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An annotated catalogue of the New World Therevidae (Insecta: Diptera: Asiloidea)

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ABSTRACT

The genera and species of New World stiletto flies (Diptera: Therevidae) are listed, with annotated references to nomenclature, synonymies and generic combinations, type localities, the primary type depositories, distribution, and citations for the most recent revisions. The genus *Cyclotelus* Walker, 1850 (along with its synonyms *Furcifera* Kröber, 1911, and *Epomyia* Cole, 1923a) is synonymized under *Cerocatus* Rondani, 1848. *Ectinorhynchus fascipennis* Kröber, 1911 is given the new name *Cerocatus rondanii* Gaimari, and *Phycus rufiventris* Kröber, 1911 is given the new name *Cerocatus raspii* Hauser. *Phycus analis* Kröber, 1911 and *Phycus bicolor* Kröber, 1911, are placed as new combinations in *Cerocatus* Rondani, as are the following species that were previously in combination with *Cyclotelus*: *Furcifera achaeta* Malloch, 1932, *Cyclotelus badicrusus* Irwin and Webb, 1992, *Phycus beckeri* Kröber, 1911, *Epomyia bella* Cole, 1923a, *Furcifera braziliana* Cole, 1960a, *Cyclotelus colei* Irwin and Lyneborg, 1981a, *Thereva diversipes* Kröber, 1911, *Thereva fascipennis* Macquart, 1846a, *Psilocephala femorata* Kröber, 1911, *Furcifera flavipes* Kröber, 1928b, *Furcifera hardyi* Cole, 1960a, *Furcifera kroeberi* Cole, 1960a, *Cyclotelus laetus* Walker, 1850, *Furcifera longicornis* Kröber, 1911, *Cyclotelus nigroflammus* Walker, 1850, *Psilocephala nigrifrons* Kröber, 1914a, *Thereva pictipennis* Wiedemann, 1821, *Furcifera polita* Kröber, 1911, *Cyclotelus pruinosus* Walker, 1850, *Thereva ruficornis* Macquart, 1841a, *Psilocephala rufiventris* Loew, 1869, *Thereva scutellaris* Walker, 1857, *Cyclotelus silacrusus* Irwin and Webb, 1992, *Cyclotelus socius* Walker, 1850 and *Psilocephala sumichrasti* Bellardi, 1861. *Dialineura pallidiventris* Malloch, 1932, *Melanothereva blackmani* Oldroyd, 1968, *Thereva maculicornis* Jaennicke, 1867 and *Thereva notabilis* Macquart, 1841a are placed as new combinations in *Entesia* Oldroyd. *Henicomyia amazonica* Irwin and Webb, 1992 is a new synonym of *Henicomyia flava* Lyneborg, 1972. *Henicomyia varipes* Kröber, 1912a is given revised species status from former synonymy with *Henicomyia hubbardii* Coquillett, 1898.

Key words: Asiloidea, distribution, generic combinations, nomenclature, primary type deposition, recent revisions, synonymy, type locality

INTRODUCTION

The family Therevidae, or stiletto flies, with over 1100 species, occurs on all continents except Antarctica. Irwin and Lyneborg (1981a, 1981b) and Gaimari and Webb (2009) provide a detailed overview of the morphological characters of the family, biology, classification and identification resources for New World taxa. It is hoped that the current catalogue, in combination with the key to all New World genera in Gaimari and Webb (2009), provides a resource for continued work on New World Therevidae.

In the New World, adult stiletto flies range in body length from 2.5–15 mm with the cuticle and macrosetae varying from pale yellow to black. Adults are also entirely or partially covered with pubescence, and macrosetae are usually prominent. Males are generally holoptic (exceptions include some genera of Phycinae), females are always dichoptic. Diagnostic characteristics in wing venation are as follows: R_4 sinuous, divergent from R_5; r_4 enclosing apex of wing; *bm* truncate apically; *d* elongate from which arise veins M_1, M_2, and M_3; m-cu present with base of m_3 truncate; r-m attached to basal half of *d*; *cup* closed near wing margin. The abdomen has eight pregenital segments, often with silver or bronze pubescence dorsally in males. Tergite 8 in males is

usually broad and rectangular, with posterior margin broadly emarginate. The epandrium is rectangular to quadrate, wider than long in most species, and the cerci are one-segmented and usually free basally. The hypandrium is often reduced and strap-like, occasionally absent; the gonocoxites are bulbous, separated medially in most species (a notable exception is the Cyclotelini, all of which have gonocoxites that are medially fused), and have gonostyli present apically. The aedeagus is usually narrow and tapered posteriorly with an internal ejaculatory apodeme. Sternite 8 of the female terminalia is conspicuous; acanthophorite macrosetae are strongly reduced in Phycinae and Xestomyzinae, and are present and distinct posterodorsally in Therevinae and Agapophytinae. Internally, female Phycinae have three spermathecae but lack a spermathecal sac, while all other therevids have a spermathecal sac in addition to spermathecae, with two spermathecae in Therevinae and Xestomyzinae, and three in Agapophytinae (although the Australian genus *Bonjeania* Irwin and Lyneborg has only one).

Larvae (Fig. 5) are long and slender with secondary abdominal segmentation. The posterior spiracle is positioned laterally on the fourth segment from the posterior end. The head capsule is heavily sclerotized, complete, and permanently exerted, with a narrow, internal spatula-shaped metacephalic rod and pair of elongate tentorial arms. Antennae are peg-like. Each thoracic segment has a pair of lateral setae, and the terminal abdominal segment has a pair of prolegs (Irwin 1972).

The pupal head segment has a prominent pair of antennal sheaths, a median labral sheath and a proboscial sheath ventrally. The wing sheaths in Therevinae have an alar process, and each abdominal segment bears a ring of spines posteriorly, and the terminal segment has a pair of caudal spines (Hauser and Irwin, 2003).

This catalogue began as a manuscript initiated by M.E. Irwin for the series "*A catalogue of the Diptera of Americas south of the United States*" but is greatly expanded here to include all species of stiletto flies in the New World, and to update the Nearctic catalogue published by Cole (1965). During the past twenty years, there have been many new Nearctic genera described (e.g., Irwin and Lyneborg 1981a) and numerous revisions of New World genera, many of which are treated only in part in the Diptera of the Nearctic (Poole 1996). Over 300 species names are currently valid for the New World, and more than 100 undescribed extant species are estimated from study of specimens in genera that have not been recently revised. Fossil therevids reported by Evenhuis (1990, 1994), and described from deposits in the New World since 1994, are included in this catalogue and are preceded with the symbol †.

CLASSIFICATION

The Therevidae belongs to the superfamily Asiloidea, forming a natural group with the Apsilocephalidae, Scenopinidae, and Evocoidae (Yeates *et al.* 2003, 2006; Woodley *et al.* 2009). The Scenopinidae (window flies) is generally considered the sister-group to the Therevidae, based on the secondary segmentation of the larval abdominal segments (except the apical segment), giving the appearance of 17 segments (Woodley 1989), the retracted lateral ejaculatory process in males (Sinclair *et al.* 1994) (although Yeates (2002) pointed out homoplasy relative to this character), and on molecular evidence (Yang *et al.* 2000; Yeates *et al.* 2003 [Evocoidae as Ocoidae]; Trautwein *et al.* 2010). Higher-level classification in the Therevidae includes four subfamilies and two tribes: Agapophytinae (Figs. 1, 2), Phycinae (Figs. 3, 4), Therevinae (Cyclotelini (Figs. 12-14), Therevini (Figs. 6-11, 15)), and Xestomyzinae (Fig. 16). The Agapophytinae is primarily Australian in distribution, with three genera endemic to the southern Neotropical Region. The Phycinae is Afrotropical, Nearctic, Neotropical, Oriental, and Palaearctic in distribution. The Therevinae is widespread over the Afrotropical, Australian, Nearctic, Neotropical, Oriental, and Palaearctic Regions, with the Cyclotelini known from the New World, and the Oriental and eastern Palaearctic regions (with one genus in the far western Palaearctic). The Therevini presently seems to be a catch-all group for all non-cycloteline Therevinae, until phylogenetic relationships are more thoroughly analyzed. The Xestomyzinae is primarily Afrotropical in distribution with one genus (*Henicomyia* Coquillett) in the Neotropical and Nearctic Region.

Across the family for the New World, there are three monotypic fossil genera representing three of the four subfamilies, 54 extant genera, and 298 extant species (two of which are incertae sedis). The New World Agapophytinae includes three extant genera and 11 extant species, all of which are in need of revision, in addition to one undescribed genus. The New World Phycinae includes one monotypic fossil genus, five extant genera, and

23 extant species. The genera *Ataenogera* Kröber (Hauser and Webb 2007) and *Phycus* Walker (Webb and Irwin 1988) have been recently revised, but no recent revisions are available for *Parapherocera* Irwin (one undescribed species) and *Pherocera* Cole (14 undescribed species). The New World Xestomyzinae includes one monotypic fossil genus, one extant genus, and seven extant species. The New World *Henicomyia* Coquillett has several undescribed species, and remains to be revised by Hauser.

The New World Therevinae includes one monotypic fossil genus, 45 extant genera, and 255 extant species. Of these, seven extant genera (*Anolinga* Gaimari and Irwin, *Breviperna* Irwin, *Cerocatus* Rondani, *Coleiana* Gaimari and Irwin, *Crebraseta* Gaimari and Irwin, *Nesonana* Gaimari and Irwin, *Ozodiceromyia* Bigot) and 67 extant species belong to the Cyclotelini. There is one undescribed genus and species from Chile and Argentina, but modern revisions for most Therevinae genera are available: *Acrosathe* Irwin and Lyneborg (Webb 2009), *Ammonaios* Irwin and Lyneborg (Hauser and Irwin 2003), *Amplisegmentum* Webb (Webb 2005c), *Anolinga* Gaimari and Irwin (Gaimari and Irwin 2000a), *Apenniverpa* Webb (Webb 2005c), *Arenigena* Irwin and Lyneborg (Webb 2009), *Argolepida* Metz and Irwin (Metz *et al.* 2003), *Brachylinga* Irwin and Lyneborg (Webb and Metz 2006), *Breviperna* Irwin (Gaimari and Irwin 2000a), *Chromolepida* Cole (Webb and Irwin 1995), *Cliorismia* Enderlein (Webb 2003), *Coleiana* Gaimari and Irwin (Gaimari and Irwin 2000a), *Crebraseta* Gaimari and Irwin (Gaimari and Irwin 2000a), *Dialineura* Rondani (Webb and Irwin 1991a), *Dichoglena* Irwin and Lyneborg (Webb 2003), *Distostylus* Webb (Metz and Webb 2003), *Elcaribe* Webb (Webb and Metz 2006), *Incoxoverpa* Webb and Irwin (Webb and Irwin 1999), *Insulatitan* Metz and Irwin (Metz and Irwin 2000), *Lindneria* Kröber (Metz and Irwin 2000), *Litolinga* Irwin and Lyneborg (Webb 2009), *Lysilinga* Irwin and Lyneborg (Webb and Metz 2006), *Megalinga* Irwin and Lyneborg (Webb and Irwin 1991c), *Microthereva* Malloch (Webb 2006), *Nebritus* Coquillett (Webb and Irwin 1991b), *Nesonana* Gaimari and Irwin (Gaimari and Irwin 2000a), *Nigranitida* Metz (Webb and Metz 2004), *Notiothereva* Metz and Irwin (Webb 2005b), *Pallicephala* Irwin and Lyneborg (Webb and Irwin 1991a), *Pandivirilia* Irwin and Lyneborg (Webb and Metz 2003a), *Penniverpa* Irwin and Lyneborg (Webb and Metz 2008), *Peralia* Malloch (Webb 2006), *Protothereva* Malloch (Webb and Metz 2003b), *Psilocephala* Zetterstedt (Webb 2003), *Ptilotophallos* Webb (Webb 2005c), *Spinalobus* Webb (Webb 2007), *Spiracolis* Webb (Webb 2005c), *Spiriverpa* Irwin and Lyneborg (Webb 2005a), *Tabuda* Walker (Webb and Irwin 1999), *Tabudamima* Irwin and Lyneborg (Webb and Irwin 1999), *Thereva* Latreille (Holston and Irwin 2005), and *Winthemmyia* Webb (Webb 2005c). The cycloteline genera *Cerocatus* Rondani and *Ozodiceromyia* Bigot remain to be revised by Gaimari, with well over 100 undescribed species.

MATERIAL AND METHODS

Format of Catalogue

The arrangement of the catalogue is an alphabetical hierarchy by subfamily, valid genus, and valid species. Under the valid genus or species, name usage is distributed chronologically for each name, nested with varying usage. For each entry, all nomenclatural details are given, including authorship, date and page, annotated subsequent references, synonymies, variant spellings, and various nomenclatural changes. For the family-group names, these details also include the type genus and method for designation. For the genus-group names, these details also include the type species and method for designation, and distribution. For the species-group names, these details also include type locality, type status, sex and depository, and species distribution. Where relevant, comments are cited at the end of an entry with reference to a note number that corresponds to an entry in the notes section.

The distribution list provided for each valid species is based on data from the most recent revisions, specimens examined by the author(s), older literature, and specimen records compiled in the Therevid Mandala database (http://www.inhs.illinois.edu/research/mandala/). Mandala is a relational database system developed by Kampmeier and Irwin (2009) wherein specimens are each identified by a unique code on a yellow label with the specimen. The format of these labels, "THEREVIDAE/M.E. Irwin/Specimen /000000", is noted as [MEI 000000].

The transition zone between the Neotropical and Neartic Regions is not delineated along political boundaries in Mexico. So, in this catalog we follow as best as possible the line drawn according to Brown

(2009) in defining the scope of the *Manual of Central American Diptera*, in an effort to make this work a closer companion to Gaimari and Webb (2009) with its key to all New World therevid genera. Even still, many states are bisected by this line, so only the most generalized method is used to differentiate these states as either Nearctic or Neotropical. Many states fall clearly within one or the other, but the following states have elements of each Region, with (1) referring to states with more than 50% in the Nearctic, and (2) referring to states with more than 50% Neotropical: (1) Baja California Sur, Chihuahua, Durango, Hidalgo, Jalisco, Michoacán, Nayarit, Puebla, San Luis Potosí, Sonora, Tamaulipas, Tlaxcala; (2) Colima, Guerrero, Oaxaca, Veracruz. In this catalogue, the Neotropical Region refers to Belize, the Caribbean Islands, Costa Rica, El Salvador, Guatemala, Mexico (Campeche, Chiapas, Quintana Roo, Sinaloa, Tabasco, Yucatán, and the transition states in (2) above), Nicaragua, Panama, and South America. The Nearctic Region refers to Canada, United States of America, and the remaining States/Districts of Mexico. The following list gives the primary subdivision for the various New World countries: Argentina (Provinces), Bolivia (Departments), Brazil (States), Canada (Provinces/Territories), Chile (Regions), Colombia (Departments), Costa Rica (Provinces), Cuba (Provinces), Dominican Republic (Provinces), Ecuador (Provinces), El Salvador (Departments), Guatemala (Departments), Guyana (Regions), Honduras (Departments), Jamaica (Parishes), Mexico (States/District), Netherlands Antilles (Islands), Nicaragua (Departments), Panama (Provinces), Paraguay (Departments/District), Peru (Regions/Province of Lima), The Bahamas (Islands/Cays), Uruguay (Departments), United States of America (States/District), Venezuela (States).

Type Depositories

The following museums and collections are depositories for the primary types of New World stiletto flies. Museum and collection acronyms follow Evenhuis (2012), and URL's for several of their type and collection databases are given if they were consulted in this work [all accessed 2012.04.28].

AMNH American Museum of Natural History, Department of Invertebrate Zoology, New York, New York, USA. [type database: http://research.amnh.org/iz/types_db/]

ANSP Academy of Natural Sciences of Philadelphia, Department of Entomology, Philadelphia, Pennsylvania, USA. [type database: http://clade.ansp.org/entomology/]

BMNH The Natural History Museum, Department of Entomology, London, United Kingdom. [collection database: http://www.nhm.ac.uk/research-curation/collections/departmental-collections/entomology-collections/search/index.php]

BYUC Brigham Young University, Monte L. Bean Life Science Museum, Entomology Section, Provo, Utah, USA.

CAS California Academy of Sciences, Department of Entomology, San Francisco, California, USA. [type database: http://researcharchive.calacademy.org/research/entomology/typesdb/default.asp]

CMNH Carnegie Museum of Natural History, Section of Invertebrate Zoology, Pittsburgh, Pennsylvania, USA.

CNC Canadian National Collection of Insects, Biological Research Division, Ottawa, Ontario, Canada.

CSUC Colorado State University, Department of Entomology, Fort Collins, Colorado, USA.

CUIC Cornell University, Department of Entomology, Ithaca, New York, USA.

DEBU University of Guelph, Department of Environmental Biology, Guelph, Ontario, Canada.

DEI Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.

DZUP Universidade Federal de Paraná, Curitiba, Paraná, Brazil.

EMEC University of California, Essig Museum of Entomology, Berkeley, California, USA.

FMNH Field Museum of Natural History, Division of Insects, Chicago, Illinois, USA.

FSCA Florida Department of Agriculture, Florida State Collection of Arthropods, Gainesville, Florida, USA.

HNHM Hungarian Natural History Museum, Zoological Department, Budapest, Hungary.

IEXA Instituto de Ecologia A. C., Departamento Biosistematica de Insectos, Veracruz, Veracruz, México.

INBC Instituto Nacional de Biodiversidad, Departamento de Entomologia, Santo Domingo de Heredia, Costa Rica.

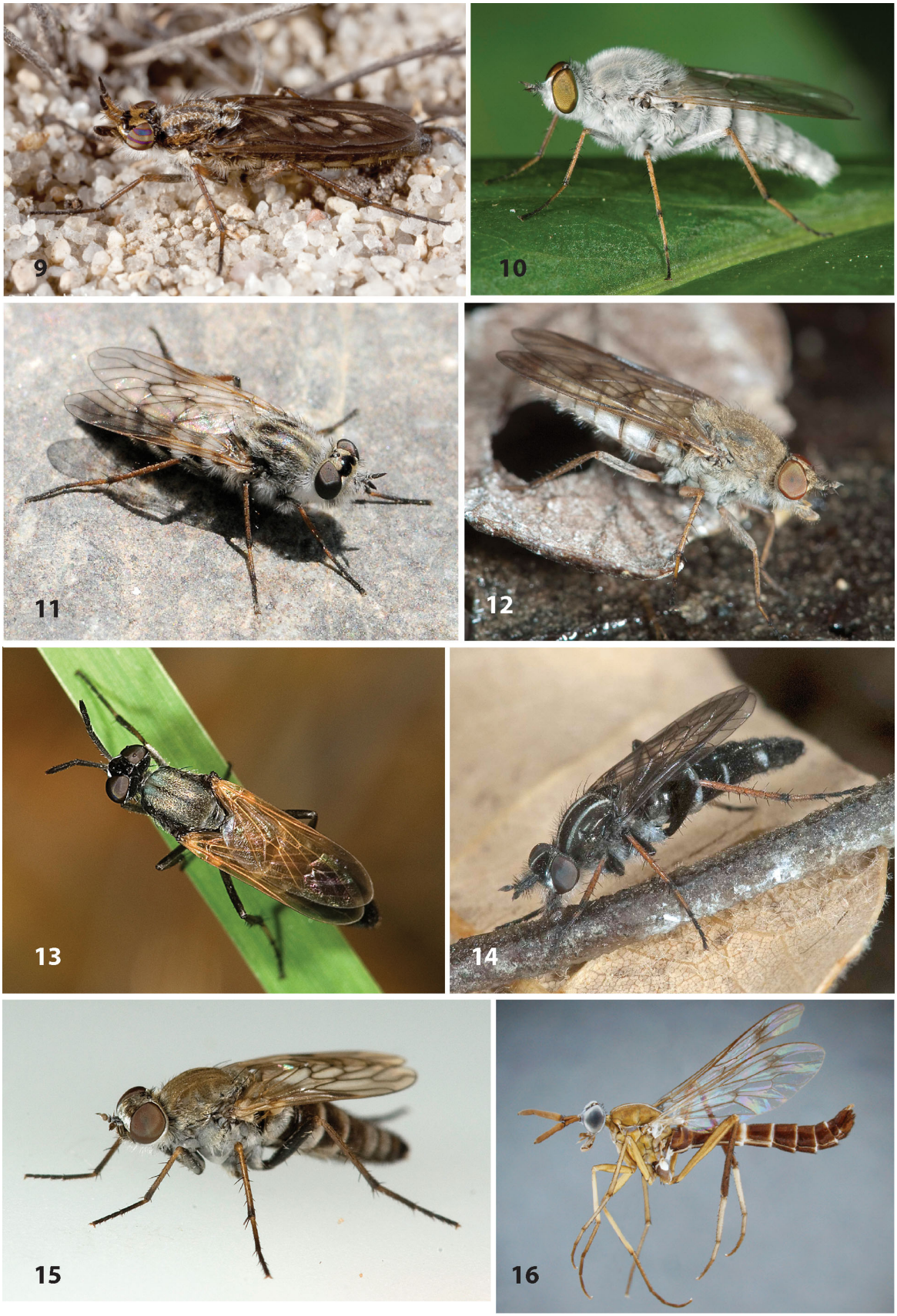
INHS	Illinois Natural History Survey, Prairie Research Institute, University of Illinois, Champaign, Illinois, USA.
INPA	Instituto Nacional de Pesquisas da Amazonia, Colecão Sistemática da Entomologia, Amazonas, Manaus, Brazil.
MCZ	Harvard University, Museum of Comparative Zoology, Department of Entomology, Cambridge, Massachusetts, USA. [type database: http://insects.oeb.harvard.edu/mcz/index.htm]
MEIC	M.E. Irwin personal collection, Vail, Arizona, USA. Future deposition CAS.
MLUH	Martin-Luther-Universität, Wissenschaftsbereich Zoologie, Halle a.S, Germany.
MNHN	Muséum National d'Histoire Naturelle, Laboratoire d'Entomologie, Paris, France.
MNNC	Museo Nacional de Historia Natural, Coleccíon Nacional de Insectos, Santiago, Chile.
MRSN	Museu Regionale di Scienze Naturali, Spinola Collection, Torino (= Turin), Italy.
MZSP	Universidade de São Paulo, Museu de Zoologia, São Paulo, Brazil.
MZUN	Museo dell' Istituto di Zoologia dell' Universita di Napoli, Naples, Italy.
NHMW	Naturhistorisches Museum, Zweite Zoologische Abteilung—Insekten, Vienna, Austria.
NHRS	Naturhistoriska riksmuseet, Entomologi, Stockholm, Sweden.
OSUC	Oregon State University, Department of Entomology, Corvallis, Oregon, USA.
PSUC	Pennsylvania State University, Frost Entomological Museum, University Park, Pennsylvania, USA.
ROME	Royal Ontario Museum, Department of Entomology, Toronto, Ontario, Canada.
SDMC	San Diego Natural History Museum, Entomology Department, San Diego, California, USA.
SEMC	University of Kansas, Snow Entomological Museum, Lawrence, Kansas, USA.
SMDV	University of British Columbia, Spencer Museum, Vancouver, British Columbia, Canada.
SMFD	Forschungsinstitut und Naturmuseum, Senckenberg, Frankfurt-am-Main, Germany.
SMNS	Staatliches Museum für Naturkunde, Stuttgart, Germany.
SMTD	Staatliches Museum für Tierkunde, Dresden, Germany.
UCDC	University of California, R.M. Bohart Museum of Entomology, Davis, California, USA.
UCMC	University of Colorado, Museum of Natural History, Boulder, Colorado, USA.
UMMZ	University of Michigan, Museum of Zoology, Ann Arbor, Michigan, USA.
UMRM	University of Missouri, W.R. Enns Entomology Museum, Columbia, Missouri, USA.
UMSP	University of Minnesota, Department of Entomology, St., Paul, Minnesota, USA.
UNAM	Universidad Nacional Autonoma de México, Departamento de Zoologia, México D. F., México.
USNM	National Museum of Natural History, Department of Entomology, Washington, D.C., USA.
WSUC	Washington State University, Maurice T. James Entomological Collection, Pullman, Washington, USA.
ZMAS	Russian Academy of Sciences, Zoological Institute, St. Petersburg, Russia.
ZMHB	Humboldt Universität, Zoologisches Museum und Institut für Spezielle Zoologie, Berlin, Germany.
ZMUC	University of Copenhagen, Zoological Museum, Copenhagen, Denmark. [collection database: http://www.zmuc.dk/EntoWeb/collections-databaser/Diptera/dipterasites.htm]
ZMUH	Universität Hamburg, Zoologisches Institut und Zoologische Museum, Hamburg, Germany.
ZSMC	Zoologische Staatssammlung des Bayerischen Staates, Munich, Germany.

Abbreviations

biog. = biogeography; biol. = biology; cat. = catalogue; comb. = combination; desc.= description, redescription, or diagnosis; desig. = designation; dist. = distribution; HT = holotype; LT = lectotype; morph. = morphology; nom. = nomenclature; NT = neotype; orig. = original; pers. comm. = personal communication; phylog. = phylogeny; rep. = reproduce; rev. = revision; sp. = species; ST = syntype; syn. = synonym; trans. = translation.

Morphological terms: abd. = abdomen; ant. = antenna; genit.= genitalia; max. palp. = maxillary palpus.

FIGURES 1–8. Therevidae. Figure 1-2. Agapophytinae: 1. *Pachyrrhiza* sp., female; 2. *Pachyrrhiza* sp., female. Figures 3-4. Phycinae: 3. *Pherocera* sp., male; 4. *Pherocera albihalteralis* Cole, female. Figures 5-8. Therevinae: 5. unidentified larva; 6. *Peralia* sp., female; 7. *Acrosathe vanduzeei* (Cole), male; 8. *Acrosathe vialis* (Osten Sacken), female. Photo credits: Stephen Marshall (1, 2, 6), Shaun Winterton (3, 4, 8), Lynette Schimming (5), Alice Abela (7).



FIGURES 9–16. Therevidae. Figures 9-15. Therevinae: 9. *Nebritus powelli* Webb and Irwin, female; 10. *Spiriverpa albiceps* (Loew), male; 11. *Thereva cordata* Holston and Irwin, female; 12. *Breviperna placida* (Coquillett), female. 13. *Ozodiceromyia livdahli* Gaimari and Irwin, female; 14. *Ozodiceromyia* sp., female; 15. *Brachylinga* sp., female. Figure 16. Xestomyzinae: *Henicomyia* sp., male. Photo credits: Alice Abela (9), Stephen Marshall (10, 12, 13, 14, 15), Harmut Wisch (11), Martin Hauser (16).

SUMMARY OF TAXONOMIC CHANGES

NEW NAMES

New species-group names:
Cerocatus raspii Hauser, for *Phycus rufiventris* Kröber 1911
Cerocatus rondanii Gaimari, for *Ectinorhynchus fascipennis* Kröber 1911

NEW SYNONYMIES

Genus-group names:
Cyclotelus Walker 1850 = *Cerocatus* Rondani 1848

Species-group names:
Henicomyia amazonica Irwin and Webb 1992 = *Henicomyia flava* Lyneborg 1972

NEW COMBINATIONS

Entesia blackmani (Oldroyd 1968), from *Melanothereva* Malloch
Entesia maculicornis (Jaennicke 1867), from *Thereva* Latreille
Entesia notabilis (Macquart 1841a), from *Thereva* Latreille
Entesia pallidiventris (Malloch 1932), from *Dialineura* Rondani
Cerocatus achaetus (Malloch 1932), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus analis (Kröber 1911), from *Phycus* Walker
Cerocatus badicrusus (Irwin and Webb 1992), from *Cyclotelus* Walker
Cerocatus beckeri (Kröber 1911), from *Cyclotelus* Walker (originally *Phycus* Walker)
Cerocatus bellus (Cole 1923a), from *Cyclotelus* Walker (originally *Epomyia* Cole)
Cerocatus bicolor (Kröber 1911), from *Phycus* Walker
Cerocatus brazilianus (Cole 1960a), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus colei (Irwin and Lyneborg 1981a), from *Cyclotelus* Walker
Cerocatus diversipes (Kröber 1911), from *Cyclotelus* Walker (originally *Thereva* Latreille)
Cerocatus fascipennis (Macquart 1846a), from *Cyclotelus* Walker (originally *Thereva* Latreille)
Cerocatus femoratus (Kröber 1911), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus flavipes (Kröber 1928b), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus hardyi (Cole 1960a), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus kroeberi (Cole 1960a), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus laetus (Walker 1850), from *Cyclotelus* Walker
Cerocatus longicornis (Kröber 1911), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus nigroflammus (Walker 1850), from *Cyclotelus* Walker
Cerocatus nigrifrons (Kröber 1911), from *Cyclotelus* Walker (originally *Psilocephala* Zetterstedt)
Cerocatus pictipennis (Wiedemann 1821), from *Cyclotelus* Walker (originally *Thereva* Latreille)
Cerocatus politus (Kröber 1911), from *Cyclotelus* Walker (originally *Furcifera* Kröber)
Cerocatus pruinosus (Walker 1850), from *Cyclotelus* Walker
Cerocatus ruficornis (Macquart 1841a), from *Cyclotelus* Walker (originally *Thereva* Latreille)
Cerocatus rufiventris (Loew 1869), from *Cyclotelus* Walker (originally *Psilocephala* Zetterstedt)
Cerocatus scutellaris (Walker 1857), from *Cyclotelus* Walker (originally *Thereva* Latreille)
Cerocatus silacrusus (Irwin and Webb 1992), from *Cyclotelus* Walker
Cerocatus socius (Walker 1850), from *Cyclotelus* Walker
Cerocatus sumichrasti (Bellardi 1861), from *Cyclotelus* Walker (originally *Psilocephala* Zetterstedt)

NEW CHANGES IN STATUS

Henicomyia varipes Kröber 1912a, resurrected from synonymy
Psilocephala antennata Kröber 1911, incertae sedis
Thereva luteiventris Philippi 1865, incertae sedis

TABLE OF GENERA

The following table lists the genera in their subfamilies as they are ordered in the catalogue. The table indicates the number of species in each genus for the Nearctic Region (NE), the Neotropical Region (NT), and for those that occur in both regions (Both). The far right column (Page) indicates the page number in the catalogue where the treatment for each genus begins. The total number of genera treated herein is 54 extant and three fossil, broken down as three extant in Agapophytinae, five extant and one fossil in Phycinae, 45 extant and one fossil in Therevinae, one extant and one fossil in Xestomyzinae, and four species are incertae sedis to subfamily and genus.

TAXON		NE	NT	Both	Total	Page
Agapophytinae Winterton						13
	Entesia Oldroyd		8		8	13
	Melanothereva Malloch		1		1	14
	Pachyrrhiza Philippi		2		2	15
Phycinae Lyneborg						15
	Ataenogera Kröber		5	1	6	15
	†*Palaeopherocera* Hauser and Irwin	1			1	17
	Parapherocera Irwin	3			3	17
	Pherocera Cole	11			11	17
	Phycus Walker		1	1	2	19
	Schlingeria Irwin	1			1	19
Therevinae Newman						20
	Acrosathe Irwin and Lyneborg	6			6	20
	†*Ambradolon* Metz and Irwin		1		1	21
	Ammonaios Irwin and Lyneborg	4			4	21
	Amplisegmentum Webb		1		1	22
	Anolinga Gaimari and Irwin		3		3	22
	Apenniverpa Webb		1		1	23
	Arenigena Irwin and Lyneborg	4		1	5	23
	Argolepida Metz and Irwin		1		1	24
	Brachylinga Irwin and Lyneborg	4	15	5	24	24
	Breviperna Irwin	1			1	27
	Cerocatus Rondani	6	23	1	30	28
	Chromolepida Cole	2		3	5	33
	Cliorismia Enderlein	2			2	34
	Coleiana Gaimari and Irwin		1		1	35
	Crebraseta Gaimari and Irwin	1			1	35
	Dialineura Rondani	1			1	35
	Dichoglena Irwin and Lyneborg	1			1	36
	Distostylus Webb		1		1	36
	Elcaribe Webb		13	1	14	37
	Incoxoverpa Webb and Irwin	1			1	39
	Insulatitan Metz and Irwin		4		4	39
	Lindneria Kröber		8		8	40

..... continued on the next page

TABLE OF GENERA. (Continued)

TAXON		NE	NT	Both	Total	Page
	Litolinga Irwin and Lyneborg	1		1	2	41
	Lysilinga Irwin and Lyneborg	6	3	1	10	42
	Megalinga Irwin and Lyneborg	1		1	2	43
	Microthereva Malloch		2		2	44
	Nebritus Coquillett	3			3	44
	Nesonana Gaimari and Irwin		2		2	45
	Nigranitida Metz		4		4	45
	Notiothereva Metz and Irwin		6		6	45
	Ozodiceromyia Bigot	17	1	11	29	46
	Pallicephala Irwin and Lyneborg	7			7	54
	Pandivirilia Irwin and Lyneborg	7			7	55
	Penniverpa Irwin and Lyneborg	2	9	2	13	58
	Peralia Malloch		2		2	60
	Protothereva Malloch		3		3	61
	Psilocephala Zetterstedt	1			1	61
	Ptilotophallos Webb		1		1	62
	Rhagioforma Irwin and Lyneborg	1	1		2	62
	Spinalobus Webb	1			1	63
	Spiracolis Webb		1		1	63
	Spiriverpa Irwin and Lyneborg	4			4	63
	Tabuda Walker	2			2	65
	Tabudamima Irwin and Lyneborg	1			1	66
	Thereva Latreille	34			34	66
	Winthemmyia Webb		1		1	73
Xestomyzinae Lyneborg						73
	Henicomyia Coquillett	1	6		7	73
	†*Peratrimera* Hauser and Irwin		1		1	74
Incertae Sedis		1	3		4	74
TOTAL		**146**	**137**	**20**	**303**	

THEREVIDAE Newman

Therevites Newman 1834: 391. Type genus *Thereva* Latreille, 1797, by conservation of use (ICZN 2006) as Opinion 2142 on Case 3251 (Holston *et al.* 2003: 198). Burmeister (1837: 614), Osten Sacken (1877: 274 North America sp. list.; 1887: 162 Central America sp. list), Coquillett (1894: 97 North America gen. key), Aldrich (1905: 246 North America cat.), Kertész (1909: 148 world cat.), Kröber (1911 Central and South America rev.; 1912a North America rev.; 1913b world cat., key; 1914a New World rev.), Malloch (1917: 308 classification, Therevoidea (Scenopinidae + Therevidae), 310 larva key, 311 pupa key, 396 larva, pupa, adult, 197 biol.)Cole (1923a North America rev.; 1965: 348 North America cat.), Malloch (1932 South America rev.), Cole and Schlinger (1969: 169 western North America key, dist., biol.), Irwin and Lyneborg (1981a North America rev.; 1981b: 513 desc. adults, desc. immatures, North America key, classification, dist., biol.), McAlpine (1981: 100 adult key to families), Teskey (1981: 129 larval key to families; 1991b: 716 larval key to families), Woodley

(1989: 1386 phylog., Fig. 3 phylog. placement), Foote (1991: 773 larval desc., biol.), Sinclair *et al*. (1994: 419 phylog., Fig. 2 phylog. placement), Sabrosky (1999: 306 nom. cat.), Gaimari and Irwin (2000a phylog.), Holston (2004 nom. cat., systematic history), Hauser and Irwin (2005a fossil rev.), Holston *et al.* (2007 phylog.), Borkent and Rotheray (2009: 168 larval key to families), Buck *et al.* (2009: 107 adult key to families), Gaimari and Webb (2009 New World gen. key, Central America dist., biol.), Woodley *et al.* (2009 Fig. 4 phylog. placement), Lambkin *et al*. (2009 supertree), Trautwein *et al*. (2010 asiloid phylog.). Other forms or misspellings of Therevidae include:

Therevanidae. Burmeister (1835: 9).
Therevina. Perty (1841: 892).
Therevoidae. Agassiz (1846b: 368).
Thereuidae. Loew (1858: 342), Kowarz (1883: 242).
Thereviti. Lioy (1864: 736).
Therevida. Marschall (1873: 320).
Tereoida. Marschall (1873: 340)
Therevedae. Walker (1874: 1).
Terevidae. Schoch (1890: 11).
Therevidi. Bigot (1890: 321).
Threvidae. Woodworth (1913: 131), Martin (1968: 73).
Thervidae. Ôuchi (1943b: 477).
Therevidea. Hennig (1948: 71).
Therividae. González-Rincones and Guyon (1953: 60).
Therevomorpha. Brues *et al.* (1954: 22).

Subfamily AGAPOPHYTINAE Winterton

Agapophytinae Winterton in Winterton *et al.* 2001: 185. Type genus: *Agapophytus* Guérin-Méneville, 1831. Winterton and Irwin (2001: 467), Winterton (2004: 1; 2006: 17; 2007: 1; 2011: 30), Lambkin *et al.* (2005: 1).

Genus ENTESIA Oldroyd

ENTESIA Oldroyd 1968: 377. Type species *Entesia tarsata* Oldroyd, 1968 by original designation. Metz and Irwin (2000: 985 key), Metz *et al*. (2003: 253 nom.), Winterton (2006: 18 nom.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 636 key). This genus is Neotropical in distribution, occurring in Argentina and Chile.

ENTISIA. Misspelling of *Entesia.* Holston (2004: 58 nom.).

blackmani (Oldroyd). **Neotropical:** Argentina.

Melanothereva blackmani Oldroyd 1968: 379. Type locality Argentina, F. [Finca] Chacabuco. HT male BMNH (Type No. 241993). Oldroyd (1968: Figs. 5 forecoxae, 6 male genit., 7 male ant., 8 female genit., 15 pupa posterior process, 19 lateral thoracic spines, 20 ant. spine).

Entesia blackmani. **NEW COMBINATION. Note 1.**

fuzi (Kröber). **Neotropical:** Chile (Región Metropolitana de Santiago).

Psilocephala fuzi Kröber 1928c: 34. Type locality Chile, Perales. HT female (MEI 115972) DEI. Kröber (1928c: Fig. 3 female ant.), Stuardo-Ortiz (1946: 87 cat.), Metz *et al*. (2003: 254 trans. orig. desc.).

Psilocephala fazi. Misspelling of *fuzi*. Kröber (1928a: 6 dist., 12 female key), Metz *et al.* (2003: 253 nom.). **Note 2.**

Entesia fuzi. Metz *et al*. (2003: 253 comb. change).

leptiformis (Kröber). **Neotropical:** Chile (Valparaiso (Aconcagua in Webb and Metz 2006)).

Psilocephala leptiformis Kröber 1928c: 33. Type locality Chile, Valparaiso. HT male (MEI 115971) DEI. Kröber (1928a: 6 dist., 8 male key; 1928c: Fig. 2 male ant.), Stuardo-Ortiz (1946: 87 cat.), Metz *et al*. (2003: 254 trans. orig. desc.). **Note 2.**

Entesia leptiformis. Metz *et al*. (2003: 253 comb. change).

maculicornis (Jaennicke). **Neotropical:** Chile (Valparaiso (Aconcagua in Webb and Metz 2006)).

Thereva maculicornis Jaennicke 1867: 45. Type locality Chile, Valparaiso. LT male SMFD. Kertész (1909: 155 cat.), Kröber (1911: 491 male key, 492 nom., LT designation according to ICZN Article 74.5, desc.; 1913b: 44 male key, 58 sp. list), Stuardo-Ortiz (1946: 86 cat.), Holston (2004: 55 nom.). **Note 3.**

Entesia maculicornis. **NEW COMBINATION. Note 4.**

Thereva maculipennis. Published in synonymy, not subsequently validated. Kröber (1911: 492, 493). **Note 5.**

notabilis (Macquart). **Neotropical:** Chile.

Thereva notabilis Macquart 1841a: 302. Type locality Chile. ST female MNHN. Macquart (1841a: Plate 5, Fig. 4 wing; 1841b: 24 subsequent usage, Plate 5, Fig. 4 wing), Blanchard (1852: 416 desc.), Philippi (1865: 779 sp. list), Reed (1888: 294 cat.), Kertész (1909: 157 cat.), Kröber (1911: 491 female key, desc.; 1913b: 45 female key, 59 female key), Stuardo-Ortiz (1946: 86 cat.), Holston (2004: 58 nom.). **Note 6.**

Entesia notabilis. **NEW COMBINATION. Note 7.**

pallidiventris (Malloch). **Neotropical:** Chile (near Región Metropolitana de Santiago).

Dialineura pallidiventris Malloch 1932: 253. Type locality Chile, Santiago, Perales. HT male USNM. Lyneborg (1968b: 149 nom.). **Note 8.**

Dialineura pallidinervis. Misspelling of *pallidiventris*. Stuardo-Ortiz (1946: 86 cat.).

Entesia pallidiventris. **NEW COMBINATION. Note 9.**

rubida (Wulp). **Neotropical:** Argentina (Tucumán).

Psilocephala rubida Wulp 1888: 369. Type locality Argentina, Tucumán. NT female (MEI 134210) MLUH. Brèthes (1907: 289 cat.), Kertész (1909: 164 cat.), Kröber (1911: 498 male key, 500 female key, 509 desc.; 1913b: 33 sp. list, 35 male key, 38 female key; 1928a: 7 dist., 8 male key, 12 female key, 23 desc.), Metz *et al*. (2003: 254 NT desig., 255 trans. orig. desc.).

Entesia rubida. Metz *et al*. (2003: 254 comb. change).

tarsata Oldroyd. **Neotropical:** Argentina.

Entesia tarsata Oldroyd 1968: 378. Type locality Argentina, Est. [Estancia] San Ramón, Chacabuco area. HT male BMNH (Type No. 242016). Oldroyd (1968: Figs. 1 male habitus, 2 male genit., 3 male ant., 4 hindtarsus, 13 pupa posterior process).

Genus MELANOTHEREVA Malloch

MELANOTHEREVA Malloch 1932: 249. Type species *Thereva lugubris* Macquart, 1841a by original designation. Malloch (1932: 238 key), Oldroyd (1968: 379 desc.), Metz and Irwin (2000: 985 key), Winterton (2006: 18 nom.), Gaimari and Webb (2009: 636 key). This genus is Neotropical in distribution, occurring in Argentina, Bolivia, and Chile. **Note 10.**

lugubris (Macquart). **Neotropical:** Chile (Araucanía, Coquimbo, Los Lagos, Magallanes, Región Metropolitana de Santiago, Valparaiso).

Thereva lugubris Macquart 1841a: 302. Type locality Chile. ST female MNHN. Macquart (1841a: Plate 5, Fig. 2 wing; 1841b: 24 subsequent usage, Plate 5, Fig. 2 wing), Blanchard (1852: 417 desc., Figs. 4a habitus, 4b ant.), Philippi (1865: 769 sp. list), Reed (1888: 294 cat.), Holston (2005: 55 nom.). **Note 11.**

Psilocephala lugubris. Kertész (1909: 163 cat., comb. change), Kröber (1911: 498 male key, 500 female key, 505 desc.; 1912a: 223 male key, 226 female key, 228 sp. list., 237 desc.; 1913b: 31 sp. list, 35 male key, 37 female key, 38 male key, 39 female key; 1914a: 39 male key, 41 female key; 1928a: 6 dist., 8 male key, 10 female key), Cole (1923a: 63 nom., note).

Melanothereva lugubris. Malloch (1932: 250 nom., comb. change, note), Stuardo-Ortiz (1946: 86 cat.), Holston (2005: 55 nom.).

Psilocephala nigra Bellardi 1861: 92. Type locality “Messico” (= Mexico, unverified locality). LT male MRSN. Bellardi (1861: 90 key), Osten Sacken (1878: 96 cat.; 1887: 163 dist.), Reed (1888: 294 syn. desig. of *lugubris* Macquart and *penthoptera* Schiner), Aldrich (1905: 247 cat.), Kertész (1909: 163, 164 nom.), Kröber (1912a:

229, 237 nom.; 1913b: 32 nom.), Cole (1923a: 63 nom.), Malloch (1932: 250 nom.), Lyneborg (1969: 409 nom., LT designation according to ICZN Article 74.5, desc., Figs. 38–44 male genit.). **Note 12.**

Thereva morio Rondani 1863: 44. Unjustified replacement name for *Thereva lugubris* Macquart. Dallas (1865: 655 nom.), Kertész (1909: 163 nom.), Kröber (1912a: 229, 237 nom., 237; 1913b: 32 nom.), Cole (1923a: 63 nom.), Malloch (1932: 250 nom.), Holston (2004: 56 nom.).

Psilocephala morio. Kertész (1909: 163 nom., as syn. of *lugubris* Macquart).

Melanothereva morio. Holston (2004: 56 nom.).

Psilocephala penthoptera Schiner 1868: 146. Unjustified replacement name for *lugubris* Macquart and *nigra* Bellardi. Osten Sacken (1878: 96 nom.), Reed (1888: 294 cat.), Aldrich (1905: 247 nom.), Kertész (1909: 163, 164 nom.), Kröber (1912a: 229, 237 nom.; 1913b: 32 nom.), Cole (1923a: 63 nom.), Malloch (1932: 250 nom.). **Note 13.**

Genus PACHYRRHIZA Philippi

PACHYRRHIZA Philippi 1865: 703. Type species *Pachyrrhiza pictipennis* Philippi, 1865 by monotypy. Malloch (1932: 238 key, 247 nom.), Oldroyd (1968: 382 nom.), Winterton (2006: 18 nom.), Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring in Argentina and Chile.

PACHYRRIZA. Misspelling of *Pachyrrhiza.* Bigot (1890: 323 key).

PACHYRHIZA. Misspelling of *Pachyrrhiza*. Williston (1908: 207 note).

argentata Oldroyd. **Neotropical:** Argentina (Rio Negro).

Pachyrrhiza argentata Oldroyd 1968: 383. Type locality Argentina, Bariloche, San Ramón, Ram Copse. HT male BMNH (Type No. 242006). Oldroyd (1968: Figs. 9 female head, 10. female ant., 11. female genit., 12 male genit., 14 pupa posterior process, 16 pupa lateral abd. spines, 17 pupa ant. spines, 18 pupa lateral thoracic spines, 21 wing).

pictipennis Philippi. **Neotropical:** Chile (Región Metropolitana de Santiago).

Pachyrrhiza pictipennis Philippi 1865: 704. Type locality Chile, Santiago Province, near Santiago and in the Cordillere. ST female (3 specimens), depository unknown. Philippi (1865: Fig. 25 habitus), Reed (1888: 294 cat.), Malloch (1932: 248 desc.), Stuardo-Ortiz (1946: 86 cat.). **Note 14.**

Baryphora pictipennis. Kertész (1909: 167 cat., comb. change).

Dialineura pictipennis. Kröber (1911: 489 desc., comb. change; 1913b: 24 sp. list; 1914a: 40 female key, 51 note).

