
- Horstmann K (1981) Revision der europäischen Tersilochinae II (Hymenoptera: Ichneumonidae). Spixiana, Suppl 4:1–76
- Hughes M, Weir A, Leschen R et al (2004) New species and records of Laboulbeniales from the subantarctic islands of New Zealand. Mycologia 96:1355–1359
- Huldén L (1983) Laboulbeniales (Ascomycetes) of Finland and adjacent parts of the U.S.S.R. Karstenia 23:31–136
- Jones MF (1934) Cysticercoids of the crow cestode, *Hymenolepis variabilis* (Mayhew, 1925) Fuhrmann, 1932. (Hymenolepididae). Proc Helminthol Soc Wash 1:62–63
- Kaur S, Mukerji KG (1996) Studies on Indian Laboulbeniales. 2. Three unrecorded species. Nova Hedwigia 62:151–156
- Köhler A (2012) Nematodes in the heads of ants associated with sap flux. Nematology 14:191–198
- Lee Y-B (1986) Taxonomy and geographical distribution of the Laboulbeniales in Asia. Korean J Pl Taxon 16:89–185
- Lee Y-B, Choi D-S (1992) Studies on taxonomy and distribution of the Laboulbeniales collected in Korea (species from Cheonnam Province). Korean J Mycol 20:183–194
- Lee Y-B, Lee JY (1981) Studies on the Laboulbeniales in Korea (I). Korean J Mycol 9:177–192
- Lee Y-B, Na Y-H (1998) Notes on some species including unrecorded species of the Laboulbeniales (Ascomycetes) collected in Korea. Korean J Mycol 26:108–118
- Lee Y-B, Na Y-H (2011) A new species of the genus *Euphoriomycetes* (Laboulbeniales Ascomycotina) collected in Korea. Mycobiology 39:59–60
- Lee Y-B, Park S-H (1991) Three species of the Laboulbeniales collected in Korea. Korean J Mycol 19:18–21
- Lee Y-B, Lee C-I, Lee J-Y (1982) Studies on the Laboulbeniomycetes in Korea (II). Korean J Mycol 10:1–6
- Lee Y-B, Kim KT, Lim CK (2002) Interesting species of the Laboulbeniales from the Upo Swamp. Mycobiology 30:128–132
- Lee Y-B, Na Y-H, Lim C-K (2005) Notes on three species of the Laboulbeniales newly collected in Korea. Mycobiology 33:61–64
- Lee Y-B, Na Y-H, Lim C-K (2006) Notes on two species of the Laboulbeniales from Tibet. Mycobiology 34:41–43
- Lee Y-B, Na Y-H, Jang I-H et al (2007) Notes on three species of the genus *Euphoriomycetes* (Laboulbeniales) from Korea. Mycobiology 35:1–5
- Lee Y-B, Lim C-K, Na Y-H (2011a) Notes on some species of the Laboulbeniales collected from Korea (2011). Korean J Mycol 39:136–140
- Lee Y-B, Cha S-T, Park S-H et al (2011b) Studies on interesting species of the Laboulbeniales collected from Korea. Mycobiology 39:219–225
- Lepesme P (1945) Laboulbeniales parasites de coléoptères. V. p 149–150. In: Jeannel R et al (eds) Mission scientifique de l'Omo, vol VI, fasc 57. Faune des terriers des rats-taupes. Mém Mus Hist Nat, Paris (n.s.) 19:1–214
- Lipkow E (1982) Lebensweise von *Philonthus*-Arten und anderen Staphylinidae (Coleoptera) des Dungs. Drosera 1982:47–54
- Maheu J (1906) Contribution à l'étude de la flore souterraine de France. Ann Sci Nat, Botanique (ser 9) 3:1–192
- Maire R (1916) Sur une nouvelle Laboulbeniale parasite des Scaphidiidae. Bull Sci Fr Belg (ser 7) 49:290–296
- Majewski T (1973a) Rare and new Laboulbeniales from Poland. III. Acta Mycologica 9:111–124
- Majewski T (1973b) Rare and new Laboulbeniales from Poland. IV. Acta Mycologica 9:229–238
- Majewski T (1974) Rare and new Laboulbeniales from Poland. V. Acta Mycologica 10:267–282
- Majewski T (1980) Rare and new Laboulbeniales from Poland. VI. Acta Mycologica 10:141–153
- Majewski T (1982) Rare and new Laboulbeniales from Poland. VII. Acta Mycologica 17:53–62
- Majewski T (1983) Rare and new Laboulbeniales from Poland. VIII. Acta Mycologica 19:183–191
- Majewski T (1984) Rare and new Laboulbeniales from Poland. IX. Acta Mycologica 20:231–241
- Majewski T (1987) Rare and new Laboulbeniales from Poland. X. Acta Mycologica 23:97–108
- Majewski T (1988a) Some Laboulbeniales (Ascomycotina) collected in Japan. I. Species from Shizuoka Prefecture. Trans Mycol Soc Japan 29:33–54
- Majewski T (1988b) Some Laboulbeniales (Ascomycotina) collected in Japan III. Species on coleopterous insects from Iriomote Island. Trans Mycol Soc Japan 29:249–264
- Majewski T (1989) Rare and new Laboulbeniales from Poland. XI. Acta Mycologica 25:43–55
- Majewski T (1994a) The occurrence of the Laboulbeniales (Fungi, Ascomycetes) in natural forest communities in the Białowieża National Park, NE Poland. Frgm Flor Geobot 39:479–501
- Majewski T (1994b) The Laboulbeniales of Poland. Polish Bot Stud 7:1–466
- Majewski T (1999) New and rare Laboulbeniales (Ascomycetes) from the Białowieża Forest (NE Poland). Acta Mycol 34:7–39
- Majewski M, Sugiyama K (1985a) Notes on the Laboulbeniomycetes of Bali Island (Indonesia). III. Trans Mycol Soc Japan 26:169–178
- Majewski T, Sugiyama K (1985b) The Laboulbeniomycetes of eastern Asia. IV. On ten species from Japan including four new species. Trans Mycol Soc Japan 26:295–313

- Majewski T, Sugiyama K (1986) Notes on the Laboulbeniomycetes of Borneo IV. Trans Mycol Soc Japan 27:425–439
- Peyritsch J (1873) Beiträge zur Kenntnis der Laboulbenien. Sitzungsber Kaiserl Akad Wissensch, Mathem-Naturwiss Classe, Abt 1. (Vienna) 68:227–254
- Poinar GO Jr (2011) The evolutionary history of nematodes. Brill, Leiden
- Poinar GO, Brodzinsky J (1986) Fossil evidence of nematode (Tylenchida) parasitism in Staphylinidae (Coleoptera). Nematologica 31:353–355
- Poinar G Jr, Datlen N, Espinoza M et al (2015) *Proparasitylenchus californicus* n. sp. (Tylenchida: Allantonematidae) parasitic in the intertidal rove beetle *Tarphiota geniculata* (Mäklin) (Coleoptera: Staphylinidae) in California, USA. Syst Parasitol 92:57–64
- Proaño Castro AC, Rossi W (2008) New records of Laboulbeniales (Fungi, Ascomycetes) from Ecuador. Biodiversity of South America, I. Mem Biodivers 1:11–18
- Prokopič J (1967) *Tachinus pallipes*, a new intermediate host of the cestode *Sorcinia diaphana* (Chodlowsky, 1906). Folia Parasitol 14:234
- Putz V (1982) Entoparasitische Nematoden bei einigen Aleocharinen (Staph.). Entomol Bl 78:31
- Robin CP (1871) Traité du Microscope. Baillière et fils, Paris. (A 2nd edition (1877) with different pagination is available free online)
- Rossi W (1981) Una nuova specie di *Monoicomycetes* (Ascomycetes, Laboulbeniales). Candollea 36:375–378
- Rossi W (1982) Laboulbeniales (Ascomycetes) della Sierra Leone. Quad Accad Nazion Lincei 255:9–22, pl. 1–4
- Rossi W (1986) Su alcune specie di Laboulbeniales nuove e interessanti della Sierra Leone. Quad Accad Nazion Lincei 260:77–96, pl. 1–3
- Rossi W (1990) New or interesting Laboulbeniales (Ascomycetes) from Sierra Leone. Quad Accad Nazion Lincei 265:5–13, pl. 1–2
- Rossi W (1991) A new species and a new record of Laboulbeniales (Ascomycetes) parasitic on myrmecophilous Staphylinidae. Sociobiology 18:197–202
- Rossi W (1994) A new contribution to the knowledge of the Laboulbeniales (Ascomycetes) from Sierra Leone. Quad Accad Nazion Lincei 267:4–17
- Rossi W (2006) New cavernicolous Laboulbeniales (Fungi, Ascomycetes). Nova Hedwigia 83:128–136
- Rossi W (2010) New Laboulbeniales (Ascomycota) parasitic on Staphylinidae from Ecuador. Mycol Progr 9:407–415