Subfamily PHYCINAE Lyneborg

Phycinae Lyneborg 1976a: 197. Type genus: *Phycus* Walker, 1850. Lyneborg (1976a:192; 1978a: 212; 1983: 181; 1987: 1; 1988: 537; 1989a:12; 1989b: 159; 1989c: 89, 1989d: 165), Irwin and Lyneborg (1981a: 260; 1981b: 517); Irwin and Webb (1992:86 sp. list), Irwin (1983: 113); Webb and Irwin (1988: 35), Sabrosky (1999: 246 nom. history), Gaimari and Irwin (2000a: 132; 2000b: 598), Metz and Irwin (2000: 985), Hauser and Irwin (2003: 739; 2005a: 400); Holston (2005: 8), Hauser and Webb (2007: 41), Gaimari and Webb (2009: 635), Webb and Hauser (2011: 67), Gaimari *et al.* (2012 nom.). **Note 15.**

Genus ATAENOGERA Kröber

ATAENOGERA Kröber 1914a: 31. Type species *Ataenogera abdominalis* Kröber, 1914a by monotypy. Malloch (1932: 237 key, 254 desc.), Cole (1965: 349 cat.), Cole and Schlinger (1969: 170 desc.), Irwin and Lyneborg (1981a: 262 desc.; 1981b: 518 dist.), Webb and Irwin (1988: 37 key, nom., 38 desc.), Irwin and Webb (1992: 86 sp. list, 88 nom.), Lyneborg (2002: 103 desc., 104 key), Hauser and Webb (2007: 43 nom., 44 desc., key), Gaimari and Webb (2009: 636 key, 644 dist.). This genus is Nearctic (Mexico) and Neotropical in distribution, occurring in

Argentina, Bolivia, Brazil, Costa Rica, El Salvador, Guyana, Mexico, Panama, Paraguay, Peru, Trinidad, and Venezuela.

LEPTOCERA Kröber 1928b: 117. Type species *Leptocera gracilis* Kröber, 1928b by monotypy. Preoccupied by Olivier (1813: 489). Webb and Irwin (1988: 39 nom., syn. desig. of *Ataenogera* Kröber), Irwin and Webb (1992: 88 nom.), Hauser and Webb (2007: 43 nom.).

ZIEHENIA Kröber 1929a: 434. Replacement name for *Leptocera* Kröber (1928b: 117) nec Olivier (1813: 489). Webb and Irwin (1988: 39 nom., syn. desig. of *Ataenogera* Kröber), Irwin and Webb (1992: 88 nom.), Hauser and Webb (2007: 43 nom.). **Note 16.**

EPILEPTOCERA Richards 1929: 171. Unjustified replacement name for *Leptocera* Kröber (1928b: 117) nec Olivier (1813: 489). Webb and Irwin (1988: 39 nom., unjustified replacement name for *Leptocera*), Irwin and Webb (1992: 88 nom.), Hauser and Webb (2007: 43 nom.). **Note 17.**

ZIEHENIMYIA. Misspelling of *Ziehenia*. Kröber (1929b: 172 desc.), Hauser and Webb (2007: 43 nom.).

abdominalis Kröber. **Neotropical:** Argentina (Catamarca, La Rioja, Mendoza, Salta, San Juan, San Luis, Santiago del Estero, Tucumán), Bolivia (El Beni, Santa Cruz), Brazil (Paraná), Paraguay (Cordillera, San Pedro).

Ataenogera abdominalis Kröber 1914a: 32. Type locality Paraguay, San Bernardino. HT male (MEI 005759) ZMHB. Malloch (1932: 255 desc.), Webb and Irwin (1988: 37 key, 39 nom., 40 desc., 41 invalid LT desig., dist., Figs. 1 ant., 2 male head, 3 max. palp., 4 wing, 5–9 male genit., 10 female abd., 11–12 female genit., 13–15 pupa), Irwin and Webb (1992: 86 sp. list, 89 nom., desc., 90 dist., Figs. 1 ant., 2 max. palp., 3 wing, 4–7 male genit., 8 female abd., 9–10 female genit.), Lyneborg (2002: 104 key), Hauser and Webb (2007: 44 key, 45 nom., desc., 47 report LT lost, invalid LT desig., dist., Figs. 1 male frons, 2 female frons, 3–8 male genit., 9 female genit., 56 dist. map). **Note 18.**

Leptocera gracilis Kröber 1928b: 118. Type locality Brazil, Paraná. LT male MLUH (lost). Kröber (1928b: Figs. 22 female ant., frons, 23 male, female abd.), Webb and Irwin (1988: 39 nom., syn. desig. of *abdominalis* Kröber, 41 LT desig.), Irwin and Webb (1992: 89 nom.), Hauser and Webb (2007: 45 nom., 47 report LT lost). **Note 19.**

Ziehenimyia gracilis. Misspelling of *Ziehenia.* Kröber (1929b: 172 dist.).

argentifrons Hauser and Webb. **Neotropical:** Argentina (Catamarca, Mendoza, Salta).

Ataenogera argentifrons Hauser and Webb 2007: 49. Type locality Argentina, Catamarca Province, 2 km N Belén, Quebrada Belén dam. HT male (MEI 107064) CAS (Type No. 18237). Hauser and Webb (2007: 45 key, 51 dist., Figs. 10 male frons, 11 female frons, 12–18 male genit., 19 female genit., 57 dist.).

brevicornis (Bromley). **Nearctic:** Mexico (Jalisco, Michoacán, Morelos, Puebla). **Neotropical:** Brazil (Amazonas, Mato Grosso do Sul, Pará, Rondônia, Santa Catarina), Colombia (Magdalena), Costa Rica (Alajuela, Guanacaste, Puntarenas), El Salvador (La Libertad), Guatemala (Zacapa), Guyana (Cuyuni-Mazaruni), Nicaragua (Rivas), Panama (Darién, Panamá (Canal Zone)), Peru (San Martin), Trinidad, Uruguay, Venezuela (Aragua, Barinas, Guárico).

Henicomyia brevicornis Bromley 1934: 361. Type locality Guyana, Bartica District [=Cuyuni-Mazaruni], Kartabo. HT female AMNH. Webb and Irwin (1988: 39 nom., syn. desig. of *abdominalis* Kröber). **Note 20.**

Ataenogera brevicornis. Hauser and Webb (2007: 42 revised status, 44 key, 52 nom., desc., comb. change, 54. dist., Figs. 20 male frons, 21 female frons, 22–27 male genit., 28 female abd., 29 female genit., 57 dist. map), Gaimari and Webb (2009: 644 dist.).

grandis Lyneborg. **Neotropical:** Brazil (Amazonas, Rio de Janeiro, Rondônia, São Paulo).

Ataenogera grandis Lyneborg 2002: 104. Type locality Brazil, Rio de Janeiro, Itatiaya [= Itatiaia], E. Rio. HT female (MEI 147914) USNM. Lyneborg (2002: 104 key, 105 dist., Figs. 1 female ant., 2 female max. palp.), Hauser and Webb (2007: 45 key, 57 desc., 59 dist., Figs. 30 male frons, 31 female frons, 32–37 male genit., 38 female genit., 56 dist. map).

irwini Hauser and Webb. **Neotropical:** Peru (Amazonas, Cajamarca).

Ataenogera irwini Hauser and Webb 2007: 59. Type locality Peru, Amazonas, 7 km W Bagua Grande. HT male (MEI 170105) CAS (Type No. 18238). Hauser and Webb (2007: 45 key, 61 dist., Figs. 39 male frons, 40 female frons, 41–46 male genit., 47 female genit., 56 dist. map).

minuta Lyneborg. **Neotropical:** Peru (Apurímac).

Ataenogera minuta Lyneborg 2002: 106. Type locality Peru, Apurímac, Cuzco-Abancay road, Apurímac crossing at Cuya. HT male (MEI 147915) BMNH. Lyneborg (2002: 104 key, 107 dist., Figs. 3 male ant., 4–7

male genit.), Hauser and Webb (2007: 45 key, 62 nom., desc., 65 dist., Figs. 48 male frons, 49 female frons, 50–55 male genit., 56 dist. map).

†Genus PALAEOPHEROCERA Hauser and Irwin

†**PALAEOPHEROCERA** Hauser and Irwin 2005a: 398. Type species *Psilocephala scudderi* Cockerell, 1909a by original designation. This genus is known only from the fossil record, in Florissant Shale (USA. Colorado).

†***scudderi*** (Cockerell). **Nearctic:** USA (Colorado).

Psilocephala scudderi Cockerell 1909a: 10. Type locality Miocene compression fossil from Florissant, Colorado. HT sex unknown (MEI 156281) AMNH (Type No. 18860). Cockerell (1909a: Fig. 3 fossil; 1916: 90 desc., misidentification, Plate 2—Fig. 5 fossil), Irwin and Lyneborg (1981b: 518 note).

Desmatomyia scudderi. Evenhuis (1990: 66 cat., comb. change; 1994: 332 cat.). **Note 21.**

Palaeopherocera scudderi. Hauser and Irwin (2005a: 399 comb. change, desc., Figs. 6 photograph of holotype, 7 drawing of holotype, 8 wing).

Genus PARAPHEROCERA Irwin

PARAPHEROCERA Irwin 1977b: 438. Type species *Parapherocera montana* Irwin, 1977b by original designation. Irwin and Lyneborg (1981a: 203 key, 264 diag, 266 sp. list; 1981b: 523 key), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 637 key). The genus is Nearctic in distribution, occurring in Mexico and the USA.

macswaini Irwin. **Nearctic:** USA (California).

Parapherocera macswaini Irwin 1977b: 448. Type locality USA, California, Kern County, Short Canyon, 9 km W Inyokern. HT female (MEI 001188) CAS (Type No. 10449). Irwin (1977b: 442 key, Figs. 14 female head, 26 male ant., 34 dist. map), Irwin and Lyneborg (1981a: 266 sp. list), Poole (1996: 309 sp. list).

montana Irwin. **Nearctic:** Mexico (Baja California Norte), USA (California).

Parapherocera montana Irwin 1977b: 442. Type locality Mexico, Baja California Norte, about 6 km S La Rumorosa. HT female (MEI 001116) CAS (Type No. 10450). Irwin (1977b: 442 key, Figs. 2 habitus, 8–9 wing, 10 male max. palp., 16, 18 female head, 17 male head, 20 female tergum 8, 24 male ant., 22, 30–32 female genit., 34 dist. map, 42–48 male genit.), Irwin and Lyneborg (1981a: 266 sp. list, Figs. 37 ant., 40 male head, 215–221 male genit.), Poole (1996: 309 sp. list).

wilcoxi Irwin. **Nearctic:** USA (California).

Parapherocera wilcoxi Irwin 1977b: 446. Type locality USA, California, San Bernardino County, Big Bear Lake. HT female (MEI 001180) CAS (Type No. 10451). Irwin (1977b: 442 key, Figs. 15 female head, 25 male ant., 34 dist. map.), Irwin and Lyneborg (1981a: 266 sp. list; 1981b: Fig. 3 male head), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 638 Fig. 2 male head).

Genus PHEROCERA Cole

PHEROCERA Cole 1923a: 20. Type species *Pherocera signatifrons* Cole, 1923a by original designation. Cole (1923a: 14 key, 20 sp. key; 1965: 349 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, 172 desc.), Irwin and Lyneborg (1981a: 201 key, 266 nom., desc., 268 sp. list, Figs. 222–227 male genit.; 1981b: 518 dist., 523 key), Irwin (1983: 113 *boharti* group), Poole (1996: 309 sp. list), Holston (2005 biol.), Gaimari and Webb (2009: 637 key, 646 dist., habitats). This genus is Nearctic in distribution, occurring in Mexico and the USA.

PHAEOCERA. Misspelling of *Pherocera*. Kimsey *et al.* (1981: 669 biol.).

albihalteralis Cole. **Nearctic:** USA (Arizona, New Mexico, Texas, Utah).

Pherocera albihalteralis Cole 1923a: 22. Type locality USA, New Mexico, Alamogordo. HT female ANSP (Type No. 6280). Cole (1923a: 20 key, Fig. 14 female head; 1965: 349 cat.), Irwin and Lyneborg (1981a: 268 sp. list), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 646 dist.).

Pherocera flavihalteralis. Misspelling of *albihalteralis.* Cole (1923a: Fig. 14).

bishopensis Irwin. **Nearctic:** USA (California).

Pherocera bishopensis Irwin 1983: 125. Type locality USA, California, Inyo County, 4.8 km S Bishop. HT female CAS (Type No. 10454). Irwin (1983: 125 key, 127 dist., Figs. 19 female head, 26 male ant., 34 male max. palp., 43, 51, 58 male genit.), Poole (1996: 309 sp. list).

boharti Irwin. **Nearctic:** USA (California).

Pherocera boharti Irwin 1983: 127. Type locality USA, California, San Bernardino County, Wildwood Canyon, 8 km E Calimesa. HT female CAS (Type No. 10455). Irwin (1983: 125 key, 128 dist., Figs. 13 female head, 20 male ant., 28 male max. palp., 43, 45, 52 male genit.), Poole (1996: 309 sp. list).

boydi Irwin. **Nearctic:** Mexico (Baja California Norte), USA (Arizona, California).

Pherocera boydi Irwin 1983: 128. Type locality USA, California, Riverside County, 6.4 km S Palm Desert, P.L. Boyd Deep Canyon Desert Research Station. HT female CAS (Type No. 10456). Irwin (1983: 125 key, 129 dist., Figs. 12 female head, 21 male head, 29 male max. palp., 36, 44, 53 male genit.), Poole (1996: 309 sp. list).

flavipes Cole. **Nearctic:** Mexico (Baja California Norte, Baja California Sur), USA (Arizona, California, Idaho, Nevada, New Mexico, Utah).

Pherocera flavipes Cole 1923a: 22. Type locality USA, Arizona, Pinal County, Highley [= Higley], Superstition Mountain. HT female USNM. Cole (1923a: 20 key, Fig. 15 female head; 1965: 349 cat.), Irwin and Lyneborg (1981a: 268 sp. list; 1981b: Fig. 21 female genit.), Irwin (1983: 125 key, 130 desc., 131 dist., Figs. 17 female head, 24 male ant., 32 male max. palp., 41, 48, 56 male genit.), Sinclair *et al.* (1994: 432 phylog. exemplar), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 642 Fig. 18 lateral female abd. apex).

nigragena Irwin. **Nearctic:** Mexico (Baja California Sur), USA (California, Nevada, Oregon).

Pherocera nigragena Irwin 1983: 132. Type locality USA, California, Inyo County, Batchelder Spring. HT female CAS (Type No. 10470). Irwin (1983: 125 key, Figs. 16 female head, 25 male ant., 33 male max. palp., 40, 49, 57 male genit.), Poole (1996: 309 sp. list).

nigripes Cole. **Nearctic:** Mexico (Baja California Sur, Sonora).

Pherocera nigripes Cole 1923b: 459. Type locality Mexico, Sonora, San Pedro Nolasco Island. HT female CAS (Type No. 01336). Cole (1923b: Fig. 2 female frons), Arnaud (1979: 136 type data), Irwin and Lyneborg (1981a: 268 sp. list). **Note 22.**

rufoabdominalis Irwin. **Nearctic:** Mexico (Baja California Norte), USA (California).

Pherocera rufoabdominalis Irwin 1983: 133. Type locality USA, California, Riverside County, 6.4 km S Palm Desert, P.L. Boyd Deep Canyon Desert Research Center. HT female CAS (Type No. 10475). Irwin (1983: 125 key, 135 dist., Figs. 6–7 female genit., 8–11 male genit., 18 female head, 27 male ant., 35 male max. palp., 42, 50, 59 male genit.), Poole (1996: 309 sp. list).

rupina Irwin. **Nearctic:** Mexico (Baja California Norte, Baja California Sur), USA (California).

Pherocera rupina Irwin 1983: 136. Type locality USA, California, Riverside County, 6.4 km S Palm Desert, P.L. Boyd Deep Canyon Desert Research Station. HT female CAS (Type No. 10476). Irwin (1983: 125 key, Figs. 1 habitus, 3–4 female thorax, 5 male wing, 15 female head, 23 male ant., 31 male max. palp., 39, 47, 55 male genit.), Poole (1996: 309 sp. list).

signatifrons Cole. **Nearctic:** USA (Arizona, California, New Mexico, Utah).

Pherocera signatifrons Cole 1923a: 21. Type locality USA, New Mexico, Alamogordo. HT female ANSP (Type No. 6281). Cole (1923a: 20 key, Figs. 11 female ant., 12 female habitus, 13 female frons; 1965: 349 cat.), Curran (1934: 187 Figs. 10 ant., 11 head, 12 habitus; 1965: 187 Figs. 10 ant., 11 head, 12 habitus), Cole and Schlinger (1969: 171 Fig. 103B ant., head, habitus), Irwin and Lyneborg (1981a: 268 sp. list), Poole (1996: 309 sp. list).

tomentamala Irwin. **Nearctic:** USA (Arizona, California, Texas).

Pherocera tomentamala Irwin 1983: 138. Type locality USA, California, Imperial County, 10 km N Glamis, Algadones Dunes. HT female CAS (Type No. 10480). Irwin (1983: 125 key, Figs. 14 female head, 22 male ant., 30 male max. palp., 38, 46, 54 male genit.), Poole (1996: 309 sp. list).

Genus PHYCUS Walker

PHYCUS Walker 1850: 2. Type species *Xylophagus canescens* Walker, 1848 by monotypy [= *Phycus brunneus* (Wiedemann, 1824)]. Bigot (1890: 322 nom., as syn. of *Agapophytus* Guérin-Méneville, 1831), Kröber (1911: 476 key, 480 desc., sp. list, key; 1913b: 6 key, 10 desc., 11 sp. list; 1928b: 121 key), Becker (1912: 294 desc.), Lyneborg (1978a: 212 review, desc.; 1983: 185 rev.), Irwin and Lyneborg (1981a: 203 key, 260 desc.; 1981b: 518 dist., 522 key), Webb and Irwin (1988: 37 key, 41 nom., desc.), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 636 key, 646 dist., habitats). This genus is Nearctic and Neotropical in distribution, occurring in Costa Rica, Mexico and the USA.

CAENOPHANES Loew 1874a: 415. Type species *Caenophanes insignis* Loew 1874a by monotypy. Preoccupied by *Caenophanes* Förster (1862: 236). Röder (1894: 173 desc.), Bezzi (1902: 191 objective syn. of *Caenophanomyia* Bezzi), Kertész (1909: 149 nom.), Becker (1912: 313 nom.), Lyneborg (1978a: 212 nom., syn. desig. of *Phycus* Walker; 1983: 185 nom.), Webb and Irwin (1988: 42 nom.), Poole (1996: 309 nom.).

CAENOPHANOMYIA Bezzi 1902: 191. Replacement name for *Caenophanes* Loew (1874a: 415) nec Förster (1862: 236). Kertész (1909: 149 cat.), Kröber (1913b: 7 key), Becker (1912: 313 desc.), Lyneborg (1978a: 212 nom., syn. desig. of *Phycus* Walker; 1983: 185 nom.), Webb and Irwin (1988: 42 nom.), Poole (1996: 309 nom.).

PARAPHYCUS Becker 1923: 62 (as subgenus of *Phycus*). Type species *Phycus nitidus* Wulp, 1897 by original designation [= *Phycus brunneus* (Wiedemann, 1824)]. Preoccupied by *Paraphycus* Girault (1915: 97). Lyneborg (1978a: 212 nom., syn. desig. of *Phycus* Walker; 1983: 185 nom.), Webb and Irwin (1988: 42 nom), Poole (1996: 309 nom.).

CAENOPHANIELLA Séguy 1941: 112. Type species *Caenophaniella nigra* Séguy, 1941 by original designation. Lyneborg (1978a: 212 syn. desig. of *Phycus* Walker; 1983: 185 nom.), Webb and Irwin (1988: 42 nom.), Poole (1996: 309 nom.).

frommeri Webb and Irwin. **Nearctic:** Mexico (Baja California Norte, Baja California Sur, Chihuahua), USA (Arizona, California). **Neotropical:** Mexico (Colima, Sinaloa).

Phycus frommeri Webb and Irwin 1988: 43. Type locality USA, California, Riverside County, 5.6 km S Palm Desert, P.L. Boyd Deep Canyon Desert Research Center. HT male (MEI 005169) CAS (Type No. 15741). Webb and Irwin (1988: Figs. 16 ant., 17 male head, 18 max. palp., 19 wing, 20–23 male genit., 25–26 female genit., 27 flight periodicity, 28–31 larva, 32–34 pupa), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 633 Fig. 1 female habitus, 646 dist.).

frontalis Webb and Irwin. **Neotropical:** Belize, Costa Rica (Cartago)**,** Mexico (Yucatán).

Phycus frontalis Webb and Irwin 1988: 47. Type locality Mexico, Yucatán, Chichén Itzá. HT male (MEI 005179) AMNH. Webb and Irwin (1988: 49 dist., Figs. 35 male head, 36–40 male genit.), Gaimari and Webb (2009: 646 dist.).

Genus SCHLINGERIA Irwin

SCHLINGERIA Irwin 1977b: 424. Type species *Schlingeria ammobata* Irwin, 1977b by original designation. Irwin and Lyneborg (1981a: 203 key, 268 desc., 269 sp. list, Figs. 228–232 male genit.; 1981b: 522 key), Poole (1996: 309 sp. list), Gaimari and Webb (2009: 636 key). This genus is Nearctic in distribution, occurring in Mexico and the USA.

ammobata Irwin. **Nearctic:** Mexico (Sonora), USA (California).

Schlingeria ammobata Irwin 1977b: 427. Type locality USA, California, Imperial County, Algadones Dunes, 10 km N Glamis. HT female (MEI 002855) CAS (Type No. 10481). Irwin (1977b: Figs. 1 habitus, 3–4 female head, 5 male head, 6–7 wing, 11 male max. palp., 12 male ant., 19 female tergum 8, 23 male style, 27–28, 35–41 male genit., 21, 29 female genit., 33 dist. map), Irwin and Lyneborg (1981a: 269 sp. list, Fig. 39 ant.), Poole (1996: 309 sp. list).

Subfamily THEREVINAE Newman

Lyneborg (1976a: 194; 1984: 208; 1989a: 15), Irwin and Lyneborg (1981a: 205; 1981b: 517), Nagatomi and Lyneborg (1987: 116), Webb and Irwin (1991a: 869; 1991b: 899; 1991c: 914; 1995: 197; 1999: 644), Gaimari and Irwin (2000a: 129; 2000b: 598), Metz and Irwin (2000: 977), Winterton *et al.* (1999: 274), Yang *et al.* (2000: 440), Metz and Webb (2003: 1), Holston (2004: 24; 2009: 28), Holston *et al.* (2003: 739), Webb (2003: 484; 2005a: 1; 2005b: 1; 2005c: 1; 2006: 1; 2009: 2), Webb and Metz (2003a: 1; 2003b: 1; 2004: 1; 2006: 1; 2008: 1), Holston and Irwin (2005: 400).

CYCLOTELINI Gaimari and Irwin 2000a: 158. Type genus *Cyclotelus* Walker, 1850 [= *Cerocatus* Rondani, 1848]. Gaimari and Irwin (2000b: 598), Cranston (2005: 288 biog.), Holston *et al.* (2007: 280 phylog.), Lambkin *et al.* (2009 phylog.).

THEREVINI Newman. Lambkin *et al.* (2009 phyl.).

Genus ACROSATHE Irwin and Lyneborg

ACROSATHE Irwin and Lyneborg 1981a: 223. Type species *Bibio annulata* Fabricius, 1805 by original designation. Irwin and Lyneborg (1981a: 202 key, 225 sp. list; 1981b: 519 key), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 643 key), Webb (2009: 7 nom., desc., 8 male key, 9 female key). This genus is Holarctic in distribution, with the Nearctic species occurring in Canada, Mexico, and the USA.

bimaculata (Cole). **Nearctic:** USA (North Carolina).

Thereva bimaculata Cole 1923a: 98. Type locality USA, North Carolina, Southern Pines. HT female CUIC. Cole (1923a: 88 female key; 1925: 88 desc.; 1965: 353 cat.), Brimley (1938: 340 cat.). **Note 23.**

Acrosathe bimaculata. Irwin and Lyneborg (1981a: 225 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 46 nom.), Webb (2009: 8 male key, 9 female key, nom., desc., Figs. 1–6 male genit., 7 female head, 8 female genit., 50 dist. map).

falcata Webb. **Nearctic:** USA (California, Nevada, Utah).

Acrosathe falcata Webb 2009: 12. Type locality USA, Nevada, summit Mt. Rose. HT male (MEI 012271) CAS (Type No. 18349). Webb (2009: 9 male key, female key, Figs. 9–15 male genit., 16 female head, 17 female genit., 51 dist. map).

otiosa (Coquillett). **Nearctic:** Canada (British Columbia), Mexico, (Baja California Norte), USA (California, Colorado, Idaho, Oregon, Utah, Washington, Wyoming).

Thereva otiosa Coquillett 1893a: 199. Type locality USA, California, Los Angeles County. LT male (MEI 159492) USNM (Type No. 10423). Coquillett (1983a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 157 cat.), Kröber (1912a: 248 male key, 250 female key, 255 sp. list, 257 desc.; 1913b: 43 male key, 44 female key, 60 sp. list; 1914a: 60 male key, 63 female key, 66 dist.), Woodworth (1913: 149 sp. list), Cole (1923a: 87 male key, 88 female key, 93 desc., Figs. 124 female frons, 141 ant., 167 wing; 1965: 354 cat.), Webb (2009: 16 LT desig.).

Acrosathe otiosa. Irwin and Lyneborg (1981a: 225 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 59 nom.), Webb (2009: 8 male key, 9 female key, 14 nom., desc., Figs. 18–24 male genit., 25 female genit., 52 dist. map).

pacifica (Cole). **Nearctic:** USA (California).

Thereva pacifica Cole 1923a: 103. Type locality USA, California, Pacific Grove. HT male USNM (Type No. 25938). Cole (1923a: 86 male key, 88 female key, Fig. 133 ant.; 1965: 354 cat.).

Acrosathe pacifica. Irwin and Lyneborg (1981a: 225 comb. change, sp. list; 1981b: Fig. 17 male genit.), Poole (1996: 308 sp. list), Holston (2004: 59 nom.), Webb (2009: 8 male key, 9 female key, 18 nom., desc., Figs. 26–31, male genit., 32 female head, 33 female genit., 51 dist. map).

vanduzeei (Cole). **Nearctic:** USA (California).

Thereva vanduzeei Cole 1923a: 105. Type locality USA, California, San Francisco, Golden Gate Park. HT male CAS (Type No. 01490). Cole (1923a: 87 male key, 88 female key, Figs. 123 female head, 135 ant., 157 wing; 1965: 354 cat.), Arnaud (1979: 139 type data).

Acrosathe vanduzeei. Irwin and Lyneborg (1981a: 225 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 64 nom.), Webb (2009: 9 male, female key, 21 nom., desc., Figs. 34–39 male genit., 40–41 female head, 42 female genit., 53 dist. map).

Acrosathe novella. Misidentification, *senus* Holston (2005: 1 biol.) and Holston and Irwin (2005: 73 biol.) nec Coquillett (1893a: 200). Webb (2009: 21 nom.).

vialis (Osten Sacken). **Nearctic:** USA (Arizona, California, Idaho, Nevada, Oregon, Utah, Washington, Wyoming).

Thereva vialis Osten Sacken 1877: 274. Type locality USA, California, Yosemite. LT male (MEI 134316) MCZ (Type No. 10677). Osten Sacken (1878: 96 cat.), Williston **(**1886: 293 note), Coquillett (1893a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 160 cat.), Kröber (1912a: 248 male key, 250 female key, 255 sp. list, 258 desc.; 1913b: 43 male key, 44 female key, 62 sp. list; 1914a: 61 male key, 63 female key, 67 dist.; 1928b: 120 dist.), Woodworth (1913: 149 sp. list), Cole and Lovett (1921: 242 cat., biol.), Cole (1923a: 87 male key, 88 female key, 94 desc., 95 dist., Figs. 3D–E male genit., 129 female head, 140 ant., 147 male genit., 158 wing; 1925: 85 dist.; 1965: 354 cat.), Webb (2009: 30 LT desig.). **Note 24.**

Acrosathe vialis. Irwin and Lyneborg (1981a: 225 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 65 nom.), Webb (2009: 9 male key, female key, 26 nom., 27 desc., Figs. 43–48 male genit., 49 female genit., 54 dist. map).

Thereva novella Coquillett 1893a: 200. Type locality USA, California, Los Angeles County. ST male (5 specimens), ST female, depository not stated (USNM, lost?). Coquillett (1893a: 197 key), Aldrich (1907: 5 cat.), Kertész (1909: 157 cat.), Kröber (1912a: 247 male key, 250 female key, 255 sp. list; 1913b: 44 female key, 59 sp. list; 1914a: 61 male key), Cole (1923a: 86 male key, 88 female key, 93 rep. orig. desc., Fig. 139 ant.; 1965: 354 cat.), Webb (2009: 26 nom., syn. desig. of *vialis* Osten Sacken). **Note 25.**

Acrosathe novella. Irwin and Lyneborg (1981a: 225 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 58 nom.), Webb (2009: 26 nom.).

†Genus AMBRADOLON Metz and Irwin

†AMBRADOLON Metz and Irwin 2000: 990. Type species *Ambradolon grimaldii* Metz and Irwin, 2000 by original designation. Metz and Irwin (2000: 986 key). This genus is known only from the fossil record, in Dominican amber (Domincan Republic).

†*grimaldii* Metz and Irwin. **Neotropical:** Dominican Republic.

Ambradolon grimaldii Metz and Irwin 2000: 991. Type locality Oligocene-Miocene amber from the Dominican Republic. HT male (MEI 088366) AMNH. Metz and Irwin (2000: 979 phylog., Figs. 27–28 phylog., 42 habitus, 43, 45 male genit., 44 male head).

Genus AMMONAIOS Irwin and Lyneborg

AMMONAIOS Irwin and Lyneborg 1981a: 240. Type species *Thereva nivea* Kröber, 1914a by original designation. Irwin and Lyneborg (1981a: 202 key, 242 sp. list; 1981b: 519 gen. key), Kimsey *et al.* (1981: 669 biol.), Poole (1996: 308 sp. list), Hauser and Irwin (2003: 739 phylog., 743 key, Fig. 2 phylog.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 641 key). This genus is Nearctic in distribution, occurring in Mexico and the USA.

confusus Hauser and Irwin. **Nearctic:** Mexico (Baja California Norte, Baja California Sur, Chihuahua, Sonora), USA (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah).

Ammonaios confusus Hauser and Irwin 2003: 744. Type locality USA, Utah, Emery County, San Rafael Desert, 22 km NE Hanksville, Flat Top Pass. HT male (MEI 122447) UCDC. Hauser and Irwin (2003: 739 phylog., 743 key, 750 dist., Figs. 1 habitus, 2 phylog., 3 female head, 7 ant., 11, 15–16, 23 male genit., 27, 31 female genit., 35–37, 40 pupa, 44 female hindtarsus, 46 wing, 50–51 pupa, 52 tentorial pit, 54 dist. map). **Note 26.**

mexicanus Hauser and Irwin. **Nearctic:** Mexico (Baja California Norte, Baja California Sur).

Ammonaios mexicanus Hauser and Irwin 2003: 759. Type locality Mexico, Baja California Norte, 8.1 km N San Felipe. HT male (MEI 109196) SDMC (Type No. 0116). Hauser and Irwin (2003: 739 phylog., 744 key, Figs. 2 phylog., 4 female head, 8 ant., 12, 17–18, 24 male genit., 28, 32 female genit., 47 wing, 55 dist. map).

niveus (Kröber). **Nearctic:** Mexico (Chihuahua, Coahuila, Durango), USA (New Mexico, Texas).

Thereva nivea Kröber 1914a: 64. Type locality USA, New Mexico, Dona Ana County, Mesilla Valley. HT male (MEI 114075) USNM (Type No. 26028). Kröber (1914a: 60 male key), Cole (1923a: 130 desc.; 1965: 354 cat.).

Ammonaios niveus. Irwin and Lyneborg (1981a: 242 sp. list, comb. change, Figs. 20 male head, 22 ant., 157–161 male genit.; 1981b: 519 key), Poole (1996: 308 sp. list), Hauser and Irwin (2003: 739 phylog., 743 key, 760 desc., Figs. 2 phylog., 5 female head, 9 ant., 13, 19–20, 25 male genit., 29, 33 female genit., 38, 41 pupa, 48 wing, 53 tentorial pit, 56 dist. map), Holston (2004: 57 nom.).

sabulosus Hauser and Irwin. **Nearctic:** USA (California).

Ammonaios sabulosus Hauser and Irwin 2003: 762. Type locality USA, California, Imperial County, 27.4 km NW Glamis. HT male (MEI 114063) EMEC. Hauser and Irwin (2003: 739 phylog., 743 key, Figs. 2. phylog., 6 female head, 10 ant., 14, 21–22, 26 male genit., 30, 34 female genit., 39, 42 pupa, 45 female hindtarsus, 49 wing, 57 dist. map).

Genus AMPLISEGMENTUM Webb

AMPLISEGMENTUM Webb 2005c: 4. Type species *Amplisegmentum ecuadorensis* Webb, 2005c by original designation. Gaimari and Webb (2009: 643 key). This genus is Neotropical in distribution, occurring in Ecuador.

ecuadorensis Webb. **Neotropical:** Ecuador (Bolivar, Carchi, Pichincha).

Amplisegmentum ecuadorensis Webb 2005c: 4. Type locality Ecuador, Carchi, Bolivar, Chota River. HT male (MEI 083805) CNC. Webb (2005c: 7 dist., Figs. 1–8 male genit., 9 female genit.).

Genus ANOLINGA Gaimari and Irwin

ANOLINGA Gaimari and Irwin 2000a: 165. Type species *Anolinga melanothrix* Gaimari and Irwin, 2000a by original designation. Gaimari and Irwin (2000a: 137 phylog., 160 key, 194 biog., Figs. 1–2 phylog., 3A dist., 4, 6 biog.), Metz *et al.* (2003: 246 desc.), Gaimari and Webb (2009: 637, 639 key). This genus is Neotropical in distribution, occurring in Brazil and Paraguay.

longiventris (Kröber). **Neotropical:** Paraguay (Cordillera).

Psilocephala longiventris Kröber 1911: 510. Type locality Paraguay, San Bernardino. LT male (MEI 113150) USNM. Kröber (1911: 499 male key, 500 female key, 510 desc.; 1913b: 31 sp. list, 37 male key, 38 female key; 1928a: 6 dist., 9 male key, 10 female key), Metz *et al.* (2003: 246 LT desig., trans. orig. desc.).

Anolinga longiventris. Metz *et al.* (2003: 246 comb. change).

Psilocephala longa Kröber 1929a: 425. Type locality Paraguay. HT male (MEI 134682) ZMHB. Kröber (1929a: Figs. 14a male ant., 14b male genit.), Metz *et al.* (2003: 246 nom., syn. desig. of *longiventris* Kröber, 247 trans. orig. desc.).

melanothrix Gaimari and Irwin. **Neotropical:** Brazil (Minas Gerais, São Paulo).

Anolinga melanothrix Gaimari and Irwin 2000a: 165. Type locality Brazil, Minas Gerais, Sapucai-mirim, Cidade Azul. HT male (MEI 100215) MZSP. Gaimari and Irwin (2000a: 137 phylog., 160 key, 168 dist., Figs. 1–2 phylog., 16 male head, 17 female head, 61, 83, 120–121 male genit.).

psilofrons Gaimari and Irwin. **Neotropical:** Brazil (Rio de Janeiro).

Anolinga psilofrons Gaimari and Irwin 2000a: 168. Type locality Brazil, Rio de Janeiro, Grajahu. HT male (MEI 077737) MZSP. Gaimari and Irwin (2000a: 137 phylog., 161 key, 170 dist., Figs. 1–2 phylog., 18 male head, 19 female head, 84, 122–123 male genit., 149 female genit.).

Genus APENNIVERPA Webb

APENNIVERPA Webb 2005c: 8. Type species *Apenniverpa venezuelensis* Webb, 2005c by original designation. Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring in Venezuela.

venezuelensis Webb. **Neotropical:** Venezuela (Aragua).

Apenniverpa venezuelensis Webb 2005c: 8. Type locality Venezuela, Aragua, Ranch[o] Grande, Parque Nacional Henry Pittier. HT male (MEI 128982) CAS (Type No. 18087). Webb (2005c: 12 dist., Figs. 10–18 male genit., 19–21 female genit.).

Genus ARENIGENA Irwin and Lyneborg

ARENIGENA Irwin and Lyneborg 1981a: 238. Type species *Thereva semitaria* Coquillett, 1893a by original designation. Irwin and Lyneborg (1981a: 201 key, 240 sp. list; 1981b: 518 key, Fig. 19 male genit.), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Webb (2009: 37 nom., desc., 38 key), Gaimari and Webb (2009: 641 key, 644 dist., biol., habitats). This genus is mainly Nearctic in distribution, occurring in Mexico and the USA.

albiseta Webb. **Nearctic:** USA (Arizona, California, Colorado, Nebraska, Nevada, New Mexico, North Dakota, Texas, Utah, Wyoming).

Arenigena albiseta Webb 2009: 39. Type locality USA, Arizona, Coconino County, 32 km NE Tuba City. HT male (MEI 119000) USNM. Webb (2009: 38 key, Figs. 55 dist. map, 56–62 male genit., 63 female genit.).

bajaensis Webb. **Nearctic:** Mexico (Baja California Norte, Baja California Sur).

Arenigena bajaensis Webb 2009: 41. Type locality Mexico, Baja California Norte, 4.8 km NW Camalú. HT male (MEI 109251) CAS (Type No. 18393). Webb (2009: 38 key, Figs. 64–70 male genit., 71 female genit., 96 dist. map).

floridensis Webb. **Nearctic:** USA (Florida).

Arenigena floridensis Webb 2009: 44. Type locality USA, Florida, Putnam County, Hollister-Roberts ranch [Hollister]. HT male (MEI 128566) FSCA. Webb (2009: 38 key, Figs. 50 dist. map, 72–78 male genit., 79 female genit.).

marcida (Coquillett). **Nearctic:** Mexico (Baja California Norte, Baja California Sur), USA (Arizona, California, Nevada, New Mexico, Texas). **Neotropical:** Mexico (Sinaloa).

Psilocephala marcida Coquillett 1893b: 228. Type locality USA, California, Los Angeles County. LT male (MEI 141533) USNM (Type No. 10415). Coquillett (1893b: 224 key), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 223 male key, 229 sp. list; 1913b: 32 sp. list, 38 male key; 1914a: 38 male key, 44 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 69 desc., 70 dist., Figs. 56 female frons, 79 ant., 97 male genit.; 1965: 351 cat.), Arnaud (1979: 137 neallotype), Webb (2009: 48 LT desig.).

Arenigena marcida. Irwin and Lyneborg (1981a: 240 comb. change, sp. list), Poole (1996: 308 sp. list), Webb (2009: 39 key, 46 nom., desc., Figs. 80–86 male genit., 87 female genit. 96 dist. map).

Psilocephala brunnea Kröber 1914a: 46. Type locality USA, Arizona, Oracle. HT female (MEI 112374) USNM (Type No. 26020). Kröber (1914a: 40 female key), Cole (1923a: 76 trans. orig. desc.; 1965: 351 cat.), Webb (2009: 46 nom., syn. desig. of *marcida* Coquillett).

Arenigena brunnea. Irwin and Lyneborg (1981a: 240 comb. change, sp. list), Poole (1996: 308 sp. list).

semitaria (Coquillett). **Nearctic:** USA (Arizona, California, Idaho, Nevada, Oregon, Utah, Wyoming).

Thereva semitaria Coquillett 1893a: 198. Type locality USA, California, Los Angeles County. LT male (MEI 114021) USNM (Type No. 10421). Coquillett (1893a: 197 key), Aldrich (1905: 250 cat.), Kertész (1909: 159 cat.), Kröber (1912a: 248 male key, 250 female key, 255 sp. list; 1913b: 43 male key, 44 female key; 61 sp. list; 1914a: 60 male key, 62 female key, 64 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 86 male key, 88 female key, 93 note, Figs. 128 female frons, 138 ant.; 1923b: 462 dist.; 1965: 354 cat.), Webb (2009: 55 LT desig.).

Arenigena semitaria. Irwin and Lyneborg (1981a: 240 sp. list, comb. change, Figs. 19 male head, 21 ant., 148–155 male genit.), Poole (1996: 308 sp. list), Holston (2004: 62 nom), Gaimari and Webb (2009: 644 biol), Webb (2009: 39 key, 53 nom., desc., Figs. 88–94 male genit., 95 female genit., 96 dist. map).

Genus ARGOLEPIDA Metz and Irwin

ARGOLEPIDA Metz and Irwin in Metz *et al.* 2003: 233. Type species *Psilocephala rivulosa* Kröber, 1928a by original designation. Metz *et al.* (2003: Fig. 5 male genit.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 643 key). This genus is Neotropical in distribution, occurring in Argentina.

rivulosa (Kröber). **Neotropical:** Argentina (Mendoza).

Psilocephala rivulosa Kröber 1928a: 21. Type locality Argentina, Mendoza. HT female (MEI 134205) MLUH. Kröber (1928a: 7 dist., 10 female key, Fig. 17 female frons, ant.), Metz *et al.* (2003: 235 trans. orig. desc., invalid LT desig.). **Note 27.**

Argolepida rivulosa. Metz *et al.* (2003: 235 comb. change).

Genus BRACHYLINGA Irwin and Lyneborg

BRACHYLINGA Irwin and Lyneborg 1981a: 232. Type species *Psilocephala baccata* Coquillett, 1893b by original designation. Irwin and Lyneborg (1981a: 202 key, 234 sp. list.; 1981b: 518 dist., 519 key), Irwin and Webb (1992: 87 sp. list, 90 dist.), Poole (1996: 308 sp. list), Metz *et al.* (2003: 247 sp. list), Webb and Metz (2006: 10 genus key, 11 desc., 13 male key, 15 female key), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 639, 644 key, dist., habitats). This genus is Nearctic and Neotropical in distribution, from the southwestern USA south through much of South America and in some islands of the Caribbean.

albifrons Webb. **Neotropical:** Venezuela (Guárico).

Brachylinga albifrons Webb in Webb and Metz 2006: 18. Type locality Venezuela, Guárico, 12 km S Calabozo. HT male (MEI 048198) USNM. Webb and Metz (2006: 15 male key, Figs. 2, 25, 48, 71, 94, 117, 140, 163 male genit., 214 dist. map).

albiseta (Malloch). **Neotropical:** Argentina (Rio Negro).

Psilocephala albiseta Malloch 1932: 252. Type locality Argentina, Río Negro, eastern end of Lago Nahuel Huapi. HT male BMNH (Type No. 241969). Malloch (1932: 250 key).

Brachylinga albiseta. Metz *et al.* (2003: 247 comb. change), Webb and Metz (2006: 13 male key, 15 female key, 19 nom., desc., Figs. 3, 26, 49, 72, 95, 118, 141, 164 male genit., 186 female genit., 208 dist. map).

attenuata Webb. **Neotropical:** Brazil (Rio Grande do Norte).

Brachylinga attenuata Webb in Webb and Metz 2006: 34. Type locality Brazil, Rio Grande do Norte, Ceará Mirim. HT male (MEI 046047) USNM. Webb and Metz (2006: 13 male key, 15 female key, Figs. 4, 27, 50, 73, 96, 119, 142, 165 male genit.).

baccata (Coquillett). **Nearctic:** Mexico (Baja California Norte, Baja California Sur, Jalisco, Sonora), USA (Arizona, California, Colorado, Nevada, New Mexico, Oregon, Utah, Washington).

Psilocephala baccata Coquillett 1893b: 226. Type locality USA, California, Los Angeles County. LT male (MEI 038548) USNM (Type No. 10411). Coquillett (1893b: 224 key), Aldrich (1905: 246 cat.), Kertész (1909:161 cat.), Kröber (1912a: 223 male key, 225 female key, 227 sp. list, 247 desc.; 1913b: 29 sp. list, 36 male key, 37 female key; 1914a: 39 male key, 40 female key, 47 desc.; 1928b: 120 dist.), Woodworth (1913: 149 sp. list), Cole (1923a: 34 male key, 37 female key, 64 note, 65 dist., Fig. 88 ant.; 1965: 350 cat.), Webb and Metz (2006: 39 LT desig.).

Brachylinga baccata. Irwin and Lyneborg (1981a: 234 sp. list, comb. change, Figs. 18 female head, 128–135 male genit.), Poole (1996: 308 checklist), Metz and Irwin (2000: 980 Figs. 4 ant., 11 head, 28 phylog.), Holston (2005 biol.), Webb and Metz (2006: 13 male key, 15 female key, 19 desc., Figs. 5, 28, 51, 74, 97, 120, 143, 166 male genit., 187 female genit., 207 dist. map).

Caenotus thompsonii Evenhuis 1977: 122. Type locality USA, California, Los Angeles County, San Dimas Experimental Forest. HT male CAS. Arnaud (1979: 209 type data), Poole (1996: 584 sp. list), Metz (2003: 3 nom., syn. desig. of *baccata* Coquillett), Webb and Metz (2006: 36 nom.).

bicolor Webb. **Nearctic:** Mexico (Jalisco**). Neotropical:** Costa Rica (Guanacaste, Heredia, Puntarenas), Mexico (Sinaloa, Yucatán), Nicaragua (Masaya), Venezuela (Aragua, Carabobo, Mérida).

Brachylinga bicolor Webb in Webb and Metz 2006: 52. Type locality Costa Rica, Guanacaste Province, 10 km W San Miguel. HT male (MEI 007477) INHS. Webb and Metz (2006: 15 male key, 17 female key, Figs. 6, 29, 52, 75, 98, 121, 144, 167 male genit., 188 female genit., 217 dist. map).

chilensis (Macquart). **Neotropical:** Argentina (Neuquén, Rio Negro), Chile (Araucanía, Atacama, Bío-Bío, Coquimbo, Libertador General Bernardo O'Higgins, Los Lagos, Magallanes, Región Metropolitana de Santiago, Valparaiso (Aconcagua in Webb and Metz 2006)).

Thereva chilensis Macquart 1841a: 303. Type locality Chile. LT male (MEI 119893) MNHN. Macquart (1841b: 25 subsequent usage), Blanchard (1852: 417 desc.), Philippi (1865: 769 sp. list), Reed (1888: 294 cat.), Kertész (1909: 152 cat.), Kröber (1911: 491 female key, 496 desc.; 1913b: 45 female key, 55 sp. list), Edwards in Malloch (1932: 243 nom.), Stuardo-Ortiz (1946: 86 nom.), Holston (2004: 47 nom.), Webb and Metz (2006: 60 LT desig.). **Note 28.**

Brachylinga chilensis. Webb and Metz (2006: 14 male key, 17 female key, 57 nom., comb. change, 58 desc., Figs. 7, 30, 53, 76, 99, 122, 145, 168 male genit., 189 female genit., 219 dist. map).

Psilocephala interrupta Kröber 1911: 507. Type locality Chile, Concepción. LT female (MEI 113147) USNM (Type No. 24213). Kröber (1911: 498 male key, 500 female key; 1913b: 31 sp. list, 36 male key, 37 female key; 1928a: 6 dist., 8 male key, 11 female key), Malloch (1932: 250 key, 251 desc., Fig. 20b ant.), Stuardo-Ortiz (1946: 87 cat.), Metz *et al.* (2003: 248 LT desig., 249 trans. orig. desc.), Webb and Metz (2006: 58 nom., syn. desig. of *chilensis* Macquart).

Brachylinga interrupta. Metz *et al.* (2003: 248 comb. change).

cinerea (Cole). **Nearctic:** USA (Arizona, California, New Mexico, Texas, Utah).

Psilocephala cinerea Cole 1923a: 65. Type locality USA, New Mexico, Alamogordo. HT male ANSP (Type No. 6278). Cole (1923a: 35 male key, 37 female key, Figs. 60 female frons, 72 wing, 95 ant.; 1965: 351 cat.).

Brachylinga cinerea. Irwin and Lyneborg (1981a: 234 sp. list, comb. change; 1981b: Figs. 10 mid-, hind coxae, 16 male genit.), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 137 phylog., Figs. 1–2 phylog.), Webb and Metz (2006: 15 male key, 17 female key, 63 nom., 64 desc., Figs. 8, 31, 54, 76, 100, 123, 146, 169 male genit., 190 female genit., 217 dist. map), Gaimari and Webb (2009: 640 Fig. 13 mid and hind coxae).

clausa (Kröber). **Neotropical:** Argentina (Salta, La Rioja, Catamarca, Mendoza, Neuquén, Tucumán), Bolivia (Santa Cruz, Tarija).

Psilocephala brunnipes clausa Kröber 1929b: 170. Type locality Bolivia, Samuhuate [Samayhuate]. HT female (MEI 121031) SMNS. Kröber (1929b: 172 Fig. 1 female ant., frons), Metz *et al.* (2003: 249 trans. orig. desc.).

Brachylinga clausa. Metz *et al.* (2003: 248 revised status, comb. change), Webb and Metz (2006: 14 male key, 17 female key, 67 nom., desc., Figs. 9, 32, 55, 78, 101, 124, 147, 170 male genit., 191 female genit., 213 dist. map).

concava Webb. **Neotropical:** Costa Rica (Guanacaste), Panama (Panamá (Canal Zone)).

Brachylinga concava Webb in Webb and Metz 2006: 70. Type locality Costa Rica, Guanacaste Province, 10 km W San Miguel. HT male (MEI 007482) INHS. Webb and Metz (2006: 14 male key, 17 female key, Figs. 10, 33, 56, 79, 102, 125, 148, 171 male genit., 192 female genit., 214 dist. map).

curacaoensis Webb. **Neotropical:** Netherlands Antilles (Bonaire, Curaçao).

Brachylinga curacaoensis Webb in Webb and Metz 2006: 74. Type locality Netherlands Antilles, Curaçao, Coral Specht, 3 km E Willemstad. HT male (MEI 048175) USNM. Webb and Metz (2006: 15 male key, 17 female key, Figs. 11, 34, 57, 80, 103, 126, 149, 172 male genit., 193 female genit., 214 dist. map).

divaricata Webb. **Neotropical:** Costa Rica (Guanacaste).

Brachylinga divaricata Webb in Webb and Metz 2006: 77. Type locality Costa Rica, Guanacaste Province, Estanción Maritza, lado O Volcan Orosi [side of Orosi Volcano]. HT male INBC (INBIO 744842). Webb and Metz (2006: 15 male key, 17 female key, Figs. 12, 35, 58, 81, 104, 127, 150, 173 male genit., 194 female genit., 216 dist. map).

fraterna (Kröber). **Neotropical:** Brazil (Ceara).

Psilocephala fraterna Kröber 1911: 521. Type locality Brazil, Soledade. HT male (MEI 147292) NHMW. Kröber (1911: 499 male key; 1913b: 30 sp. list, 37 male key; 1928a: 6 dist., 9 male key).

Brachylinga fraterna. Irwin and Webb (1992: 87 checklist, comb. change), Webb and Metz (2006: 15 male key, 79 nom., desc., Figs. 13, 36, 59, 82, 105, 128, 151, 174 male genit.).

laculata Webb. **Neotropical:** Mexico (Baja California Sur).

Brachylinga laculata Webb in Webb and Metz 2006: 81. Type locality Mexico, Baja California Sur, Las Barracas. HT male (MEI 076286) CAS (Type No. 18114). Webb and Metz (2006: 14 male key, 16 female key, Figs. 14, 37, 60, 83, 106, 129, 152, 175 male genit., 195 female genit., 215 dist. map).

mexicana Webb. **Nearctic:** Mexico (Baja California Norte, Baja California Sur, Sonora), USA (California).

Brachylinga mexicana Webb in Webb and Metz 2006: 85. Type locality Mexico, Baja California Norte, 9.7 km N San Borja. HT male (MEI 042575) CAS (Type No. 18115). Webb and Metz (2006: 14 male key, 16 female key, Figs. 15, 38, 61, 84, 107, 130, 153, 176 male genit., 196 female genit., 216 dist. map).

mimica Webb. **Nearctic:** Mexico (Jalisco). **Neotropical:** Mexico (Sinaloa).

Brachylinga mimica Webb in Webb and Metz 2006: 88. Type locality Mexico, Jalisco, Careyes. HT male (MEI 121558) USNM. Webb and Metz (2006: 14 male key, 17 female key, Figs. 16, 39, 62, 85, 108, 131, 154, 177 male genit., 197 female genit., 216 dist. map).

morata (Coquillett). **Nearctic:** USA (Alabama, Florida, Georgia, Illinois, Indiana, Maryland, Michigan, New Jersey, New York, North Carolina).

Psilocephala morata Coquillett 1893b: 225. Type locality USA, New Jersey, Cape May. LT male MCZ (Type No. 7562). Coquillett (1893b: 223 key), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 224 male key, 225 female key, 229 sp. list, 245 desc.; 1913b: 32 sp. list, 39 male key, female key; 1914a 40 male key, 41 female key, 50 note), Cole (1923a: 35 male key, 37 female key, 68 note, 69 dist., Figs. 40 female frons, 83 ant., 105 male genit.; 1965: 351 cat.), Johannsen (1928: 764 cat.), Wolcott and Otero (1936: 340 cat.), Wolcott (1951: 452 cat.), Webb and Metz (2006: 93 LT desig.).

Brachylinga morata. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Poole (1996: 308 sp. list), Webb and Metz (2006: 15 male key, 17 female key, 90 nom., 91 desc., 93 Figs. 17, 40, 63, 86, 109, 132, 155, 178 male genit., 198 female genit., 211 dist. map).

ornata (Kröber). **Neotropical:** Brazil (Ceara, Mato Grosso do Sul, Rio de Janeiro, Santa Catarina), Paraguay.

Psilocephala ornata Kröber 1911: 516. Type locality Brazil, Nova Teutonia. NT female (MEI 153864) INHS. Kröber (1911: 501 female key; 1913b: 33 sp. list, 38 female key; 1928a: 6 dist., 12 female key), Metz *et al.* (2003: 250 trans. orig. desc.), Webb and Metz (2006: 101 NT desig.).

Brachylinga ornata. Metz *et al.* (2003: 248 comb. change), Webb and Metz (2006: 17 female key, 99 nom., desc., Figs. 199 female genit., 213 dist. map).

ornatifrons (Kröber). **Neotropical:** Peru (Arequipa, Ayacucho, Huánuco, Lambayeque, Lima).

Psilocephala ornatifrons Kröber 1911: 519. Type locality Peru, Arequipa. HT male (MEI 134208) SMTD. Kröber (1911: 499 male key; 1913b: 33 sp. list, 37 male key; 1928a: 6 dist., 10 male key), Metz *et al.* (2003: 250 trans. orig. desc.).

Brachylinga ornatifrons. Metz *et al.* (2003: 248 comb. change), Webb and Metz (2006: 14 male key, 16 female key, 102 nom., desc., Figs. 18, 41, 64, 87, 110, 133, 156, 179 male genit., 200 female genit., 213 dist. map).

pavida (Coquillett). **Nearctic:** Mexico (Baja California Norte, Baja California Sur, Durango, Jalisco, Morelos, Nayarit, Puebla, Sonora), USA (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah, Washington). **Neotropical:** Costa Rica (Guanacaste), Guatemala (Zacapa), Honduras, Mexico (Chiapas, Colima, Sinaloa, Veracruz), Nicaragua (Léon).

Psilocephala pavida Coquillett 1893b: 226. Type locality USA, California, Los Angeles County. HT male USNM (Type No. 10412). Coquillett (1893b: 224 key), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1912a: 223 male key, 230 sp. list; 1913b: 33 sp. list, 38 male key; 1914a: 39 male key, 40 female key, 46 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 36 male key, 37 female key, 66 note, dist., Figs. 51 female, 77, wing, 84 ant., 98 male genit.; 1965: 351 cat.), James (1936: 341 dist.).

Brachylinga pavida. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Poole (1996: 308 sp. list), Webb and Metz (2006: 15 male key, 17 female key, 104 nom., 105 desc., Figs. 19, 42, 65, 88, 111, 134, 157, 180 male genit., 201 female genit., 212 dist. map).

Psilocephala pilosa Kröber 1914a: 47. Type locality USA, Arizona, Hot Springs. HT male USNM (Type No. 26021). Kröber (1914a: 39 male key), Cole (1923a: 76 trans. orig. desc.; 1965: 351 cat.), Webb and Metz (2006: 104 nom., syn. desig. of *pavida* Coquillet).

Brachylinga pilosa. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Poole (1996: 308 sp. list), Webb and Metz (2006: 104 nom.).

punctifrons (Kröber). **Nearctic:** Mexico (Jalisco, Nayarit, Puebla). **Neotropical:** Colombia (Bolivar), Costa Rica (Guanacaste, Puntarenas), El Salvador (Ahuachapán, La Libertad), Guatemala (Esquintla, Guatemala, Quetzaltenango), Mexico (Chiapas, Colima, Guerrero, Oaxaca, Sinaloa), Nicaragua (Masaya), Panama (Chiriqui, Panamá (Canal Zone)).

Psilocephala punctifrons Kröber 1914a: 58. Type locality Guatemala, Departamento Esquintla, Monterrico. NT male (MEI 108667) INBC. Kröber (1914a: 38 male key, 40 female key; 1928a: 7 dist., 8 male key, 11 female key, 16 desc., Figs. 11 female frons, ant., 11a male ant.), Metz *et al*. (2003: 248 NT desig., 250 trans. orig. desc.).

Brachylinga punctifrons. Metz *et al*. (2003: 248 comb. change), Webb and Metz (2006: 14 male key, 17 female key, 123 nom., 124 desc., Figs. 20, 43, 66, 89, 112, 135, 158, 181 male genit., 202 female genit., 215 dist. map).

sericeifrons (Kröber). **Neotropical:** Argentina (Chubut, La Rioja, Neuquén, Rio Negro, Salta, Tucumán), Chile (Araucanía, Atacama, Bío-Bío, Coquimbo, Maule, Región Metropolitana de Santiago, Valparaiso (Aconcagua in Webb and Metz 2006)).

Psilocephala sericeifrons Kröber 1928c: 34. Type locality Chile, Olemué [=Olmué]. HT female (MEI 115973) DEI. Kröber (1928a: 7 dist., 11 female key; 1928c: Fig. 4 female ant.), Malloch (1932: 250 key), Webb and Metz (2006: 131 invalid LT desig.). **Note 29.**

Brachylinga sericeifrons. Webb and Metz (2006: 13 male key, 16 female key, 129 nom., comb. change, desc., Figs. 21, 44, 67, 90, 113, 136, 159, 182 male genit., 203 female genit., 210 dist. map).

tepocae (Cole). **Nearctic:** Mexico (Nayarit, Sonora). **Neotropical:** Mexico (Chiapas, Oaxaca, Sinaloa).

Psilocephala tepocae Cole 1923b: 461. Type locality Mexico, Sonora, Tepoca Bay. HT female CAS (Type No. 01338). Cole (1923b: Fig. 3 female ant.), Arnaud (1979: 138 type data).

Brachylinga tepocae. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Webb and Metz (2006: 15 male key, 17 female key, 137 nom., desc., Figs. 22, 45, 68, 91, 114, 137, 160, 183 male genit., 204 female genit., 214 dist. map).

tridentata Webb. **Neotropical:** Costa Rica (Guanacaste).

Brachylinga tridentata Webb in Webb and Metz 2006: 140. Type locality Costa Rica, Guanacaste Province, Estación Santa Rosa. HT male (INBIO CR1002 205328) INBC. Webb and Metz (2006: 14 male key, 17 female key, Figs. 23, 46, 69, 92, 115, 138, 161, 184 male genit., 205 female genit., 213 dist. map).

xanthoperna Irwin and Webb. **Neotropical:** Brazil (Roraima), Colombia (Magdalena), Venezuela (Aragua, Guárico, Monagas, Nueva Esparta, Zulia).

Brachylinga xanthoperna Irwin and Webb 1992: 91. Type locality Brazil, Río Branco, Roraima, Río Uraricoera, Ilha de Maracá. HT female (MEI 006913) INPA. Irwin and Webb (1992: 87 checklist, 91 dist., Figs. 11 female frons, 12 female ant., 13 female max. palp., 14 female wing, 15–16 female genit.), Webb and Metz (2006: 15 male key, 17 female key, 143 desc., Figs. 24, 47, 70, 92, 116, 139, 162, 185 male genit., 206 female genit., 213 dist. map).

Genus BREVIPERNA Irwin

BREVIPERNA Irwin 1977a: 288. Type species *Psilocephala placida* Coquillett, 1894 by original designation. Irwin and Lyneborg (1981a: 203 key, 247 desc., 249 sp. list; 1981b: 522 key), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 137 phylog., 158 key, 170 nom., 194 biog., Figs. 1–2 phylog., 3A dist., 4, 6 biog.), Webb (2007: 42 key), Gaimari and Webb (2009: 639 key). This genus is Nearctic in distribution, occurring in Mexico and the USA.

placida (Coquillett). **Nearctic:** Mexico (Jalisco, Nayarit), USA (Arizona, New Mexico).

Psilocephala placida Coquillett 1894: 99. Type locality Flagstaff, Arizona. HT female USNM (Type No. 10420). Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1912a: 225 female key, 230 sp. list; 1913b: 33 sp. list, 39 female key; 1914a: 41 female key), Cole (1923a: 37 female key, 64 note, Fig. 45 female frons; 1965: 351 cat.). **Note 30.**

Breviperna placida. Irwin (1977a: 291 desc., comb. change, Figs. 1, 3 male head, 2 female head, 4 female wing, 5–6 female genit., 7–15 male genit.), Irwin and Lyneborg (1981a: 249 sp. list, Figs. 169–173 male genit.; 1981b: 522 key, Fig. 6 female ant.), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 137 phylog., 170 desc., 171 dist., Figs. 1–2 phylog., 14 male head, 15 female head, 48 basal costal lobe, 60, 81–82, 118–119 male genit., 148 female genit.), Gaimari and Webb (2009: 640 Fig. 14 basal costal lobe, 644 dist., habitat).

Genus CEROCATUS Rondani

CEROCATUS Rondani 1848: 99. Type species *Cerocatus tarsalis* Rondani, 1848 by monotypy. Brauer (1882: 107 note), Kertész (1909: 171 cat.), Kröber (1913a: 175 key, rep. orig. desc.; 1914b: 4 key, desc.; 1937a: 213 cat.), Hardy (1966: 32.1 cat.), Kelsey (1969: 1 nom. as therevid), O'Hara *et al.* (2011: 50 nom.). This genus is Nearctic and Neotropical in distribution, occurring in Argentina, Bolivia, Brazil, Canada, Chile, Costa Rica, Ecuador, Guatemala, Mexico, Nicaragua, Paraguay, Peru, Uruguay, and USA. **Note 31.**

CYCLOTELUS Walker 1850: 4. Type species *Cyclotelus pruinosus* Walker, 1850 by subsequent designation (Becker 1912: 315). **NEW SYNONYM.** Walker (1854: 107 nom., syn. desig. of *Agapophytus* Guérin-Méneville), Röder (1885a: 138 taxonomic note), Bigot (1890: 322 nom., syn. of *Agapophytus* Guérin-Méneville), Kertész (1909: 170 cat., revised status), Kröber (1911: 476 key, 477 nom., desc., sp. list, key; 1913b: 6 key, 8 desc., 9 key, sp. list), Becker (1912: 315 nom.), Becker (1912: 315 nom.), Irwin and Lyneborg (1981a: 203 key, 251 nom., desc., 254 sp. list; 1981b: 518 dist., 522 key), Irwin and Webb (1992: 87 checklist, 92 nom.), Gaimari and Irwin (2000a: 137 phylog., 162 key, 187 nom., 188 desc., dist., 189 sp. list, 194 biog., Figs. 1–2 phylog., 3B dist., 4, 6 biog.), Metz *et al*. (2003: 251 sp. list), Holston *et al*. (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 637 key, 645 dist., habitats). **Note 32.**

FURCIFERA Kröber 1911: 524. Type species *Furcifera fascipennis* Kröber, 1911 by subsequent designation (Cole 1960a: 161) [= *Cerocatus socius* (Walker 1850)]. Kröber (1911: 476 key, 524 sp. key; 1912a: 210 key, 220 desc.; 1913b: 8 key, 27 desc., sp. key), Cole (1923a: 14 key, 25 desc.; 1960a: 161 nom.; 1965: 350 cat.), Malloch (1932: 237 key, 256 note), Curran (1934: 188 key; 1965: 188 key), Oldroyd (1968: 377 note), Cole and Schlinger (1969: 170 key, 172 desc.), Irwin and Lyneborg (1981a: 251 nom., syn. desig. of *Cyclotelus* Walker), Irwin and Webb (1992: 92 nom.), Gaimari and Irwin (2000a: 187 nom.), Metz *et al.* (2003: 251 nom.).

EPOMYIA Cole 1923a: 26. Type species *Thereva pictipennis* Wiedemann, 1821 by original designation. Cole (1923a: 14 key, 26 desc., sp. key; 1960a: 161 nom.; 1965: 350 cat.), Malloch (1932: 256 nom., syn. desig. of *Furcifera* Kröber), Curran (1934: 188 key; 1965: 188 key), Irwin and Lyneborg (1981a: 251 nom.), Irwin and Webb (1992: 92 nom.), Gaimari and Irwin (2000a: 187 nom.), Metz *et al.* (2003: 251 nom.).

achaetus (Malloch). **Neotropical:** Uruguay (Montevideo).

Furcifera achaeta Malloch 1932: 256. Type locality Uruguay, Montevideo. HT male BMNH (Type No. 241977). Cole (1960a: 164 male key, 165 female key, 169 note, Fig. 11 female head).

Cyclotelus achaetus. Irwin and Webb (1992: 87 checklist, comb. change, 92 desc., Figs. 17 female frons, 18–21 male genit., 22–23 female genit.), Gaimari and Irwin (2000a: 189 sp. list).

Cerocatus achaetus. **NEW COMBINATION.**

analis (Kröber). **Neotropical:** Paraguay (Cordillera).

Phycus analis Kröber 1911: 480. Type locality Paraguay, San Bernardino. HT male HNHM (destroyed). Kröber (1911: 480 key; 1913b: 11 key, sp. list).

Cerocatus analis. **NEW COMBINATION.**

badicrusus (Irwin and Webb). **Neotropical:** Brazil (Amazonas), Ecuador (Pichincha), Peru (Puno).

Cyclotelus badicrusus Irwin and Webb 1992: 94. Type locality Ecuador, Pinchinca, Tinalandia, 15 km SE Santo Domingo de los Colorados. HT male (MEI 006888) CAS (Type No. 16347). Irwin and Webb (1992: 87 checklist, 95 dist., Figs. 24 male ant., 25 male max. palp., 26 male wing, 27–30 male genit., 31 female frons, 32–33 female genit.).

Cyclotelus badicrasus. Misspelling of *badicrusus*. Gaimari and Irwin (2000a: 189 sp. list).

Cerocatus badicrusus. **NEW COMBINATION.**

beckeri (Kröber). **Neotropical:** Argentina, Brazil, Paraguay, Peru.

Phycus beckeri Kröber 1911: 481. Type locality Paraguay, San Bernardino. HT female (MEI 137408) HNHM. Kröber (1911: 480 key; 1913b: 11 key, sp. list, Fig. 1 habitus; 1914a: 35 dist.). **Note 33.**

Cyclotelus beckeri. Irwin and Webb (1992: 87 checklist, comb. change), Gaimari and Irwin (2000a: 137 phylog., 189 sp. list, Figs. 1–2 phylog., 36 male head, 37 female head, 53, 55, 70, 103–104,142–143 male genit., 156 female genit.).

Cerocatus beckeri. **NEW COMBINATION.**

bellus (Cole). **Nearctic:** USA (Texas).

Epomyia bella Cole 1923a: 32. Type locality USA, Texas, Macdona. HT female ANSP (Type No. 6279). Cole (1923a: 26 female key, Figs. 21 female head, 27 female wing, 31 ant.; 1925: 85 dist.).

Furcifera bella. Cole (1960a: 165 female key, 167 note, comb. change, Figs. 4 female wing, 4a female head, 4b ant.; 1965: 350 cat.).

Cyclotelus bellus. Irwin and Lyneborg (1981a: 254 sp. list, comb. change), Gaimari and Irwin (2000a: 189 sp. list), Gaimari and Webb (2009: 645 dist.).

Cyclotelus bella. Misspelling of *bellus* by gender disagreement. Poole (1996: 309 sp. list).

Cerocatus bellus. **NEW COMBINATION.**

bicolor (Kröber). **Neotropical:** Bolivia.

Phycus bicolor Kröber 1911: 482. Type locality Bolivia. HT female ZSMC. Kröber (1911: 480 female key; 1913b: 11 key, sp. list).

Cerocatus bicolor. **NEW COMBINATION.**

brazilianus (Cole). **Neotropical:** Brazil (Paraná).

Furcifera braziliana Cole 1960a: 166. Type locality Brazil, Paraná, Curitiba, Parolim. HT male USNM (Cole 1960a). Cole (1960a: 164 male key, 165 female key, Fig. 13 male genit.).

Cyclotelus brazilianus. Irwin and Webb (1992: 87 checklist, comb. change), Gaimari and Irwin (2000a: 189 sp. list).

Cerocatus brazilianus. **NEW COMBINATION.**

colei (Irwin and Lyneborg). **Nearctic:** USA (District of Columbia, Illinois, Massachusetts, New York, New Jersey, North Carolina).

Psilocephala scutellaris Loew 1870: 171. Type locality USA, District of Columbia. ST female (MEI 140257) MCZ (Type No. 10677). Preoccupied by *Thereva scutellaris* Walker (1857: 133). Loew (1872b: 209 subsequent usage), Osten Sacken (1878: 96 cat.), Coquillett (1893b: 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 165 cat.), Johnson (1910: 748 cat.), Kröber (1911: 498 male key, 499 female key, 502 desc.; 1912a: 223 male key, 226 female key, 230 sp. list, 231 desc.; 1913b: 34 sp. list, 37 male key, female key; 1914a: 39 male key, 41 female key, 50, 56 dist.; 1928a: 7 dist., 8 male key, 11 female key; 1929b: 172 dist.), Irwin and Lyneborg (1981a: 254 sp. list, comb. change, objective syn. of *colei* Irwin and Lyneborg 1981a), Poole (1996: 308 nom.), Gaimari and Irwin (2000a: 189 nom.). **Note 34.**

Epomyia scutellaris. Cole (1923a: 26 key, 28 desc., comb. change, Figs. 26 female head, 29 female wing, 30 ant., 35 male genit.), Johannsen (1928: 764 cat.), Brimley (1938: 340 cat.).

Furcifera scutellaris. Cole (1960a: 164 key, 168 nom., comb. change, note, Figs. 5 female wing, 5a female frons, 5b ant. 5c male genit.; 1965: 350 cat.).

Cyclotelus colei Irwin and Lyneborg 1981a: 254. Replacement name for *Psilocephala scutellaris* Loew (1870: 171) nec *Thereva scutellaris* Walker (1857: 133). Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 189 nom., sp. list). **Note 35.**

Cerocatus colei. **NEW COMBINATION.**

diversipes (Kröber). **Neotropical:** Brazil (Bahia).

Thereva diversipes Kröber 1911: 493. Type locality Brazil, Alagoinas [Alagoinhas]. HT male (MEI 119875) NHMW. Kröber (1911: 491 male key; 1913b: 45 male key, 56 sp. list).

Furcifera diversipes. Cole (1960a: 166 note, comb. change).

Cyclotelus diversipes. Irwin and Webb (1992: 87 checklist, comb. change), Gaimari and Irwin (2000a: 189 sp. list), Holston (2004: 49 nom.).

Cerocatus diversipes. **NEW COMBINATION.**

fascipennis (Macquart). **Neotropical:** South America.

Thereva fascipennis Macquart 1846a: 232. Type locality South America [Amerìque méridionale]. ST female MNHN ["Collection de M. Robyns, de Bruxelles"]. Macquart (1846a: Plate 9, Fig. 5 head; 1846b: 104 subsequent usage, Plate 9, Fig. 5 head), Kertész (1909: 153 cat.). Metz *et al.* (2003: 251 trans. orig. desc.). **Note 36.**

Psilocephala fascipennis. Kröber (1911: 497 sp. list, comb. change, 500 female key, 505 desc.; 1912a: 221 desc.; 1913b: 28 female key, dist.; 1928a: 6 dist., 10 female key), Holston (2004: 50 nom.).

Cyclotelus fascipennis. Metz *et al.* (2003: 251 comb. change).

Cerocatus fascipennis. **NEW COMBINATION.**

femoratus (Kröber). **Neotropical:** Paraguay.

Psilocephala femorata Kröber 1911: 522. Type locality Paraguay. HT male HNHM (destroyed). Kröber (1911: 499 male key; 1913b: 30 sp. list, 37 male key; 1928a: 6 dist., 9 male key), Metz *et al.* (2003: 252 trans. orig. desc.).

Cyclotelus femorata. Misspelling of *femoratus* by gender disagreement. Metz *et al.* (2003: 251 comb. change).

Cerocatus femoratus. **NEW COMBINATION.**

flavipes (Kröber). **Neotropical:** Brazil (Santa Catarina).

Furcifera flavipes Kröber 1928b: 113. Type locality Brazil, Rio de Janeiro, Neu Freiburg [= Nova Friburgo]. HT female (MEI 140305) MLUH. Kröber (1928b: Fig. 19 ant.), Cole (1960a: 165 female key, 166 note, Fig. 6 ant.). **Note 37.**

Cyclotelus flavipes. Irwin and Webb (1992: 87 checklist, comb. change), Gaimari and Irwin (2000a: 189 nom., sp. list).

Cerocatus flavipes. **NEW COMBINATION.**

Furcifera diversipes Kröber 1928b: 116. Type locality Brazil, Rio de Janeiro, Neu Freiburg [= Nova Friburgo] . HT male (MEI 140304) MLUH. Kröber (1928b: Fig. 21 male ant.), Cole (1960a: 164 male key, 166 note, Fig. 8 male ant.), Irwin and Webb (1992: 87 nom., syn. desig. of *flavipes* Kröber).

hardyi (Cole). **Nearctic:** USA (Texas).

Epomyia flavipes Hardy 1943: 26. Type locality USA, Texas, Brownsville. HT male SEMC. Preoccupied by *Furcifera flavipes* Kröber (1928b: 113). Hardy (1943: Figs. 2a male ant., 2b male genit.), Cole (1965: 350 nom.). Irwin and Lyneborg (1981a: 254 nom.). Poole (1996: 308 nom.), Gaimari and Irwin (2000a: 189 nom.).

Furcifera hardyi Cole 1960a: 167. Replacement name for *Epomyia flavipes* Hardy (1943: 26) nec *Furcifera flavipes* Kröber (1928b: 113). Cole (1960a: 164 male key).

Cyclotelus hardyi. Irwin and Lyneborg (1981a: 254 comb. change, sp. list), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 189 nom., sp. list).

Cerocatus hardyi. **NEW COMBINATION.**

kroeberi (Cole). **Neotropical:** Brazil (Mato Grosso), Costa Rica, Paraguay (Guairá), Uruguay (Montevideo).

Furcifera kroeberi Cole 1960a: 169 (as *kröberi*). Type locality Brazil, Mato Grosso, Salabra. HT female USNM. Cole (1960a: 164 female key, 169 desc., Fig. 12 female head). **Note 38.**

Cyclotelus kroeberi. Irwin and Webb (1992: 88 checklist, comb. change, 95 desc., Figs. 34–34, 37 male genit., 38 female frons, 39–40 female genit.), Gaimari and Irwin (2000a: 137 phylog., 189 sp. list, Figs. 1–2 phylog., 38 male head, 39 female head, 71, 105–106, 144–145 male genit.).

Cerocatus kroeberi. **NEW COMBINATION.**

laetus (Walker). **Neotropical:** South America.

Cyclotelus laetus Walker 1850: 6. Type locality South America. ST female BMNH (Type No. 241975). Kertész (1909: 170 cat.), Kröber (1911: 477 key, 478 desc.; 1913b: 9 key, sp. list), Gaimari and Irwin (2000a: 189 sp. list).

Agapophytus laetus. Walker (1854: 108 cat., comb. change).

Cerocatus laetus. **NEW COMBINATION.**

longicornis (Kröber). **Neotropical:** Peru.

Furcifera longicornis Kröber 1911: 526. Type locality Peru, Vilcanota. HT female (MEI 085582) MNHN. Kröber (1911: 524 key; 1913b: 27 key, 28 sp. list), Cole (1960a: 165 female key, note). **Note 39.**

Cyclotelus longicornis. Gaimari and Irwin (2000a: 189 sp. list, comb. change).

Cerocatus longicornis. **NEW COMBINATION.**

nigrifrons (Kröber). **Neotropical:** Costa Rica (Puntarenas).

Psilocephala nigrifrons Kröber 1914a: 57. Type locality Costa Rica, Puntarenas. HT female ZMUH (presumed destroyed). Kröber (1914a: 40 female key; 1928a: 6 dist., 12 female key, 15 desc., Fig. 10 female frons, ant.), Metz *et al*. (2003: 252 trans. orig. desc.). **Note 40.**

Cyclotelus nigrifrons. Metz *et al*. (2003: 251 comb. change), Gaimari and Webb (2009: 645 dist.).

Cerocatus nigrifrons. **NEW COMBINATION.**

nigroflammus (Walker). **Neotropical:** Brazil (Rio de Janeiro, Santa Catarina).

Cyclotelus nigroflammus Walker 1850: 4. Type locality South America. ST female BMNH (Type No. 241972). Irwin and Webb (1992: 88 sp. list), Gaimari and Irwin (2000a: 189 nom., sp. list).

Cyclotelus nigroflamma. Incorrect original spelling. Walker 1850: 4. Kertész (1909: 170 cat.), Kröber (1911: 477 key, 478 desc.; 1913b: 9 key, sp. list).

Agapophytus nigroflamma. Misspelling of *nigroflammus*. Walker (1854: 107).

Agapophytus nigroflammus. Walker (1854: 107 cat., comb. change).

Cerocatus nigroflammus. **NEW COMBINATION.**

Furcifera fulvipennis Kröber 1928b: 114. Type locality Brazil, Rio de Janeiro, Neu Freiburg [= Nova Friburgo]. HT female (MEI 140306) MLUH. Kröber (1928b: Fig. 20 female ant., frons), Cole (1960a: 165 female key, 166 note, Fig. 7 female ant., frons), Irwin and Webb (1992: 88 nom., syn. desig. of *nigroflammus* Walker), Gaimari and Irwin (2000a: 189 nom.).

pictipennis (Wiedemann). **Nearctic:** Canada (Ontario), USA (Alabama, Arizona, Colorado, Connecticut, Florida, Georgia, Illinois, Kansas, Maryland, Massachusetts, Michigan, Nebraska, New Jersey, New York, North Carolina, Ohio, Texas, Wisconsin).

Thereva pictipennis Wiedemann 1821: 113. Type locality USA, Georgia, Savannah. ST female ZMUC. Wiedemann (1828: 235 desc.), Walker (1848: 225 desc.), Osten Sacken (1858: 38 cat.), Coquillett (1893b: 222 nom., 223 key), Aldrich (1905: 247 cat.), Zimsen (1954: 11 type list).

Psilocephala pictipennis. Osten Sacken (1878: 96 cat., comb. change), Coquillett (1893b: 224 key), Kertész (1909: 164 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 223 male key, 226 female key, 230 sp. list, 235 desc.; 1913b: 33 nom., sp. lists, 39 female key; 1914a: 39 male key, 42 female key).

Epomyia pictipennis. Cole (1923a: 26 key, 30 nom., comb. change, desc., Figs. 20 female head, 22 female wing, 28 fore- and midleg tibiae and tarsi, 34 male genit., 36 ant.; 1925: 85 dist.), Johannsen (1928: 764 cat.), Kröber (1928b: 121 desc., dist.), Brimley (1938: 340 cat.).

Furcifera pictipennis. Cole (1960a: 164 key, 167 note, comb. change, Figs. 2 wing, 2a female head, 2b ant., 2c male genit., 2d fore- and midtarsi, 14 coxae; 1965: 350 cat.).

Cyclotelus pictipennis. Irwin and Lyneborg (1981a: 254 sp. list., comb. change), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 137 phylog., 189 nom., sp. list, Figs. 1–2 phylog., 34 male head, 35 female head, 45 foreleg, 69,101–102, 140–141 male genit.), Holston (2004: 59 nom.), Gaimari and Webb (2009: 638 Fig. 7 female head).

Cerocatus pictipennis. **NEW COMBINATION.**

Psilocephala erythrura Loew 1870: 172. Type locality USA, Middle States. ST male (MEI 140267) MCZ (Type No. 10664). Loew (1872b: 210 subsequent usage), Coquillett (1893b: 222 nom., syn. desig. of *pictipennis* Wiedemann), Osten Sacken (1878: 95 cat.), Aldrich (1905: 246 cat.), Kertész (1909: 162 nom.), Kröber (1912a: 235 nom.; 1913b: 33 nom.), Cole (1923a: 30 nom.; 1965: 350 nom.), Irwin and Lyneborg (1981a: 254 nom.), Poole (1996: 308 nom.), Gaimari and Irwin (2000a: 189 nom.). **Note 41.**

politus (Kröber). **Neotropical:** Argentina, Bolivia, Brazil (Paraná), Paraguay (Cordillera).

Furcifera polita Kröber 1911: 524. Type locality Paraguay. ST female (MEI 085581) MNHN, ST female (MEI 140258), ST female (MEI 140263) USNM (Type No. 24190), ST sex unknown HNHM (destroyed). Kröber

(1911: 524 key, Fig. 2 male ant.; 1913b: 27 male key, 28 female key, sp. list; 1914a: 35 note; 1929a: 423 dist.), Cole (1960a: 164 female key, 166 note, Fig. 10 female head).

Cyclotelus politus. Irwin and Webb (1992: 88 sp. list, comb. change, 97 desc., Figs. 41–45 male genit., 46 female frons, 47–48 female genit.), Gaimari and Irwin (2000a: 189 sp. list).

Cerocatus politus. **NEW COMBINATION.**

pruinosus (Walker). **Neotropical:** South America.

Cyclotelus pruinosus Walker 1850: 5. Type locality South America. LT male BMNH (Type No. 24193). Kertész (1909: 170 cat.), Kröber (1911: 477 key, 479 desc.; 1913b: 9 key, sp. list), Becker (1912: 315 nom., LT designation under ICZN Article 74.5), Irwin and Lyneborg (1981a: Figs. 26 ant., 182–187 male genit.), Gaimari and Irwin (2000a: 189 sp. list).

Agapophytus pruinosus. Walker (1854: 107 cat., comb. change).

Cerocatus pruinosus. **NEW COMBINATION.**

raspii Hauser. **Neotropical:** Paraguay.

Phycus rufiventris Kröber 1911: 482. Type locality Paraguay. HT female HNHM (destroyed). Preoccupied by *Psilocephala rufiventris* Loew (1869: 12). Kröber (1911: 480 key; 1913b: 11 key, sp. list).

Cerocatus raspii Hauser. **NEW NAME** for *Phycus rufiventris* Kröber, 1911. **Note 42.**

rondanii Gaimari. **Neotropical:** Brazil.

Ectinorrhynchus fascipennis Kröber 1911: 483. Type locality Brazil. HT female NHMW. Preoccupied by *Thereva fascipennis* Macquart (1846a: 232). Misspelling of *Ectinorhynchus* Macquart (1850: 407). Kröber (1911: Fig. 1 female ant.; 1913b: 19 sp. list), Irwin and Webb (1992: 88 nom.). **Note 43.**

Cerocatus rondanii Gaimari. **NEW NAME** for *Ectinorhynchus fascipennis* Kröber, 1911. **Note 44.**

ruficornis (Macquart). **Neartic:** USA (North or South Carolina).

Thereva ruficornis Macquart 1841a: 303. Type locality "De la Caroline" [Carolina]. ST male MNHN (catalogue number 1119). Macquart (1841b: 25 subsequent usage), Osten Sacken (1858: 38 cat.; 1878: 96 cat.), Aldrich (1905: 248 cat.), Kertész (1909: 159 cat.), Kröber (1912a: 247 male key, 255 sp. list; 1913b: 44 male key, 60 sp. list; 1914a: 60 male key), Cole (1923a: 127 trans. orig. desc., note; 1965: 354 cat., as incertae sedis), Wray (1967: 77 cat.).

Ozodiceromya ruficornis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 308 sp. list).

Cyclotelus ruficornis. Gaimari and Irwin (2000a: 189 comb. change, sp. list).

Ozodiceromyia ruficornis. Holston (2004: 61 nom.).

Cerocatus ruficornis. **NEW COMBINATION.**

rufiventris (Loew). **Nearctic:** Canada (Ontario), USA (Arkansas, District of Columbia, Florida, Illinois, Indiana, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, Ohio, Rhode Island, South Carolina, Texas, Virginia, Wisconsin, Wyoming).

Psilocephala rufiventris Loew 1869: 12. Type locality USA, Nebraska. ST female (MEI 140262) MCZ (Type No. 10672). Loew (1872b: 126 subsequent usage), Osten Sacken (1878: 96 cat.), Coquillett (1893b: 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 165 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 224 male key, 226 female key, 230 sp. list, 233 desc.; 1913b: 34 sp. list, 38 male key, 39 female key; 1914a: 39 male key, 41 female key, 50 dist.; 1928b: 121 desc., dist.). **Note 45.**

Epomyia rufiventris. Cole (1923a: 26 keys, 27 desc., comb. change, Figs. 19 female wing, 25 female head, 37 ant.; 1925: 85 dist.), Johannsen (1928: 764 cat.), Brimley (1938: 340 cat.).

Furcifera rufiventris. Cole (1960a: 164 key, 168 nom., comb. change, note, Figs. 1 female wing, 1a female head, 1b ant.; 1965: 350 cat.).

Cyclotelus rufiventris. Irwin and Lyneborg (1981a: 254 sp. list, comb. change, Figs. 24 female foretarsus, 27 ant., 30 female head; 1981b: Figs. 9 mid-, hind coxae, 11 male foreleg, 22 female genit.), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 189 nom., sp. list), Gaimari and Webb (2009: 640 Fig. 12 mid and hind coxae, 642 Fig. 19 lateral female abd. apex). **Note 46.**

Cerocatus rufiventris. **NEW COMBINATION.**

Psilocephala lacteipennis Kröber 1914a: 53. Type locality USA, Florida. HT male USNM (Type No. 26024). Kröber (1914a: 39 male key), Cole (1923a: 77 trans. orig. desc.; 1960a: 168 nom., syn. desig. of *rufiventris*

Loew; 1965: 350 cat.), Irwin and Lyneborg (1981a: 254 nom.), Poole (1996: 308 nom.), Gaimari and Irwin (2000a: 189 nom.).

scutellaris (Walker). **Neotropical:** Brazil.

Thereva scutellaris Walker 1857: 133. Type locality Brazil, Valley of the Amazon. ST male BMNH (Type No. 242996). Kertész (1909: 159 cat.), Kröber (1911: 491 male key, 492 desc.; 1912a: 225 female key, 230 sp. list, 231 desc.; 1913b: 44 male key, 61 sp. list).

Cyclotelus scutellaris. Irwin and Webb (1992: 88 sp. list, comb. change), Gaimari and Irwin (2000a: 189 sp. list), Holston (2004: 62 nom.).

Cerocatus scutellaris. **NEW COMBINATION.**

silacrusus (Irwin and Webb). **Neotropical:** Brazil (São Paulo).

Cyclotelus silacrusus Irwin and Webb 1992: 99. Type locality Brazil, São Paulo, Santo Amaro. HT male (MEI 006884) MZSP. Irwin and Webb (1992: 88 sp. list 101 dist., Figs. 49–52 male genit., 53 female frons, 54–55 female genit.).

Cyclotelus silacrasus. Misspelling of *silacrusus*. Gaimari and Irwin (2000a: 189 sp. list).

Cerocatus silacrusus. **NEW COMBINATION.**

socius (Walker). **Neotropical:** Brazil.

Cyclotelus socius Walker 1850: 6. Type locality South America. ST female BMNH (Type No. 241974). Kertész (1909: 170 cat.), Kröber (1911: 477 key, 479 desc.; 1913b: 9 key, sp. list), Irwin and Webb (1992: 88 sp. list), Gaimari and Irwin (2000a: 189 nom., sp. list).

Agapophytus socius. Walker (1854: 107 cat., comb. change).

Cerocatus socius. **NEW COMBINATION.**

Furcifera fascipennis Kröber 1911: 526. Type locality Brazil. HT female NHMW. Preoccupied by *Thereva fascipennis* Macquart (1846a: 232) if a valid species in this genus. Kröber (1911: 524 key; 1912a: 221 desc.; 1913b: 28 sp. list), Cole (1923a: 25 dist.;1960a: 164 male key, 165 female key, desc., Fig. 9 female head), Irwin and Webb (1992: 88 nom., syn. desig. of *socius* Walker), Gaimari and Irwin (2000a: 189 nom.). **Note 47.**

sumichrasti (Bellardi). **Nearctic:** Mexico (Nuevo León). **Neotropical:** Mexico (Veracruz), Nicaragua (Granada).

Psilocephala sumichrasti Bellardi 1861: 91. Type locality Mexico, Tuxpango. LT male MRSN. Bellardi (1861: 90 key), Osten Sacken (1878: 96 cat.; 1887: 163 dist.), Aldrich (1905: 247 cat.), Kertész (1909: 165 cat.), Kröber (1912a: 223 male key, 231 sp. list; 1913b: 34 sp. list, 36 male key; 1914a: 38 male key, 41 female key, 43 dist.), Lyneborg (1969: 404 nom., 405 LT desig., desc., Figs. 31–34 male genit., 35 male ant., 36–37 male genit.). **Note 48.**

Epomyia sumichrasti. Cole (1923a: 26 key, 31 note, comb. change, Figs. 23 female wing, 24 female frons, 32 ant., 33 male genit.), Curran (1934: 186 Fig. 9 wing; 1965: 186 Fig. 9 wing).

Furcifera sumichrasti. Cole (1960a: 164 key, 168 note, comb. change, Figs. 3 female wing, 3a female frons, ant., 3b ant., 3c male genit.).

Cyclotelus sumichrasti. Irwin and Lyneborg (1981a: 254 sp. list., comb. change), Gaimari and Irwin (2000a:189 sp. list), Gaimari and Webb (2009: 645 dist.).

Cerocatus sumichrasti. **NEW COMBINATION.**

tarsalis Rondani. **Neotropical:** Brazil.

Cerocatus tarsalis Rondani 1848: 99. Type locality: Brazil. ST female MZUN. Rondani (1848: Fig. 9 head, Fig. 10 wing), Kertész (1909: 171 cat.), Kröber (1913a: 175 rep. orig. desc.; 1914b: 4 cat.; 1937a: 213 cat.), Hardy (1966: 32.1 cat.), Kelsey (1969: 1 note), O'Hara *et al.* (2011: 215 sp. list). **Note 49.**

Genus CHROMOLEPIDA Cole

CHROMOLEPIDA Cole 1923a: 23. Type species *Psilocephala pruinosa* Coquillett, 1904a by original designation. Cole (1923a: 13 key; 1965: 350 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, 171 desc., Figs. 103C head, ant., genit.), Irwin and Lyneborg (1981a: 202 key, 258 desc., 260 sp. list; 1981b: 522 key), Webb and Irwin (1995: 199 nom., desc., 204 key, Fig. 1 phylog.), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 158 key), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb

(2009: 637 key, 645 dist., habitats). This genus is Nearctic and Neotropical in distribution, occurring in Colombia, Costa Rica, Guyana, Mexico, Nicaragua, USA, and Venezuela.

CHRMOMOLEPIDA. Misspelling of *Chromolepida.* Curran (1934: 186; 1965: 186).

bella Cole. **Nearctic:** USA (Arizona, California, Idaho, Nevada, Oregon, Utah, Washington). **Neotropical:** Mexico (Sinaloa).

Chromolepida bella Cole 1923a: 24. Type locality USA, California, San Francisco, Golden Gate Park. HT male (MEI 009177) USNM (Type No. 25929). Cole (1923a: 23 key, Figs. 16 female head, 17 male ant., 18 male genit.; 1965: 350 cat.), Curran (1934: 186 Fig. 4 antenna; 1965: 186 Fig. 4 antenna), Arnaud (1979: 136 paratypes), Irwin and Lyneborg (1981a: 260 sp. list, Figs. 31 male head, 194–199 male genit.), Poole (1996: 308 sp. list), Webb and Irwin (1995: 197 phylog. 204 key, nom., desc., 210 dist., Figs. 1 phylog., 2–8 male genit., 9–11 fem genit., 56 dist. map).

Chrmomolepida bella. Misspelling of *Chromolepida*. Curran (1934: 186 Fig. 5 head; 1965: 186 Fig. 5 head).

clavitibia Webb and Irwin. **Nearctic:** Mexico (Baja California Norte, Baja California Sur).

Chromolepida clavitibia Webb and Irwin 1995: 213. Type locality Mexico, Baja California Sur, Los Frailes. HT male (MEI 008812) CAS (Type No. 17029). Webb and Irwin (1995: 197 phylog. 204 key, 214 dist., Figs. 1 phylog., 12–18 male genit., 19–21 female genit., 57 dist. map).

mexicana Cole. **Nearctic:** Mexico (Chihuahua, Coahuila, Durango, Sonora), USA (Arizona, California, Colorado, New Mexico, Texas).