- Rossi W (2011) New species of *Laboulbenia* from Ecuador, with evidence for host switch in the Laboulbeniales. Mycologia 103:184–194
- Rossi W, Bergonzo E (2008) New or interesting Laboulbeniales from Brazil. El Aliso 26:1–8
- Rossi W, Cesari Rossi MG (1980) Nuovo contributo alla conoscenza delle laboulbeniali (Ascomycetes) parassite di stafilinidi italiani (Insecta, Coleoptera). Giorn Bot Ital 114:187–192
- Rossi W, Máca J (2006) Notes on the Laboulbeniales (Ascomycetes) from the Czech Republic. Sydowia 58:110–124
- Rossi W, Proaño Castro AC (2009) New species of *Rhachomyces* from Ecuador, one of which is dimorphic. Mycologia 101:674–680
- Rossi W, Santamaría S (1992) New or interesting Laboulbeniales (Ascomycetes) from Zaire. Nova Hedwigia 55:519–525
- Rossi W, Santamaría S (2000) New Laboulbeniales parasitic on Staphylinidae. Mycologia 92:786–791
- Rossi W, Santamaría S (2012) *Rodoucea*, a new genus of the Laboulbeniales. Mycologia 104:785–788
- Rossi W, Weir A (2007) New species of *Corethromyces* from South America. Mycologia 99:131–134
- Rossi W, Máca J, Vavra J (2010) New records of Laboulbeniales (Ascomycota) from the Czech Republic and Slovakia. Polish Bot J 55(2):343–351
- Rostrup O (1916) Bitrag til Danmarks svampeflora. I. Dansk Bot Arkiv 2:1–56
- Santamaría S (1989) El orden Laboulbeniales (Fungi, Ascomycotina) en la Península Ibérica e Islas Baleares. Ed Espec Soc Catalana Micol 3:1–396
- Santamaría S (1992a) Laboulbeniales (Ascomycotina) ibéricos. Nuevos datos corológicos. Orsis 7:139–144
- Santamaría S (1992b) New and interesting Laboulbeniales (Fungi, Ascomycotina) from Spain. Nova Hedwigia 54:479–492
- Santamaría S (1993) Contribución al conocimiento de los Laboulbeniales (Fungi, Ascomycotina) ibéricos. III. Orsis 8:21–31
- Santamaría S (1994) Studies on the genus *Monoicomycetes* (Laboulbeniales, Ascomycotina): on the species described by Spegazzini. Mycotaxon 50:89–92
- Santamaría S (1995a) New and interesting Laboulbeniales (Fungi, Ascomycotina) from Spain, III. Nova Hedwigia 61:65–83
- Santamaría S (1995b) A new generic arrangement for two species formerly described in *Laboulbenia*. Mycologia 87:697–701
- Santamaría S (1996a) Bases corológicas de Flora Micológica Iberica, Números 895–1113. Cuad Trab Flora Micol Ibérica 10:1–126
- Santamaría S (1996b) Taxonomic notes on *Monoicomycetes* with descriptions of two new species. Mycol Res 100:1179–1193
- Santamaría S (1997) Species of *Corethromyces* parasitic on rove beetles of the genus *Scopaeus*. Mycologia 89:325–331
- Santamaría S (1998) Laboulbeniales I. Laboulbenia. Flora Micológica Ibérica, vol 4. J. Cramer, Madrid
- Santamaría S (1999) New and interesting Iberian Laboulbeniales (Fungi, Ascomycota). Nova Hedwigia 68:351–364
- Santamaría S (2000) Taxonomy and morphology of *Amorphomyces* (Laboulbeniales). Mycol Res 104:1389–1398

- Santamaría S (2001) New and interesting Laboulbeniales (Fungi, Ascomycota) from Spain, IV. Nova Hedwigia 72:375–389
- Santamaría S (2002) A taxonomic revision of the genus *Dioicomycetes* (Laboulbeniales). Mycol Res 106:615–638
- Santamaría S (2006) New or interesting Laboulbeniales (Fungi, Ascomycota) from Spain. V. Nova Hedwigia 82:349–363
- Santamaría S, Girbal J (1987) Contribución al conocimiento de los Laboulbeniales (Ascomycotina) ibéricos, II. An Jardín Bot Madrid 44:11–22
- Santamaría S, Rossi W (1999) New or interesting Laboulbeniales (Ascomycota) from the Mediterranean region. Pl Biosyst 133:163–171
- Santamaría S, Balazuc J, Tavares II (1991) Distribution of the European Laboulbeniales (Fungi, Ascomycotina). An annotated list of species. Treb Inst Bot Barcelona 14:1–123