Chromolepida mexicana Cole 1923b: 460. Type locality Mexico, Sonora, Guaymas. HT female (MEI 009025) CAS (Type No. 1337). Cole (1965: 350 cat.), Arnaud (1979: 136 type data), Irwin and Lyneborg (1981a: 260 sp. list, Fig. 5 midcoxa), Poole (1996: 308 sp. list), Webb and Irwin (1995: 197 phylog. 204 key, 214 nom., desc., 216 dist., Figs. 1. phylog., 22–28 male genit., 29–31 female genit., 57 dist. map).

nigra Webb and Irwin. **Nearctic:** Mexico (Hidalgo, Jalisco, Morelos, Puebla, Querétaro). **Neotropical:** Mexico (Guerrero, Oaxaca, Quintana Roo, Sinaloa, Veracruz, Yucatán), Nicaragua (Léon).

Chromolepida nigra Webb and Irwin 1995: 218. Type locality Mexico, Sinaloa, 34 km E Villa Union. HT male (MEI 008815) INHS. Webb and Irwin (1995: 197 phylog. 204 key, Figs. 1 phylog., 32–38 male genit., 39–41 female genit., 57 dist. map).

pruinosa (Coquillett). **Nearctic:** Mexico (Puebla). **Neotropical:** Colombia (Magdalena), Costa Rica (Alajuela, Guanacaste, San José), Guatemala, Guyana, Honduras, Nicaragua (Granada), Venezuela (Aragua, Guárico).

Psilocephala pruinosa Coquillett 1904a: 91. Type locality Nicaragua, Granada. HT male (MEI 009218) USNM (Type No. 7795). Kröber (1911: 499 male key, 522 desc.; 1913b: 33 sp. list, 37 male key; 1928a: 7 dist., 9 male key), Kertész (1909: 164 cat.).

Chromolepida pruinosa. Cole (1923a: 23 key, 24 desc., comb. change), Irwin and Lyneborg (1981a: 260 sp. list), Webb and Irwin (1995: 197 phylog. 204 key, 220 nom., desc., 221 dist., Figs. 1 phylog., 42 ant., 43 max. palp., 44 wing, 45–51 male genit., 52 female head, 53–55 female genit., 58 dist. map).

Genus CLIORISMIA Enderlein

CLIORISMIA Enderlein 1927: 109. Type species *Rhagio ardea* Fabricius, 1794 by original designation. Webb (2003: 486 nom., desc., 488 key), Gaimari and Webb (2009: 644 key). The genus is Holarctic in distribution with the Nearctic species occurring in Canada and the USA.

CLIORISMA. Misspelling of *Cliorismia.* Kröber (1937b: 275).

bussi (James). **Nearctic:** Canada (Northwest Territories, Yukon Territory), USA (Alaska).

Psilocephala bussi James in James and Huckett 1952: 265. Type locality Canada, Yukon Territory, 8.1 km N Burwash Landing, Duke River Meadow. HT male (MEI 009360) WSUC (Type No. 172). James and Huckett (1952: 267 dist., Fig. 1 male genit.), Cole (1965: 351 cat.), Arnaud (1979: 137 paratype).

Pandivirilia bussi. Irwin and Lyneborg (1981a: 214 sp. list, comb. change; 1981b: 519 key), Poole (1996: 308 sp. list).

Cliorismia bussi. Webb and Metz (2003a: 377 comb. change), Webb (2003: 488 nom., desc., 489 dist., Figs. 1–8 male genit., 9 female genit., 19 dist. map; 2005a: 5 phylog., Fig. 1 phylog.).

platyphallus Webb. **Nearctic:** USA (California, Oregon, Washington).

Cliorismia platyphallus Webb 2003: 491. Type locality USA, Oregon, Baker County, Goose Creek, 55 km SE Union. HT male (MEI 008943) WSUC. Webb (2003: 493 dist., Figs. 10–17 male genit., 18 female genit., 20 dist. map), Webb (2005: 5 phylog., Fig. 1 phylog.). **Note 50.**

Genus COLEIANA Gaimari and Irwin

COLEIANA Gaimari and Irwin 2000a: 181. Type species *Coleiana nigricopis* Gaimari and Irwin, 2000a by original designation. Gaimari and Irwin (2000a: 137 phylog., 162 key, 181 desc., 194 biog., Figs. 1–2 phylog., 3C dist. map, 4, 6 biog.), Gaimari and Webb (2009: 637 key). The genus is Neotropical in distribution, occurring in Brazil.

nigricopis Gaimari and Irwin. **Neotropical:** Brazil (Rio de Janeiro, Santa Catarina).

Coleiana nigricopis Gaimari and Irwin 2000a: 181. Type locality Brazil, Santa Catarina, Nova Teutonia. HT male (MEI 028449) CNC. Gaimari and Irwin (2000a: 137 phylog., 162 key, 181 desc., Figs. 1–2 phylog., 32 male head, 33 female head, 47 mid tarsus, 68, 99–100,107,138–139 male genit., 155 female genit.).

Genus CREBRASETA Gaimari and Irwin

CREBRASETA Gaimari and Irwin 2000a: 184. Type species *Thereva crassicornis* Bellardi, 1861 by original designation. Gaimari and Irwin (2000a: 137 phylog., 159 key, 194 biog., Figs. 1–2 phylog., 3B dist., 4, 6 biog.), Gaimari and Webb (2009: 639 key). This genus is Nearctic in distribution, occurring in Mexico.

crassicornis (Bellardi). **Nearctic:** Mexico (Federal District).

Thereva crassicornis Bellardi 1861: 88. Type locality "Messica" [= Mexico]. LT male (MEI 070536) MRSN. Bellardi (1861: Fig. 16 habitus, male genit.), Osten Sacken (1878: 97 cat.; 1887: 163 dist.), Aldrich (1905: 248 cat.), Williston (1908: 206 comment), Kertész (1909: 153 cat.), Kröber (1912a: 248 male key, 250 female key, 253 sp. list; 1913b: 43 male key, 56 sp. list; 1914a: 61 male key), Cole (1923a: 127 note), Lyneborg (1969: 398 LT designation under ICZN Article 74.5, LT male desc., Figs. 18–23 male genit.), Papavero and Ibáñez-Bernal (2001: 108 nom.).

Ozodiceromya crassicornis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 desc., comb. change), Papavero and Ibáñez-Bernal (2001: 108 nom.).

Ozodiceromyia crassicornis. Holston (2004: 49 nom.).

Crebraseta crassicornis. Gaimari and Irwin (2000a: 137 phylog., 159 key, 184 comb. change, desc., 186 dist., Figs. 1–2 phylog., 22 male head, 23 female head, 50 basal costal lobe, 63, 89–90, 126–127 male genit., 151 female genit.).

Genus DIALINEURA Rondani

DIALINEURA Rondani 1856: 155. Type species *Musca anilis* Linnaeus, 1761 by original designation. Bigot (1890: 324 key), Coquillett (1910a: 376 nom., syn. of *Psilocephala*; 1910b: 532 nom., syn. of *Thereva*), Becker (1912: 308 desc.), Cole (1923a: 14 key, 78 nom., desc.; 1965: 252 cat.), Malloch (1932: 238 key), Curran (1934: 188 key; 1965: 188 key), Lyneborg (1968a: 546 morph.; 1968b: 149 historical review, 151 key), Cole and Schlinger (1969: 170 key, desc.), Zaitzev (1971: 183 Palaearctic species), Irwin and Lyneborg (1981a: 201 key, 204 desc., 205 sp. list; 1981b: 519 key), Poole (1996: 308 sp. list), Webb and Irwin (1991a: 870 nom., phylog., desc.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 643 key), O'Hara *et al.* (2011: 72 nom.). This genus is Holarctic in distribution, occurring in the Nearctic Region in Canada and the USA.

gorodkovi Zaitzev. **Nearctic:** Canada (Manitoba, Northwest Territories, Yukon Territory), USA (Alaska). **Palearctic:** Russia.

Dialineura gorodkovi Zaitzev 1971: 191. Type locality Russia, Chukchi Autonomous District, upper stream Bolshaya River. HT male ZMAS. Lyneborg (1975: 577 note), Irwin and Lyneborg (1981a: 205 sp. list; 1981b: 519 key). Webb and Irwin (1991a: 870 phylog., 873 nom., desc., 874 dist., Figs. 1 phylog., 2 ant., 3 max. palp., 4 wing, 5–11 male genit., 12 female frons, 13–14 female genit.), Poole (1996: 308 sp. list), Webb (2005: 5 phylog., Fig. 1 phylog.), Webb and Metz (2003a: 371 phylog., Figs. 1a, b phylog.). **Note 51.**

Genus DICHOGLENA Irwin and Lyneborg

DICHOGLENA Irwin and Lyneborg 1981a: 210. Type species *Psilocephala amplifrons* Cole, 1925 by original designation [= *Dichoglena nigrina* (Kröber, 1914a)]. Irwin and Lyneborg (1981a: 202 key; 1981b: 521 key), Poole (1996: 308 sp. list), Webb (2003: 494 nom., desc.), Webb and Metz (2003a: 374 key), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641 key). This genus is Holarctic in distribution, occurring in the Nearctic Region in Canada and the USA.

nigrina (Kröber). **Nearctic:** Canada (Alberta, British Columbia, Ontario, Quebec, Yukon Territory), USA (California, Colorado, Idaho, Maine, Michigan, Montana, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Utah, Washington, Wyoming).

Psilocephala nigrina Kröber 1914a: 53. Type locality USA, Colorado, Florissant. HT female USNM (Type No. 26023). Kröber (1914a: 42 female key), Cole (1923a: 77 trans. orig. desc.; 1965: 351 cat.), Poole (1996: 308 sp. list), Webb (2003: 497 invalid LT desig.).

Dichoglena nigrina. Irwin and Lyneborg (1981a: 212 comb. change, sp. list), Webb (2003: 495 nom., desc., 497 dist., Figs. 21–28 male genit., 29 female genit., 30 dist. map; 2005: 5 phylog., Fig. 1 phylog.), Webb and Metz (2003a: 371 phylog., Figs. 1a, b phylog.).

Psilocephala latifrons Cole 1923a: 73. Type locality USA, New York, West Danby. HT male (MEI 011273) CUIC. Preoccupied by *Aristothereva latifrons* Frey (1921: 82). Cole (1923a: 35 male key, 73 dist., Fig. 61 male frons; 1925: 85 nom., objective syn. of *amplifrons* Cole; 1965: 350 nom.), Johannsen (1928: 764 nom.), Arnaud (1979: 137 paratype), Irwin and Lyneborg (1981a: 211 nom.), Poole (1996: 308 nom.), Webb (2003: 495 nom.). **Note 52.**

Psilocephala amplifrons Cole 1925: 85. Replacement name for *Psilocephala latifrons* Cole (1923a: 73) nec *Aristothereva latifrons* Frey (1921: 82). Johannsen (1928: 764 cat.), Cole (1965: 350 cat.), Webb (2003: 495 syn. desig. of *nigrina* Kröber).

Dichoglena amplifrons. Irwin and Lyneborg (1981a: 2011 comb. change, 211 sp. list, Figs. 15 male head, 61–65 male genit.), Poole (1996: 308 sp. list), Webb (2003: 495 nom.).

Genus DISTOSTYLUS Webb

DISTOSTYLUS Webb in Metz and Webb 2003: 5. Type species *Distostylus irwini* Webb in Metz and Webb, 2003 by original designation. Metz and Webb (2003: 2 phylog., Figs. 1– 4 phylog.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring on the Caribbean Island of Dominica.

irwini Webb. **Neotropical:** Dominica.

Distostylus irwini Webb in Metz and Webb 2003: 6. Type locality Dominica, St. John Parish, Cabrits National Park. HT male (MEI 146471) CAS (Type No. 17900). Metz and Webb (2003: 2 phylog., 9 dist., Figs. 1–2 phylog., 3–11 male genit., 12–13 female genit.).

Genus ELCARIBE Webb

ELCARIBE Webb in Webb and Metz 2006: 146. Type species *Psilocephala obscura* Coquillett, 1893b by original designation. Webb and Metz (2006: 155 male key, 156 female key), Gaimari and Webb (2009: 643 key). This genus is Nearctic and Neotropical in distribution, occurring in the Florida Keys in the USA and on various Caribbean Islands.

abdominalis (Fabricius). **Neotropical:** British Virgin Islands (Anegada Island, Guana Island), Jamaica, Puerto Rico (including Mona Island, Vieques Island, Saint Croix Island), United States Virgin Islands (Saint Thomas Island), West Indies (Saint Martin Island).

Bibio abdominalis Fabricius 1805: 68. Type locality "Am. Ins.", possibly St. Croix Island (Lyneborg 1969: 395). LT male ZMUC. Kertész (1909: 149 cat.), Lyneborg (1969: 395 nom., LT desig., 396 LT desc., Figs. 9–17 male genit.), Zimsen (1964: 454 types).

Thereva abdominalis. Wiedemann (1821: 113 desc., comb. change; 1828: 236 desc.).

Psilocephala abdominalis. Kröber (1911: 499 male key, 500 female key, 515 desc., comb. change; 1913b: 28 sp. list, 37 male key, 38 female key; 1928a: 5 dist., 10 male key, 12 female key).

Brachylinga abdominalis. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Metz *et al.* (2003: 247 nom.), Holston (2004: 42 nom.).

Elcaribe abdominalis. Webb and Metz (2006: 155 male key, 156 female key, 158 nom., comb. change, desc., 160 dist., Figs. 218, 233, 247, 261, 275, 289, 303, 317 male genit., 331, 343 female genit., 355 dist. map).

Psilocephala pygmaea Kröber 1911: 515. Type locality West Indies, Saint Thomas Island. HT female NHMW. Kröber (1911: 500 female key; 1913b: 33 sp. list, 38 female key; 1928a: 7 dist., 12 female key), Irwin and Lyneborg (1981a: 270 as unplaced species of Therevidae), Metz *et al.* (2003: 247 nom., syn. desig. of *abdominalis* Fabricius), Webb and Metz (2006: 158 nom.).

Psilocephala monensis Curran 1926: 2. Type locality West Indies, Puerto Rico, Mona Island. HT female AMNH. Kröber (1928a: 6 dist., 11 female key), Wolcott and Otero (1936: 340 cat.), Wolcott (1951: 452 cat.), Webb and Metz (2006: 158 nom., syn. desig. of *abdominalis* Fabricius).

Brachylinga monensis. Irwin and Lyneborg (1981a: 234 sp. list, comb. change).

Psilocephala vexans Curran 1926: 2. Type locality Virgin Islands, Saint Thomas Island. HT male AMNH. Kröber (1928a: 7 dist., 9 male key, 23 desc.), Wolcott and Otero (1936: 340 cat.), Wolcott (1951: 452 cat.), Irwin and Lyneborg (1981a: 234 nom., syn. desig. of *abdominalis* Fabricius), Metz *et al.* (2003: 247 nom.), Webb and Metz (2006: 158 nom.).

anguilla Webb. **Neotropical:** British West Indies (Anguilla Island).

Elcaribe anguilla Webb in Webb and Metz 2006: 162. Type locality British West Indies, Anguilla Island, Flat Top Point. HT male (MEI 040248) USNM. Webb and Metz (2006: 155 male key, 156 female key, 164 dist., Figs. 219–220, 234, 248, 262, 276, 290, 304, 318 male genit., 332, 344 female genit., 356 dist. map).

bahamaensis Webb. **Neotropical:** The Bahamas (Abaco Cays, Berry Islands, Caico Islands, Cat Island, Eleuthera Island, Grand Bahama Island, Great Inagua Island, New Providence Island, Salvador Island, South Andros Island, South Bimini Island, Turks Islands).

Elcaribe bahamaensis Webb in Webb and Metz 2006: 164. Type locality The Bahamas, Mayaguana Island, Abrahams Bay. HT male (MEI 048178) USNM. Webb and Metz (2006: 156 male key, 157 female key, 166 dist., Figs. 221, 235, 249, 263, 277, 291, 305, 319 male genit., 333, 345 female genit., 356 dist. map).

bifidus Webb. **Neotropical:** Dominican Republic (Barahona, Maria Trinidad Sanchez, Pedernales, Puerto Plata).

Elcaribe bifidus Webb in Webb and Metz 2006: 167. Type locality Dominican Republic, Puerto Plata. HT male (MEI 039812) INHS. Webb and Metz (2006: 155 male key, 156 female key, 169 dist., Figs. 222, 236, 250, 264, 278, 292, 306, 320 male genit., 334, 346 female genit., 357 dist. map).

elongatus Webb. **Neotropical:** Dominican Republic (Monte Cristi, Pedernales), The Bahamas (Andros Island, Caico Islands, Plana Cays, Turks Islands).

Elcaribe elongatus Webb in Webb and Metz 2006: 170. Type locality Dominican Republic, Pedernales, 9.5 km N Cabo Rojo. HT male (MEI 030441) CMNH. Webb and Metz (2006: 156 male key, 157 female key, 172 dist., Figs. 223, 237, 251, 265, 279, 293, 307, 321 male genit., 335, 347 female genit., 358 dist. map).

glabrus Webb. **Neotropical:** Dominican Republic (Independencia, Pedernales).

Elcaribe glabrus Webb in Webb and Metz 2006: 172. Type locality Dominican Republic, Independencia, 4 km S Los Pinos, Loma de Vientos. HT male (MEI 030404) CMNH. Webb and Metz (2006: 156 male key, 158 female key, 174 dist., Figs. 224, 238, 252, 266, 280, 294, 308, 322 male genit., 336, 348 female genit., 356 dist. map).

guanaensis Webb. **Neotropical:** British Virgin Islands (Anegada Island, Guana Island), Puerto Rico, United States Virgin Islands (Saba Island).

Elcaribe guanaensis Webb in Webb and Metz 2006: 175. Type locality British Virgin Islands, Guana Island. HT male (MEI 048109) USNM. Webb and Metz (2006: 155 male key, 157 female key, 177 dist., Figs. 225, 239, 253, 267, 281, 295, 309, 323 male genit., 337, 349 female genit., 358 dist. map).

longicaudus Webb. **Neotropical:** British West Indies (Antigua Island).

Elcaribe longicaudus Webb in Webb and Metz 2006: 180. Type locality British West Indies, Antigua, English Harbour. HT male (MEI 040247) INHS. Webb and Metz (2006: 155 male key, 156 female key, 182 dist., Figs. 227, 241, 255, 269, 283, 297, 311, 325 male genit., 356 dist. map).

obscurus (Coquillett). **Nearctic:** USA (Florida). **Neotropical:** Bahamas, Cayman Islands, Dominican Republic (Independencia, Pedernales), Jamaica (Kingston), Netherlands Antilles.

Psilocephala obscura Coquillett 1893b: 229. Type locality Jamaica, Kingston. HT female MCZ (Type No. 7566). Coquillett (1893b: 224 key), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1911: 499 female key, 517 desc.; 1913b: 33 sp. list, 38 female key; 1914a: 41 female key, 49 desc.; 1928a: 6 dist., 12 female key), Cole (1965: 351 cat). **Note 53.**

Brachylinga obscura. Irwin and Lyneborg (1981a: 234 sp. list, comb. change).

Elcaribe obscurus. Webb and Metz (2006: 155 male key, 157 female key, 182 nom., desc., comb. change, 184 dist., Figs. 228, 242, 256, 270, 284, 298, 312, 326 male genit., 339, 351 female genit., 360 dist. map).

Psilocephala squamosa Hardy 1943: 24. Type locality USA, Florida, Key West. Holotype male SEMC. Hardy (1943: Figs. 1a ant., 1b male genit.), Cole (1965: 352 cat.), Webb and Metz (2006: 182 nom., syn. desig. of *obscura* Coquillett).

Brachylinga squamosa. Irwin and Lyneborg (1981a: 234 sp. list, comb. change), Poole (1996: 308 sp. list).

paniculus Webb. **Neotropical:** West Indies (St. Kitts Island).

Elcaribe paniculus Webb in Webb and Metz 2006: 188. Type locality West Indies, Saint Kitts, W Basseterre, Bottom Mattingly Heights. HT male (MEI 115925) FSCA. Webb and Metz (2006: 155 male key, 157 female key, Figs. 229, 243, 257, 271, 285, 299, 313, 327 male genit., 340, 352 female genit., 359 dist. map).

platycera Loew. **Neotropical:** Cuba (Ciudad de la Habana, Santiago de Cuba, Guantánamo), Dominican Republic (Pedernales, Puerto Plata, San Cristóbal), The Bahamas (Grand Turk Island).

Psilocephala laticornis Loew 1869: 10. Type locality Cuba. ST female MCZ (Type No. 10675). Preoccupied by *Thereva laticornis* Loew (1856: 32). Loew (1872a: 114 nom., objective syn. of *platycera* Loew; 1872b: 124 subsequent usage), Osten Sacken (1878: 96 nom.), Kertész (1909: 163, 164 nom.), Kröber (1911: 519 nom.; 1913b: 33 nom.), Irwin and Lyneborg (1981a: 234 nom.). **Note 54.**

Elcaribe laticornis. Webb and Metz (2006: 156 male key, 157 female key, 178 nom., comb. change, desc., 180 dist., Figs. 226, 240, 254, 268, 282, 296, 310, 324 male genit., 338, 350 female genit., 359 dist. map).

Psilocephala platycera Loew 1872a: 114. Replacement name for *Psilocephala laticornis* Loew (1869: 10) nec *Thereva laticornis* Loew (1856: 32). Osten Sacken (1878: 96 cat.), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1911: 501 female key, 519 desc.; 1913b: 33 sp. list, 38 female key; 1928a: 7 dist., 12 female key), Webb and Metz (2006: 178 nom., incorrectly referred to as unjustified replacement name). **Note 54.**

Brachylinga platycera. Irwin and Lyneborg (1981a: 234 sp. list, comb. change).

scarbroughi Webb. **Neotropical:** The Bahamas (San Salvador Island).

Elcaribe scarbroughi Webb in Webb and Metz 2006: 191. Type locality The Bahamas, San Salvador Island, Road S CCFL [= Gerace Research Station]. HT male (MEI 141723) INHS. Webb and Metz (2006: 156 male key, 158 female key, Figs. 230, 244, 258, 272, 286, 300, 314, 328 male genit., 341, 353 female genit., 357 dist.).

starki Webb. **Neotropical:** Cuba (Santiago de Cuba).

Elcaribe starki Webb in Webb and Metz 2006: 194. Type locality Cuba, Province Santiago de Cuba, Parque Baconao, 5 km W Lagune Sigua, 0.5 km W Hotel "Los Caroles". HT male (MEI 081635) INHS. Webb and Metz (2006: 155 male key, 156 female key, Figs. 231, 245, 259, 273, 287, 301, 315, 329 male genit., 342, 354 female genit., 358 dist. map).

stellus Webb. **Neotropical:** Dominican Republic (La Romana).

Elcaribe stellus Webb in Webb and Metz 2006: 198. Type locality Domincan Republic, Saona Island [Isla Saono], Mano Juan [Adamanay], La Romana. HT male USNM (Type No. 136719). Webb and Metz (2006: 155 male key, 156 female key, Figs. 232, 246, 260, 274, 288, 302, 316, 330 male genit., 357 dist. map). **Note 55.**

Genus INCOXOVERPA Webb and Irwin

INCOXOVERPA Webb and Irwin 1999: 648. Type species *Tabuda borealis* Cole, 1923a by original designation. Webb and Irwin (1999: 645 phylog., Fig. 1 phylog.), Gaimari and Webb (2009: 641 key). This genus is Nearctic in distribution, occurring in Canada and northwest USA.

borealis (Cole). **Nearctic:** Canada (Saskatchewan), USA (Wyoming).

Tabuda borealis Cole 1923a: 82. Type locality Canada, Saskatchewan, Gull Lake. HT male (MEI 013391) MCZ (Type No. 7561). Cole (1923a: Figs. 114 male head, 116 male genit.; 1965: 352 cat.), Irwin and Lyneborg (1981a: 223 sp. list), Poole (1996: 309 sp. list).

Incoxoverpa borealis. Webb and Irwin (1999: 645 phylog., 651 desc., comb. change, 656 male key, 657 female key, Figs. 1 phylog., 2 ant., 5 max. palp., 8 wing, 11, 19, 27, 35, 43, 51, 59 male genit., 67, 74 female genit.), Webb and Metz (2003a: 371 phylog., Figs. 1a, b phylog.), Webb (2005a: 8 phylog., Fig. 1 phylog.).

Genus INSULATITAN Metz and Irwin

INSULATITAN Metz and Irwin 2000: 993. Type species *Insulatitan romaynae* Metz and Irwin, 2000 [= *Psilocephala longipes* Loew, 1869] by original designation. Metz and Irwin (2000: 979 phylog., 988 key, Fig. 28 phylog.), Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring Cuba, Dominican Republic, and The Bahamas.

longipes (Loew). **Neotropical:** Cuba, The Bahamas (Man O War Cay, South Bimini Island).

Psilocephala longipes Loew 1869: 8. Type locality Cuba. ST female (MEI 140580) MCZ (Type No. 10674). Loew (1872b: 122 subsequent usage), Osten Sacken (1878: 96 cat.), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1911: 499 male key, 500 female key, 506 desc.; 1913b: 31 sp. list, 37 male key, female key; 1914a: 38 male key, 40 female key, 56 desc.; 1928a: 6 dist., 10 male key, 11 female key, 17 desc., Fig. 12 male ant.; 1929b: 170 dist.). **Note 56.**

Penniverpa longipes. Irwin and Webb (1992: 88 sp. list, comb. change).

Insulatitan longipes. Webb and Metz (2008: 43 nom., comb. change).

Insulatitan romaynae Metz and Irwin 2000: 995. Type locality The Bahamas, [Abaco Islands] Man O War Cay. HT male (MEI 079660) CNC. Metz and Irwin (2000: 979 phylog., 989 key, 997 dist., Figs. 27–28 phylog., 29 male abd., 35 female abd., 46–47, 54, 58, 62–63 male genit.), Webb and Metz (2008: 43 nom., syn. desig. of *longipes* Loew).

trishae Metz and Irwin. **Neotropical:** Dominican Republic (Azua, Matanzas, Pedernales), Haiti.

Insulatitan trishae Metz and Irwin 2000: 997. Type locality Dominican Republic, Azua, E side crest of Sierra Martin Garcia, 7 km WNW Barrero. HT male (MEI 084389) CMNH. Metz and Irwin (2000: 979 phylog., 990 key, 999 dist., Figs. 17 male notum, 27–28 phylog., 30 male abd., 36 female abd., 48–49, 55, 59, 64–65 male genit.).

watsoni Metz and Irwin. **Neotropical:** Cuba (Ciudad de la Habana, Santiago de Cuba).

Insulatitan watsoni Metz and Irwin 2000: 1000. Type locality Cuba, Santiago [de Cuba], Jardin Botanico. HT male (MEI 109139) FMNH. Metz and Irwin (2000: 979 phylog., 989 key, 1002 dist., Figs. 21 halter, 27–28 phylog., 31–32 male abd., 37 female abd., 50–51, 56, 60 male genit., 66–67 male genit.).

youngi Metz and Irwin. **Neotropical:** Dominican Republic (Azua, Independencia, Pedernales, Puerto Plata, Samaná).

Insulatitan youngi Metz and Irwin 2000: 1002. Type locality Dominican Republic, Azua, 8 km NE Padre Las Casas, Rio Las Cuevas. HT male (MEI 030475) CMNH. Metz and Irwin (2000: 979 phylog., 990 key, Figs. 3. male ocellar tubercle, 8 female genit., 13 prosternum, 27–28 phylog., 33–34 male abd., 38 female abd., 52–53, 57, 61, 68–69 male genit.).

Genus LINDNERIA Kröber

LINDNERIA Kröber 1929b: 170. Type species *Lindneria splendida* Kröber, 1929b by monotypy. Metz and Irwin (2000: 979 phylog., 988 key, 1008 desc., Figs. 27–28 phylog.), Buck *et al*. (2009: 149 photo), Gaimari and Webb (2009: 637 key, 645 dist.). This genus is Neotropical in distribution, occurring in Argentina, Bolivia, Brazil, Costa Rica, Ecuador, Guyana, Panama, Peru, and Venezuela.

bellingeri Metz and Irwin. **Neotropical:** Venezuela (Aragua).

Lindneria bellingeri Metz and Irwin 2000: 1008. Type locality Venezuela, Aragua, Cordillera de la Costa, Parque Nacional Henri Pittier, Rancho Grande Biological Station. HT male (MEI 078113) DEBU. Metz and Irwin (2000: 979 phylog., 990 key, 1009 dist., Figs. 2 male ocellar tubercle, 27–28 phylog., 39 wing, 76–77, 84, 91, 98–99 male genit.).

browni Metz and Irwin. **Neotropical:** Brazil (Santa Catarina).

Lindneria browni Metz and Irwin 2000: 1009. Type locality Brazil, Santa Catarina, Nova Teutonia. HT male (MEI 079677) CNC. Metz and Irwin (2000: 979 phylog., 990 key, 1010 dist., Figs. 27–28 phylog., 78–79, 85, 94, 100–101 male genit.).

dicosta Metz and Irwin. **Neotropical:** Costa Rica (Puntarenas), Ecuador (Pichincha), Panama (Bocas del Toro).

Lindneria dicosta Metz and Irwin 2000: 1010. Type locality Ecuador, Pichincha, 47 km S Santo Domingo de los Cororados, Rio Palenque Biological Station. HT male (MEI 089827) USNM. Metz and Irwin (2000: 979 phylog., 990 key, 1011 dist., Figs. 22 halter, 27–28 phylog., 40 wing, 80–81, 86, 93, 102–103 male genit.).

penelopae Metz and Irwin. **Neotropical:** Brazil (Minas Gerais, Rio de Janeiro).

Lindneria penelopae Metz and Irwin 2000: 1011. Type locality Brazil, Rio de Janeiro. HT female (MEI 088413) USNM. Metz and Irwin (2000: 979 phylog., 990 key, 1012 dist., Figs. 7 female genit., 20 female notum, 27–28 phylog.).

platyptera (Kröber). **Neotropical:** Guyana (Upper Demerara-Berbice).

Psilocephala platyptera Kröber 1914a: 48. Type locality Guyana, Upper Demerara-Berbice, Essequebo River, Rockstone. HT male (MEI 109105) USNM (Type No. 26022). Kröber (1914a: 39 male key; 1928a: 7 dist.), Cole (1923a: 77 trans. orig. desc.; 1925: 84 corrected type locality). **Note 57.**

Lindneria platyptera. Metz and Irwin (2000: 979 phylog., 990 key, 1012 comb. change, desc., 1013 dist., Figs. 27–28 phylog., 70–71, 88, 92, 104–105 male genit.).

splendida Kröber. **Neotropical:** Argentina (Chaco), Bolivia (El Beni, Santa Cruz), Brazil (Rio de Janeiro), Peru (Madre de Dios).

Lindneria splendida Kröber 1929b: 171. Type locality Bolivia, Santa Cruz, San José de Chiquitos. HT male (MEI 109101) SMNS. Kröber (1929b: Figs. 2 male ant., genit., 3 wing), Metz and Irwin (2000: 979 phylog., 990 key, 1013 trans. orig. desc., 1014 desc., dist., Figs. 27–28 phylog., 41 wing, 72–73, 87, 95, 106–107 male genit.). **Note 58.**

thompsoni Metz and Irwin. **Neotropical:** Peru (Pasco).

Lindneria thompsoni Metz and Irwin 2000: 1014. Type locality Peru, Pasco, Oxapampa. HT male (MEI 088405) USNM. Metz and Irwin (2000: 979 phylog., 990 key, 1015 dist., Figs. 27–28 phylog., 74–75, 89, 96, 108–109 male genit.).

wintertoni Metz and Irwin. **Neotropical:** Brazil (Minas Gerais, Goiás, São Paulo).

Lindneria wintertoni Metz and Irwin 2000: 1015. Type locality Brazil, São Paulo, Serra de Mantiqueira, Campos do Jordão, Estação Eugênio Lefèvre. HT male (MEI 088384) MZSP. Metz and Irwin (2000: 979 phylog., 990 key, 1016 dist., Figs. 1 male habitus, 5 male flagellum, 9 male head, 10 female head, 12 head, 14 prosternum, 16 midcoxa, 18 male notum, 19 female notum, 27–28 phylog., 82–83, 90, 97, 110–111 male genit.).

Genus LITOLINGA Irwin and Lyneborg

LITOLINGA Irwin and Lyneborg 1981a: 234. Type species *Psilocephala acuta* Adams, 1903 by original designation. Irwin and Lyneborg (1981a: 201 key, 236 sp. list; 1981b: 519 key), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 642 key, 645 dist., biol., habitats), Webb (2009: 56 nom., desc., 57 key). This genus is mainly Nearctic in distribution, occurring in Mexico and the USA.

acuta (Adams). **Nearctic:** Mexico (Tamaulipas), USA (Colorado, Kansas, Texas). **Neotropical:** Mexico (Veracruz).

Psilocephala acuta Adams 1903: 222. Type locality USA, Kansas, Clark County, Englewood. LT male (MEI 170185) SEMC. Aldrich (1905: 246 cat.), Kertész (1909: 160 cat.), Kröber (1912a: 224 male key, 225 female key, 227 sp. list; 1913b: 28 sp. list, 35 male key, 37 female key, 39 male key; 1914a: 40 male key, 41 female key), Cole (1923a: 34 male key, 37 female key, 70 note, Figs. 57 female frons, 67 wing, 87 ant.; 1965: 350 cat.), Arnaud (1979: 136 ST data), Webb (2009: 59 LT desig.).

Litolinga acuta. Irwin and Lyneborg (1981a: 236 sp. list, comb. change, Figs. 16–17 female head, 136–141 male genit., 1981b: Fig. 4 male head), Poole (1996: 308 sp. list), Gaimari and Webb (2009: 638 Fig. 3 male head), Webb (2009: 58 key, nom., desc., Figs. 97 dist. map, 98–104 male genit., 105 female genit.).

Psilocephala pallida Kröber 1914a: 45. Type locality: USA, Texas. HT male USNM (Type No. 26018). Kröber (1914a: 38 male key; 1928b: 120 desc., dist.), Cole (1923a: 75 trans. orig. desc.; 1965: 351 cat.), Irwin and Lyneborg (1981a: 236 nom., syn. desig. of *acuta* Adams), Poole (1996: 308 nom.), Webb (2009: 58 nom.).

tergisa (Say). **Nearctic:** USA (Alabama, Florida, Georgia).

Thereva tergisa Say 1823: 39. Type locality USA, Florida, Levy County, 3.2 km W Archer. NT male (MEI 128582) FSCA. Holston (2004: 63 nom.), Webb (2009: 63 NT desig.).

Thereva tergissa. Misspelling of *tergisa.* Wiedemann (1828: 233 desc.), Osten Sacken (1858: 38 cat.; 1878: 96 nom.), LeConte (1859: 57 as *tergis*[*sa*], 813 taxonomic index), Kertész (1909: 165 cat.), Cole (1923a: 71 nom.), Irwin and Lyneborg (1981a: 236 nom.), Poole (1996: 308 nom.). **Note 59.**

Psilocephala tergissa. Misspelling of *tergisa.* Coquillett (1893a: 197 comb. change; 1893b: 223 key), Aldrich (1905: 247 cat.), Kröber (1912a: 223 male key, 225 female key, 231 sp. list, 234 desc.; 1913b: 34 sp. list, 39 female key; 1914a: 38 male key, 40 female key, 45 desc.), Cole (1923a: 34 male key, 37 female key, 71 desc., Figs. 50 female frons, 66 ant.; 1965: 352 cat.).

Thereva tergis. Misspelling of *tergisa.* Kertész (1909: 165 nom.), Kröber (1912a: 231 nom.), Holston (2004: 62 nom.). **Note 60.**

Psilocephala tergisa. Cole (1965: 352 cat.).

Litolinga tergisa. Irwin and Lyneborg (1981a: 236 sp. list, comb. change), Poole (1996: 308 sp. list), Holston (2004: 63 nom.), Webb (2009: 59 key, 61 nom., desc., Figs. 97 dist. map, 98–104 male genit., 105 female genit.).

Thereva corusca Wiedemann 1828: 232. Unjustified replacement name for *Thereva tergisa* Say (1823: 39). Osten Sacken (1858: 38 nom.; 1878: 96 cat.), Aldrich (1905: 247 nom.), Kertész (1909: 161 nom.), Kröber (1913b: 34 dist.), Cole (1923a: 71 nom.; 1965: 352 nom.), Irwin and Lyneborg (1981a: 236 nom.), Poole (1996: 308 nom.), Holston (2004: 48 nom.), Webb (2009: 61 nom.). **Note 61.**

Thereva corrusca. Misspelling of *corusca.* LeConte (1859: 57 nom., 813 taxonomic index), Holston (2004: 48 nom.).

Genus LYSILINGA Irwin and Lyneborg

LYSILINGA Irwin and Lyneborg 1981a: 230. Type species *Psilocephala aurantiaca* Coquillett, 1904b by original designation. Irwin and Lyneborg (1981a: 202 key, 232 sp. list; 1981b: 519 key), Poole (1996: 308 sp. list), Metz *et al.* (2003: 259 nom.), Webb and Metz (2006: 11 key, 200 desc., 207 sp. key), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 644 key, 645 dist., habitats). This is a Nearctic and Neotropical genus, occurring in Costa Rica, Guatemala, Mexico, and the USA.

aurantiaca (Coquillett). **Nearctic:** Mexico (Baja California Norte, Sonora), USA (Arizona, California, Colorado, Nevada, New Mexico, Texas, Utah).

Psilocephala aurantiaca Coquillett 1904b: 177. Type locality USA, California, Claremont. HT male USNM (Type No. 8035). Kertész (1909:161 cat.), Kröber (1912a: 224 male key, 227 sp. list; 1913b: 29 sp. list, 35, 39 male key; 1914a: 40 male key), Cole (1923a: 35 male key, 37 female key, 67 desc., Figs. 52 female frons, 70 wing, 91 ant., 104 male genit.; 1965: 350 cat.).

Lysilinga aurantiaca. Irwin and Lyneborg (1981a: 230 desc., 232 sp. list, comb. change, Figs. 122–127 male genit.), Poole (1996: 308 sp. list), Metz and Irwin 2000: 979 phylog., Figs. 27–28 phylog.), Webb and Metz (2006: 208 key, desc., Figs. 361, 371, 381, 391, 401, 411, 421, 431 male genit., 441 female genit., 448 dist. map).

chamela Webb. **Nearctic:** Mexico (Jalisco, Morelos).

Lysilinga chamela Webb in Webb and Metz 2006: 215. Type locality Mexico, Jalisco, Estación de Biología Chamela. HT male (MEI 077764) UNAM. Webb and Metz (2006: 208 key, Figs. 362, 372, 382, 392, 402, 412, 422, 432 male genit., 442 female genit., 448 dist. map).

crassiseta Webb. **Neotropical:** Costa Rica (Guanacaste, Puntarenas).

Lysilinga crassiseta Webb in Webb and Metz 2006: 218. Type locality Costa Rica, Puntarenas, San Luis, Monteverde. HT male (INBIO CR 1002 165171) INBC. Webb and Metz (2006: 207 key, Figs. 363, 373, 383, 393, 403, 413, 423, 433 male genit., 443 female genit., 449 dist.).

digita Webb. **Nearctic:** Mexico (Jalisco, Nayarit).

Lysilinga digita Webb in Webb and Metz 2006: 220. Type locality Mexico, Jalisco, 9.7 km E Durazno. HT male (MEI 039772) SDMC. Webb and Metz (2006: 208 key, Figs. 364, 374, 384, 394, 404, 414, 424, 434 male genit.).

dolichophalla Webb. **Neotropical:** Guatemala (Petén).

Lysilinga dolichophalla Webb in Webb and Metz 2006: 222. Type locality Guatemala, El Petén, Tikal. HT male (MEI 147285) UMMZ. Webb and Metz (2006: 207 key, Figs. 365, 375, 385, 395, 405, 415, 425, 435 male genit., 448 dist. map).

nigra Webb. **Nearctic:** Mexico (Jalisco, Morelos, Nayarit). **Neotropical:** Mexico (Guerrero, Oaxaca).

Lysilinga nigra Webb in Webb and Metz 2006: 224. Type locality Mexico, Jalisco, [Punta] Careyes. HT male (MEI 101362) USNM. Webb and Metz (2006: 207 key, Figs. 366, 376, 386, 396, 406, 416, 426, 436 male genit., 444 female genit., 449 dist. map).

occipitalis (Adams). **Nearctic:** Mexico (Chihuahua), USA (Arizona, California, New Mexico, Texas, Utah).

Psilocephala occipitalis Adams 1904: 443. Type Locality USA, Arizona, Bill Williams Fork. HT male SEMC. Kertész (1909: 164 cat.), Kröber (1912a: 223 male key, 230 sp. list; 1913b: 33 sp. list, 35 male key; 1914a: 38 male key, 44 desc.), Cole (1923a: 35 male key, 69 note; 1965: 351 cat.).

Lysilinga occipitalis. Irwin and Lyneborg (1981a: 232 sp. list, comb. change), Poole (1996: 308 sp. list), Webb and Metz (2006: 208 key, 226 desc. Figs. 367, 377, 387, 397, 407, 417, 427, 437 male genit., 445 female genit., 449 dist. map). **Note 62.**

Psilocephala subrufa Cole 1923a: 68. Type locality USA, Arizona, Highley [= Higley], Superstition Mountain. HT female USNM [U.S. Biological Survey]. Cole (1923a: 37 female key; 1965: 352 cat.), Webb and Metz (2006: 226 nom., syn. desig. of *occipitalis* Adams).

Lysilinga subrufa. Irwin and Lyneborg (1981a: 232 sp. list, comb. change), Poole (1996: 308 sp. list).

parkeri Webb. **Nearctic:** Mexico (Jalisco).

Lysilinga parkeri Webb in Webb and Metz 2006: 229. Type locality Mexico, Jalisco, [Punta] Careyes. HT male (MEI 101111) USNM. Webb and Metz (2006: 207 key, Figs. 368, 378, 388, 398, 408, 418, 428, 438 male genit., 446 female genit., 449 dist. map).

pilifrons (Kröber). **Neotropical:** Costa Rica (Guanacaste, San José).

Psilocephala pilifrons Kröber 1928a: 18. Type locality Costa Rica, San Jose, Farm La Caja, 8 km W San José. HT male (MEI 115974) DEI. Kröber (1928a: 7 dist., 9 male key, Fig. 14 male head), Metz *et al.* (2003: 259 trans. orig. desc.).

Lysilinga pilifrons. Metz *et al.* (2003: 259 comb. change), Webb and Metz (2006: 207 key, 233 desc., Figs. 369, 379, 389, 399, 409, 419, 429, 439 male genit., 447 female genit., 448 dist. map).

Psilocephala maculifrons Kröber 1928a: 20. Type locality Costa Rica, Guanacaste, Estación Maritza, side of Orosi Volcano. NT male (MEI 109120) INBC. Kröber (1928a: 6 dist., 12 female key, Fig. 16 female frons, ant.), Metz *et al.* (2003: 259 NT desig., trans. orig. desc.), Webb and Metz (2006: 233 nom., syn. desig. of *pilifrons* Kröber).

Lysilinga maculifrons. Metz *et al.* (2003: 259 comb. change).

recta Webb. **Nearctic:** Mexico (Sonora).

Lysilinga recta Webb in Webb and Metz 2006: 235. Type locality Mexico, Sonora, Álamos. HT male (MEI 112267) CAS (Type No. 18116). Webb and Metz (2006: 207 key, Figs. 370, 380, 390, 400, 410, 420, 430, 440 male genit., 449 dist. map).

Genus MEGALINGA Irwin and Lyneborg

MEGALINGA Irwin and Lyneborg 1981a: 242. Type species *Megalinga insignata* Irwin and Lyneborg, 1981a by original designation. Irwin and Lyneborg (1981a: 201 key, 244 sp. list; 1981b: 518 key), Webb and Irwin (1991c: 915 desc., 916 key), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 643 key, 645 dist.). This is a Nearctic and Neotropical genus, occurring in El Salvador, Guatemala, Mexico, and the USA.

bolbocera (Osten Sacken). **Nearctic:** Mexico (Jalisco, Nayarit). **Neotropical:** El Salvador (Ahuachapán), Guatemala (Esquintla, Quiché), Mexico (Guerrero, Oaxaca, Sinaloa).

Thereva bolbocera Osten Sacken 1887: 162. Type locality Mexico, Presidio [Presidio de Mazatlán]. HT female (MEI 007028) BMNH (Type No. 241987). Kertész (1909: 152 cat.), Cole (1923a: 127 note), Kröber (1912a: 250 female key, 252 sp. list; 1913b: 44 female key, 55 sp. list), Papavero and Ibáñez-Bernal (2003: 161 sp. list), Holston (2004: 46 nom.), Gaimari and Webb (2009: 645 dist., habitat).

Thereva bolboceras. Misspelling of *bolbocera.* Aldrich (1905: 248 cat.), Kertész (1909: 152 nom.), Kröber (1912a: 250 female key; 1914a: 62 female key, 64 note), Irwin and Lyneborg (1981a: 236 nom.), Holston (2004: 46 nom., as unjustified emendation).

Litolinga bolbocera. Irwin and Lyneborg (1981a: 236 sp. list, comb. change).

Megalinga bolbocera. Webb and Irwin (1991c: 916 key, nom., desc., comb. change, Figs. 1 ant., 2 max. palp. 3 wing, 4–9 male genit., 10 female head, 11–12 female genit., 13 female furca, 25 dist.), Holston (2004: 46 nom.).

insignata Irwin and Lyneborg. **Nearctic:** Mexico (Baja California Norte, Baja California Sur), USA (Arizona, California).

Megalinga insignata Irwin and Lyneborg 1981a: 244. Type locality USA, California, Inyo County, Bennetts Well. HT male (MEI 005144) CAS (Type No. 13670). Irwin and Lyneborg (1981a: Figs. 3 forecoxae, prosternum, cervical lobes, 162–168 male genit.; 1981b: 518 key, Figs. 12 anterior thorax (head removed), 13 wing, 18 male genit.), McAlpine (1981: 95 Fig. 33 wing), Poole (1996: 308 sp. list), Webb and Irwin (1991c: 916 key, 919 nom., desc., Figs. 3 fore coxae, prosternum, cervical lobes, 14 wing, 15–20 male genit., 21 female head, 22–24 female furca, 26 dist. map), Gaimari and Webb (2009: 640 Fig. 11 thorax, Fig. 16 wing, 645 dist., habitat). **Note 63.**

Genus MICROTHEREVA Malloch

MICROTHEREVA Malloch 1932: 244. Type species *Microthereva argentiventris* Malloch, 1932 by original designation. Malloch (1932: 238 key, 245 sp. key), Webb (2006: 2 key, 4 nom.), Gaimari and Webb (2009: 636 key). This genus is Neotropical in distribution, occurring in Argentina and Chile.

argentiventris Malloch. **Neotropical:** Argentina (Neuquén, Rio Negro), Chile (Araucanía, Bío-Bío).

Microthereva argentiventris Malloch 1932: 245. Type locality Argentina, Río Negro, Puerto Blest. HT male BMNH (Type No. 241998). Malloch (1932: 245 key, Fig. 20a ant.), Webb (2006: 6 key, desc., 9 dist., Figs. 1 ant., 2–9 male genit., 10 femle genit., 30 dist. map).

variventris Malloch. **Neotropical:** Argentina (Río Negro).

Microthereva variventris Malloch 1932: 246. Type locality Argentina, Río Negro, Bariloche. HT male BMNH (Type No. 241999). Malloch (1932: 245 key), Webb (2006: 6 key, 10 desc., 13 dist., Figs. 11–18 male genit., 19 female genit., 30 dist. map).

Genus NEBRITUS Coquillett

NEBRITUS Coquillett 1894: 98. Type species *Nebritus pellucidus* Coquillett, 1894 by original designation. Coquillett (1894: 97 key), Aldrich (1905: 246 cat.), Williston (1908: 207 key), Kertész (1909: 167 cat.), Kröber (1912a: 210 key, 217 desc.; 1913b: 6 key, 16 desc., sp. list; 1914a: 33, key, desc.), Cole (1923a: 14 key, 18 desc.; 1965: 349 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, desc.), Irwin and Lyneborg (1981a: 201 key, 249 desc., 251 sp. list; 1981b: 518 key), Webb and Irwin (1991b: 900 nom., desc., 901 sp. key), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 159 key), Holston (2005 biol.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641 key). This genus is Nearctic in distribution, occurring in Mexico and the USA.

ZIONEA Hardy 1938: 144. Type species *Zionea tanneri* Hardy, 1938 by original designation. Cole (1965: 349 cat.), Cole and Schlinger (1969: 170 key, 172 desc.), Irwin and Lyneborg (1981a: 249 nom., syn. desig. of *Nebritus* Coquillett), Webb and Irwin (1991b: 900 nom.), Poole (1996: 308 nom.).

pellucidus Coquillett. **Nearctic:** Mexico (Baja California Norte), USA (California).

Nebritus pellucidus Coquillett 1894: 98. Type locality USA, California, Los Angeles County. LT male (MEI 007041) USNM (Type No. 10424). Aldrich (1905: 246 cat.), Kertész (1909: 167 cat.), Kröber (1912a: 218 desc.; 1913b: 16 sp. list; 1914a: 32 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 18 desc., Figs. 8 ant., 9 female habitus, 10 male genit.; 1965: 349 cat.), Curran (1934: 187 Fig. 15 ant., Fig. 16 habitus, Fig. 17 male genit.; 1965: 187 Fig. 15 ant., Fig. 16 habitus, Fig. 17 male genit.), Cole and Schlinger (1969: 171 Figs. 103A ant., habitus, genit.), Irwin and Lyneborg (1981a: 251 sp. list, Figs. 2, male head, 176–181 male genit.; 1981b: Fig. 2 male head), Webb and Irwin (1991b: 901 nom., desc., key, 902 LT desig., dist., Figs. 1 male head, 2 male ant., 3 male max. palp., 4 male wing, 5–10 male genit., 11–12 female genit., 39 dist. map), Sinclair *et al.* (1994: 432 phylog. exemplar), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 638 Fig. 6 male head).

powelli Webb and Irwin. **Nearctic:** USA (California).

Nebritus powelli Webb and Irwin 1991b: 904. Type locality USA, California, Ventura County, Oxnard. HT male (MEI 006335) CAS (Type No. 16630). Webb and Irwin (1991b: 901 key, 910 dist., Figs. 13 male head, 14 male ant., 15–20 male genit., 21–22 female genit., 23–26 larva, 27–28 pupa., 40 dist. map), Poole (1996: 308 sp. list), Holston (2005 biol.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.).

tanneri (Hardy). **Nearctic:** Mexico (Baja California Norte), USA (California, Nevada, Utah).

Zionea tanneri Hardy 1938: 144. Type locality USA, Utah, Zion National Park. HT female (MEI 007000) BYUC. Hardy (1938: Figs. 1–2 female head), Cole (1965: 349 cat.).

Nebritus tanneri. Irwin and Lyneborg (1981a: 251 sp. list, comb. change), Webb and Irwin (1991b: 911 nom., desc., 912 dist., Figs. 29 male head, 30 male ant., 31–36 male genit., 37–38 female genit., 41 dist. map), Poole (1996: 308 sp. list). **Note 64.**

Genus NESONANA Gaimari and Irwin

NESONANA Gaimari and Irwin 2000a: 172. Type species *Nesonana youngi* Gaimari and Irwin, 2000a by original designation. Gaimari and Irwin (2000a: 137 phylog., 160 key, 194 biog., Figs. 1–2 phylog., 3A dist. map, 4, 6 biog.), Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring in the Dominican Republic.

xenoverpa Gaimari and Irwin. **Neotropical:** Dominican Republic (Monte Cristi, Pedernales).

Nesonana xenoverpa Gaimari and Irwin 2000a: 172, Type locality Dominican Republic, Pedernales, 3.3 km NE Los Arroyos. HT male (MEI 030366) CMNH. Gaimari and Irwin (2000a: 136 phlog., 160 key, Figs. 1–2 phylog., 11 male head, 58, 77–78, 114–115 male genit.).

youngi Gaimari and Irwin. **Neotropical:** Dominican Republic (Pedernales).

Nesonana youngi Gaimari and Irwin 2000a: 175. Type locality Dominican Republic, Pedernales, 26 km N[W] Cabo Rojo. HT male (MEI 030376) CMNH. Gaimari and Irwin (2000a: 137 phylog., 160 key, Figs. 1–2 phylog., 12 male head, 13 female head, 40 lateral thorax, 59, 79–80, 116–117 male genit., 147 female genit.).

Genus NIGRANITIDA Metz

NIGRANITIDA Metz in Metz *et al.* 2003: 239. Type species *Psilocephala costata* Wulp, 1888 by original designation. Webb and Metz (2004: 3 desc., 4 sp. key), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 643 key). This genus is Neotropical in distribution, occurring in Argentina.

NIGRINITIDA. Misspelling of *Nigranitida.* Holston *et al.* (2007: 286, 290, Figs. 2–4).

costata (Wulp). **Neotropical:** Argentina (Buenos Aires, Catamarca, Córdoba La Pampa, La Rioja, Mendoza, Tucumán).

Psilocephala costata Wulp 1888: 368. Type locality Argentina, Mendoza, Potrerillos. NT female (MEI 140761) NHMW. Brèthes (1907: 289 cat.), Kertész (1909: 161 cat.), Kröber (1911: 499 male key, 511 desc.; 1913b: 30 sp. list, 37 male key; 1928a: 6 dist., 9 male key, 10 female key), Metz *et al*. (2003: 241 NT desig., trans. orig. desc.). **Note 65.**

Nigranitida costata. Metz *et al*. (2003: 241 sp. list, comb. change), Webb and Metz (2004: 4 key, desc., Figs. 1–8 male genit., 9 female head, 10 female genit.), Holston *et al.* (2007: 284 phylog.).

Psilocephala atra Kröber 1911: 512. Type locality Argentina, Mendoza, Poterillos [Potrerillos]. HT female (MEI 140761) NHMW. Kröber (1911: 500 female key; 1913b: 29 sp. list, 38 female key; 1928a: 6 dist., 11 female key), Metz *et al.* (2003: 241 nom., objective syn. of *costata* Wulp), Webb and Metz (2004: 4 nom.).

gibba Webb. **Neotropical:** Argentina (Neuquén).

Nigranitida gibba Webb in Webb and Metz 2004: 8. Type locality Argentina, Neuquén, Catan Lil. HT male (MEI 073578) DEBU. Webb and Metz (2004: 4 key, 8 desc., Figs. 11–18 male genit.).

irwini Webb. **Neotropical:** Argentina (Catamarca, La Rioja, Mendoza, Tucumán).

Nigranitida irwini Webb in Webb and Metz 2004: 10. Type locality Argentina, Catamarca, 28 km SE Tinogasta. HT male (MEI 106759) CAS (Type No. 18024). Webb and Metz (2004: 4 key, 13 dist., Figs. 19–26 male genit., 27 female genit.).

margaretae Webb. **Neotropical:** Argentina (Mendoza).

Nigranitida margaretae Webb in Webb and Metz 2004: 13. Type locality Argentina, Mendoza, Lavalle, Parque Provincial Telteca. HT male (MEI 121138) CAS (Type No. 18025). Webb and Metz (2004: 4 key, Figs. 28–35 male genit.). **Note 66.**

Genus NOTIOTHEREVA Metz and Irwin

NOTIOTHEREVA Metz and Irwin in Metz *et al.* 2003: 242. Type species *Thereva albiventris* Philippi, 1865 by original designation. Webb (2005b: 3 nom., 4 desc., 5 sp. key), Holston *et al.* (2007: 282 phylog., Figs. 2–4

phylog.), Gaimari and Webb (2009: 643, 644 key). This genus is Neotropical in distribution, occurring in Argentina, Chile, and Peru.

albiventris (Philippi). **Neotropical:** Argentina (La Rioja, Neuquén, Jujuy, Santa Cruz), Chile (Araucanía, Atacama, Bío-Bío, Coquimbo, Libertador General Bernardo O'Higgins, Magallanes, Región Metropolitana de Santiago, Valparaiso (Aconcagua in Webb and Metz 2006)).

Thereva albiventris Philippi 1865: 770. Type locality Chile, Santiago. LT male (MEI 134684) MNNC. Reed (1888: 294 cat.), Kertész (1909: 150 cat.), Kröber (1911: 491 male key, female key, 494 desc.; 1913b: 44 male, female key, 53 sp. list), Malloch (1932: 242 key, 243 nom., desc.), Stuardo-Ortiz (1946: 86 cat.), Metz *et al.* (2003: 243 LT desig., 244 trans. orig. desc.), Holston (2004: 42 nom.). **Note 67.**

Notiothereva albiventris. Metz *et al.* (2003: 243 comb. change), Webb (2005b: 5 key, 6 nom., 8 desc., dist., Figs. 1–7 male genit., 8 female genit., 44 dist. map), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.).

Psilocephala ruficornis Kröber 1911: 520. Type locality Chile, Concepción. HT male, depository unknown. Kröber (1911: 498 male key; 1913b: 33 sp. list, 37 male key; 1928a: 7 dist., male key), Stuardo-Ortiz (1946: 87 cat.), Metz *et al.* (2003: 245 trans. orig. desc.), Webb (2005b: 6 nom., syn. desig. of *albiventris* Philippi). **Note 68.**

Notiothereva ruficornis. Metz *et al.* (2003: 244 comb. change).

argentina Webb. **Neotropical:** Argentina (Catamarca, La Rioja, Salta, Tucumán).

Notiothereva argentina Webb 2005b: 15. Type locality Argentina, Tucumán Province, Quebrada Las Canas, near Ruinas de Quilmes. HT male (MEI 106083) CAS (Type No. 18060). Webb (2005b: 5 key, 17 dist., Figs. 9–14 male genit., 15 female genit., 44 dist. map), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.).

aurea Webb. **Neotropical:** Chile (Los Lagos).

Notiothereva aurea Webb 2005b: 19. Type locality Chile, Valdivia, Lago Calafquen. HT male (MEI 079021) FMNH. Webb (2005b: 5 key, 22 dist., Figs. 16–21 male genit., 22 female genit., 44 dist. map).

bezzii (Kröber). **Neotropical:** Peru (Ancash, Lambayeque, Lima, Piura).

Psilocephala bezzii Kröber 1911: 501. Type locality Peru, Piura, Samán. LT male (MEI 113148) USNM. Kröber (1911: 499 male key, female key; 1913b: 29 sp. list, 37 male key as *bezzi*, 37 female key; 1928a: 6 dist., 9 male key, 10 female key), Metz *et al.* (2003: 244 LT desig., trans. orig. desc.).

Psilocephala bezzi. Misspelling of *bezzii*. Kröber (1913b: 37 male key).

Notiothereva bezzii. Metz *et al.* (2003: 244 comb change), Webb (2005b: 5 key, 22 nom., 23 desc., 25 dist., Figs. 23–28 male genit., 29 female genit., 44 dist. map).

brunnipes (Kröber). **Neotropical:** Chile (Tarapaca).

Psilocephala brunnipes Kröber 1911: 509. Type locality Chile, Arica. HT female SMTD. Kröber (1911: 500 female key; 1913b: 29 sp. list, 38 female key; 1928a: 6 dist., 12 female key, 18 desc., Fig. 13 male ant.), Stuardo-Ortiz (1946: 87 cat.), Metz *et al.* (2003: 245 trans. orig. desc.).

Notiothereva brunnipes. Metz *et al.* (2003: 244 comb. change), Webb (2005b: 5 key, 25 nom., 27 desc., dist., Figs. 30–35 male genit., 36 female genit., 44 dist. map).

simulata (Malloch). **Neotropical:** Argentina (Rio Negro).

Thereva simulata Malloch 1932: 244. Type locality Argentina, L. [Lago] Nahuel Huapi, eastern end. HT male BMNH (Type No. 241955). Malloch (1932: 242 key). Holston (2004: 62 nom.).

Notiothereva simulata. Metz *et al.* (2003: 244 comb. change), Webb (2005b: 5 key, 30 desc., dist., Figs. 37–42 male genit., 43 female genit., 44 dist. map).

Genus OZODICEROMYIA Bigot

OZODICEROMYIA Bigot 1890: 321. Type species *Ozodiceromyia mexicana* Bigot, 1890 by original designation. Bigot (1890: 323 key), Aldrich (1905: 246 cat.), Williston (1908: 207 note), Kertész (1909: 169 cat.), Becker (1912: 294 syn. desig. of *Phycus* Walker), Kröber (1912a: 210 key, 211 desc., revised status; 1913b: 6 key, 8 rep. orig. desc., sp. list), Cole (1923a: 14 key, 19 desc.; 1965: 349 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, 172 desc.), Sabrosky (1978: 143 fixed spelling as *Ozodiceromyia* as First Revisor), Irwin and Lyneborg (1981a: 254 nom., incorrectly listed as error), Gaimari and Irwin (2000a: 137

phylog., 161 key, 189 nom., 190 desc., dist., 191 sp. list, 194 biog., Figs. 1–3 phylog., 3B dist. map, 4, 6 biog.; 2000b: 563 nom.), Evenhuis and Pont (2004: 44, cat., nom.), Holston (2005 biol.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Webb (2007: 42 key), Gaimari and Webb (2009: 637 key, 645 dist., biol., habitats). This genus is Nearctic and Neotropical in distribution, occurring throughout North America and south to Ecuador. **Note 69.**

OZODICEROMYA. Incorrect original spelling. Bigot (1890: 321). Sabrosky (1978: 143 fixed spelling as *Ozodiceromyia* as First Revisor), Irwin and Lyneborg (1981a: 203 key, 254 desc., 257 sp. list; 1981b: 522 key), Poole (1996: 308 sp. list), Gaimari and Irwin (2000a: 190 nom.; 2000b: 563 nom.), Evenhuis and Pont (2004: 43 nom.).

OZODICERONYMA. Misspelling of *Ozodiceromyia*. Godman and Salvin (1901: 378 sp. list), Irwin and Lyneborg (1981a: 254 nom.), Gaimari and Irwin (2000a: 190 nom.; 2000b: 563 nom.). **Note 70.**

anomala (Adams). **Nearctic:** Mexico (Chihuahua), USA (Arizona, Colorado, New Mexico, Texas).

Thereva anomala Adams 1904: 444. Type locality USA, Arizona, Oak Creek Canyon. ST male, ST female (MEI 084829) SEMC. Kertész (1909: 150 cat.), Kröber (1912a: 248 male key, 251 female key; 1913b: 43 male key, 44 female key, 53 sp. list), Cole (1923a: 86 male key, 91 note; 1965: 353 cat.).

Ozodiceromya anomala. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia anomala. Gaimari and Irwin (2000a: 191 sp. list, Figs. 130–131 male genit.), Holston (2004: 44 nom.).

argentata (Bellardi). **Nearctic:** Canada (Manitoba, Nova Scotia, Ontario, Quebec), Mexico (Baja California Sur, Chihuahua, Coahuila, Durango, Federal District, Guanajuato, Hidalgo, Jalisco, México, Michoacán, Morelos, Nayarit, Nuevo Léon, Puebla, Querétaro, San Luis Potosí, Sonora, Tamaulipas, Tlaxcala, Zacatecas), USA (Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Virginia, West Virginia, Wisconsin, Wyoming). **Neotropical:** Mexico (Campeche, Chiapas, Guerrero, Oaxaca, Veracruz).

Thereva argentata Bellardi 1861: 89. Type locality "Messico" [Mexico], Cordova. LT male MRSN. Osten Sacken (1878: 97 cat.; 1887: 163 dist.), Röder (1885b: 340 dist.), Aldrich (1905: 248 cat.), Lyneborg (1969: 401 nom., 402 LT desig., desc. LT, Figs. 24–30 male genit.). **Note 71.**

Psilocephala argentata. Röder (1885b: 340 comb. change, dist.), Williston (1896: 306 desc., dist.), Aldrich (1905: 246 cat.), Kertész (1909:161 cat.), Kröber (1911: 499 male key, 523 desc.; 1912a: 223 male key, 227 sp. list; 1913b: 29 sp. list, 37 male key, 37 male key; 1914a: 39 male key; 1928a: 6 dist., 9 male key), Cole (1923a: 51 note), Wolcott and Otero (1936: 340 cat.), Wolcott (1951: 452 cat.). **Note 71.**

Ozodiceromya argentata. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change).

Ozodiceromyia argentata. Gaimari and Irwin (2000a: 191 sp. list, nom.), Holston (2004: 44 nom.).

Psilocephala univittata. Misidentification, *sensu* Williston (1901: 297 note) nec Bellardi (1861: 190). Gaimari and Irwin (2000a: 191, nom.).

Psilocephala frontalis Cole 1923a: 40. Type locality USA, New York, Rochester. HT male CUIC. Cole (1923a: 35 male key, 36 female key, 40 larva desc., pupa desc., dist., Figs. 2A–C male genit., 43 female habitus, 168–169 larva, 170 pupa; 1925: 85 dist.; 1965: 351 cat.), Johannsen (1928: 764 cat.), Teskey (1976: 33 biol.), Arnaud (1979: 137 remarks), Gaimari and Irwin (2000a: 191 nom., syn. desig. of *argentata* Bellardi).

Psilocephala frontata. Misspelling of *frontalis*. Kröber (1928b: 121). **Note 72.**

Ozodiceromya frontalis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

argentifera (Kröber). **Nearctic:** Mexico (Chihuahua, Durango, Jalisco, Michoacán, Morelos, Nayarit, Puebla, Zacatecas). **Neotropical:** Mexico (Oaxaca).

Phycus argentifer Kröber 1929a: 418. Type locality Mexico, Oaxaca, 16.1 km NE Haujuapan de Leon. NT male ZMHB. Kröber (1929a: Fig. 3 male ant.), Gaimari and Irwin (2000b: 567 NT desig.).

Ozodiceromyia argentifera. Cole (1965: 349 cat., comb. change), Gaimari and Irwin (2000a: 137 phylog., 191 sp. list, Figs. 1–2 phylog., 26 male head, 27 female head, 41 male lateral thorax, 49, 51 basal costal lobe, 52, 54, 65,93–94, 109, 132–133 male genit., 152 female genit.; 2000b: 562 phylog., 566 desc., 568 dist., 585 key, Figs. 1 dist. map, 5–6 cladogram, 7 male head, 8 female head, 14 male lateral thorax, 15 basal costal lobe, 17–19, 23, 26–27, 32–33 male genit., 39 female genit.), Gaimari and Webb (2009: 640 Fig. 10 lateral thorax, Fig. 15 basal costal lobe).

Ozodiceromya argentifera. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list), Poole (1996: 308 sp. list).

arizonensis (Cole). **Nearctic:** USA (Arizona, New Mexico, Utah).

Psilocephala arizonensis Cole 1923a: 45. Type locality USA, Arizona, Chiricahua Mountains. HT male USNM (Type No. 25932). Cole (1923a: 35 male key, 36 female key, Fig. 58 female frons; 1965: 350 cat.), Arnaud (1979: 136 paratypes).

Ozodiceromya arizonensis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia arizonensis. Gaimari and Irwin (2000a: 191 sp. list).

breviventris (Kröber). **Nearctic:** Mexico (Jalisco, Morelos). **Neotropical:** Costa Rica (Guanacaste, San José), El Salvador (Santa Ana), Guatemala (Esquintla, Zacapa), Nicaragua (Estalí).

Psilocephala breviventris Kröber 1928a: 19. Type locality Costa Rica, 8km W San Jose, Farm La Caja. HT male DEI. Kröber (1928a: 6 dist., 10 male key, Fig. 15 male ant.).

Ozodiceromyia breviventris. Gaimari and Irwin (2000a: 191 sp. list, comb. change).

californica (Kröber). **Nearctic:** USA (Arizona, California, Nevada, Utah).

Thereva californica Kröber 1912a: 259. Type locality USA, California. HT male USNM. Kröber (1912a: 248 male key, 252 sp. list; 1913b: 43 male key, 55 sp. list; 1914a: 61 male key), Cole (1923a: 86 male key, 95 trans. orig. desc.; 1965: 353 cat.).

Ozodiceromya californica. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia californica. Gaimari and Irwin (2000a: 191 sp. list, Fig. 42 male ant.), Holston (2004: 47 nom.).

costalis (Loew). **Nearctic:** Mexico (Baja California Norte), USA (California, Idaho, Nevada, Oregon, Utah).

Psilocephala costalis Loew 1869: 11. Type locality USA, California. ST female MCZ (Type No. 10671). Loew (1872b: 125 subsequent usage), Osten Sacken (1878: 96 cat.), Coquillett (1893b: 225 key), Aldrich (1905: 246 cat.), Kertész (1909:161 cat.), Kröber (1912a: 226 female key, 228 sp. list; 1913b: 30 sp. list., 37 female key; 1914a: 42 female key, 50 desc.; 1928b: 120 dist.), Woodworth (1913: 149 sp. list), Cole and Lovett (1921: 242 cat., biol.), Cole (1923a: 35 male key, 36 female key, 50 desc., 51 dist., Figs. 63 female frons, 74 wing, 99 male genit.; 1965: 351 cat.). **Note 73.**

Ozodiceromya costalis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia costalis. Gaimari and Irwin (2000a: 191 sp. list, Fig. 43 male ant.; 2000b: 261 phylog., Figs. 5–6 phylog.).

flavipennis (Cole). **Nearctic:** Canada (Ontario), USA (Alabama, Arkansas, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, Texas, Virginia, West Virginia).

Psilocephala flavipennis Cole 1923a: 42. Type locality USA, Maryland, Cupids Bower Island [Sherwin Island]. HT male USNM (Type No. 25931). Cole (1923a: 35 male key, 36 female key, dist., Figs. 41 female head, 69 wing, 107 male genit.; 1965: 351 cat.), Johannsen (1928: 764 cat.), Arnaud (1979: 137 remarks).

Ozodiceromya flavipennis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia flavipennis. Gaimari and Irwin (2000a: 191 sp. list).

germana (Walker). **Nearctic:** USA (Alabama, Arkansas, Florida, Georgia, North Carolina, Oklahoma, South Carolina).

Thereva germana Walker 1848: 222. Type locality USA, Florida. ST male (2 specimens) BMNH. Osten Sacken (1858: 38 cat.; 1878: 97 cat.), Aldrich (1905: 248 cat.), Kertész (1909: 154 cat.), Kröber (1912a: 248 male key, 250 female key, 254 sp. list; 1913b: 43 male key, 44 female key, 57 sp. list).

Psilocephala germana. Cole (1923a: 74 desc., dist., comb. change; 1965: 351 cat.).

Ozodiceromya germana. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia germana. Gaimari and Irwin (2000a: 191 sp. list, nom.), Holston (2004: 51 nom.).

Psilocephala johnsoni Coquillett 1893b: 228. Type locality USA, Florida, St. Augustine. HT female MCZ (Type No. 7565). Coquillett (1893b: 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 222 male key, 226 female key, 228 sp. list; 1913b: 31 sp. list, 37 female key; 1914a: 42 female key), Cole (1923a: 46 note; 1965: 351 cat.), Gaimari and Irwin (2000a: 191 nom., syn. desig. of *germana* Walker).

Ozodiceromya johnsoni. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Psilocephala notata. Misidentification, *sensu* Cole (1923a: 43) and Kröber (1914a: 38) nec Wiedemann (1821: 114). Gaimari and Irwin (2000a: 191 nom.).

Psilocephala davisi Johnson 1926: 300. Type locality USA, North Carolina, Southport. HT male MCZ (Type No. 7570). Cole (1965: 351 cat.), Gaimari and Irwin (2000a: 191 nom., syn. desig. of *germana* Walker).

Ozodiceromya davisi. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 nom., comb. change), Poole (1996: 308 sp. list).

lateralis (Adams). **Nearctic:** Mexico (Baja California Norte), USA (Arizona, California, Colorado, Nevada, Utah, Wyoming).

Psilocephala lateralis Adams 1904: 444. Type locality USA, Arizona, Bill Williams Fork. HT male SEMC. Kertész (1909: 163 cat.), Kröber (1912a: 224 male key, 228 sp. list; 1913b: 31 sp. list, 35 male key; 1914a: 39 male key, 42 female key, 51 desc.**)**, Cole (1923a: 35 male key, 36 female key, 53 desc., 54 dist., Fig. 62 female frons; 1923b: 461 dist.; 1965: 351 cat.), Irwin and Lyneborg (1981a: 257 desig. replacement name), Poole (1996: 308 nom.).

Ozodiceromyia lateralis. Gaimari and Irwin (2000a: 191 sp. list, nom., revised status).

Ozodiceromya frommeri Irwin and Lyneborg 1981a: 257. Unjustified replacement name for *Psilocephala lateralis* Adams (1904: 444) nec *Thereva lateralis* Eschscholtz (1822: 112). Misspelling of *Ozodiceromyia*. Poole (1996: 308 sp. list).

Ozodiceromyia frommeri. Gaimari and Irwin (2000a: 191 nom., unjustified replacement name, objective syn. of *lateralis* Adams).

levigata (Loew). **Nearctic:** Canada (British Columbia), USA (California, Nevada, Oregon, Washington).

Psilocephala levigata Loew 1876: 319. Type locality USA, California, San Francisco. ST female MCZ (Type No. 10666). Cole (1965: 351 cat.).

Psilocephala laevigata. Misspelling of *levigata*. Osten Sacken (1878: 96 cat.), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 227 female key, 228 sp. list; 1913b: 31 sp. list, 42 female key), Cole (1923a: 36 female key, 53 desc., dist., Fig. 55 female frons).

Psilocephala laerigata. Misspelling of *levigata.* Cole (1923a: 35 male key).

Ozodiceromya levigata. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia levigata. Gaimari and Irwin (2000a: 191 sp. list, nom.).

Psilocephala aldrichii Coquillett 1893b: 227. Type locality USA, California, Los Angeles County. LT male USNM (Type No. 10414). Coquillett (1893b: 224 key), Aldrich (1905: 246 cat.), Kertész (1909: 160 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 224 male key, 227 female key, sp. list, 240 desc.; 1913b: 29 sp. list, 35 male key, 40 female key; 1914a: 39 male key, 42 female key, 52 desc.; 1928b: 120 dist.), Woodworth (1913: 149 sp. list), Cole and Lovett (1921: 242 cat.), Cole (1925: 85 dist.; 1965: 350 cat.), Gaimari and Irwin (2000a: 191 nom., LT desig., syn. desig. of *levigata* Loew).

Psilocephala aldrichi. Misspelling of *aldrichii.* Cole (1923a: 35 male key, 36 female key, 51 desc., 52 dist., Figs. 38 female habitus, 39 male habitus, 42 female frons), Cole and Schlinger (1969: 172 Figs. 104 male, female habitus). **Note 74.**

Ozodiceromya aldrichi. Misspelling of *Ozodiceromyia* and *aldrichii.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change).

Ozodiceromya aldrichii. Misspelling of *Ozodiceromyia*. Poole (1996: 308 sp. list).

livdahli Gaimari and Irwin. **Nearctic:** Mexico (Chihuahua), USA (Arizona, New Mexico). **Neotropical:** Mexico (Sinaloa).

Ozodiceromyia livdahli Gaimari and Irwin 2000b: 570. Type locality USA, Arizona, 8.1 km E Fort Apache. HT male (MEI 038101) CAS. Gaimari and Irwin (2000b: 562 phylog., 572 dist., 581 key, Figs. 2 dist. map, 5–6 phylog., 24, 28 male genit.).

melanoneura (Loew). **Nearctic:** USA (California).

Thereua melanoneura Loew 1872a: 74. Type locality USA, California. ST male MCZ (Type No. 10678). Original misspelling of *Thereva*. Loew (1872b: 250 subsequent usage).

Thereva melanoneura. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 198 key; 1900: 407 dist.,), Aldrich (1905: 248 cat.), Kertész (1909: 155 cat.), Kröber (1912a: 248 male key, 254 sp. list, 260 desc.; 1913b: 43 male key, 58 sp. list), Cole (1923a: 86 male key, 92 desc., Figs. 125 female frons, 145 male genit., 156 wing; 1965: 353 cat.). **Note 75.**

Thereva melaneura. Misspelling of *melanoneura*. Woodworth (1913: 149 sp. list), Curran (1934: 186 Fig. 8 wing; 1965: 186 Fig. 8 wing).

Ozodiceromya melanoneura. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia melanoneura. Gaimari and Irwin (2000a: 191 sp. list), Holston (2004: 56 nom.).

metallica (Kröber). **Nearctic:** USA (Arizona, Colorado, New Mexico, Texas).

Thereva metallica Kröber 1914a: 68. Type locality USA, New Mexico, Las Vegas Hot Springs. HT male USNM (Type No. 26029). Kröber (1914a: 60 male key), Cole (1923a: 130 desc.; 1965: 353 cat.), Holston (2004: 56 fixed spelling as *metallica* as First Revisor).

Thereva mettalica. Misspelling of *metallica*. Kröber (1914a: 61 male key, original misspelling), Holston (2004: 56 nom.).

Thereva melanoneura. Misidentification, *sensu* Cole (1923a: 91) nec Loew (1872a: 74). Gaimari and Irwin (2000a: 191 nom.).

Ozodiceromya metallica. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia metallica. Gaimari and Irwin (2000a: 191 sp. list, nom.), Holston (2004: 56 nom.).

mexicana Bigot. **Nearctic:** Mexico (Coahuila, Federal District, Hidalgo, Jalisco, México, Michoacán, Morelos, Nuevo Léon, San Luis Potosí). **Neotropical:** Mexico (Guerrero, Oaxaca, Veracruz).

Ozodiceromyia mexicana Bigot 1890: 321. Type locality Mexic[o]. HT female (MEI 103180) BMNH (Type No. 241992). Bigot (1890: 323 key), Aldrich (1905: 246 cat.), Kertész (1909: 169 cat.), Becker (1912: 294 comb. in *Phycus* Walker), Kröber (1912a: 210 key, 211 desc., dist.; 1913b: 6 key, 16 desc., sp. list; 1914a: 33 desc.), Cole (1923a: 19 desc.), Gaimari and Irwin, (2000a: 189 nom, 192 sp. list; 2000b: 563 nom, 576 desc., 581 dist., biol., 586 key, Figs. 3 dist., 5, 6 phylog., 9 male head, 10 female head, 13 flagellum apex, 16 male hind coxa, 21 ventral lobe, 25, 30–31, 34–35 male genit., 41 female genit.), Gaimari and Webb (2009: 645 biol.).

Phycus mexicanus. Becker (1912: 294 comb. change).

Ozodiceromya mexicana. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, Figs. 5 midcoxa, 28 ant., 188–193 male genit.), Gaimari and Irwin (2000b: 576 nom.).

Ozodiceronyma mexicana. Misspelling of *Ozodiceromyia.* Godman and Salvin (1901: 378 sp. list), Gaimari and Irwin (2000b: 576 nom.).

Euphycus setosus Kröber 1912a: 211. Type locality Mexico, Guadelupe. LT male NHMW. Kröber (1913b: 12 sp. list), Irwin and Lyneborg (1981a: 257 syn. desig. of *mexicana* Bigot), Gaimari and Irwin (2000a: 192 nom.; 2000b: 576 LT desig., nom.). **Note 76.**

Ozodiceromya setosa. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 nom., comb. change), Gaimari and Irwin (2000b: 576 nom.).

milleri (Irwin). **Nearctic:** Mexico (Puebla). **Neotropical:** Mexico (Oaxaca).

Breviperna milleri Irwin 1977a: 294. Type locality Mexico, Puebla, 8 km S Tecomachalco. HT female (MEI 004055) MEIC. **Note 77.**

Ozodiceromya milleri. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change).
Ozodiceromyia milleri. Gaimari and Irwin (2000a:192 sp. list).

nanella (Cole). **Nearctic:** Canada (British Columbia), Mexico (Baja California Norte), USA (Arizona, California, Colorado, Idaho, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Thereva pygmaea Cole 1923a: 89. Type locality USA, California, San Bernardino County, Glen Martin, San Bernardino Mountains. HT male USNM (Type No. 25935). Preoccupied by *Thereva pygmaea* Fallén (1815: 234). Cole (1923a: 86 male key, 89 female key, 91 dist., Figs. 127 female frons, 143 ant., 144 male genit., 165 wing), James (1949: 11 male genit., 13 desc., dist.), Cole (1965: 353 nom.), Poole (1996: 309 nom.), Gaimari and Irwin (2000a: 192 nom.), Holston (2004: 60 nom.).

Thereva nana Cole 1959: 148. Replacement name for *Thereva pygmaea* Cole (1923a: 89) nec Fallén (1815: 234). Preoccupied by *Thereva nana* Fallén (1815: 233). Cole (1965: 353 nom.), Poole (1996: 309 nom.), Gaimari and Irwin (2000a: 192 nom.), Holston (2004: 57 nom.).

Thereva nanella Cole 1960b: 118. Replacement name for *Thereva nana* Cole (1959: 148) nec Fallén (1815: 233). Cole (1965: 353 cat.).

Ozodiceromya nanella. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia nanella. Gaimari and Irwin (2000a: 137 phylog., 192 nom., sp. list, Figs. 1–2 phylog., 24 male head, 25 female head, 44 foreleg, 64, 91–92, 128–129 male genit.), Holston (2004: 57 nom.).

Thereva nigra. Misidentification, *sensu* Kröber (1914a: 60 male key, 62 female key, 69 desc.; 1928b: 119 desc.) nec Say (1823: 40). Gaimari and Irwin (2000a: 192 nom.).

nigrimana (Kröber). **Nearctic:** Mexico (Chihuahua, Morelos, Nayarit, Sonora), USA (Arizona, California, Colorado, Idaho, Kansas, Nebraska, Nevada, New Mexico, Oklahoma, Texas, Utah, Wyoming). **Neotropical:** Mexico (Sinaloa).

Psilocephala nigrimana Kröber 1912a: 238. Type locality USA, Colorado, Pueblo. HT female NHMW. Kröber (1912a: 226 female key, 229 sp. list; 1913b: 32 sp. list, 39 female key; 1914a: 42 female key), Cole (1923a: 51 note; 1965: 351 cat.).

Ozodiceromya nigrimana. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Ozodiceromyia nigrimana. Gaimari and Irwin (2000a: 192 sp. list, nom., Fig. 108 male genit.).

Psilocephala platancala. Misidentification, *sensu* Cole (1923a: 35 male key, 36 female key, 48 desc., 49 dist, Figs. 44 female head, 76 wing, 90 ant.; 1923b: 461 dist.; 1965: 315 cat.) and Kröber (1928b: 121 dist.) nec Loew (1876: 321). Gaimari and Irwin (2000a: 192 nom.).

Psilocephala coloradensis James 1936: 341. Type locality USA, Colorado, Boulder. HT male CSUC. James (1936: 341 desc., 312 dist.), Cole (1965: 351 cat.), Arnaud (1979: 137 paratypes), Gaimari and Irwin (2000a: 192 nom., syn. desig. of *nigrimana* Kröber).

Ozodiceromya coloradensis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

notata (Wiedemann). **Nearctic:** Canada (Ontario, Quebec), USA (Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin).

Thereva notata Wiedemann 1821: 114. Type locality USA, Georgia, Savannah. ST male NHMW. Wiedemann (1828: 236 desc.), Osten Sacken (1858: 38 cat.), Zimsen (1954: 11 type list).

Psilocephala notata. Osten Sacken (1878: 95 cat., comb. change), Coquillett (1893b: 225 key, 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1912a: 224 male key, 227 female key, 229 sp. list, 243 desc.; 1913b: 32 sp., 35, 39 male key, 40 female key; 1914a: 38 male key, 42 female key, 52 desc.), Cole and Lovett (1921: 242 cat.), Cole (1923a: 35 male key, 36 female key, 43 desc., Figs. 75 wing, 85 ant.; 1965: 351 cat.). **Note 78.**

Ozodiceromya notata. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Ozodiceromyia notata. Gaimari and Irwin (2000a: 137 phylog., 192 sp. list, nom., Figs. 1–2 phylog., 28 male head, 29 female head, 66, 95–96, 134–135 male genit., 153 female genit.), Holston (2004: 458 nom.), Gaimari and Webb (2009: 638 Fig. 8 male head, Fig. 9 female head).

Thereva nigra Say 1823: 40. Type locality USA, Pennsylvania. LT female (MEI 084101) NHMW. Wiedemann (1828: 235 desc.), Osten Sacken (1858: 38 cat.; 1878: 95 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 156 cat.), Kröber (1912a: 251 female key, 254 note; 1913b: 44 female key, 59 sp. list; 1914a: 61 male key, 63 female key, 69 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 129 nom., rep. desc., note; 1965: 354 cat. as incertae sedis), Gaimari and Irwin (2000a: 192 nom., LT desig., syn. desig. of *notata* Wiedemann), Holston (2004: 57 nom). **Note 79.**

Psilocephala nigra. Wulp (1882: 118 dist., comb. change), Osten Sacken (1887: 163 dist.). **Note 80.**

Ozodiceromya nigra. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Thereva hoemorrhoidalis Macquart 1841a: 304. Type locality "De la Caroline" [Carolina]. ST male MNHN (catalogue number 1120). Macquart (1841b: 26 subsequent usage), Gaimari and Irwin (2000a: 192 nom., syn. desig. of *notata* Wiedemann), Holston (2004: 53 nom.).

Thereva haemorrhoidalis. Misspelling of *hoemorrhoidalis*. Osten Sacken (1858: 38 cat.).

Psilocephala haemorrhoidalis. Misspelling of *hoemorrhoidalis*. Osten Sacken (1878: 96 nom., syn. of *nigra* Say), Coquillett (1893b: 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 162 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 224 male key, 227 female key, 228 sp. list, 241 desc.; 1913b: 30 sp. list, 35, 39 male key, 40 female key; 1914a: 40 male key, 42 female key, 53 note; 1928b: 121 desc., dist.), Malloch (1917: 397 larvae, Plate LVI Fig. 9 larval thoracic spiracle, Fig. 10 lateral larval habitus, Fig. 12 dorsal pupal habitus, Fig. 13 pupal apex, Plate XVII Fig. 1 ventral larval head), Cole (1923a: 35 male key, 36 female key, 38 desc., 40 dist., Figs. 2D–E male genit., 47 female habitus, 48 male habitus, 171, 172 pupa; 1965: 351 cat.), Johannsen (1928: 764 cat.), Brimley (1938: 340 cat.), Poole (1996: 308 nom.).

Psilocephala hoemorrhoidalis. Cole (1965: 351 cat.).

Ozodiceromya hoemorrhoidalis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Ozodiceromyia hoemorrhoidalis. Holston (2004: 53 nom.).

obliquefasciata (Kröber). **Nearctic:** Mexico (Chihuahua). **Neotropical:** Costa Rica (San José), Guatemala, Mexico (Chiapas).

Psilocephala obliquefasciata Kröber 1911: 504. Type locality Costa Rica. ST male (2 specimens), ST female (2 specimens) USNM, ST male MNHN. Kröber (1911: 498 male key, 499 female key; 1913b: 33 sp. list, 37 male key, female key; 1928a: 6 dist., 8 male key, 10 female key, 15 desc., Fig. 8 male ant.).

Ozodiceromya obliquefasciata. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change).

Ozodiceromyia obliquefasciata. Gaimari and Irwin (2000a: 192 sp. list).

parargentifera Gaimari and Irwin. **Nearctic:** Mexico (Michoacán, Puebla). **Neotropical:** Mexico (Guerrero).

Ozodiceromyia parargentifera Gaimari and Irwin 2000b: 581. Type locality Mexico, Guerrero, 6.4 km W Chilpancingo. HT male (MEI 027017) CAS. Gaimari and Irwin (2000b: 584 dist., 586 key, Figs. 4 dist. map, 5–6 phylog., 36–37 male genit., 40 female genit.).

platancala (Loew). **Nearctic:** Canada (Alberta, Manitoba, Saskatchewan), USA (Colorado, Kansas, Montana, North Dakota, Oklahoma, Texas, Utah, Wyoming).

Psilocephala platancala Loew 1876: 321. Type locality USA, Texas. ST female MCZ (Type No. 10673). Osten Sacken (1878: 96 cat.), Coquillett (1893b: 225 key), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1912a: 227 female key, 230 sp. list; 1913b: 33 sp. list, 40 female key; 1914a: 40 male key, 42 female key, 55 desc.), Cole (1923a: 35 male key, 36 female key, 48 desc., Figs. 76 wing, 90 ant.; 1925: 85 dist.; 1965: 351 cat.).

Ozodiceromya platancala. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Ozodiceromyia platancala. Gaimari and Irwin (2000a:192 sp. list).

Psilocephala albertensis Cole 1925: 86. Type locality Canada, Alberta, Lethbridge. HT male CNC (Type No. 448). Cole (1965: 350 cat.), Gaimari and Irwin (2000a: 192 nom., syn. desig. of *platancala* Loew).

Ozodiceromya albertensis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 257 sp. list, comb. change), Poole (1996: 308 sp. list).

Psilocephala montiradicis James 1949: 10. Type locality USA, Colorado, Fort Collins. HT male CSUC. James (1949: 10 dist., Fig. 1 male genit.), Cole (1965: 351 cat.), Gaimari and Irwin 2000a: 192 nom., syn. desig. of *platancala* Loew).

Ozodiceromya montiradicis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 308 sp. list).

proxima (Schiner). **Neotropical:** Costa Rica (Puntarenas, San José), Venezuela.

Psilocephala proxima Schiner 1868: 147. Type locality Venezuela. ST male (2 specimens) NHMW. Kertész (1909: 164 cat.), Kröber (1911: 499 male key, 513 desc.; 1913b: 33 sp. list, 37 male key; 1928a: 7 dist., 9 male key).

Ozodiceromyia proxima. Gaimari and Irwin (2000a:192 sp. list, nom., comb. change).

Psilocephala stigmaticalis Schiner *sensu* Schiner (1868: 146 *partim*, 1 paralectotype). Mixed syntype series. Gaimari and Irwin (2000a: 193).

rugifrons (Kröber). **Nearctic:** Mexico (Chihuahua, Durango).

Psilocephala rugifrons Kröber 1914a: 54. Type locality Mexico, Chihuahua, Sierra Madre, head of Rio Piedras Verdes. HT female USNM (Type No. 26025). Kröber (1914a: 42 female key), Cole (1923a: 78 trans. orig. desc.).

Ozodiceromya rugifrons. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 258 sp. list, comb. change).

Ozodiceromyia rugifrons. Gaimari and Irwin (2000a:192 sp. list).

schroederi (Kröber). **Nearctic:** Mexico (Puebla). **Neotropical:** Costa Rica (Guanacaste, Limón, Puntarenas, San José), Guatemala, Mexico (Chiapas).

Psilocephala schroederi Kröber 1911: 503. Type locality Costa Rica. HT female USNM (Type No. 24280). Kröber (1911: 500 female key; 1913b: 34 sp. list, 37 female key; 1928a: 7 dist., 11 female key).

Ozodiceromya schroederi. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 258 sp. list, comb. change).

Ozodiceromyia schroederi. Gaimari and Irwin (2000a:192 sp. list).

signatipennis (Cole). **Nearctic:** Canada (Alberta, British Columbia, Manitoba), Mexico (Aguascalientes, Baja California Norte, Baja California Sur, Chihuahua, Durango, Sonora), USA (Arizona, California, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Texas, Utah, Washington, Wyoming).

Psilocephala signatipennis Cole 1923a: 47. Type locality USA, Oregon, Hood River. HT male USNM (Type No. 25933). Cole (1923a: 34 male key, 36 female key, Figs. 93 ant., 103 male genit.; 1923b: 461 dist.; 1965: 352 cat.), Kröber (1928b: 120 desc., dist.), Arnaud (1979: 138 paratypes).

Ozodiceromya signatipennis. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 258 sp. list, comb. change, Fig. 29 ant.), Poole (1996: 309 sp. list).

Ozodiceromyia signatipennis. Irwin and Lyneborg (1981b: Fig. 14 wing), Gaimari and Irwin (2000a:192 sp. list; 2000b: 562 phylog., Figs. 5–6 phylog., 11 male head, 12 female flagellum, 20, 22, 29, 38 male genit.), Buck *et al.* (2009: 110 Fig. 65 wing), Gaimari and Webb (2009: 640 Fig. 17 wing).

subnotata (Johnson). **Nearctic:** USA (Florida, Georgia).

Psilocephala subnotata Johnson 1926: 299. Type location USA, Florida, St. Augustine. ST male (1 specimen), ST female (1 specimen), MCZ (Type No. 7564). Brimley (1938: 340 cat.), Cole (1965: 352 cat.).

Ozodiceromya subnotata. Misspelling of *Ozodiceromyia.* Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Ozodiceromyia subnotata. Gaimari and Irwin (2000a: 192 sp. list).

univittata (Bellardi). **Nearctic:** Mexico (Federal District, Hidalgo, Jalisco, México, Michoacán, Morelos, Nayarit, Puebla, Tlaxcala, Zacatecas). **Neotropical:** Costa Rica (Alajuela, Guanacaste, Heredia, Puntarenas), El Salvador, Guatemala, Honduras, Mexico (Chiapas, Guerrero, Oaxaca, Sinaloa, Veracruz), Nicaragua.

Psilocephala univittata Bellardi 1861: 90. Type locality Mexico, Puebla. ST female, depository unknown (in orig. descr. as "Collezioni di Saussure, Bigot e Bellardi"). Bellardi (1861: 90 key), Osten Sacken (1878: 96 cat.; 1887: 163 dist.), Williston (1901: 297 misidentification of *argentata* Macquart), Aldrich (1905: 247 cat.),

Kertész (1909: 165 cat.), Kröber (1912a: 224 male key, 227 female key, 231 sp. list; 1913b: 34 sp. list, 39 male key, 40 female key; 1914a: 42 female key, 54 desc., 55 dist.), Cole (1923a: 46 trans. orig. desc., note). **Note 81.**

Ozodiceromya univittata. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change).

Ozodiceromyia univittata. Gaimari and Irwin (2000a:192 sp. list).

xanthobasis (James). **Nearctic:** USA (Colorado, New Mexico, Wyoming).

Thereva xanthobasis James 1949: 12. Type locality USA, Colorado, Fort Collins. HT male CSUC. James (1949: Fig. 2 male genit.), Cole (1965: 354 cat.).