- Shamshuddin M, Al-Hafidh R, Al-Adhami MA (1967) Biology of *Craetopyrus cornutus* (Gravenhorst) (Coleoptera: Staphylinidae) and its associated species of mite of the genus *Pygmephorus* (Acarina: Pyemotidae). Appl Entomol Zool 2:218–222
- Shen Y-H, Ye D-H (eds) (2006) Flora fungorum sinicorum, Laboulbeniales, vol 28. Science Press, Beijing
- Shen Y-H, Li T-H, Song B (2004) Two new records of *Cantharomyces* to China. Mycosistema 23:303–305
- Siemaszko J, Siemaszko W (1926) Laboulbeniales polonici et palaeartici. Polskie Pism Entomol 6:188–211
- Smetana A (1982) Revision of the subfamily Xantholininae of America north of Mexico (Coleoptera: Staphylinidae). Mem Entomol Soc Canada 120: i–iv, 1–389
- Staniec B (2005) A description of the developmental stages of *Acylophorus wagenschieberi* Kiesenwetter, 1850 (Coleoptera: Staphylinidae), with comments on its biology, egg parasite and distribution in Poland. Dt Entomol Ztschr 52:97–113
- Steenberg T, Langor V, Esbjerg P (1996) Entomopathogenic fungi in predatory beetles (Col.: Carabidae and Staphylinidae) from agricultural fields. Entomophaga 40:77–85
- Sugiyama K (1981) Notes on Laboulbeniomycetes of Formosa III. Trans Mycol Soc Japan 22:311–319
- Sugiyama K (1982) The second species of the genus *Porophoromyces* (Laboulbeniomycetes). Trans Mycol Soc Japan 23:231–244
- Sugiyama K, Majewski M (1985a) Notes on the Laboulbeniomycetes of Bali Island (Indonesia). II. Trans Mycol Soc Japan 26:125–144
- Sugiyama K, Majewski M (1985b) The Laboulbeniomycetes of Peninsular Malaysia II. Trans Mycol Soc Japan 26:449–462
- Sugiyama K, Mochizuka H (1979) The Laboulbeniomycetes (Ascomycotina) of peninsular Malaysia. Trans Mycol Soc Japan 20:339–355
- Sugiyama K, Yamamoto H (1982) Notes on the Laboulbeniomycetes of Borneo II. The genus *Rickia*. Trans Mycol Soc Japan 23:301–311
- Tavares II (1985) Laboulbeniales (Fungi, Ascomycetes). Mycol Memoir 9:1–627
- Tavares II, Balazuc J (1989) *Sugiyamaemyces*, a new genus of Laboulbeniales (Ascomycetes) on *Clidicus* (Scydmaenidae). Mycotaxon 34:565–576
- Terada K (1980) New or interesting species of the Laboulbeniales found on some coleopterous insects of Japan. Trans Mycol Soc Japan 21:193–203
- Terada K (1981) *Osoriomyces*, a new genus of Laboulbeniales from Taiwan. Mycotaxon 13:412–418
- Terada K, Tavares II (1993) A new species of *Clonophoromyces* (Ascomycetes, Laboulbeniales) discovered in Japan. Trans Mycol Soc Japan 34:357–362
- Townes H, Townes M (1982) A revision of the Serphidae (Hymenoptera). Mem Am Entomol Inst 32:i–iv, 1–541
- Watrous LE (1980) *Lathrobium (Tetartopeus)*: natural history, phylogeny and revision of the Nearctic species (Coleoptera, Staphylinidae). Syst Entomol 8:303–338
- Weir A (1994) Further records of Laboulbeniales from collections of British Coleoptera. Mycol Res 98:433–444
- Weir A (1995) Two new species of *Ilyomyces*. Mycol Res 99:789–792
- Weir A, Beakes GW (1993) New British Laboulbeniales. Mycol Res 97:1045–1055
- Weir A, Hammond P (1997) A preliminary assessment of species-richness patterns of tropical beetle-associated Laboulbeniales (Ascomycetes). In: Hyde KD (ed) Biodiversity of tropical microfungi. Hong Kong University Press, Hong Kong, pp 121–139
- Weir A, Rossi W (1997) New and interesting Laboulbeniales from New Zealand. Can J Bot 75:791–798
- Weir A, Rossi W (2001) New and interesting Bolivian Laboulbeniales. Mycologia 93:171–180
- Wyatt TD (1982) The salt marsh beetle. Antenna 6:303–304