Ozodiceromya xanthobasis. Misspelling of *Ozodiceromyia*. Irwin and Lyneborg (1981a: 258 sp. list, comb. change), Poole (1996: 309 sp. list).

Ozodiceromyia xanthobasis. Gaimari and Irwin (2000a: 192 sp. list), Holston (2004: 65 nom.).

Genus PALLICEPHALA Irwin and Lyneborg

PALLICEPHALA Irwin and Lyneborg 1981a: 206. Type species *Psilocephala variegata* Loew, 1870 by original designation. Irwin and Lyneborg (1981a: 201 key, 207 sp. list; 1981b: 519 key), Webb and Irwin (1991a: 870 phylog., 875 nom., desc., 876 sp. key, Fig. 1 phylog.), Poole (1996: 308 sp. list), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641, 643 key). This genus is Nearctic in distribution, occurring in Canada and USA.

flavipilosa (Cole). **Nearctic:** USA (California).

Psilocephala variegata flavipilosa Cole 1923a: 62. Type locality USA, California, Paso Robles. HT male (MEI 005960) CAS (Type No. 01485). Cole (1923a: 34 male key, 37 female key, Figs. 59 female frons, 80 ant.; 1965: 352 cat.), Arnaud (1979: 138 type data). **Note 82.**

Pallicephala flavipilosa. Irwin and Lyneborg (1981a: 207 sp. list, comb. change, revised status), Webb and Irwin (1991a: 870 phylog., 877 key, nom., desc., 879 dist., Figs. 1 phylog., 15–20 male genit. 21–22 female genit.), Poole (1996: 309 sp. list).

occidentalis (Cole). **Nearctic:** Canada (British Columbia), USA (California, Oregon, Washington).

Psilocephala variegata occidentalis Cole 1923a: 61. Type locality USA, Oregon, Corvallis. HT male (MEI 005962) CAS (Type No. 01484). Cole (1923a: 34 male key, Figs. 78 wing, 102 male genit.; 1965: 352 cat.), Arnaud (1979: 138 type data).

Pallicephala occidentalis. Irwin and Lyneborg (1981a: 208 sp. list, comb. change, revised status), Webb and Irwin (1991a: 870 phylog., 876 key, 879 nom., desc., 883 dist., Figs. 1 phylog., 23–28 male genit., 29–30 female genit., 80 dist. map), Poole (1996: 309 sp. list).

Psilocephala fuscipennis Cole 1923a: 62. Type locality USA, Washington, Clallam County, Forks. HT female (MEI 005959) CAS (Type No. 01487). Cole (1923a: 37 female key, Fig. 65 female frons; 1965: 351 cat.), Arnaud (1979: 137 type data), Webb and Irwin (1991a: 879 nom., syn. desig. of *occidentalis* Cole), Poole (1996: 309 nom.).

Pallicephala fuscipennis. Irwin and Lyneborg (1981a: 208 sp. list, comb. change).

pachyceras (Williston). **Nearctic:** Canada (British Columbia), USA (California, Oregon, Washington).

Thereva crassicornis Williston 1886: 293. Type locality USA, California. LT male (MEI 005958) SEMC. Preoccupied by *Thereva crassicornis* Bellardi (1861: 88). Woodworth (1913: 149 sp. list), Cole (1923a: 79 nom.), Lyneborg (1968b: 167 nom., desc., Figs. 43–50 male genit.), Irwin and Lyneborg (1981: 208 nom., as syn. of *Pallicephala willistoni*), Webb and Irwin (1991a: 893 nom., as syn. of *Pallicephala willistoni*, 895 LT desig.), Poole (1996: 309 nom., as syn. of *Pallicephala willistoni*), Gaimari and Irwin (2000a: 187 nom.), Holston (2004: 59 nom.). **Note 83.**

Psilocephala crassicornis. Coquillett (1893b: 223 key, comb. change), Kertész (1909: 161 cat.), Cole (1923a: 79 nom.), Gaimari and Irwin (2000a: 187 nom.).

Dialineura crassicornis. Kröber (1912a: 216 sp. list, comb. change; 1914a: 34 note), Cole and Lovett (1921: 243 cat., biol.), Cole (1923a: 79 nom., desc., 82 dist., Figs. 109 male habitus, 110 male genit.; 1965: 352 cat.), Lyneborg (1968b: 149 nom.), Gaimari and Irwin (2000a: 187 nom.).

Thereva pachyceras Williston 1908: 206. Replacement name for *Thereva crassicornis* Williston (1886: 293) nec Bellardi (1861: 88). Gaimari and Irwin (2000a: 187 nom., clarified status), Holston (2004: 59 nom.).

Pallicephala pachyceras. Gaimari and Irwin (2000a: 187 nom., clarified status), Webb and Metz (2003a: Figs. 1a, 1b phylog.), Webb (2005: 8 phylog.), Gaimari and Webb (2009: 638 Fig. 5 male ant.).

Dialineura willistoni Cole 1965: 352. Unjustified replacement name for *Thereva crassicornis* Williston (1886: 293) nec Bellardi (1861: 88). Gaimari and Irwin (2000a: 187 nom., clarified status).

Thereva willistoni. Lyneborg (1968b: 167 nom., comb. change, desc., Figs. 43–50 male genit.), Gaimari and Irwin (2000a: 187 nom).

Pallicephala willistoni. Irwin and Lyneborg (1981a: 208 sp. list, comb. change; 1981b: Fig. 5 male ant.), Webb and Irwin (1991a: 870 phylog., 876 key, 893 nom., desc., Figs. 69 male ant., 70–76 male genit., 77 female head, 78–79 female genit., 81 dist. map), Poole (1996: 309 sp. list), Gaimari and Irwin (2000a: 187 nom).

quebecensis Webb and Irwin. **Nearctic:** Canada (Quebec, Saskatchewan).

Pallicephala quebecensis Webb and Irwin 1991a: 883. Type locality Canada, Quebec, Great Whale River. HT male (MEI 006739) CNC (Type No. 20890). Webb and Irwin (1991a: 870 phylog., 877 key, 885 dist., Figs. 1 phylog., 31–36 male genit., 37–38 female genit., 82 dist.), Poole (1996: 309 sp. list).

slossonae (Coquillett). **Nearctic:** Canada (Nova Scotia, Ontario), USA (Connecticut, Michigan, New Hampshire, Pennsylvania, Vermont).

Psilocephala slossonae Coquillett 1893b: 227. Type locality USA, New Hampshire, Franconia. HT female (MEI 006704) MCZ (Type No. 27050). Cole (1965: 352 cat., corrected spelling as First Reviser), Poole (1996: 309 nom.). **Note 84.**

Psilocephala slossoni. Incorrect original spelling. Coquillett (1893b: 223 key, 227 desc.). Aldrich (1905: 247 cat.), Kertész (1909: 165 cat.), Kröber (1912a: 225 female key, 231 sp. list; 1913b: 34 sp. list, 37 female key; 1914a: 41 female key), Cole (1923a: 37 female key, 64 note; 1965: 352 cat.), Irwin and Lyneborg (1981a: 234 nom.), Webb and Irwin (1991a: 885 nom.). **Note 84.**

Brachylinga? slossonae. Irwin and Lyneborg (1981a: 234 sp. list, comb. change).

Pallicephala slossonae. Webb and Irwin (1991a: 870 phylog., 876 key, 885 nom., desc., comb. change, 887 dist., Figs. 1 phylog., 39–44 male genit., 45–46 female genit., 82 dist. map), Webb and Metz (2003a: 372 phylog.), Webb (2005a: 6 phylog., Fig. 1 phylog.).

Pallicephala slossoni. Misspelling of *slossonae*. Poole (1996: 309 sp. list).

variegata (Loew). **Nearctic:** Canada (New Brunswick, Ontario, Prince Edward Island), USA (Indiana, Michigan New York, Wisconsin).

Psilocephala variegata Loew 1870: 170. Type locality Canada. HT male (MEI 005967) MCZ (Type No. 10668). Loew (1872a: 74 desc.; 1872b: 208 subsequent usage), Osten Sacken (1878: 96 cat.), Coquillett (1893b: 224 key), Aldrich (1905: 247 cat.), Kertész (1909: 165 cat.), Kröber (1912a: 224 male key, 231 sp. list; 1913b: 34 sp. list, 39 male key; 1914a: 40 male key), Cole (1923a: 34 male key, 37 female key, 60 desc.; 1925: 85 dist.; 1965: 352 cat.), Johannsen (1928: 764 cat.), Arnaud (1979: 138 neallotype). **Note 85.**

Psilocephalae variegatae. Misspelling of *Psilocephala* and *variegata*. Loew (1872a: 74 desc.).

Pallicephala variegata. Irwin and Lyneborg (1981a: 208 sp. list, comb. change, Fig. 4 midcoxa), Webb and Irwin (1991a: 870 phylog., 877 key, 887 nom., desc., 889 dist., Figs. 1 phylog., 47 male ant., 48 male max. palp., 49 male wing, 50–57 male genit., 58 female frons, 50–60 female genit., 82 dist. map), Poole (1996: 309 sp. list).

westcotti Webb and Irwin. **Nearctic:** USA (Oregon).

Pallicephala westcotti Webb and Irwin 1991a: 891. Type locality USA, Oregon, Waldport. HT male (MEI 005995) INHS. Webb and Irwin (1991a: 870 phylog., 876 key, 893 dist., Figs. 1 phylog., 61–66 male genit., 67–68 female genit.), Poole (1996: 309 sp. list).

Genus PANDIVIRILIA Irwin and Lyneborg

PANDIVIRILIA Irwin and Lyneborg 1981a: 212. Type species *Psilocephala limata* Coquillett, 1894 by original designation [= *Pandivirilia conspicua* (Walker, 1848)]. Irwin and Lyneborg (1981a: 202 key, 214 sp. list, Fig. 1 phylog.; 1981b: 519, 522 key), Poole (1996: 309 sp. list), Webb and Metz (2003a: 375 key, nom., desc.), Holston *et*

al. (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641, 644 key). This genus is Holarctic in distribution, occurring in the Nearctic Region in Canada, Mexico, and the USA.

VIRILIRICTA Irwin and Lyneborg 1981a: 208. Type species *Psilocephala montivaga* Coquillett, 1893b by original designation. Irwin and Lyneborg (1981a: 202 key, 210 sp. list; 1981b: 521 key), Lyneborg (1986b: 86 nom., syn. desig. of *Pandivirilia* Irwin and Lyneborg), Poole (1996: 310 sp. list), Webb and Metz (2003a: 376 nom.).

albifrons (Say). **Nearctic:** Canada (Ontario), USA (Connecticut, Florida, Georgia, Illinois, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, Texas, Virginia, Wisconsin).

Thereva albifrons Say 1829: 156. Type locality USA, Illinois, Vermilion County, Forest Glen Forest Preserve, 8.1 km SE Westville. NT male (MEI 007621) INHS. Osten Sacken (1858: 38 cat.; 1878: 96 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 149 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 249 male key, 250 female key, 252 sp. list; 1913b: 43 male key, 44 female key, 53 dist.; 1914a: 61 male key), Cole (1923a: 87 male key, 102 desc.; 1965: 352 cat.), Webb and Metz (2003a: 378 NT desig.).

Spiriverpa albifrons. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Holston (2004: 42 nom.).

Pandivirilia albifrons. Webb and Metz (2003a: 371 phylog., 376 key, 377 nom., desc., comb. change, 378 dist., Figs. 1 phylog., 2, 9, 16, 23, 30, 37, 44, 51 male genit., 58 female genit., 64 dist. map).

Thereva nitoris Coquillett 1894: 101. Type locality USA, Missouri. HT female (MEI 170173) USNM (Type No. 993). Aldrich (1905: 248 cat.), Kertész (1909: 156 cat.), Kröber (1912a: 250 female key, 255 sp. list; 1913b: 44 female key, 59 sp. list; 1914a: 63 female key), Cole (1923a: 88 female key, 126 note; 1965: 354 cat.), Webb and Metz (2003a: 377 nom., syn. desig. of *albifrons* Say).

Spiriverpa nitoris. Irwin and Lyneborg (1981a: 216 nom., comb. change), Poole (1996: 309 sp. list), Holston (2004: 57 nom.).

Thereva borealis Cole 1923a: 126. Type locality USA, Michigan, [East Lansing], Michigan Agricultural College. HT female CUIC. Cole (1923a: 88 female key; 1965: 353 cat.), Brimley (1938: 340 cat.), Webb and Metz (2003a: 377 nom., syn. desig. of *albifrons* Say).

Dichoglena borealis. Irwin and Lyneborg (1981a: 211 comb. change, sp. list), Poole (1996: 308 sp. list), Holston (2004: 46 nom.).

conspicua (Walker). **Nearctic:** Canada (Alberta, British Columbia, Newfoundland, Nova Scotia, Ontario, Quebec, Saskatchewan, Yukon Territory), Mexico (Baja California Norte), USA (Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Idaho, Illinois, Maine, Maryland, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Mexico, New York, Oregon, Pennsylvania, Utah, Vermont, Washington, West Virginia, Wisconsin, Wyoming).

Thereva conspicua Walker 1848: 223. Type locality Canada, Nova Scotia. LT female BMNH (Type No. 241958). Osten Sacken (1858: 38 cat.; 1878: 97 cat.), Aldrich (1905: 248 cat.), Kertész (1909: 153 cat.), Kröber (1912a: 249 male key, 250 female key 253 sp. list; 1913b: 43 male key, 56 sp. list; 1914a: 61 male key), Cole (1923a: 75 LT designation according to ICZN Article 74.5), Webb and Metz (2003a: 384 invalid LT desig.). **Note 86.**

Psilocephala conspicua. Cole (1923a: 74 rep. desc., comb. change; 1965: 351 cat.), Irwin and Lyneborg (1981a: 227 sp. list), Poole (1996: 309 sp. list), Holston (2004: 48 nom.).

Pandivirilia conspicua. Webb and Metz (2003a: 371 phylog., 377 key, 381 nom., 383 desc., comb. change, 384 dist., Figs. 1 phylog., 3, 10, 17, 24, 31, 38, 45, 52 male genit., 59 female genit., 65 dist. map), Webb (2005a: 5 phylog., Fig. 1 phylog.).

Psilocephala limata Coquillett 1894: 99. Type locality USA, Washington, West Washington Territory. LT female USNM (Type No. 10419). Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 228 sp. list; 1913b: 31 sp. list, 39 female key; 1914a: 41 female key, 49 desc.), Cole (1923a: 35 male key, 37 female key, 58 desc., 60 dist., Figs. 49 female frons, 71 wing, 86 ant., 101 male genit., 173 pupa; 1925: 85 dist; 1965: 351 cat.), Teskey (1976: 33 biol.), Webb and Metz (2003a: 382 nom., syn. desig. of *conspicua* Walker, 384 LT desig.). **Note 87.**

Psilocephala limbata. Misspelling of *limata*. Kröber (1912a: 225 female key).

Pandivirilia limata. Irwin and Lyneborg (1981a: 214 sp. list, comb. change, Figs. 12 hind femur, 14 male head, 32 wing), Poole (1996: 309 sp. list).

Psilocephala canadensis Cole 1923a: 57. Type locality Canada, Ontario, Trenton. HT female (MEI 009388) CNC (Type No. 1204). Cole (1923a: 37 female key, Fig. 53 female frons; 1965: 351 cat.), Arnaud (1979: 137 remark), Webb and Metz (2003a: 382 nom., syn. desig. of *conspicua* Walker). **Note 88.**

Viriliricta canadensis. Irwin and Lyneborg (1981a: 210 sp. list, comb. change), Poole (1996: 310 sp. list).

Psilocephala pollinosa Cole 1923a: 72. Type locality USA, California, Tuolumne Meadows. HT male CAS (Type No. 01489). Cole (1923a: 35 male key, Fig. 92 ant.; 1965: 351 cat.), Arnaud (1979: 137 type data), Webb and Metz (2003a: 382 nom., syn. desig. of *conspicua* Walker).

Pandivirilia pollinosa. Irwin and Lyneborg (1981a: 214 sp. list, comb. change), Poole (1996: 309 sp. list).

constricta Webb. **Nearctic:** USA (California).

Pandivirilia constricta Webb in Webb and Metz 2003a: 389. Type locality USA, California, Angeles National Forest, Angeles Forest Highway, 2.4 km NNW Angeles Crest Highway. HT male (MEI 079857) INHS. Webb and Metz (2003a: 371 phylog., 376 key, 390 dist., Figs. 1 phylog., 4, 11, 18, 25, 32, 39, 46 male genit., 53 female genit., 64 dist. map).

grandis (Johnson). **Nearctic:** Canada (Ontario, Quebec), USA (Connecticut, Maine, Massachusetts, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia).

Psilocephala grandis Johnson 1902: 241. Type locality Canada, Quebec, Rouville County. HT female MCZ (Type No. 7569). Aldrich (1905: 247 cat.), Kertész (1909: 162 cat.), Kröber (1912a: 225 female key, 228 sp. list), Cole (1923a: 37 female key, 57 note; 1965: 351 cat.), Johannsen (1928: 764 cat.).

Viriliricta grandis. Irwin and Lyneborg (1981a: 210 sp. list, comb. change), Poole (1996: 310 sp. list).

Pandivirilia grandis. Webb and Metz (2003a: 371 phylog., 390 nom., desc., comb. change, 377 key, 391 dist., Figs. 1 phylog., 5, 12, 19, 26, 33, 40, 47, 54 male genit., 60 female genit., 66 dist. map).

melampodia (Loew). **Nearctic:** Canada (Nova Scotia, Ontario, Quebec), USA (Arkansas, Connecticut, Florida, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, West Virginia, Wisconsin).

Psilocephala melampodia Loew 1869: 9. Type locality USA, Illinois. LT female MCZ (Type No. 10665). Loew (1872b: 123 subsequent usage), Coquillett (1893b: 223 key), Osten Sacken (1878: 95 cat.), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 225 female key, 229 sp. list, 235 desc.; 1913b: 32 sp. list, 39 female key; 1914a: 41 female key, 50 desc.), Malloch (1917: 398 larva), Cole (1923a: 36 female key, 60 note, Figs. 54 female frons, 89 ant.; 1965: 351 cat.), Johannsen (1928: 764 cat.), Brimley (1938: 340 cat.), Webb and Metz (2003a: 393 LT desig.). **Note 89.**

Dichoglena melampodia. Irwin and Lyneborg (1981a: 212 sp. list, comb. change), Poole (1996: 308 sp. list).

Pandivirilia melampodia. Webb and Metz (2003a: 371 phylog., 376 key, 392 nom., desc., comb. change, 393 dist., Figs. 1 phylog., 6, 13, 20, 27, 34, 41, 48, 55 male genit., 61 female genit., 67 dist. map).

Psilocephala argentifrons Cole 1923a: 56. Type locality USA, Pennsylvania, Rockville. HT male CAS (Type No. 11631). Cole (1923a: 36 male key, 57 larva, pupa desc., Figs. 64 male frons, 94 ant., 100 male genit., 174 pupa; 1965: 350 cat.), Arnaud (1979: 136 type data), Webb and Metz (2003a: 392 nom., syn. desig. of *melampodia* Loew). **Note 90.**

Pandivirilia argentifrons. Irwin and Lyneborg (1981a: 214 sp. list, comb. change), Poole (1996: 309 sp. list).

montivaga (Coquillett). **Nearctic:** Mexico (Baja California Norte), USA (Arizona, Arkansas, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Psilocephala montivaga Coquillett 1893b: 226. Type locality USA, California, Los Angeles County. LT male (MEI 009223) USNM (Type No. 10413). Coquillett (1893b: 223 key), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 223 male key, 225 female key, 229 sp. list; 1913b: 32 sp. list, 38 male key, 39 female key; 1914a: 38 male key, 41 female key, 48 desc.), Woodworth (1913: 149 sp. list), Cole (1923a: 35 male key, 37 female key, 64 note; 1965: 351 cat.), Webb and Metz (2003a: 396 LT desig.). **Note 91.**

Viriliricta montivaga. Irwin and Lyneborg (1981a: 210 sp. list, comb. change, Figs. 13 hind femur, 56–60 male genit.), Poole (1996: 310 sp. list).

Pandivirilia montivaga. Webb and Metz (2003a: 371 phylog., 377 key, 395 nom., desc., comb. change, 396 dist., Figs. 1 phylog., 7, 14, 21, 28, 35, 42, 49, 56 male genit., 62 female genit., 68 dist. map), Webb (2005: 5 phylog., Fig. 1 phylog.).

rufa Webb. **Nearctic:** USA (Pennsylvania, Tennessee).

Pandivirilia rufa Webb in Webb and Metz 2003a: 400. Type locality USA, Pennsylvania, [Centre County], Moshannon. HT male (MEI 134596) PSUC. Webb and Metz (2003a: 371 phylog., 377 key, 401 dist., Figs. 1 phylog., 8, 15, 22, 29, 36, 43, 50, 57 male genit., 63, female genit., 68 dist. map).

Genus PENNIVERPA Irwin and Lyneborg

PENNIVERPA Irwin and Lyneborg 1981a: 227. Type species *Psilocephala festina* Coquillett, 1893b by original designation. Irwin and Lyneborg (1981a: 203 key, 229 sp. list; 1981b: 522 key), Irwin and Webb (1992: 88 sp. list, 106 note), Poole (1996: 309 sp. list), Metz and Irwin (2000: 979 phylog., 988 key, 1016 nom., Figs. 27–28 phylog.), Metz *et al.* (2003: 261 nom.), Holston *et al.* (2007: 282 phylog., Figs. 2–4 phylog.), Webb and Metz (2008: 4 nom., desc., 5 male sp. key, 7 female sp. key), Gaimari and Webb (2009: 639 key, 646 dist., habitats). This genus is Nearctic and Neotropical in distribution, occurring from Argentina north through the southern USA and the Caribbean.

alvatra Irwin and Webb. **Neotropical:** Brazil (Amazonas, Rondônia, Roraima), Venezuela (Amazonas).

Penniverpa alvatra Irwin and Webb 1992: 107. Type locality Brazil, Roraima, Río Uraricoera, Ilha de Maracá. HT male (MEI 006898) INPA. Irwin and Webb (1992: 88 sp. list, 109 dist, Figs. 79 male ant., 80 male max. palp., 81 male wing, 82–87 male genit., 88–89 female genit.), Webb and Metz (2008: 6 male key, 7 female key, nom., 8 desc., 9 dist., Figs. 1–5 male genit., 6 female genit., 78 female abd., 89 dist. map).

Penniverpa alvadusta Irwin and Webb 1992: 106. Type locality Brazil, Amazonas, Manaus. HT female (MEI 006910) INPA. Irwin and Webb (1992: 88 sp. list, 107 dist., Figs. 77–78 female genit.), Webb and Metz (2008: 7 nom., syn. desig. of *alvatra* Irwin and Webb).

bradleyi Webb. **Neotropical:** Mexico (Veracruz).

Penniverpa bradleyi Webb in Webb and Metz 2008: 10. Type locality Mexico, Veracruz, Actopan, La Mancha. HT male IEXA. Webb and Metz (2008: 6 male key, 11 dist. Figs. 7–11 male genit., 89 dist. map).

chersonesa Webb. **Nearctic:** Mexico (Baja California Sur).

Penniverpa chersonesa Webb in Webb and Metz 2008: 11. Type locality Mexico, Baja California Sur, Las Barracas. HT male CAS (Type No. 18250). Webb and Metz (2008: 6 male key, 7 female key, 12 dist., Figs. 12–16 male genit. 17 female genit., 79 female abd., 88 dist. map).

dives (Schiner). **Neotropical:** Brazil (Amapá), Guyana (Cuyuni-Mazaruni), Trinidad and Tobago, Venezuela (Aragua).

Bibio senilis Fabricius 1805: 68. Type locality Surinam-Guianas area (Lyneborg 1969: 391). LT male ZMUC. Preoccupied by *Bibio senilis* Panzer (1798: 22). Lyneborg (1969: 390 LT desig., 391 desc., Figs. 1–8 male genit.), Zimsen (1954: 454 type), Irwin and Webb (1992: 88 nom., objective syn. of *lyneborgi* Irwin and Webb).

Thereva senilis. Wiedemann (1821: 112 desc., comb. change), Macquart (1841a: 302 desc.; 1841b: 24 desc.), Kertész (1909: 159 cat.).

Psilocephala senilis. Kröber (1911: 499 male key, 501 female key, 516 desc., comb. change; 1912a: 224 male key, 226 female key, 230 sp. list, 245 desc.; 1913b: 34 sp. list, 37 male key, 38 female key, 39 male key; 1914a: 40 male key, 41 female key; 1928a: 7 dist., 10 male key, 12 female key), Cole (1923a: 36 male key, 37 female key, 72 nom., note; 1965: 351 cat.).

Penniverpa senilis. Irwin and Lyneborg (1981a: 229 comb. change.), Holston (2004: 62 nom.), Webb and Metz (2008: 13 nom.).

Psilocephala dives Schiner 1868: 147. Type locality Venezuela. LT male NHMW. Kertész (1909: 162 cat.), Kröber (1911: 499 male key, 501 female key, 518 desc.; 1913b: 30 sp. list, 37 male key, 38 female key; 1928a: 6 dist., 10 male key, 12 female key), Metz *et al.* (2003: 261 trans. orig. desc.), Webb and Metz (2008: 15 LT desig.).

Penniverpa dives. Metz *et al.* (2003: 261 comb. change), Webb and Metz (2008: 6 male key, 7 female key, 12 nom., 14 desc., 15 dist., Figs. 18–22 male genit., 23 female genit., 80 female abd., 89 dist. map).

Psilocephala stigmaticalis Schiner 1868: 146. Type locality Venezuela. LT female (MEI 084125) NHMW (= HT of *Psilocephala quadrimaculata* Kröber). Kertész (1909: 165 cat.), Kröber (1911: 499 male key, 500 female key, 512 desc.; 1913b: 34 sp. list, 37 male key, 38 female key; 1928a: 7 dist., 9 male key, 11 female key), Gaimari and Irwin (2000a: 192 LT desig.), Webb and Metz (2008: 13 nom., syn. desig. of *dives* Schiner). **Note 92.**

Penniverpa stigmaticalis. Gaimari and Irwin (2000a: 192 sp. list, nom., comb. change).

Psilocephala quadrimaculata Kröber 1911: 514. Type locality Venezuela. HT female (MEI 084125) NHMW (= LT of *Psilocephala stigmaticalis* Schiner). Kröber (1911: 500 female key; 1913b: 33 sp. list, 38 female key; 1928a: 7 dist., 11 female key); Gaimari and Irwin (2000a: 193 nom., objective syn. of *stigmaticalis* Schiner), Webb and Metz (2008: 13 nom.). **Note 92.**

Psilocephala senilis Bromley 1934: 361. Type locality Guyana, Cuyuni-Mazaruni, Kartabo. HT male AMNH. Metz *et al.* (2003: 261 nom.). **Note 93.**

Penniverpa lyneborgi Irwin and Webb 1992: 88. Replacements name for *Bibio senilis* Fabricius. Webb and Metz (2008: 13 nom., syn. desig. of *dives* Schiner).

Penniverpa bromleyi Metz and Irwin in Metz *et al.* 2003: 261. Unjustified replacement name for *Psilocephala senilis* Bromley (1934: 361) nec *Bibio senilis* Fabricius (1805: 68). Webb and Metz (2008: 12 nom., syn. desig. of *dives* Schiner). **Note 94.**

epidema Webb. **Nearctic:** Mexico (Jalisco, Morelos, Nayarit, Sonora, Tamaulipas). **Neotropical:** Belize, Costa Rica (Guanacaste, Puntarenas), Guatemala (Zacapa), Honduras (Isla de la Bahía), Mexico (Guerrero, Sinaloa, Veracruz), Nicaragua (Chinandega, Léon), Panama (Chiriqui, Panamá (Canal Zone)).

Penniverpa epidema Webb in Webb and Metz 2008: 15. Type locality Costa Rica, Guanacaste, 10 km W San Miguel. HT male (MEI 007609) INHS. Webb and Metz (2008: 6 male key, 7 female key, 16 dist., Figs. 24–28 male genit., 29 female genit., 81 female abd., 89 dist. map), Gaimari and Webb (2009: 646 dist.).

evani Webb. **Neotropical:** Ecuador (Guayas, Loja, Los Rios, Manabí, El Oro), El Salvador (La Libertad), Panama (Panamá (Canal Zone)).

Penniverpa evani Webb in Webb and Metz 2008: 18. Type locality Ecuador, Guayas, Boliche. HT male (MEI 088429) CAS (Type No. 18251). Webb and Metz (2008: 6 male key, 7 female key, 21 dist., Figs. 30–34 male genit. 35 female genit. 82 female abd., 89 dist. map), Gaimari and Webb (2009: 646 dist.).

festina (Coquillett). **Nearctic:** USA (Arizona, Florida, Georgia, South Carolina, Texas).

Psilocephala festina Coquillett 1893b: 225. Type locality USA, Florida, St. Augustine. LT male (MEI 140538) MCZ (Type No. 7568). Coquillett (1893b: 223 key), Williston (1901: 297 note), Aldrich (1905: 247 cat.), Kertész (1909: 162 cat.), Kröber (1912a: 224 male key, 226 female key, 228 sp. list; 1913b: 30 sp. list, 39 male key; 1914a: 38 male key, 40 female key, 42 desc.), Cole (1923a: 35 male key, 67 note, dist., Figs. 68 wing, 82 ant., 106 male genit.; 1965: 351 cat.), Irwin and Lyneborg (1981b: 522 key). Webb and Metz (2008: 23 LT desig.). **Note 95.**

Penniverpa festina. Irwin and Lyneborg (1981a: 229 sp. list, nom., comb. change, Figs. 25 female foretarsus, 115–121 male genit.), Sinclair *et al.* (1994: 432 phylog. exemplar), Poole (1996: 309 sp. list), Metz and Irwin (2000: 979 phylog., Fig. 27 phylog.), Webb and Metz (2008: 6 male key, 7 female key, 21 nom., desc., 23 dist., Figs. 36–42 male genit., 43 female genit., 83 female abd., 88 dist. map).

gracilis (Kröber). **Neotropical:** Peru (Ancash, Cajamarca, Cusco, Huánuco, El Callao, La Libertad, Lambayeque, Lima).

Psilocephala gracilis Kröber 1911: 507. Type locality Peru, Piura. LT male USNM. Kröber (1911: 498 male key, 500 female key; 1913b: 30 sp. list, 37 male key, female key; 1914a: 57 key; 1928a: 6 dist., 9 male key, 11 female key), Webb and Metz (2008: 32 LT desig.).

Penniverpa gracilis. Webb and Metz (2008: 5 male key, 7 female key, 30 nom., desc., comb. change, 32 dist., Figs. 44–48 male genit., 49 female genit., 84 female abd., 89 dist. map).

Psilocephala brunnipennis Kröber 1914a: 56. Type locality Peru, Bella Vista bei Callao. HT male ZMUH (presumed destroyed). Kröber (1914a: 38 male key, 57 key; 1928a: 6 dist., 8 male key, 18 desc.), Metz and Irwin (2000: 1016 trans. orig. desc.), Webb and Metz (2008: 30 nom., syn. desig. of *gracilis* Kröber). **Note 40.**

Penniverpa brunnipennis. Metz and Irwin (2000: 979 phylog. 1016 comb. change, 1017 dist., Fig. 27 phylog.).

insular Webb. **Neotropical:** Jamaica (Westmorland).

Penniverpa insular Webb in Webb and Metz 2008: 33. Type locality Jamaica, Trelawny, Duncans. HT male (MEI 088499) CNC. Webb and Metz (2008: 6 male key, 7 female key, 34 dist., Figs. 50–54 male genit., 55 female genit., 85 female abd., 88 dist. map).

megaplax Webb. **Neotropical:** Argentina (Catamarca, Jujuy, Salta), Bolivia (Santa Cruz), Paraguay (Asunción).

Penniverpa megaplax Webb in Webb and Metz 2008: 34. Type locality Bolivia, Santa Cruz, 5 km N Camiri. HT male (MEI 110550) CAS (Type No. 18252). Webb and Metz (2008: 5 male key, 7 female key, 37 dist., Figs. 56–60 male genit., 61 female genit., 86 female abd., 89 dist. map).

multisetosa Webb. **Nearctic:** Mexico (Chihuahua, Jalisco). **Neotropical.** Guatemala (San Marcos, Zacapa), Honduras (Atlántica), Mexico (Veracruz).

Penniverpa multisetosa Webb in Webb and Metz 2008: 37. Type locality Mexico, Jalisco, Puerto Villarta. HT male (MEI 007685) USNM. Webb and Metz (2008: 6 male key, 7 female key, 38 dist., Figs. 62–66 male genit., 67 female genit., 87 female abd., 89 dist. map), Gaimari and Webb (2009: 646 dist.).

parvula (Kröber). **Neotropical:** Brazil (Bahia).

Psilocephala parvula Kröber 1911: 520. Type locality Brazil, Bahia. HT male NHMW. Kröber (1911: 499 male key; 1913b: 33 sp. list, 37 male key; 1928a: 7 dist., 10 male key).

Brachylinga parvula. Irwin and Webb (1992: 87 sp. list, comb. change).

Penniverpa parvula. Webb and Metz (2006: 238 comb. change), Webb and Metz (2008: 6 male key, 39 nom., desc., 40 dist., Figs. 68–72 male genit.).

unispinosa Webb. **Neotropical:** Mexico (Quintana Roo).

Penniverpa unispinosa Webb in Webb and Metz 2008: 40. Type locality Mexico, Quintana Roo, Allen Point, Ascension Bay. HT male (MEI 088464) USNM. Webb and Metz (2008: 6 male key, 43 dist., 73–77 male genit., 88 dist. map).

Genus PERALIA Malloch

PERALIA Malloch 1932: 240. Type species *Anabarrhynchus griseus* Kröber, 1911 by original designation [= *Peralia vittata* (Philippi, 1865)]. Malloch (1932: 237 key), Stuardo-Ortiz (1946: 85 cat.), Webb (2006: 3 key, 13 nom., desc.), Lyneborg (2001: 15 compare with Australian *Anabarhynchus*), Holston *et al*. (2007: 282 phylog., Figs. 2–4 phylog.), Gaimari and Webb (2009: 636 key). This genus is Neotropical in distribution, occurring in Argentina and Chile.

hermanni (Kröber). **Neotropical:** Argentina (Neuquén), Chile (Araucanía, Bío-Bío, Coquimbo, Los Lagos, Magallanes, Región Metropolitana de Santiago, Valparaiso (Aconcagua in Webb 2006)).

Anabarrhynchus hermanni Kröber 1911: 488. Type locality Chile, O'Higgins Region, Rancagua. HT female ZSMC. Misspelling of *Anabarhynchus*. Kröber (1911: 485 key; 1913b: 20 key, 22 sp. list; 1928b: 113 desc., Fig. 18 ant.), Stuardo-Ortiz (1946: 87 cat.). **Note 96.**

Peralia hermanni. Webb (2006: 15 key, nom., comb. change, desc., 17 dist., Figs. 29 female genit., 31 dist. map).

vittata (Philippi). **Neotropical:** Argentina (Neuquén, Rio Negro), Chile (Araucanía, Bío-Bío, Coquimbo, Libertador General Bernardo O'Higgins, Magallanes, Región Metropolitana de Santiago, Valparaiso (Aconcogua in Webb 2006)).

Thereva vittata Philippi 1865: 769. Type locality Chile, Curicó, Estero la Jaula. NT male (MEI 169897) CNC. Reed (1888: 294 cat.), Kertész (1909: 160 cat.), Kröber (1911: 491 female key, 493 desc.; 1913b: 45 female key, 62 sp. list), Webb (2006: 23 NT desig.).

Peralia vittata. Edwards in Malloch (1932: 241 nom., comb. change), Stuardo-Ortiz (1946: 86 cat.), Holston (2004: 65 nom.), Webb (2006: 15 key, 18 nom., 19 desc., 23 NT desig., Figs. 20–27 male genit., 28 female genit., 32 dist. map). **Note 97.**

Thereva schineri Jaennicke 1867: 44. Type locality Chile, Valparaiso. LT female SMFD. Kertész (1909: 159 cat.), Kröber (1911: 485 nom., 487 LT designation under ICZN Article 74.5), Webb (2006: 19 nom., syn. desig. of *vittata* Philippi). **Note 98.**

Anabarrhynchus schineri. Misspelling of *Anabarhynchus*. Kröber (1911: 485 nom., comb. change, key, 487 desc.; 1913b: 20 key, 23 sp. list), Stuardo-Ortiz (1946: 87 cat.).

Anabarhynchus schineri. Holston (2004: 61 nom.).

Anabarhynchus niger Bigot 1890: 325. Type locality Chile. HT male BMNH (Type No. 240479). Webb (2006: 19 nom., syn. desig. of *vittata* Philippi).

Anabarrhynchus niger. Misspelling of *Anabarhynchus*. Kertész (1909: 166 cat.), Kröber (1911: 485 key, 486 desc.; 1913b: 20 key, 22 sp. list), Malloch (1932: 236 faunal list), Edwards in Malloch (1932: 241 nom., suggested possible synonymy with *Peralia grisea*).

Peralia niger. Edwards in Malloch (1932: 241 nom., comb. change), Stuardo-Ortiz (1946: 85 cat.). **Note 97.**

Dialineura costalis Bigot 1890: 327. Type locality Chile. ST male (3 specimens), ST female (2 specimens), depository unknown. Kertész (1909: 168 cat.), Kröber (1911: 527 desc.; 1913b: 24 sp. list), Lyneborg (1968b: 149 nom.), Webb (2006: 18 nom., syn. desig. of *vittata* Philippi). **Note 99.**

Peralia costalis. Edwards in Malloch (1932: 241 nom., comb. change), Stuardo-Ortiz (1946: 85 cat.). **Note 97.**

Anabarrhynchus griseus Kröber 1911: 485. Type locality Chile, O'Higgins Region, Rancagua. HT male ZSMC. Misspelling of *Anabarhynchus*. Kröber (1911: 485 key; 1913b: 20 key, 22 sp. list), Webb (2006: 18 nom., syn. desig. of *vittata* Philippi). **Note 100.**

Peralia grisea. Malloch (1932: 240 comb. change, desc.), Stuardo-Ortiz (1946: 85 cat.).

Anabarrhynchus maculifrons Kröber 1911: 485. Type locality Chile, O'Higgins Region, Rancagua. HT female ZSMC. Misspelling of *Anabarhynchus*. Kröber (1911: 485 key; 1913b: 20 male key, 22 sp. list), Stuardo-Ortiz (1946: 87 cat.), Webb (2006: 18 nom., syn. desig. of *vittata* Philippi). **Note 101.**

Genus PROTOTHEREVA Malloch

PROTOTHEREVA Malloch 1932: 238. Type species *Prototheretia grisea* Malloch, 1932 by original designation. Malloch (1932: 238 key), Webb and Metz (2003b: 2 nom., 3 desc., 4 sp. key), Gaimari and Webb (2009: 641 key). This genus is Neotropical in distribution, occurring in Argentina, Ecuador, and Peru.

ecuadorensis Webb. **Neotropical:** Ecuador (Carchi, Pichincha, Tungarahua).

Prototheretia ecuadorensis Webb in Webb and Metz 2003b: 5. Type locality Ecuador, Carchi, San Isidro. HT male (MEI 039726) CNC. Webb and Metz (2003b: 4 key, 8 dist., Figs. 1–8 male genit., 9 female genit., 19 dist. map).

grisea Malloch. **Neotropical:** Argentina (Chaco).

Prototheretia grisea Malloch 1932: 239. Type locality Argentina, Chubut, Valle del Lago Blanco. HT female BMNH (Type No. 242005). Webb and Metz (2003b: 4 key, desc., Fig. 19 dist. map).

peruensis Webb. **Neotropical:** Peru (Lima).

Prototheretia peruensis Webb in Webb and Metz 2003b: 8. Type locality Peru, Q. [Quebrada] Huarochiri. HT male (MEI 090036) CAS (Type No. 17901). Webb and Metz (2003b: 4 key, Figs. 10–17 male genit., 18 female genit., 19 dist. map).

Genus PSILOCEPHALA Zetterstedt

PSILOCEPHALA Zetterstedt 1838: 525. Type species *Bibio imberbis* Fallén, 1814 by subsequent designation (Coquillett 1910b: 597). Bigot (1890: 324 key), Coquillett (1893b: 223 sp. table; 1894: 97 key; 1910b: 597 type sp. desig.), Aldrich (1905: 246 cat., cited Zetterstedt's paper as 1840: 525), Williston (1908: 207 key), Kertész (1909: 160 cat.), Kröber (1913b: 8 key), Becker (1912: 308 desc.), Cole (1923a: 14 key; 1965: 350 cat.), Malloch (1932: 238 key), Curran (1934: 188 key; 1965: 188 key), Lyneborg (1968a: 546 morph.), Cole and Schlinger (1969: 170 key, 173 desc.), Irwin and Lyneborg (1981a: 203 key, 225 desc., 227 sp. list; 1981b: 522 key), Poole (1996: 309 sp. list), Metz *et al.* (2003: 231 nom., desc., 232 sp. list), Webb (2003: 499 nom.), Gaimari and Webb (2009: 637 key). The genus is Holarctic in distribution, occurring in the Nearctic Region in Canada and the USA.

PARACLIA Enderlein 1936: 88. Type species *Bibio imberbis* Fallén, 1814 by monotypy. Enderlein (1936: 88 objective syn. of *Psilocephala* Zetterstedt), Poole (1996: 309 nom.), Metz *et al.* (2003: 231 nom.), Webb (2003: 499 nom.). **Note 102.**

vicina (Walker). **Nearctic:** Canada (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland Northwest Territories, Nova Scotia, Ontario, Quebec, Saskatchewan, Yukon Territory), USA (Alaska, California, Colorado, Idaho, Illinois, Maine, Michigan, Minnesota, Montana, New York, Oregon, Utah, Washington, Wisconsin, Wyoming).

Thereva vicina Walker 1848: 222. Type locality Canada, Nova Scotia. LT male BMNH (Type No. 241966). Osten Sacken (1858: 38 cat.; 1878: 97 cat.), Aldrich (1905: 249 cat.), Kertész (1909: 160 cat.), Kröber (1912a: 249 male key, 256 sp. list; 1913b: 43 male key, 62 dist.; 1914a: 61 male key), Cole (1923a: 74 rep. desc.), Metz *et al.* (2003: 232 LT desig.).

Psilocephala vicina. Cole (1923a: 74 comb. change; 1965: 352 cat.), Irwin and Lyneborg (1981a: 227 sp. list), Poole (1996: 309 sp. list), Webb (2003: 499 nom., desc., 501 dist., Figs. 31–38 male genit., 39 female genit., 40 dist. map), Holston (2004: 65 nom.).

Psilocephala melanoprocta Loew 1869: 11. Type locality USA, Maine. LT male (MEI 134203) MCZ (Type No. 10669). Loew (1872b: 125 subsequent usage), Osten Sacken (1878: 95 cat.), Coquillett (1893b: 225 key), McGillivray and Houghton (1903: 12 dist.), Aldrich (1905: 247 cat.), Kertész (1909: 163 cat.), Kröber (1912a: 224 male key 229 sp. list, 238 desc., 239 LT designation according to ICZN Article 74.5; 1913b: 32 dist., 38 male key; 1914a: 40 male key, 50 dist.), Cole (1923a: 54 nom., syn. desig. of *munda* Loew; 1965: 351 nom.), Irwin and Lyneborg (1981a: 227 nom.), Metz *et al.* (2003: 232 nom., invalid LT desig.), Poole (1996: 309 nom.), Webb (2003: 499 nom). **Note 103.**

Psilocephala munda Loew 1869: 9. Type locality USA, Wisconsin. LT female (MEI 134201) MCZ (Type No. 10670). Loew (1872b: 123 subsequent usage), Osten Sacken (1878: 95 cat.), Coquillett (1893b: 225 key), McGillivray and Houghton (1903: 12 dist.), Aldrich (1905: 247 cat.), Kertész (1909: 164 cat.), Kröber (1912a: 226 female key, 229 sp. list, 239 desc., 240 LT designation according to ICZN Article 74.5; 1913b: 32 dist., 40 female key; 1914a: 42 female key, 53 desc.; 1928b: 120 dist.), Cole (1923a: 35 male key, 36 female key, 54 desc., 55 dist., Figs. 46 female head, 73 wing, 81 ant., 96 male genit.; 1925: 85 dist.; 1965: 351 cat.), Cole and Lovett (1921: 241 Fig. 20 head, wing, 242 cat.), Johannsen (1928: 764 cat.), Irwin and Lyneborg (1981a: 227 sp. list, Figs. 10 female head, 11 ant.), Poole (1996: 309 sp. list), Metz *et al.* (2003: 232 nom., invalid LT desig., syn. desig. of *vicinia* Walker), Webb (2003: 499 nom.). **Note 103.**

Genus PTILOTOPHALLOS Webb

PTILOTOPHALLOS Webb 2005c: 13. Type species *Ptilotophallos megasathe* Webb, 2005c by original designation. Gaimari and Webb (2009: 639 key). This genus is Neotropical in distribution, occurring in Brazil.

megasathe Webb. **Neotropical:** Brazil (Rondônia).

Ptilotophallos megasathe Webb 2005c: 13. Type locality Brazil, Rondônia, 7 km E Costa Marques. HT male (MEI 090015) USNM. Webb (2005c: 17 dist., Figs. 22–30 male genit., 31 female genit.).

Genus RHAGIOFORMA Irwin and Lyneborg

RHAGIOFORMA Irwin and Lyneborg 1981a: 236. Type species *Psilocephala maculipennis* Kröber, 1914a by original designation. Irwin and Lyneborg (1981a: 201 key, 248 sp. list; 1981b: 519 key), Metz *et al.* (2003: 261 nom.), Gaimari and Webb (2009: 642 key, 646 dist., habitats). This genus is Nearctic and Neotropical in distribution, occurring in Costa Rica and Mexico.

maculipennis (Kröber). **Nearctic:** Mexico (Baja California Norte, Baja California Sur).

Psilocephala maculipennis Kröber 1914a: 45. Type locality Mexico, Baja California Sur, San Jose del Cabo. HT male USNM (Type No. 26019). Kröber (1914a: 38 male key), Cole (1923a: 76 trans. orig. desc.). **Note 104.**

Rhagioforma maculipennis. Irwin and Lyneborg (1981a: 238 sp. list, comb. change, Figs. 23 ant., 142–147 male genit.; 1981b: 519 key, Fig. 8 male max. palp.), Gaimari and Webb (2009: 646 dist.).

schmidti (Kröber). **Neotropical:** Costa Rica (San José), Guatemala, Honduras, Venezuela.

Psilocephala schmidti Kröber 1928a: 12. Type locality Costa Rica, San Jose, 8 km W San Jose, Farm La Caja. LT female (MEI 115975) DEI. Kröber (1928a: 7 dist., 8 male key, 12 female key, Fig. 6 female ant., frons, 7 male ant.), Metz *et al.* (2003: 261 LT desig., trans. orig. desc.). **Note 105.**

Rhagioforma schmidti. Metz *et al.* (2003: 261 comb. change), Gaimari and Webb (2009: 646 dist.).

Genus SPINALOBUS Webb

SPINALOBUS Webb 2007: 42. Type species *Spinalobus rodmani* Webb, 2007 by original designation. Webb (2007: 42 key), Gaimari and Webb (2009: 639 key). This genus is Nearctic in distribution, occurring in the United States (New Mexico).

rodmani Webb. **Nearctic:** USA (New Mexico).

Spinalobus rodmani Webb 2007: 43. Type locality USA, New Mexico, Dona Ana County, 3.7 km N Mesquite exit, E side I-10. HT male (MEI 051228) INHS. Webb (2007: Figs. 1–6 male genit., 7 female genit.).

Genus SPIRACOLIS Webb

SPIRACOLIS Webb 2005c: 17. Type species *Spiracolis curvipalpus* Webb, 2005c by original designation. Gaimari and Webb (2009: 637 key). This genus is Neotropical in distribution, occurring in Brazil.

curvipalpus Webb. **Neotropical:** Brazil (Parana).

Spiracolis curvipalpus Webb 2005c: 17. Type locality Brazil, Parana, Jundiai Do Sul, Fazenda Monte Verde. HT male (MEI 163480) DZUP. Webb (2005c: 21 dist., Figs. 32–39 male genit., 40 female head, 41 female genit.).

Genus SPIRIVERPA Irwin and Lyneborg

SPIRIVERPA Irwin and Lyneborg 1981a: 214. Type species *Thereva lunulata* Zetterstedt, 1838 by original designation. Irwin and Lyneborg (1981a: 202 key, 216 sp. list; 1981b: 522 key), Poole (1996: 309 sp. list), Webb and Metz (2003a: 374 key), Webb (2005a: 5 phylog., 9 desc., 10 key, Fig. 1 phylog.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641 key). This genus is Holarctic in distribution, occurring in the Nearctic Region in Canada and the USA.

SPIRIVERBA. Misspelling of *Spiriverpa.* Zaitzev (1986: 4 nom.), Webb (2005: 9 nom.).

albiceps (Loew). **Nearctic:** Canada (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Nunavut Territory, Ontario, Quebec, Saskatchewan, Yukon Territory), USA (Alaska, Colorado, Idaho, Illinois, Michigan, Nebraska, Nevada, New Mexico, Utah). **Note 106.**

Thereua albiceps Loew 1870: 166. Type locality Canada, Manitoba, Red River. LT male MCZ (Type No. 10676). Original misspelling of *Thereva*. Loew (1872b: 204 subsequent usage).

Thereva albiceps. Osten Sacken (1878: 96 cat.), Kertész (1909: 149 cat.), Aldrich (1905: 248 cat.), Kröber (1912a: 252 nom., as syn of *Thereva albifrons* Say; 1913b: 53 nom.), Cole (1923a: 88 female key, 103 desc.; 1965: 352 cat.), Webb (2005a: 15 LT desig.). **Note 107.**

Spiriverpa albiceps. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Holston (2004: 42 nom.), Webb (2005a: 5 phylog., 10 key, 11 nom., desc., 14 dist., Figs. 1 phylog., 2–8 male genit., 9 female genit., 17 dist. map), Webb and Metz (2003a: 372 phylog.).

Thereva cockerelli Cole 1923a: 99. Type locality USA, Colorado, Peaceful Valley. HT male USNM (Type No. 25937). Cole (1923a: 87 male key, 88 female key, 99 dist., Fig. 146 male genit.; 1925: 85 dist.; 1965: 353 cat.), Webb (2005a: 11 nom., syn. desig. of *albiceps* Loew).

Spiriverpa cockerelli. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Holston (2004: 48 nom.).

bella (Kröber). **Nearctic:** Canada (Ontario), USA (Connecticut, Georgia, Iowa, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, West Virginia).

Thereva bella Kröber 1914a: 64. Type locality USA, Massachusetts, Riverside. ST male (Type No. 27051), ST female MCZ. Kröber (1914a: 61 male key, 62 female key), Cole (1923a: 86 male key, 88 female key, 101 desc., 102 dist., Fig. 137 ant.; 1965: 353 cat.), Brimley (1938: 340 cat.). **Note 108.**

Spiriverpa bella. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Holston (2004: 45 nom.), Webb (2005a: 5 phylog., 11 key, 20 nom., desc., 23 dist., Figs. 1 phylog., 18–24 male genit., 35 dist. map).

Thereva bella nigrimana Kröber 1914a: 65 (as var.). Type locality USA, Massachusetts, Springfield. HT male MCZ (Type No. 27052). Kröber (1914a: 60 male key), Poole (1996: 309 nom., syn. desig. of *bella* Kröber), Webb (2005a: 20 nom.). **Note 109.**

Thereva nigrimana. Cole (1965: 353 cat., revised status), Poole (1996: 309 nom.).

Spiriverpa bella nigrimana. Irwin and Lyneborg (1981a: 216 sp. list, nom., comb. change), Holston (2004: 45 nom.).

cinerascens (Cole). **Nearctic:** Canada (British Columbia), USA (Alaska, Arizona, California, Idaho, Oregon, Utah, Washington).

Thereva cinerascens Cole 1923a: 97. Type locality USA, Oregon, Hood River. HT female USNM (Type No. 25936). Cole (1923a: 88 female key; 1925: 85 dist.; 1965: 353 cat.).

Spiriverpa cinerascens. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Webb (2005a: 5 phylog., 10 key, 28 nom., desc., 29 dist., Figs. 1 phylog., 25–32 male genit., 50 dist. map).

senex (Walker). **Nearctic:** Canada (Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec), USA (Colorado, Connecticut, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin).

Thereva senex Walker 1848: 224. Type locality Canada, Nova Scotia. LT female BMNH (Type No. 241986). Osten Sacken (1858: 38 cat.; 1878: 97 cat.), Aldrich (1905: 250 cat.), Kertész (1909: 159 cat.), Johnson (1910: 748 cat.), Kröber (1912a: 250 female key, 255 sp. list; 1913b: 44 female key, 61 sp. list), Cole (1923a: 129 rep. orig. desc., LT designation according to ICZN Article 74.5; 1965: 354 cat.), Johannsen (1928: 765 cat.). **Note 110.**

Spiriverpa senex. Irwin and Lyneborg (1981a: 216 sp. list, comb. change), Poole (1996: 309 sp. list), Webb and Metz (2003a: 371 phylog., Fig. 1 phylog.), Webb (2005a: 5 phylog., 11 key, 36 nom., 37 desc., 38 dist., Figs. 1 phylog., 43–49 male genit., 52 dist. map).

Thereua candidata Loew 1869: 8. Type locality USA, northern Wisconsin. ST male MCZ (Type No. 10679). Original misspelling of *Thereva*. Loew (1872b: 122 subsequent usage).

Thereva candidata. Osten Sacken (1878: 96 cat., 239 note), Coquillett (1893a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 152 cat.), Kröber (1912a: 248 male key, 250 female key, 252 sp. list; 1913b: 43 male key, 44 female key, 55 sp. list; 1914a: 61 male key, 62 female key, 67 desc.; 1928b: 120 dist.), Cole (1923a: 86 male key, 88 female key, 96 desc., 97 dist., Figs. 130 female frons, 149 male genit.; 1925: 85 dist.; 1965: 353 cat.), Johannsen (1928: 764 cat.), Brimley (1938: 340 cat.), Webb (2005a: 36 nom., syn. desig. of *senex* Walker). **Note 111.**

Spiriverpa candidata. Irwin and Lyneborg (1981a: 216 sp. lists, comb. change; 1981b: Figs. 20 male genit., 27 pupa), Sinclair *et al.* (1994: 432 phylog. exemplar, Fig. 18 male genitalia), Poole (1996: 309 sp. list), Holston (2004: 47 nom.), Gaimari and Webb (2009: 642 Fig. 22 pupa).

Genus TABUDA Walker

TABUDA Walker 1852: 197. Type species *Tabuda fulvipes* Walker, 1852 by monotypy [= *Tabuda varia* (Walker, 1848)]. Bigot (1890: 322 nom., syn. desig. of *Baryphora* Loew), Coquillett (1894: 97 key), Aldrich (1905: 246 cat.), Williston (1908: 207 key), Cole (1923a: 14 key, 80 note; 1965: 352 cat.), Kröber (1928b: 125 key), Malloch (1932: 238 key), Curran (1934: 188 key; 1965: 188 key), Irwin and Lyneborg (1981a: 202 key, 221 nom., desc., 223 sp. list; 1981b: 519 key), Poole (1996: 309 sp. list), Webb and Irwin (1999: 654 nom., 655 desc., 656 male key, 657 female key), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641 key). This genus is Holarctic in distribution occurring in Canada and the USA in the Nearctic Region. **Note 112.**

METAPHRAGMA Coquillett 1894: 97. Type species *Xestomyza planiceps* Loew, 1872a by monotypy. Coquillett (1894: 97 key), Aldrich (1905: 246 cat.), Williston (1908: 207 key), Kertész (1909: 167 cat.), Kröber (1912a: 210 key, 218 desc., 219 desc.; 1913b: 7 key, 25 desc., sp. list; 1914a: 32 diag., 33 desc., key), Cole (1923a: 14 key, 83 desc., dist., Fig. 118 male habitus; 1965: 352 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, desc.), Irwin and Lyneborg (1981a: 221 nom., syn. desig. of *Tabuda* Walker), Lyneborg (1986a: 64 nom.), Poole (1996: 309 nom.), Webb and Irwin (1999: 655 nom.). **Note 113.**

ONYCHOMYIA Frey 1921: 83. Type species *Onychomyia superba* Frey, 1921 by original designation. Preoccupied by *Onychomyia* Stein (1919: 100). Speiser (1923: 138 nom., objective syn. of *Platarista* Speiser), Lyneborg (1986a: 64 nom.; 1989a: 24 cat., nom.), Zaitzev (1970: 1415 nom.), Poole (1996: 309 nom.), Webb and Irwin (1999: 655 nom.).

PLATARISTA Speiser 1923: 99. Replacement name for *Onychomyia* Frey (1921: 83) nec Stein (1917: 138). Kröber (1937b: 272 cat.), Zaitzev (1970: 1415 rev.), Lyneborg (1986a: 64 nom., syn. desig. of *Tabuda* Walker; 1989a: 24 cat., nom.), Poole (1996: 309 nom.), Webb and Irwin (1999: 655 nom.).

planiceps (Loew). **Nearctic:** Canada (British Columbia), USA (California, Colorado, Idaho, Nebraska, Nevada, Oregon, Utah, Washington, Wyoming).

Xestomyza planiceps Loew 1872a: 75. Type locality USA, California. LT female (MEI 013394) MCZ (Type No. 10687). Loew (1872b: 251 subsequent usage), Osten Sacken (1878: 97 cat.), Aldrich (1905: 246 cat.), Woodworth (1913: 149 nom.), Webb and Irwin (1999: 662 LT designation according to ICZN Article 74.5). **Note 114.**

Metaphragma planiceps. Coquillett (1894: 97 comb. change), Woodworth (1913: 149 sp. list), Cole and Lovett (1921: 242 cat.), Curran (1934: 186 Fig. 6 habitus; 1965: 186 Fig. 6 habitus), Knowlton and Harmston (1937: 142 cat.).

Tabuda planiceps. Irwin and Lyneborg (1981a: 223 sp. list, comb. change), Webb and Irwin (1999: 661 nom., desc., Figs. 1 phylog., 3 ant., 6 max. palp., 9 wing, 14, 22, 30, 38, 46, 54, 62 male genit., 69, 76 female genit.), Poole (1996: 309 sp. list), Webb (2005: Fig. 1 phylog.), Webb and Metz (2003a: Figs. 1a, 1b, phylog.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.).

varia (Walker). **Nearctic:** USA (Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, South Carolina).

Thereva varia Walker 1848: 221. Type locality USA, Florida. LT male (MEI 013406) BMNH. Osten Sacken (1858: 38 cat.; 1878: 97 cat.), Aldrich (1905: 248 cat.), Kertész (1909: 160 cat.), Kröber (1912a: 250 female key, 255 sp. list; 1913b: 44 female key, 62 sp. list), Cole (1923a: 128 rep. desc., LT designation according to ICZN Article 74.5; 1965: 354 cat. as incertae sedis), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.). **Note 115.**

Tabuda varia. Irwin and Lyneborg (1981a: 223 sp. list, comb. change, Figs. 6–7 head, 94–100 male genit.), Poole (1996: 309 sp. list), Webb and Irwin (1999: 656 male key, 657 female key, 667 nom., desc., 668 dist., Figs. 1 phylog., 16, 24, 32, 40, 48, 56, 64 male genit., 71, 78 female genit.), Holston (2004: 64 nom.), Webb (2005: Fig. 1 phylog.), Webb and Metz (2003a: Figs. 1a, 1b, phylog.).

Thereva nervosa Walker 1848: 223. Type locality USA, Georgia. LT male BMNH (Type No. 241970). Preoccupied by *Thereva nervosa* Loew (1847: 28). Osten Sacken (1858: 38 cat.; 1878: 97 cat., 239 note), Aldrich (1905: 248 nom.), Kertész (1909: 155 cat.), Kröber (1912a: 249 male key, 254 sp. list; 1913b: 43 male key, 58 sp. list; 1914a: 61 male key), Cole (1923a: 128 rep. orig. desc., LT designation according to ICZN Article 74.5; 1965: 354 cat. as incertae sedis), Curran (1934: 188 nom.; 1965: 188 nom.), Lyneborg (1968b: 168 nom.), Irwin and Lyneborg (1981a: 223 nom., syn. desig. of *varia* Walker), Poole (1996: 309 nom.), Webb and Irwin (1999: 667 nom.). **Note 116.**

Tabuda nervosa. Holston (2004: 57 nom.).

Tabuda fulvipes Walker 1852: 197. Type locality unknown. ST male (habitus figured in Walker, 1852: Plate 6, Figs. 4, 4a), depository unknown. Walker (1852: Plate 6, Fig. 4 male habitus, Fig. 4a male ant.), Evett (1862: 217 collection record), Osten Sacken (1878: 97 cat.), Aldrich (1905: 246 cat.), Johnson (1910: 748 cat.), Cole (1923a: 81 desc., 82 dist., Figs. 113 male head, 115 male genit., 117 wing; 1965: 352 cat.), Johannsen (1928: 764 cat.), Curran (1934: 186 Fig. 7 wing, 188 nom., syn. desig. of *nervosa* Walker; 1965: 186 Fig. 7 wing, 188 nom.), Brimley (1938: 340 cat.), Irwin and Lyneborg (1981a: 223 nom., syn. desig. of *varia* Walker), Lyneborg (1986a: 64 nom.), Poole (1996: 309 nom.), Webb and Irwin (1999: 667 nom.). **Note 116.**

Baryphora fulvipes. Bigot (1890: 322 comb. change), Kertész (1909: 167 cat.). **Note 117.**

Dialineura fulvipes. Kröber (1912a: 216 sp. list, nom., desc.).

Tabuda fulviceps. Misspelling of *fulvipes*. Kröber (1928b: 120 dist.).

Genus TABUDAMIMA Irwin and Lyneborg

TABUDAMIMA Irwin and Lyneborg 1981a: 219. Type species *Thereva melanophleba* Loew, 1876 by original designation. Irwin and Lyneborg (1981a: 202 key, 221 sp. list, Figs. 88–93 male genit.; 1981b: 520 key), Poole (1996: 309 sp. list), Webb and Irwin (1999: 670 desc.), Holston (2005 biol.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.), Gaimari and Webb (2009: 641 key). This genus is Nearctic in distribution, occurring in Mexico and the USA.

melanophleba (Loew). **Nearctic:** Mexico (Baja California Norte), USA (California, Nevada, Oregon, Washington).

Thereua melanophleba Loew 1876: 317. Type locality USA, California, San Francisco. LT male (MEI 013409) MCZ (Type No. 10686). Original misspelling of *Thereva*.

Thereva melanophleba. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 155 cat.), Lyneborg (1968b: 166 desc., Figs. 35–42 male genit.), Webb and Irwin (1999: 672 LT desig.).

Thereva melanopheba. Misspelling of *melanophleba*. Williston (1908: 206 comment.).

Dialineura melanophleba. Kröber (1912a: 216 sp. list, comb. change), Cole (1923a: 79 note, dist., Figs. 108 wing, 111 male genit., 112 male head; 1965: 352 cat.), Lyneborg (1968b: 149 nom.).

Tabudamima melanophleba. Irwin and Lyneborg (1981a: 221 sp. list, comb. change; 1981b: 520 key), Poole (1996: 309 sp. list), Webb and Irwin (1999: 645 phylog., 671 nom., desc., Figs. 1 phylog., 4 ant., 7 max. palp., 10 wing, 18 male genit., 26, 34, 42, 50, 58, 66 male genit., 73, 80 female genit., 81–82 pupa, 83–86 larva), Holston (2004: 56 nom.; 2005 biol.). **Note 118.**

Genus THEREVA Latreille

THEREVA Latreille 1797: 167. Type species *Musca plebeja* Linnaeus, 1758 by conserved usage according to ICZN (2006, Opinion 2142) on case 3251 (Holston *et al*. 2003: 198). Latreille (1802: 441 included *Musca plebeja*), Meigen (1820: 86), Rondani (1856: 155), Williston (1896: 69), Bigot (1890: 324 key), Coquillett (1893a: 197 sp. key; 1894: 97 key), Aldrich (1905: 247 cat.), Williston (1908: 207 key), Collinge (1909: biol.), Kertész (1909: 149 cat.), Kröber (1911: 476 key; 1912a: 247 male key, 250 female key, 252 sp. list; 1913b: 8 key, 42 desc.; 1914a: 60 male key, 62 female key), Becker (1912: 307 desc.), Cole (1923a: 14 key, 85 nom., desc., 86; 1965: 352 cat.), Malloch (1932: 238 key, 241 nom.), Curran (1934: 188 key; 1965: 188 key), Lyneborg (1968a: 546 morph.; 1976b:

239 nom.), Cole and Schlinger (1969: 170 key, desc.), Irwin and Lyneborg (1981a: 202 key, 216 desc., 218 sp. list.; 1981b: 519 key), Poole (1996: 309 sp. list), Holston *et al.* (2003: 198 petition ICZN; 2007: 3 phylog.), Holston (2004 nom., systematic history), Holston and Irwin (2005: 12 nom., 21 key to Nearctic sp., rev.), ICZN (2006 opinion), Gaimari and Webb (2009: 643 key). This genus is Holarctic in distribution, occurring in the Nearctic Region in Canada, Mexico and the USA. **Note 119.**

TPEREVA. Misspelling of *Thereva*. Eversmann (1834: 422).

EXAPATA Macquart 1841a: 304. Type species *Exapata anthracoides* Macquart, 1841a by monotypy [= *Thereva cincta* Meigen, 1820)]. Macquart (1841b: 26 subsequent usage), Bigot (1890: 322 nom., syn. desig. of *Thereva* Latreille), Kertész (1909: 149 nom.), Lyneborg (1989a: 25 nom.).

THEREUA. Misspelling of *Thereva*. Agassiz (1846a: 39 nomenclator; 1846b: 368 index), Loew (1858: 342 sp. desc.; 1869: 7 sp. desc., 1870: 166 sp. desc.; 1872a: 74 sp. desc.;1874b: 382 sp. desc., 1876: 317 sp. desc.), Kowarz (1883: 242 sp. desc.), Kertész (1909: 149 nom.), Holston (2004: 31 nom.).

THERESA. Misspelling of *Thereva*. Dufour (1850: 139).

THERENA. Misspelling of *Thereva*. Loew (1854: 1).

RETHEVA. Misspelling of *Thereva*. Costa (1857: 455).

THAREVA. Misspelling of *Thereva*. Rondani (1863: 98), O'Hara *et al.* (2011: 177 nom.).

CAENOZONA Kröber 1912b: 251. Type species *Caenozona bicolor* Kröber, 1912b by subsequent designation (Kröber 1937b: 276). Lyneborg (1976b: 238 nom., syn. desig. of *Thereva* Latreille; 1989a: 25 nom.), Poole (1996: 309 nom.).

NEOTHEREVA Kröber 1912c: 138. Type species *Neothereva nitidifrons* Kröber, 1912c by subsequent designation (Kröber 1937b: 276). Kröber (1912c: 138 sp. key), Lyneborg (1978b: 75 nom., syn. desig. of *Thereva* Latreille; 1989a: 25 nom.), Poole (1996: 309 nom.).

EXOPATA. Misspelling of *Exapata* Macquart. Cole (1923a: 85).

ATHEREVA Kröber 1924b: 28 (as subgenus of *Thereva*). Type species *Thereva decipiens* Kröber, 1913b by subsequent designation (Kröber 1937b: 277). Lyneborg (1989a: 25 nom., syn. desig. of *Thereva* Latreille), Poole (1996: 309 nom.).

REINIGIELLUM Enderlein 1933: 139. Type species *Reinigiellum speculiferum* Enderlein, 1933 by original designation. Lyneborg (1976b: 239 nom., syn. desig. of *Thereva* Latreille; 1989a: 25 cat.), Poole (1996: 309 nom.).

THERVA. Misspelling of *Thereva*. Ôuchi (1943a: 483).

NEOTHERVA. Misspelling of *Neothereva*. Miller (1950: 77).

EXPATIA. Misspelling of *Exapata.* Poole (1996: 309 nom.).

albopilosa Kröber. **Nearctic:** Canada (Alberta, British Columbia, Yukon Territory), USA (Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Thereva albopilosa Kröber 1912a: 256. Type locality USA, Colorado. HT male (MEI 088611) USNM (Type No. 24192). Kröber (1912a: 248 male key, 252 sp. list; 1913b: 43 male key, 53 sp. list; 1928b: 120 desc.), Irwin and Lyneborg (1981a: 218 sp. list), Cole (1923a: 87 male key, 99 trans. orig. desc.; 1965: 252 cat.), Poole (1996: 309 sp. list), Holston (2004: 43 nom.), Holston and Irwin (2005: 26 male key, 29 female key, 77 desc., 130 dist., Figs. 54–55 male genit., 107 female frons, map 17 dist.). **Note 120.**

aurofasciata Kröber. **Nearctic:** Canada (Alberta, British Columbia, Yukon Territory), USA (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Thereva aurofasciata Kröber 1912a: 263. Type locality USA, southern Colorado. HT male (MEI 119840) NHMW. Kröber (1912a: 249 male key, 252 sp. list; 1913b: 43 male key, 54 sp. list; 1914a: 62 male key), Cole (1923a: 87 male key, 112 trans. orig. desc.; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 45 nom.), Holston and Irwin (2005: 21 male key, 27 female key, 79 nom., desc., 133 dist., Figs. 3 female scutum, 56–57 male genit., 108 female frons, map 18 dist.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.). **Note 121.**

Thereva nigripilosa Cole 1923a: 110. Type locality Canada, British Columbia, Victoria. HT male (MEI 119292) CNC (Type No. 1205). Cole (1923a: 87 male key; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 57 nom.), Holston and Irwin (2005: 79 nom., syn. desig. of *aurofasciata* Kröber).

bakeri Cole. **Nearctic:** USA (California).

Thereva bakeri Cole 1923a: 124. Type locality USA, California, Los Angeles County, mountains near Claremont. HT male (MEI 119252) USNM (Type No. 25945). Cole (1923a: 87 male key, 89 female key, Fig. 163 wing; 1965: 353 cat.), Kröber (1928b: 120 desc., dist.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 45 nom.), Holston and Irwin (2005: 22 male key, 27 female key, 48 desc., 138 dist., Figs. 32–33 male genit., 96 female frons, map 7 dist.).

brunnea Cole. **Nearctic:** Canada (Alberta, British Columbia), USA (California, Idaho, Montana, Oregon, Washington).

Thereva brunnea Cole 1923a: 108. Type locality Canada, British Columbia, Victoria. HT male (MEI 119290) CNC (Type No. 223). Cole (1923a: 88 male key, 89 female key, Figs. 120 female frons, 152 male genit., 164 wing; 1925: 86 dist.; 1965: 353 cat.), Arnaud (1979: 138 paratypes), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 47 nom.), Holston and Irwin (2005: 25 male key, 29 female key, 81 desc., 139 dist., Figs. 8, 58–59 male genit., 109 female frons, map 19 dist.).

cingulata Kröber. **Nearctic:** Canada (Alberta, British Columbia, Saskatchewan), USA (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, South Dakota, Utah, Washington, Wyoming).

Thereva cingulata Kröber 1912a: 267. Type locality USA, Colorado, Jefferson County, Morrison. HT female (MEI 119841) NHMW. Kröber (1912a: 252 female key, 253 sp. list; 1913b: 44 female key, 55 sp. list), Cole (1923a: 87 male key, 89 female key, 116 rep. orig. desc., 117 desc., dist., Fig. 155 male genit.; 1925: 86 dist.; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Holston (2004: 48 nom.), Poole (1996: 309 sp. list), Holston and Irwin (2005: 21 male key, 29 female key, 83 desc., 141 dist., Figs. 11, 60–61 male genit., 110 female frons, map 20 dist.).

clamonae Holston and Irwin. **Nearctic:** USA (California, Idaho, Nevada, Oregon, Washington, Wyoming).

Thereva clamonae Holston and Irwin 2005: 85. Type locality USA, Nevada, Washoe County, Mount Rose summit. HT male (MEI 083603) CAS (Type No. 18228). Holston and Irwin (2005: 25 male key, 28 female key, 144 dist., Figs. 62–63 male genit., 111 female frons, map 21 dist.).

colorado Holston and Irwin. **Nearctic:** USA (Colorado).

Thereva colorado Holston and Irwin 2005: 87. Type locality USA, Colorado, Clear Creek County, Mount Evans. HT male (MEI 118383) CNC. Holston and Irwin (2005: 25 male key, 29 female key, 146 dist., Figs. 64–65 male genit., 112 female frons).

comata Loew. **Nearctic:** USA (California, Oregon, Washington).

Thereua comata Loew 1869: 7. Type locality USA, California. LT male (MEI 081622) MCZ (Type No. 10684). Original misspelling of *Thereva*. Loew (1872b: 121 subsequent usage).

Thereva comata. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 152 cat.), Kröber (1912a: 249 male key, 252 sp. list, 265 desc.; 1913b: 43 male key, 55 sp. list; 1914a: 62 male key), Cole (1923a: 87 male key, 89 female key, 110 note, Figs. 131 female frons, 151 ant., 161 wing; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 48 nom.; 2005 biol.), Holston and Irwin (2005: 23 male key, 27 female key, 42 nom., LT desig., desc., 147 dist., Figs. 17 dist. map, 28–29 male genit., 94 female frons, map 5 dist.). **Note 122.**

Thereva cornata. Misspelling of *comata*. Woodworth (1913: 149 sp. list).

Thereva nebulosa Kröber 1912a: 264. Type locality USA, California. HT male (MEI 119885) MNHN. Kröber (1912a: 249 male key, 254 sp. list; 1913b: 43 male key, 58 sp. list), Cole (1923a: 87 male key, 89 female key, 111 note; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 57 nom.), Holston and Irwin (2005: 42 nom., syn. desig. of *comata* Osten Sacken). **Note 123.**

cordata Holston and Irwin. **Nearctic:** USA (California).

Thereva cordata Holston and Irwin 2005: 52. Type locality USA, California, Mono County, 4.8 km N Inyo County, White Mountains, near Naval Research station, N. fork of Crooked Creek. HT male (MEI 132403) CAS (Type No. 18229). Holston and Irwin (2005: 24 male key, 26 female key, 153 dist., Figs. 14 head, thorax, 34–35 male genit., 97 female frons, map 8 dist.).

diversa Coquillett. **Nearctic:** USA (Arizona, Colorado, Montana, Nebraska, New Mexico, Wyoming).

Thereva diversa Coquillett 1894: 100. Type locality USA, Colorado. LT male (MEI 111120) USNM (Type No. 995). Aldrich (1905: 248 cat.), Kertész (1909: 153 cat.), Kröber (1912a: 249 male key, 251 female key, 253 sp. list, 262 desc.; 1913b: 43 male key, 44 female key, 56 sp. list; 1914a: 61 male key), Cole (1923a: 88 male key, 89

female key, 116 note; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 49 nom.), Holston and Irwin (2005: 24 male key, 28 female key, 54 nom., LT desig., desc., 154 dist., Figs. 36–37 male genit., 98 female frons, map 9 dist.). **Note 124.**

Thereva concavifrons Kröber 1914a: 70. Type locality USA, New Mexico, Lincoln County, Rio Ruidoso, Blanca Forks. HT female (MEI 111117) USNM (Type No. 26026). Kröber (1914a: 62 female key; 1928b: 121 desc., dist.), Cole (1923a: 131 desc.; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 48 nom.), Holston and Irwin (2005: 54 nom., syn. desig. of *diversa* Coquillett).

duplicis Coquillett. **Nearctic:** Canada (Alberta, British Columbia, Manitoba, Northwest Territories, Ontario, Saskatchewan, Yukon Territory), USA (Michigan, Minnesota, Montana, North Dakota, South Dakota, Wisconsin, Wyoming).

Thereva duplicis Coquillett 1893a: 199. Type locality USA, South Dakota, Brookings County, Brookings. LT male (MEI 119284) USNM (Type No. 10422). Coquillett (1893a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 153 cat.), Kröber (1912a: 249 male key, 251 female key, 253 sp. list; 1913b: 43 male key, 44 female key, 56 sp. list; 1914a: 60 male key, 62 female key, 65 desc.; 1928b: 119 desc.), Cole (1923a: 87 male key, 89 female key, 115 note, Figs. 122 female frons, 148 male genit., 159 wing; 1925: 86 dist.; 1965: 353 cat.), Johannsen (1928: 765 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 24 key, 27 female key, 88 nom., LT desig., desc., 155 dist., Figs. 66–67 male genit., 113 female frons, map 22 dist.).

egressa Coquillett. **Nearctic:** Canada (Alberta, British Columbia), USA (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Thereva egressa Coquillett 1894: 99. Type locality USA, Colorado. LT male (MEI 119285) USNM (Type No. 994). Aldrich (1905: 248 cat., corrected spelling), Kertész (1909: 153 cat.), Kröber (1912a: 249 male key, 251 female key, 253 sp. list; 1913b: 44 male key, female key, 56 sp. list; 1914a: 62 male key, 71 note; 1928b: 120 dist.), Woodworth (1913: 149 sp. list), Cole (1923a: 87 male key, 89 female key, 109 note; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 25 male key, 29 female key, 90 nom., LT desig., desc., 159 dist., Figs. 3 female genit., 68–69 male genit., 114 female frons, map 23 dist.).

Thereva egressus. Incorrect original spelling. Coquillett (1894: 99). Holston (2004: 50 nom.), Holston and Irwin (2005: 90 nom.).

Thereva neomexicana Cole 1923a: 117. Type locality USA, New Mexico, Rio Grande River. HT female (MEI 119286) USNM (Type No. 25943). Cole (1923a: 89 female key; 1925: 84 nom.; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 57 nom.), Holston and Irwin (2005: 90 nom., syn. desig. of *egressa* Coquillett). **Note 125.**

elizabethae Holston and Irwin. **Nearctic:** Canada (British Columbia), USA (California, Oregon, Washington).

Thereva elizabethae Holston and Irwin 2005: 56. Type locality USA, California, San Luis Obispo County, Grover City. HT male (MEI 088988) EMEC. Holston and Irwin (2005: 22 male key, 27 female key, 164 dist., Figs. 5 habitus, 38–39 male genit., 99 female frons, map 10 dist.), Holston (2005 biol.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.).

flavicauda Coquillett. **Nearctic:** USA (California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming).

Thereva flavicauda Coquillett in Baker 1904: 23. Type locality USA, Nevada, Ormsby County. LT female (MEI 118372) USNM (Type No. 6710). Kertész (1909: 153 cat.), Kröber (1912a: 251 female key, 253 sp. list; 1913b: 44 female key, 56 sp. list; 1914a: 63 female key), Cole (1923a: 89 female key, 115 note; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 23 male key, 28 female key, 92 nom., LT desig., desc., 166 dist., Figs. 70–71 male genit., 115 female frons, map 24 dist.).

Thereva flavohirta Kröber 1914a: 70. Type locality USA, Colorado. HT female (MEI 111132) USNM (Type No. 26027). Kröber (1914a: 62 female key), Cole (1923a: 131 desc.; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 92 nom., syn. desig. of *flavicauda* Coquillett).

Thereva pseudoculata Cole 1923a: 121. Type locality USA, Utah, Box Elder County, Brigham. HT male (MEI 119287) USNM (Type No. 25944). Cole (1923a: 87 male key, 89 female key, 121 dist., Figs. 132 ant., 153 male genit.; 1965: 354 cat.), Knowlton and Harmston (1937: 142 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole

(1996: 310 sp. list), Holston (2004: 60 nom.), Holston and Irwin (2005: 92 nom., syn. desig. of *flavicauda* Coquillett).

flavicincta Loew. **Nearctic:** Canada (New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Quebec), USA (Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Vermont, Wisconsin).

Thereua flavicincta Loew 1870: 168. Type locality USA, New Hampshire, White Mountains. LT male (MEI 104584) MCZ (Type No. 10680). Original misspelling of *Thereva*. Loew (1872b: 206 subsequent usage). **Note 126.**

Thereva flavicincta. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 197 key), McGillivray and Houghton (1903: 12 dist.), Aldrich (1905: 248 cat.), Kertész (1909: 153 cat.), Kröber (1912a: 249 male key, 251 female key, 253 sp. list, 261 desc.; 1913b: 43 male key, 44 female key, 56 sp. list; 1914a: 60 male key, 68 desc.), Cole (1923a: 86 male key, 89 female key, 114 note, dist.; 1925: 86 dist.; 1965: 353 cat.), Johannsen (1928: 765 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 24 male key, 28 female key, 94 nom., desc., 95 LT desig., 170 dist., Figs. 72–73 male genit., 116 female frons, map 25 dist.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.). **Note 127.**

Thereua gilvipes Loew 1870: 168. Type locality USA, Massachusetts. LT female (MEI 104567) MCZ (Type No. 10681). Original misspelling of *Thereva*. Loew (1872b: 206 subsequent usage).

Thereva gilvipes. Osten Sacken (1878: 96 cat.), Aldrich (1905: 248 nom., syn. desig. of *flavicincta* Loew), Kertész (1909: 153, 154 nom.), Kröber (1912a: 253 nom.; 1913b: 56 nom.), Cole (1965: 353 nom.), Irwin and Lyneborg (1981a: 219 nom.), Poole (1996: 309 nom.), Holston (2004: 51 nom.), Holston and Irwin (2005: 94 nom., LT desig.).

flavipilosa Cole. **Nearctic:** Canada (British Columbia), USA (Arizona, California, Colorado, Montana, Nevada, Oregon, Utah, Wyoming).

Thereva flavipilosa Cole 1923a: 125. Type locality USA, California, Fresno County, Huntington Lake. HT male (MEI 134395) CAS (Type No. 01494). Cole (1923a: 87 male key, Fig. 136 ant.; 1965: 353 cat.), Arnaud (1979: 138 type data), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 50 nom.), Holston and Irwin (2005: 22 male key, 27 female key, 58 nom., desc., 173 dist., Figs. 12 female genit., 18 dist. map, 40–41 male genit., 100 female frons, map 11 dist.), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.).

foxi Cole. **Nearctic:** Canada (Alberta, British Columbia, Yukon Territory), USA (Colorado, Idaho, Montana, Oregon, Utah, Washington, Wyoming).

Thereva foxi Cole 1923a: 112. Type locality USA, Washington, Lewis County, Paradise Valley on Mount Rainier. HT male (MEI 134396) CAS (Type No. 01493). Cole (1923a: 87 male key; 1965: 353 cat.), Arnaud (1979: 138 type data), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 51 nom.), Holston and Irwin (2005: 25 male key, 28 female key, 32 desc., 176 dist., Figs. 20–21 male genit. 90 female frons, map 1 dist.).

frontalis Say. **Nearctic:** Canada (Alberta, Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec), USA (Colorado, Connecticut, Illinois, Indiana, Iowa, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Wisconsin, Wyoming).

Thereva frontalis Say 1824: 370. Type locality USA, Minnesota, Clearwater County, Itasca Park. NT female (MEI 078277) UMSP. Wiedemann (1828: 230 desc.), Osten Sacken (1858: 38 cat.; 1878: 96 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 153 cat.), Kröber (1912a: 252 female key, 253 dist., 266 desc.; 1913b: 43 male key, 56 sp. list), Cole (1923a: 87 male key, 89 female key, 112 desc., dist., Figs. 2A–C male genit., 121 female frons, 150 male genit.; 1925: 86 dist.; 1965: 353 cat.), Johannsen (1928: 765 cat.), Teskey (1976: 33 biol., Figs. 39, larval habitus, 40 larval head capsule), Irwin and Lyneborg (1981a: 219 sp. list, Fig. 1 habitus), Poole (1996: 309 sp. list), Holston (2004: 51 nom.), Holston and Irwin (2005: 26 male key, 29 female key, 96 nom., desc., 97 NT desig., 178 dist., Figs. 74–75 male genit., 117 female frons, map 26 dist.).

Thereva aurata Harris 1835: 596. *Nomen nudum*. Osten Sacken (1858: 38 cat.), Johnson (1925: 73 nom., syn. desig. of *frontalis* Say), Irwin and Lyneborg (1981a: 270 nom.), Poole (1996: 310 nom.), Holston (2004: 45 nom.). **Note 128.**

Thereva ustulata Kröber 1912a: 265. Type locality Canada, Quebec, Laval County. HT male (MEI 111166) USNM (Type No. 24194). Kröber (1912a: 248 male key, 255 sp. list; 1913b: 43 male key, 62 sp. list; 1914a: 62

male key), Cole (1923a: 88 male key, 110 note; 1925: 86 dist.; 1965: 354 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 310 sp. list), Holston (2004: 64 nom.), Holston and Irwin (2005: 96 nom., syn. desig. of *frontalis* Say). **Note 129.**

fucata Loew. **Nearctic:** Canada (British Columbia), Mexico (Baja California Norte), USA (California, Idaho, Nevada, Oregon, Utah, Washington).

Thereua fucata Loew 1872a: 74. Type locality USA, California. LT male (MEI 104566) MCZ (Type No. 10685). Original misspelling of *Thereva*. Loew (1872b: 250 subsequent usage). **Note 130.**

Thereva fucata. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 154 cat.), Kröber (1912a: 247 male key, 251 female key, 254 sp. list, 260 desc.; 1913b: 43 male key, 56 sp. list, Fig. 44 female habitus; 1914a: 61 male key, 62 female key, 67 desc.; 1928b: 120 dist.), Cole and Lovett (1921: 242 cat.), Cole (1923a: 86 male key, 89 female key, 123 note, dist., Figs. 154 male genit., 162 wing; 1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list; 1981b: Figs. 1 female habitus, 23 larval habitus, 24, 26 larval head capsule, 25 larval anterior and posterior spiracles), Teskey (1991a: Fig. 21a larval head and thorax, 21b larval head capsule), Foote (1991: Fig. 191a larval habitus, 191b larval head capsule, 191c larval anterior and posterior spiracles), Poole (1996: 309 sp. list), Holston (2004: 51 nom.), Holston and Irwin (2005: 22 male key, 27 female key, 60 desc., LT desig., 186 dist., Fig. 15 head, thorax, 42–43 male genit., 101 female frons, map 12 dist.), Holston (2005 biol.), Borkent and Rotheray (2009: 167 Fig. 32 larval head capsule), Gaimari and Webb (2009: 642 Fig. 20 larva, Fig. 21 larval head capsule). **Note 131.**

Thereva furcata. Misspelling of *fucata*. Woodworth (1913: 149 sp. list), Knowlton and Harmston (1937: 142 cat.).

Thereva fuctata. Misspelling of *fucata*. Holston and Irwin (2005: Fig. 15 legend).

fucatoides Bromley. **Nearctic:** Canada (British Columbia), USA (California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming).

Thereva fucatoides Bromley 1937: 99. Type locality USA, Utah, Cache County, Logan Canyon. HT male (MEI 118373) USNM. Cole (1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 51 nom.), Holston and Irwin (2005: 22 male key, 27 female key, 63 nom., desc., 190 dist., Figs. 13 female genit., 44–45 male genit., 102 female frons., map 13 dist.). **Note 132.**

Thereva fucata. Misidentification, *sensu* Yeates (1994: 92, Figs. 326-327) nec Loew (1872a: 74). Holston and Irwin (2005: 63 nom.).

hirticeps Loew. **Nearctic:** USA (California, Oregon, Washington).

Thereua hirticeps Loew 1874b: 382. Type locality USA, California, San Francisco. LT female (MEI 081665) MCZ (Type No. 10682). Original misspelling of *Thereva*.

Thereva hirticeps. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 198 key), Aldrich (1905: 248 cat.), Kertész (1909: 154 cat.), Kröber (1912a: 252 female key, 254 sp. list; 1913b: 44 female key, 57 sp. list), Cole and Lovett (1921: 242 cat.), Cole (1923a: 87 male key, 89 female key, 120 desc., 121 LT designation according to ICZN Article 74.5, dist., Figs. 126 female frons, 166 wing; 1965: 353 cat.), Arnaud (1979: 139 neallotype), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 52 nom.), Holston and Irwin (2005: 23 key, 27 female key, 44 desc., 199 dist., Figs. 17 dist. map, 30–31 male genit., 95 female frons, map 6 dist.). **Note 133.**

johnsoni Coquillett. **Nearctic:** Canada (British Columbia), Mexico (Baja California Norte), USA (California, Nevada, Oregon, Utah, Washington).

Thereva johnsoni Coquillett 1893a: 200. Type locality USA, Washington, King County, Seattle. HT female (MEI 081640) MCZ (Type No. 7571). Coquillett (1893a: 197 key), Aldrich (1905: 248 cat.), Kertész (1909: 154 cat.), Kröber (1912a: 251 female key, 254 sp. list; 1913b: 44 female key, 58 sp. list; 1928b: 119 dist.), Cole and Lovett (1921: 242 cat., biol.), Cole (1923a: 87 male key, 89 female key, 107 desc., 108 dist., Figs. 119 female frons, 142 ant.; 1925: 86 dist.; 1965: 253 cat.), Arnaud (1979: 138 neallotype), Irwin and Lyneborg (1981a: 219 sp. list), Holston (2004: 53 nom.), Poole (1996: 309 sp. list), Holston and Irwin (2005: 24 male key, 28 female key, 99 desc., 201 dist., Figs. 1 male head, 2 female head, 19 dist. map, 76–77 male genit., 118 female frons, map 27 dist.). **Note 134.**

Thereva johnsonii. Original misspelling of *johnsoni*. Coquillett (1893a: 198 key).

krafti Holston and Irwin. **Nearctic:** Canada (Alberta, British Columbia), USA (California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

Thereva krafti Holston and Irwin 2005: 101. Type locality USA, Oregon, Baker County, 54.7 km SE Union, Upper Goose Creek. HT male (MEI 100503) WSUC. Holston and Irwin (2005: 26 male key, 28 female key, 205 dist., Figs. 78–79 male genit., 119 female frons, map 28 dist.).

kristinae Holston and Irwin. **Nearctic:** Canada (British Columbia), Mexico (Baja California Norte), USA (California, Idaho, Nevada, Oregon, Washington).

Thereva kristinae Holston and Irwin 2005: 65. Type locality Canada, British Columbia, Robson. HT male (MEI 076346) SMDV. Holston and Irwin (2005: 24 male key, 27 female key, 209 dist., Figs. 46–47 male genit., 103 female frons, map 14 dist.).

leucosoma Holston and Irwin. **Nearctic:** USA (California, Colorado, Idaho, Nevada, Oregon, Utah, Washington, Wyoming).

Thereva leucosoma Holston and Irwin 2005: 67. Type locality USA, Utah, Daggett County, Manila. HT male (MEI 080403) UMRM. Holston and Irwin (2005: 24 male key, 27 female key, 210 dist., Figs. 48–49 male genit., 104 female frons, map 15 dist.).

macdunnoughi Cole. **Nearctic:** Canada (Alberta, British Columbia), USA (California, Colorado, Washington).

Thereva macdunnoughi Cole 1925: 87. Type locality Canada, Alberta, Brazeau [Nordegg]. HT male (MEI 119288) CNC (Type No. 447). Cole (1965: 353 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 55 nom.), Holston and Irwin (2005: 25 male key, 28 female key, 34 desc., 201 dist., Figs. 22–23 male genit., 91 female frons, map 2 dist.).

nelsoni Holston and Irwin. **Nearctic:** USA (California, Nevada, Utah).

Thereva nelsoni Holston and Irwin 2005: 69. Type locality USA, California, Mono County, 1.6 km W Tom's Place, Rock Creek. HT male (MEI 132527) CAS (Type No. 18230). Holston and Irwin (2005: 24 male key, 27 female key, 212 dist., Figs. 50–51 male genit., 105 female frons, map 15 dist.).

niveipennis Kröber. **Nearctic:** USA (California).

Thereva niveipennis Kröber 1914a: 66. Type locality USA, California, Alameda County. HT male (MEI 118374) USNM (Type No. 25946). Kröber (1914a: 60 male key), Cole (1923a: 87 male key, 106 desc., Figs. 134 ant., 160 wing; 1965: 354 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 309 sp. list), Holston (2004: 57 nom.), Holston and Irwin (2005: 21 male key, 26 female key, 71 desc., 212 dist., Figs. 6 habitus, 52–53 male genit., 106 female frons), Holston *et al.* (2007: 282 phylog., Figs. 2–5 phylog.).

nobilitata (Fabricius). **Nearctic:** Canada (British Columbia). **Palearctic:** widespread western Europe.

Bibio nobilitata Fabricius 1775: 757. Type locality Daniae nemoribus [= Denmark]. ST sex unknown, ZMUC (but see note). **Note 135.**

Thereva nobilitata. Holston and Irwin (2005: 24 male key, 29 female key, 110 desc., 213 dist., Figs. 10, 88–89 male genit. 124 female frons). **Note 136.**

nudotermina Holston and Irwin. **Nearctic:** USA (California).

Thereva nudotermina Holston and Irwin 2005: 103. Type locality USA, California, Plumas County, Chester. HT male (MEI 122872) OSUC. Holston and Irwin (2005: 26 male key, 29 female key, 213 dist., Figs. 80–81 male genit., 120 female frons, map 29 dist.).

schlingeri Holston and Irwin. **Nearctic:** USA (Arizona, New Mexico).

Thereva schlingeri Holston and Irwin 2005: 105. Type locality USA, Arizona, Coconino County, Snow Bowl. HT male (MEI 101876) UCDC. Holston and Irwin (2005: 26 male key, 29 female key, 213 dist., Figs. 82–83 male genit., 121 female frons, map 30 dist.).

smithae Holston and Irwin. **Nearctic:** USA (California).

Thereva smithae Holston and Irwin 2005: 107. Type locality USA, California, Ventura County, San Nicolas Island. HT male (MEI 118044) EMEC. Holston and Irwin (2005: 24 male key, 28 female key, 214 dist., Fig. 84–85 male genit., 122 female frons).

strigipes Loew. **Nearctic:** Canada (Alberta, British Columbia, Manitoba, New Brunswick, Northwest Territories, Nova Scotia, Ontario, Quebec, Saskatchewan, Yukon Territory), USA (Maine, Michigan, Minnesota, New Hampshire, New York, Vermont).

Thereua strigipes Loew 1870: 169. Type locality Canada, Manitoba, English River. ST female (MEI 111045) MCZ (Type No. 10683). Original misspelling of *Thereva*. Loew (1872b: 207 subsequent usage). **Note 137.**

Thereva strigipes. Osten Sacken (1878: 96 cat.), Coquillett (1893a: 198 key), McGillivray and Houghton (1903: 12 dist.), Johannsen (1903: 15 specimen), Aldrich (1905: 248 cat.), Kertész (1909: 159 cat.), Kröber (1912a: 252 female key, 255 sp. list, 268 desc.; 1913b: 44 female key, 61 sp. list), Cole (1923a: 88 female key, 118

desc., dist.; 1925: 86 dist.; 1965: 354 cat.), Johannsen (1928: 765 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 310 sp. list), Holston (2004: 62 nom.), Holston and Irwin (2005: 25 male key, 28 female key, 36 desc., 214 dist., Figs. 7 habitus, 24–25 male genit., 92 female frons, map 3 dist.). **Note 138.**

utahensis Hardy. **Nearctic:** Canada (Alberta, British Columbia, Yukon Territory), USA (California, Colorado, Idaho, Montana, Oregon, Utah, Washington, Wyoming).

Thereva utahensis Hardy 1938: 145. Type locality USA, Utah, North Fork Provo Canyon. HT female (MEI 081669) USNM. Hardy (1938: Fig. 3 female head), Cole (1965: 354 cat.), Irwin and Lyneborg (1981a: 219 sp. list), Poole (1996: 310 sp. list), Holston (2004: 64 nom.), Holston and Irwin (2005: 26 male key, 28 female key, 108 desc., 216 dist., Figs. 86–87 male genit., 123 female frons, map 31 dist.).

webbi Holston and Irwin. **Nearctic:** Canada (Alberta, British Columbia, Manitoba, Newfoundland, Northwest Territories, Yukon Territory), USA (Alaska, Colorado, Montana, Oregon, Utah, Wyoming).

Thereva webbi Holston and Irwin 2005: 38. Type locality Canada, Yukon Territory, 16.1 km NW Teslin Lake, Alaska Highway, near Lone Tree Creek. HT male (MEI 087890) ROME. Holston and Irwin (2005: 25 male key, 28 female key, 217 dist., Figs. 26–27 male genit., 93 female frons, map 4 dist.).

Genus WINTHEMMYIA Webb

WINTHEMMYIA Webb 2005c: 21. Type species *Psilocephala angustata* Kröber, 1913b by original designation. Gaimari and Webb (2009: 642 key). This genus is Neotropical in distribution, occurring in Brazil.

angustata (Kröber). **Neotropical:** Brazil (Bahia).

Psilocephala angustata Kröber 1913b: 29. Type locality Brazil, Bahia. HT female (MEI 147345) ZMHB. Kröber (1913b: 29 sp. list).

Brachylinga angustata. Irwin and Webb (1992: 87 sp. list, comb. change).

Winthemmyia angustata. Webb (2005c: 21 nom., comb. change, desc., 25 dist., Figs. 42–49 male genit., 50 female genit.).

Subfamily XESTOMYZINAE Lyneborg

Xestomyzini Lyneborg 1976a: 192 (as tribe of Phycinae). Type genus: *Xestomyza* Wiedemann, 1820. Irwin and Webb (1992: 85 as subfamily), Sabrosky (1999: 323 nom. history), Holston (2004 nom., systematic history), Hauser and Irwin (2005a: 400 fossil rev.; 2005b: 39 fossil descr.; 2005c: 1). **Note 139.**

Genus HENICOMYIA Coquillett

HENICOMYIA Coquillett 1898: 187. Type species *Henicomyia hubbardii* Coquillett, 1898 by original designation. Williston (1908: 207 key), Kertész (1909: 149 cat.), Kröber (1912a: 210 key, 213 desc.; 1913b: 6 key, 16 desc., sp. list; 1914a: 34 desc.), Cole (1923a: 14 key, 17 desc.; 1965: 349 cat.), Curran (1934: 188 key; 1965: 188 key), Cole and Schlinger (1969: 170 key, 171 desc., Figs. 102 dorsal habitus, lateral habitus, ant.), Lyneborg (1972: 362 desc., 364 key), Irwin and Lyneborg (1981a: 203 key, 262 desc., 264 sp. list; 1981b: 518 dist., 522 key), Irwin and Webb (1992: 87 sp. list, 101 note), Poole (1996: 308 sp. list), Gaimari and Webb (2009: 637 key, 645 dist., habitats). This genus is Nearctic and Neotropical in distribution, occurring in Argentina, Paraguay, Brazil, Peru, Panama, Costa Rica, Guatemala, Mexico and the USA.

bicolor Lyneborg. **Neotropical:** Brazil (Parana, Santa Catarina).

Henicomyia bicolor Lyneborg 1972: 367. Type locality Brazil, Santa Catarina, Nova Teutonia. HT male CNC. Lyneborg (1972: 364 key, 368 dist., Fig. 209 male head, 210 male ant., 222–230 male genit.), Irwin and Webb (1992: 87 sp. list, 103 desc., 105 dist., Figs. 67 male frons, 68–71 male genit., 72–73 female genit.). **Note 140.**

diversicolor Lyneborg. **Neotropical:** Brazil (Rio de Janeiro).

Henicomyia diversicolor Lyneborg 1972: 368. Type locality Brazil, Rio de Janeiro State, Itatiaya [= Itatiaia]. HT female MZSP. Lyneborg (1972: 364 key, 369 dist.), Irwin and Webb (1992: 87 sp. list).

flava Lyneborg. **Neotropical:** Argentina (Jujuy), Bolivia (Beni), Brazil (Amazonas, Goiás, Mato Grosso, Rondônia, Roraima, São Paulo), Paraguay (Alto Parana).

Henicomyia flava Lyneborg 1972: 369. Type locality Brazil, Goiaz [= Goiás], Annapolis [= Anápolis]. HT male USNM (Type No. 1218). Lyneborg (1972: 364 key, 370 dist., Figs. 207 female head, 208 female ant., 231–235 male genit.), Irwin and Webb (1992: 87 sp. list, 105 desc., 106 dist., Figs. 74 female frons, 75–76 female genit.).

Henicomyia amazonica Irwin and Webb 1992: 101. Type locality Brazil, Amazonas, Manaus. HT male (MEI 006829) INPA. **NEW SYNONYM.** Irwin and Webb (1992: 87 sp. list, 103 dist., Figs. 56 male frons, 57 male ant., 58 max. palp., 59 wing, 60–64 male genit., 65–66 female genit.). **Note 141.**

hubbardii Coquillett. **Nearctic:** USA (Arizona, California, New Mexico, Texas).

Henicomyia hubbardii Coquillett 1898: 187. Type locality USA, Arizona, Fort Grant. HT male USNM (Type No. 4071). Aldrich (1907: 4 cat.), Kertész (1909: 149 cat.), Kröber (1912a: 213 sp. list; 1913b: 16 sp. list; 1914a: 35 Fig. 2 head), Lyneborg (1972: 364 key, nom., desc., 366 dist., Figs. 212 male head, 213 female ant., 214–221 male genit.), Cole (1965: 349 cat.), Irwin and Lyneborg (1981a: 264 sp. list, Figs. 35 male head, 208–214 male genit.; 1981b: Fig. 7 male ant.), Poole (1996: 308 sp. list), Gaimari and Webb (2009: 638 Fig. 4 male ant.).

Henicomyia hubbardi. Misspelling of *hubbardii*. Cole (1923a: 17 key, note, Figs. 5 male dorsal habitus, 6 ant., 7 male lateral habitus), Curran (1934: 187 Fig. 13 ant., Fig. 14 habitus; 1965: 187 Fig. 13 ant., Fig. 14 habitus), Cole and Schlinger (1969: 171 Figs. 102 dorsal habitus, lateral habitus, ant.), Sinclair *et al.* (1994: 432 phylog. exemplar).

nigra Lyneborg. **Neotropical:** Peru (Huánuco).

Henicomyia nigra Lyneborg 1972: 371. Type locality Peru, Huánuco, Cochicote. HT male USNM (Type No. 1223). Lyneborg (1972: 364 key, 371 dist., Fig. 211 male ant.).

tomentosa Lyneborg. **Neotropical:** Costa Rica (Alajuela).

Henicomyia tomentosa Lyneborg 1972: 370. Type locality Costa Rica, Higuito, San Mateo. HT female USNM (Type No. 1221). Lyneborg (1972: 364 key, 370 dist., Fig. 206 female head).

varipes Kröber. **Nearctic:** Mexico (Federal District).

Henicomyia varipes Kröber 1912a: 213. Type locality Mexico, Districto Federal, Mexico City. HT female MNHN. **REVISED STATUS.** Kröber (1913b: 16 dist.), Cole (1923a: 17 key, 18 desc., 1965: 349 cat.), Lyneborg (1972: 364 nom., probable syn. of *hubbardii* Coquillett), Irwin and Lyneborg (1981a: 264 nom., syn. of *hubbardii* Coquillett), Poole (1996: 308 nom.). **Note 142.**

†Genus PERATRIMERA Hauser and Irwin

†PERATRIMERA Hauser and Irwin 2005b: 40. Type species *Peratrimera mexicana* Hauser and Irwin, 2005b by original designation. This genus is known only from the fossil record, from Mexican amber (Chiapas).

†***mexicana*** Hauser and Irwin. **Neotropical:** Mexico (Chiapas).

Peratrimera mexicana Hauser and Irwin 2005b: 40. Type locality Oligocene–Miocene (20 million years old) amber from Chiapas, Mexico. HT female (MEI 164794) BMNH (Accession No. In. 2158(1)). Hauser and Irwin (2005b: Figs. 1a photograph of holotype, 1b habitus, 2a ant., 2b, c wing.).

Incertae Sedis

antennata Kröber. **Neotropical:** Chile (Bío-Bío).

Psilocephala antennata Kröber 1911: 508. Type locality Chile, Concepción. ST male, ST female, depository unknown. Kröber (1911: 498 male key, 500 female key; 1913b: 29 sp. list, 37 male key, 38 female key; 1928a: 5 dist., 8 male key, 11 female key), Stuardo-Ortiz (1946: 87 cat.), Metz *et al.* (2003: 248 trans. orig. desc.), Webb and Metz (2006: 237 nom., *nomen dubium*). **Note 143.**

Brachylinga antennata. Metz *et al.* (2003: 248 comb. change).

luteiventris Philippi. **Neotropical:** Chile **(**Región Metropolitana de Santiago).

Thereva luteiventris Philippi 1865: 769. Type locality Chile, near Santiago. ST sex unknown, MNNC (lost? but see note). Reed (1888: 294 cat.), Kertész (1909: 155 cat.), Kröber (1911: 491 female key, 494 reprod. orig. desc.; 1913b: 45 female key, 58 sp. list), Stuardo-Ortiz (1946: 86 cat.), Holston (2004: 55 nom.). **Note 144.**

triangularis Say. **Neartic:** USA (Missouri).

Xylophagus triangularis Say 1823: 30. Type locality USA, Missouri. ST sex unknown, ANSP (destroyed). Woodley (2011: 486 unrecognized, possibly Therevidae).

vetustus Walker. **Neotropical**: Brazil.

Xylophagus ? *vetustus* Walker, 1854: 106. ST ♀ BMNH (lost). Brazil. Pará. Woodley (2011: 486 unrecognized, possibly Therevidae).

New World Species Formerly Considered Therevidae

†***Apsilocephala vagabunda*** (Cockerell) [Apsilocephalidae]

Rueppellia vagabunda Cockerell 1927: 163. Irwin and Lyneborg (1981b: 518 note), Evenhuis (1994: 321 cat.).

Apsilocephala vagabunda. Hauser and Irwin (2005a: 394 comb. change).

Atherimorpha macrochaeta (Bigot) [Rhagionidae, currently a junior synonym]

Psilocephala macrochaeta Bigot 1890: 325. Kertész (1909: 163 cat.), Kröber (1911: 500 female key, 510 rep. orig. desc., desc.; 1913b: 32 sp. list, 38 female key), Malloch (1932: 236 sp. list).

Atherimorpha macrochaeta. Edwards in Malloch (1932: 236 comb. change), James (1975: 24.2 nom.). **Note 145.**

Atherimorpha pilosula (Bigot) [Rhagionidae, currently a junior synonym]

Psilocephala pilosula Bigot 1890: 325. Kertész (1909: 164 cat.), Kröber (1911: 498 male key, 521 desc.; 1913b: 33 sp. list, 37 male key), Malloch (1932: 236 sp. list).

Atherimorpha pilosula. Edwards in Malloch (1932: 236 comb. change), James (1975: 24.2 nom.). **Note 146.**

†***"Nebritus" willistoni*** Melander [unplaced Trichoptera]

Nebritus willistoni Melander 1949: 30. Evenhuis (1994: 320 cat.), Hauser and Irwin (2005a: 394 transferred this species to the Trichoptera, as incertae sedis).

Scepsis appendiculata (Macquart) [Tabanidae]

Thereva appendiculata Macquart 1841a: 301. Macquart (1841a: Plate 5, Fig. 3 wing; 1841b: 23 subsequent usage, Plate 5, Fig. 3 wing), Kertész (1909: 151 cat.).

Brachylinga appendiculata. Irwin and Webb (1992: 87 comb. change).

Scepsis appendiculata. Webb and Metz (2006: 238 comb. change). Tabanidae. **Note 147.**

†***Taracticus hypogaeus*** (Cockerell) [Asilidae]

Psilocephala hypogaea Cockerell 1909b: 68. Cockerell (1909b: Figs. 3, 3a photograph), Irwin and Lyneborg (1981b: 518 note).

Taracticus hypogaeus. Hauser and Irwin (2005a: 394 comb. change). Asilidae.

Thereva plagiata Walker [Asilidae, currently a junior synonym]

Thereva plagiata Harris 1835: 596. *Nomen nudum.* Walker (1848: 223 validated name as *Thereva plagiata* Walker), Osten Sacken (1858: 38 cat.), Johnson (1925: 74 nom.), Stone *et al.* (1965: 1115 nom.), Irwin and Lyneborg (1981a: 270 nom.), Poole (1996: 310 nom.), Holston (2005: 59 nom.). **Note 148.**

Thereva plagiata Walker 1848: 223. Osten Sacken (1878: 97 nom., syn. desig. of *Stichopogon trifasciatus* (Say)), Williston (1886: 289 nom.), Back (1909: 335 nom.), Martin and Wilcox (1965: 385 nom.), Holston (2004: 59 nom.), Barnes (2010: 373 nom.). **Note 149.**

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LITERATURE CITED

Adams, C.F. (1903) Descriptions of six new species. Pages 221–223. *In*: Snow, F.H. A preliminary list of the Diptera of Kansas. *Kansas University Science Bulletin*, 2(5), 211–223.

Adams, C.F. (1904) Notes on and descriptions of North American Diptera. *Kansas University Science Bulletin*, 2 [= whole series], 14, 433–455. [= *Kansas University Bulletin* 4(6)].

Agassiz, J.M. (1846a) *Nomenclator zoologicus continens nomina systematica generum animalium tam viventium quam fossilium, secundum ordinem alphabeticum disposita, adjectis auctoribus, libris, in quibus reperiuntur, anno editionis, etymologia et familiis, ad quas pertinent, in singulis classibus. Fascicle IX/X: Titulum et praefationem operis, Mollusca, Lepidoptera, Strepsiptera, Diptera, Myriapoda, Thysanura, Thysanoptera, Suctoria, Epizoa et Arachnidas* [*Pt. 4*]. *Nomina systematica generum Diptorum, tam viventium quibus reperiuntur, anno editionis, etymolgia et familiis ad quas pertinent.* Soloduri [Solthurn, Switzerland]: Jent and Gassman, 42 pp.

Agassiz, J.M. (1846b) *Nomenclatoris zoologici index universalis, continens nomina systematica classium, ordinum, familiarum et generum animalium omnium, tam viventium quam fossilium, secundum ordinem aphabeticum unicum disposita, adjectis homonymiis plantarum, nec non variis adnotationibus et emendationibus.* (= Fasc. XII). Soloduri [Solthurn, Switzerland]: Jent and Gassman, 393 pp.

Aldrich, J.M. (1905) A catalogue of North American Diptera (or two-winged flies). *Smithsonian Miscellaneous Collections*, 46(1444), 1–680.

Aldrich, J.M. (1907) Additions to my catalogue of North American Diptera. *Journal of the New York Entomological Society*, 15, 1–9.

Anonymous (an appointed Committee of the Academy). 1869. (Biography of) Robert Kennicott. *Transactions of the Chicago Academy of Sciences*, 1(2), 133–226.

Arnaud, P.H., Jr. (1979) A catalog of the types of Diptera in the collection of the California Academy of Sciences. *Myia*, 1, v + 505 pp.

Back, E.A. (1909) The robber-flies of America, north of Mexico, belonging to the subfamilies Leptogastrinae and Dasypogoninae. *Transactions of the American Entomological Society*, 35, 137–400.

Baker, C.F. (1904) Diptera. Reports on Californian and Nevadan Diptera, I. *Invertebrata Pacifica*, 1, 17–39.

Barnes, J.K. (2010) Revision of Nearctic *Stichopogon* species (Diptera: Asilidae) with white-banded abdomens, including description of *Stichopogon venturiensis*, new species, from coastal California. *Proceedings of the Entomological Society of*

Washington, 112, 367–380. http://dx.doi.org/10.4289/0013-8797.112.3.367
Becker, T. (1912) Beitrag zur Kenntnis der Thereviden. *Verhandlungen der Zoologischen–Botanischen Gesellschaft in Wien*, 62, 289–319.
Becker, T. (1923) Wissenschaftliche Ergebnisse der mit Unterstützung der Akademie der Wissenschaften in Wien aus der Erbschaft Treitl von F. Werner unternommenen zoologischen Expedition nach dem Anglo-Ägyptischen Suran (Kordofan) 1914. VI. Diptera. *Denkschrift der Akademie der Wissenschaften zu Wien*, 98, 57–82.
Bellardi, L. (1861) *Saggio di ditterologia messicana*. Parte IIa. Stamperia Real, Torino [=Turin]. 99 pp.
Bezzi, M. (1902) Neue Namen für einige Dipteren-Gattungen. *Zeitschrift für systematische Hymenopterologie und Dipterologie*, 2, 190–192.
Bigot, J.M.F. (1890) Diptères nouveaux ou peu connus. 35^{e} partie, XLIV: Therevidi. *Annales de la Société Entomologique de France* (6), 9[1889], 321–328.
Blanchard, E. (1852) Orden IX. Dipteros. Pages 327–468. *In*: Gay, C. *Historia fisica y politica de Chile, Zoologia*, 7. Paris. 417 pp.
Borkent, A. & Rotheray, G. (2009) Key to Diptera Families—Larvae. Chapter 7. Pages 157–191. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. and Zumbado, M. (eds.). *Manual of Central American Diptera*. Volume 1. National Research Council Research Press, Ottawa, Canada, 714 pp.
Brauer, F. (1882) Die Zweiflügler des kaiserlichen Museums zu Wien. II. *Denkschriften der Kaiserlichen Akademie der Wissenschaften*, 44(1), 59–110.
Brèthes, J. (1907) Catálogo de los Dípteros de las Repúblicas del Plata. *Anales del Museo Nacional de Buenos Aires*, 16(3), 277–305.
Brimley, C.S. (1938) *The Insects of North Carolina. Being a List of the Insects of North Carolina and their Close Relatives*. North Carolina Department of Agriculture, Division of Entomology, Raleigh. 560 pp.
Bromley, S.W. (1934) Therevidae. Pages 360–361. *In:* Curran, C.H. (ed.). The Diptera of Kartabo, Bartica District, British Guiana, with descriptions from other British Guiana localities. *Bulletin of the American Museum of Natural History*, 66, 287–532.
Bromley, S.W. (1937) New and little-known Utah Diptera with notes on the taxonomy of the Diptera. *Proceedings of the Utah Academy of Sciences, Arts and Letters*, 14, 99–109.
Brown, B.V. (2009) Introduction. Chapter 1. Pages 1–7. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. and Zumbado, M. (eds.), *Manual of Central American Diptera*. Volume 1. National Research Council Research Press, Ottawa, Canada, 714 pp.
Brues, C.T., Melander, A.L. & Carpenter, F.M. (1954) Classification of insects. (Revised ed.). *Bulletin of the Museum of Comparative Zoology*, 108, 917 pp.
Buck, M., Woodley, N.E., Borkent, A., Wood, D.M., Pape, T., Vockeroth, J.R., Michelsen, V. & Marshall, S.A. (2009) Key to Diptera Families—Adults. Chapter 6. Pages 95–156. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. and Zumbado, M. (eds.). *Manual of Central American Diptera*. Volume 1. National Research Council Research Press, Ottawa, Canada, 714 pp.
Burmeister, H.C.C. (1835) Bericht über die Fortschritte der Entomologie 1834–35. *Wiegmann's Archiv für Naturgeschichte*, 1(2), 7–74.
Burmeister, H.C.C. (1837) *Handbuch der Naturgeschichte.* [Part 2]. Enslin, Berlin. xii + 369–858.
Cockerell, T.D.A. (1909a) Fossil Diptera from Florissant, Colorado. *Bulletin of the American Museum of Natural History*, 26, 9–12.
Cockerell, T.D.A. (1909b) Fossil insects from Florrisant, Colorado. *Bulletin of the American Museum of Natural History*, 26, 67–76.
Cockerell, T.D.A. (1916) Some American fossil insects. *Proceedings of the United States National Museum*, 51(2146), 89–106. http://dx.doi.org/10.5479/si.00963801.51-2146.89
Cockerell, T.D.A. (1927) Fossil insects from the Miocene of Colorado. *Annals and Magazine of Natural History*, Series 9, 19, 161–166. http://dx.doi.org/10.1080/00222932708633587
Cole, F.R. (1923a) Revision of the North American two-winged flies of the family Therevidae. *Proceedings of the United States National Museum*, 62(4), 1–140. http://dx.doi.org/10.5479/si.00963801.62-2450.1
Cole, F.R. (1923b) Expedition of the California Academy of Sciences to the Gulf of California in 1921. Diptera from the Islands and adjacent shores of the Gulf of California. II. General Report. *Proceedings of the California Academy of Sciences, series* 4, 12, 457–481.
Cole, F.R. (1925) Notes on the dipterous family Therevidae. *The Canadian Entomologist*, 57, 84–88. http://dx.doi.org/10.4039/Ent5784-4
Cole, F.R. (1959) A new name proposed in the genus *Thereva* (Diptera: Therevidae). *Pan Pacific Entomologist*, 35(3), 148.
Cole, F.R. (1960a) Stiletto-flies of the genus *Furcifera* Kröber (Diptera: Therevidae). *Annals of the Entomological Society of America*, 53, 160–169.
Cole, F.R. (1960b) New names in Therevidae and Bombyliidae (Diptera). *Pan Pacific Entomologist*, 36(3), 118.
Cole, F.R. (1965) Therevidae. Pages 348–354. *In*: Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H and Coulson, J.R. (eds.). A catalog of the Diptera of America north of Mexico. *USA Department of Agriculture, Agricultural Handbook*, 276, 1–1696.
Cole, F.R. & Lovett, A.L. (1921). XV. An annotated list of the Diptera (flies) of Oregon. *Proceedings of the California Academy of Sciences*, 11(15), 197–344.

Cole, F.R. & Schlinger, E.I. (1969) *The Flies of Western North America*. University of California Press, Berkeley and Los Angeles. 693 pp.
Collinge, W.E. (1909) Observations of the life-history and habits of *Thereva nobilitata* Fabr., and other species. *Journal of Economic Biology*, 4(1), 14–18.
Coquillett, D.W. (1893a) Synopsis of the dipterous genus *Thereva*. *The Canadian Entomologist*, 25, 197–201. http://dx.doi.org/10.4039/Ent25197-8
Coquillett, D.W. (1893b) Synopsis of the dipterous genus *Psilocephala*. *The Canadian Entomologist*, 25, 222–229. http://dx.doi.org/10.4039/Ent25222-9
Coquillett, D.W. (1894) Revision of the dipterous family Therevidae. *Journal of the New York Entomological Society*, 2, 97–101.
Coquillett, D.W. (1898) A new dipterous genus belonging to the Therevidae. *Journal of the New York Entomological Society*, 6, 187–188.
Coquillett, D.W. (1900) Papers from the Harriman Alaska Expedition. IX. Entomological results (3), Diptera. *Proceedings of the Washington Academy of Sciences*, 2, 389–464.
Coquillett, D.W. (1904a) New Diptera from Central America. *Proceedings of the Entomological Society of Washington*, 6, 90–98.
Coquillett, D.W. (1904b) New North American Diptera. *Proceedings of the Entomological Society of Washington*, 6, 166–192.
Coquillett, D.W. (1910a) Corrections to my paper on the type species of the North American genera of Diptera. *The Canadian Entomologist*, 42, 375–378. http://dx.doi.org/10.4039/Ent42375-11
Coquillett, D.W. (1910b) The type-species of the North American genera of Diptera. *Proceedings of the U. S. National Museum*, 37, 499–647.
Costa, A. (1857) Contribuzione alla fauna ditterologica italiana. *Il Giambattista Vico*, 2, 438-460.
Cranston, P.S. (2005) Biogeographic patterns in the evolution of Diptera. Pages 274–311. *In*: Yeates, D.K., and Wiegmann, B.M. (eds.). *The Evolutionary Biology of Flies*. Columbia University Press, New York. 430 pp.
Curran, C.H. (1926) New Diptera from the West Indies. *American Museum Novitates*, 220, 1–14.
Curran, C.H. (1934) *The Families and Genera of North American Diptera*. Ballou Press, New York. 512 pp. http://dx.doi.org/10.5962/bhl.title.6825
Curran, C.H. (1965) *The Families and Genera of North American Diptera.* Second Revised Edition. Henry Tripp, Woodhaven, NY. 515 pp. **Note 150.**
Dallas, W.S. (1865) Diptera, Insecta. Pages 381–710. *In*: Gunther, A. *The records of zoological literature*. John Van Voors, London, volume 2, 798 pp.
Dufour, L. (1850) Description et iconographie de quelques diptéres de l'Espagne. *Annales de la Société Entomologique de France*, (2)8, 131–155.
Enderlein, G. (1927) Dipterologische Studien XIX. *Stettiner Entomolgische Zeitung*, 88(2), 102–109.
Enderlein, G. (1933) Entomologische Ergebnisse der Deutsch-Russichen Alai-Pamir-Expedition, 1928 (III.) 1. Diptera. *Deutsche Entomolgische Zeischrift*, 1933(2–3), 129–146.
Enderlein, G. (1936) 22. Ordnung Zweiflügler Diptera. Abteilung 16. *In*: Brohmer, P., Erhmann, P and Ulmer, G. (Eds.). *Die Tierwelt Mitteleuropas* (*Insekten* 3), 1–259. Insekten III. Leipzig.
Eschscholtz, J.F. (1822) Entomographien: Erste Lieferung. *Naturwissenschaftliche Abhandlungen aus Dorpat*, 1, 57–186.
Evenhuis, N.L. (1977) New North American Bombyliidae with notes on some described species. *Entomological News*, 88, 121–126.
Evenhuis, N.L. (1990) Systematics and evolution of the genera in the subfamilies Usiinae and Phthiriinae (Diptera: Bombyliidae) of the world. *Entomonograph*, 11[1989], 1–72.
Evenhuis, N.L. (1994) *Catalogue of the Fossil Flies of the World (Insecta: Diptera).* Backhuys Publishers, Leiden. 600 pp.
Evenhuis, N.L. (1997) *Litteratura Taxonomica Dipterorum (1758–1930). Volume II. L–Z.* Bachuys Publishers, Leiden, 427–871.
Evenhuis, N.L. (2012) *Insect and Spider Collections of the World.* Available at: http://hbs.bishopmuseum.org/codens/codens-inst.html. Last revised 1 January 2012. [accessed 2012.04.28].
Evenhuis, N.L. & Pont, A.C. (2004) The Diptera genera of Jacques-Marie-Frangille-Bigot. *Zootaxa*, 751, 1–94.
Evett, W. (1862) Stated Meeting, June 9. Written Communication (read). *Proceedings of the Entomological Society of Philadelphia*, 1(7), 217
Fabricius, J.C. (1775) *Systema entomologiae, sistens insectorvm classes, ordines, genera, species adiectis synonymis, loci descriptionibvs, observationibvs.* Flensburgi et Lispiae [= Flensburg and Leipzig] Kortii. 832 pp. http://dx.doi.org/10.5962/bhl.title.36510
Fabricius, J.C. (1794) *Entomologiae Systematicae Emendata et Aucta. Secundum. Classes, Ordines, Genera, Species.* Volume 4. Hafniae [=Copenhagen], 472 pp.
Fabricius, J.C. (1805) *Systema antiatorum secondum ordines, genera, species*. Brunsvigae [= Brunswick]. 373 pp.
Fallén, C.F. (1814) *Anthracides Sveciae*. Berlingianis, Lundae [= Lund]. 16 pp.
Fallén, C.F. (1815) Beskrifning öfver några Rot-fluge Arter, horande till slagterna *Thereva* och *Ocyptera*. *Kongliga Vetenskaps-Academiens Handlingar* [ser. 3], 1815, 229–240.
Foote, B.A. (1991) Therevidae (Asiloidea). Pages 773–774. *In*: Chapter 37. Order Diptera. Pages 690–915 of Stehr, F.W. (ed.), *Immature Insects*. Volume 2. Kendall/Hunt Publishing, Dubuque, Iowa. 975 pp.

Förster, A. (1862) Synopsis der Familien und Gattungen der Braconiden. *Verhandlungen des naturhistorischen Vereins der Preussischen Rheinlande und Westfalens*, 19, 225–288.
Frey, R. (1921) Beitrag zur Kenntnis der paläarktischen Thereviden (Dipt.). *Notulae Entomologicae*, 1, 81–85.
Gaimari, S.D. & Irwin, M.E. (2000a) Phylogeny, classification, and biogeography of the cycloteline Therevinae (Insecta: Diptera: Therevidae). *Zoological Journal of the Linnean Society*, 129, 129–240. http://dx.doi.org/10.1111/j.1096-3642.2000.tb00012.x
Gaimari, S.D. & Irwin, M.E. (2000b) Revision of the *mexicana*-group of the cycloteline genus *Ozodiceromyia* Bigot (Diptera: Therevidae). *Proceedings of the Entomological Society of Washington*, 102(3), 561–600.
Gaimari, S.D. & Webb, D.W. (2009) Therevidae (stiletto flies). Chapter 46. Pages 643–647. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. and Zumbado, M. (eds.), *Manual of Central American Diptera*. Volume 1. National Research Council Research Press, Ottawa, Canada, 714 pp.
Gaimari, S.D., Hauser, M. & Fricke, R. (submitted 2012) Potential Case 3605 PHYCINAE Lyneborg, 1976 (Insecta: Diptera: Therevidae): proposed emendation of spelling to PHYCUSINAE to remove homonymy with PHYCINAE Swainson, 1838 (Osteichthyes: Gadiformes: Phycidae); and *Phycis* Walbaum [ex Artedi], 1792 (Osteichthyes: Gadiformes: Phycidae): proposed conservation of usage by designation of *Blennius phycis* Linnaeus, 1766 as the type species. *Bulletin of Zoological Nomenclature*.
Girault, A.A. (1915) Australian Hymenoptera Chalcidoidea - VII. The family Encyrtidae with descriptions of new genera and species. *Memoirs of the Queensland Museum*, 4, 1–184.
Godman, F.D. & Salvin, O. (1901) List of species recorded from Mexico or Central America since 1887, not enumerated in the Supplement. Pages 377–378 (Part 15). *In*: Godman, F.D and Salvin, O. (eds.). *Biologica Centrali-Americana. Insecta. Diptera.* Volume 1 (1886–1901). Taylor and Francis, London. 378 pp. **Note 151.**
González-Rincones, R. & Guyon, L. (1953) *Clasificacion general de los dipteros.* Universidad Central de Venezuela, Caracas, 243 pp.
Guérin-Méneville, F.E. (1831) Insectes. Voyage autour du monde, exécuté par ordre du Roi, sur la corvette de sa Majesté, La Coquille, pendant les années 1822, 1823, 1824 et 1825. Sous les ministère de S.E.M. Le Marquis de Clermont-Tonnerre, et publié sous les auspices de son Excellence M. Le Cte de Chabrol, Ministre de la Marine et des Colonies (ed. by L.I. Duperrey), plates 20–21. Histoire naturelle zoologie. A. Bertrand, Paris.
Hardy, D.E. (1938) New Therevidae (Diptera) from Utah. *Annals of the Entomological Society of America*, 31(2), 144–146.
Hardy, D.E. (1943) New Therevidae and Asilidae in the Snow Entomological Collection. *Journal of the Kansas Entomological Society*, 16, 24–29.
Hardy, D.E. (1966) 32. Family Scenopinidae (Omphralidae). Pages 32.1-32.5. *In*: Papavero, N. (ed.), *A Catalogue of the Diptera of the Americas South of the United States*. Departamento de Zoologia, Secretaria da Agricultura. São Paulo, Brazil.
Harris, T.W. (1835) VIII. Insects. Pages 553–602. *In*: Hitchcock, E. *Report on the geology, mineralogy, botany, and zoology of Massachusetts.* 2nd ed., Amherst, Massachusetts. 702 pp.
Hauser, M. & Irwin, M.E. (2003) The Nearctic genus *Ammonaios* Irwin and Lyneborg 1981 (Diptera: Therevidae). *Annals of the Entomolgical Society of America*, 96(6), 738–765. http://dx.doi.org/10.1603/0013-8746(2003)096[0738:TNGAIA]2.0.CO;2
Hauser, M. & Irwin, M.E. (2005a) Fossil Therevidae (Insecta: Diptera) from Florissant, Colorado (Upper Eocene). *Journal of Systematic Palaeontology*, 3(4), 393–401. http://dx.doi.org/10.1017/S1477201905001690
Hauser, M. & Irwin, M.E. (2005b) A new remarkable Xestomyzinae (Insecta, Diptera, Therevidae) genus from Mexican amber. *Zootaxa*, 1008, 39–45.
Hauser, M. & Irwin, M.E. (2005c) The subfamily Xestomyzinae (Diptera: Therevidae) new to Madagascar, with the description of four new species. *African Invertebrates*, 46, 181–202.
Hauser, M. & Webb, D.W. (2007) A revision of the New World stiletto fly genus *Ataenogera* Kröber (Diptera: Therevidae: Phycinae) with the description of two new species. *Zootaxa*, 1530, 41–67.
Hennig, W. (1948) *Die Larvenformen der Dipteren.* 1. Teil. Akademie-Verlag, Berlin. 185 pp.
Holston, K.C. (2004) A systematic database of *Thereva* Latreille names: an answer to the nomenclatural challenge in Therevidae (Insecta: Diptera). *Memoirs of the American Entomological Society*, 45, 1–86.
Holston, K.C. (2005) Evidence for community structure and habitat partitioning in coastal dune stiletto flies at the Guadalupe-Nipomo dunes system, California. *Journal of Insect Science*, 5 (42), 1–17.
Holston, K.C. (2009) A new species of *Acantothereva* Séguy, 1935, from Tunisia (Diptera: Therevidae: Therevinae), taxonomic consequences and phylogenetic implications. *Zootaxa*, 2155, 28–36.
Holston, K.C. & Irwin, M.E. (2005) Revision of the Nearctic *Thereva* (Diptera: Asiloidea: Therevidae). *Studia Dipterologica Supplement*, 13, 1–219.
Holston, K.C., Irwin, M.E. & Thompson, F.C. (2003) Case 3251. *Thereva* Latreille, 1797 and *Phasia* Latreille, 1804 (Insecta, Diptera): proposed conservation of usage by designation of *Musca plebeja* Linnaeus, 1758 as the type species of *Thereva. Bulletin of Zoological Nomenclature*, 60, 198–202.
Holston, K.C., Irwin, M.E. & Wiegmann, B.M. (2007) Monophyly and phylogenetic relationships of *Thereva* and therevine genus-groups (Insecta: Diptera: Therevidae) based on EF-1α, 23S rDNA and mitochondrial 16S rDNA sequences. *Invertebrate Systematics*, 21, 279–296. http://dx.doi.org/10.1071/IS06005
Horn, W., Kahle, I., Friese, G. & Gaedike, R. (1990) *Collectiones entomologicae. Ein Kompendium über den Verbleib entomogischer Sammlungen der Welt bis 1960. Tiel II: L bis Z.* Akademie der Landwirtschaftswissenschaften der

Deutschen Demokratischen Republik, Berlin. Pp. 221–573.
International Commission on Zoological Nomenclature (2006) Opinion 2142 (Case 3251). *Thereva* Latreille, 1797 and *Phasia* Latreille, 1804 (Insecta, Diptera), usage conserved by the designation of *Musca plebeja* Linnaeus, 1758 as the type species of *Thereva*. *Bulletin of Zoological Nomenclature*, 63, 72–73.
Irwin, M.E. (1972) Diagnoses and habitat preferences of the immature stages of three South African species of the *Xestomyza*-group (Diptera: Therevidae). *Annals of the Natal Museum*, 21, 377–389.
Irwin, M.E. (1977a) A new genus and species of stiletto-flies from southwestern North America with close affinities to Chilean and Australian genera (Diptera: Therevidae: Therevinae). *Pan Pacific Entomologist*, 53, 287–296.
Irwin, M.E. (1977b) Two new genera and four new species of the *Pherocera*-group from western North America, with observations on habitats and behavior (Diptera: Therevidae: Phycinae). *Proceedings of the Entomological Society of Washington*, 79(3), 422–451.
Irwin, M.E. (1978) Holotype deposition of *Henicomyia bicolor*. *Proceedings of the Entomological Society of Washington*, 80(1), 74.
Irwin, M.E. (1983) The *boharti* species group of the genus *Pherocera* (Diptera: Therevidae: Phycinae). *Pan Pacific Entomologist*, 59(1–4), 113–139.
Irwin, M.E. & Lyneborg, L. (1981a) The genera of Nearctic Therevidae. *Bulletin of the Illinois Natural History Survey*, 32[1980], 193–277.
Irwin, M.E & Lyneborg, L. (1981b) Therevidae. Chapter 37. Pages 513–523. *In*: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J. R. and Wood, D.M. (coords.). *Manual of Nearctic Diptera*, Volume 1. Research Branch, Agriculture Canada, Ottawa. Monograph 27, 674 pp .
Irwin, M.E & Webb, D.W. (1992) Brasilian Therevidae (Diptera), A checklist and discriptions [sic] of species. *Acta Amazonica*, 21, 85–121.
Jaennicke, F. (1867) Neue exotische Dipteren. *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 6, 311–408.
James, M.T. (1936) New species and records of Colorado Diptera. *Journal of the New York Entomological Society*, 44, 341–344.
James, M.T. (1949) Some new and poorly known Therevidae (Diptera) from Colorado. *Annals of the Entomological Society of America*, 42, 10–13.
James, M.T. (1975) 24. Family Xylophagidae. Pages 24.1-24.6. *In*: Papavero, N. (ed.), *A Catalogue of the Diptera of the Americas South of the United States*. Departamento de Zoologia, Secretaria da Agricultura. São Paulo, Brazil.
James, M.T. & Huckett, H.C. (1952) The Diptera collected by I. O. Buss in southwestern Yukon Territory during the summer of 1950. *The Canadian Entomologist*, 84, 265–269. http://dx.doi.org/10.4039/Ent84265-9
Johannsen, O.A. (1903) Notes on some Adirondack Diptera collected by Messrs. McGillivray and Houghton. *Entomological News*, 15, 14–17.
Johannsen, O.A. (1928) Order Diptera. Pages 687–868. *In* Leonard, M.D. (ed.), *A List of the Insects of New York with a List of the Spiders and Certain Other Allied Groups*. Cornell University Agricultural Experiment Station Memoir, 101, 5-1121.
Johnson, C.W. (1902) New North American Diptera. *The Canadian Entomologist*, 34, 240–242. http://dx.doi.org/10.4039/Ent34240-9
Johnson, C.W. (1910) Order Diptera. Pages 703–814. *In* Smith, J. B. (ed.), *The Insects of New Jersey.* Annual Report of the New Jersey State Museum, 1909, 15–888.
Johnson, C.W. (1925) Diptera of the Harris Collection. *Proceedings of the Boston Society of Natural History*, 38, 57–99.
Johnson, C.W. (1926) New species of Diptera from North Carolina and Florida. *Psyche*, 32[1925], 299–302.
Kampmeier, G.E. & Irwin, M.E. (2009) Meeting the interrelated challenges of tracking specimen, nomenclature, and literature data in Mandala. Chapter 15. Pages 407–437. *In*: Pape, T., Meier, R. and Bickel, D. (eds.). *Diptera Diversity: Status, Challenges and Tools*. Brill Academic Publishers, Leiden. 459 pp. http://dx.doi.org/10.1163/ej.9789004148970.I-459.65
Kelsey, P. (1969) A revision of the Scenopinidae (Diptera) of the world. *Bulletin of the United States National Museum*, 277, 1–336.
Kertész, K. (1897) Psilocephala laticornis Lw. *Termeszetrajzi Fuzetek* 10: 614–616
Kertész, K. (1909) *Catalogus dipterorum hucusque descriptorum.* Volume 5. Lipsiae, Budapestini. [= Leipzig, Budapest]. 199 pp.
Kimsey, L.S., Kimsey, R.B. & Toft, C.A. (1981) Life history of *Bembix inyoensis* in Death Valley (Hymenoptera: Sphecidae). *Journal of the Kansas Entomological Society*, 54, 665–672.
Knowlton, G.F. & Harmston, F.C. (1937) Utah Diptera. *Proceedings of the Utah Academy of Sciences, Arts and Letters*, 14, 141-149.
Kowarz, F. (1883) Beiträge zu einem Verzeichnisse der Dipteren Böhmens. III. *Wiener Entomologische Zeitung*, 2, 241–243.
Kröber, O. (1911) Die Thereviden Süd- und Mittelamerikas. *Annales Musei Nationalis Hungarici*, 9, 475–529.
Kröber, O. (1912a) Die Thereviden Nordamerikas. *Stettiner Entomologische Zeitung*, 73, 209–272.
Kröber, O. (1912b) Monographie der paläarktischen und afrikanischen Thereviden (Dipt.). *Deutsche Entomologische Zeitschrift*, 1912(3), 251–266.
Kröber, O. (1912c) Monographie der paläarktischen und afrikanischen Thereviden (Dipt.). *Deutsche Entomologische Zeitschrift*, 1912(2), 109–140.
Kröber, O. (1913a) Die Omphraliden. Eine monographische Studie. *Annales Musei Nationales Hungarici*, 21, 174–210.
Kröber, O. (1913b) Diptera. Family Therevidae. *In*: Wytsman, P. (ed.). *Genera insectorum*, 148, 1–69.

Kröber, O. (1914a) Beiträge zur Kenntnis der Thereviden und Omphraliden. *Jahrbuch der Hamburgischen Wissenschaftlichen Anstalten* (= *Mitteilungen des Naturhistorischen Museums Hamburg*), 31(2), 29–74.
Kröber, O. (1914b) Diptera. Family Omphralidae. *In*: Wytsman, P. (ed.). *Genera insectorum,* 161, 1–16.
Kröber, O. (1924a) 26 Therevidae. *In*: Lindner, E. (ed.). *Die Fliegen der palaearktischen Region,* 4(1), 1–16.
Kröber, O. (1924b) 26 Therevidae. *In*: Lindner, E. (ed.). *Die Fliegen der palaearktischen Region,* 4(2), 17–32.
Kröber, O. (1925) 26 Therevidae. *In*: Lindner, E. (ed.). *Die Fliegen der palaearktischen Region,* 4(3), 33–60.
Kröber, O. (1928a) Neue und wenig bekannte Dipteren aus den Familien Omphralidae, Conopidae und Therevidae. *Konowia,* 7, 1–23.
Kröber, O. (1928b) Neue und wenig bekannte Dipteren aus den Familien Omphralidae, Conopidae und Therevidae. *Konowia,* 7, 113–134.
Kröber, O. (1928c) Neue Dipteren des Deutschen Entomolog. Museums in Dahlem (Conopidae, Omphralidae, Therevidae, Tabanidae). *Entomologische Mitteilungen,* 17(1), 31–41.
Kröber, O. (1929a) Neue Beiträge zur Kenntnis der Thereviden und Tabaniden (Dipt.). *Deutsche Entomologische Zeitschrift*, (1928) 5, 417–434.
Kröber, O. (1929b) Die Ausbeute der Deutschen Chaco-Expedition 1925/26 (Diptera). XI. Therevidae. *Konowia,* 8, 170–172.
Kröber, O. (1937a) Ein Beitrag zur Kenntnis der Omphraliden (Scenopiniden), Diptera. *Stettiner Entomologische Zeitung* 98: 211–231.
Kröber, O. (1937b) Katalog der palaearktischen Thereviden, nebst Tabellen und Zusätzen sowie Neubeschreibungen. *Acta Instituti et Musei Zoologici Universitatis Atheniensi,* 1, 269–321.
Lambkin, C.L., Recsei, J.M. and Yeates, D.K. (2005) Systematic revision of *Johnmannia* Irwin and Lyneborg (Diptera: Therevidae): Atypical metallic stiletto flies from Australian mesic habitats. *Zootaxa,* 86, 1–28.
Lambkin, C.L., Trueman, J.W.H., Yeates, D.K., Holston, K.C., Webb, D.W., Hauser, M., Metz, M.A., Hill, H.N., Skevington, J.H., Yang, L., Irwin, M.E. and Wiegmann, B.M. (2009) Supertrees and the Tree of Life: generating a metaphylogeny for a diverse invertebrate family (Insecta: Diptera: Therevidae) using constraint trees and the parsimony ratchet to overcome low taxon overlap. *Systematic Entomology,* 23, 171–191.
Latreille, P.A. (1797) Précis des caractères génériques des Insectes, disposés dans un ordre naturel par le Citoyen Latreille. "1796." Paris (Brive), Prévôt (F. Bourdeaux). xiii + [i] + 201 + [7] pp. **Note 152.**
Latreille, P.A. (1802). *Histoire naturelle générale et particulière des crustacés et des insectes.* Tome troisieme. F. Dufart, Paris. 468 pp.
LeConte, J.L. (ed.) (1859) *The complete writings of Thomas Say on the entomology of North America*. Volume 2. H. Bailliere, New York. 814 pp.
Linnaeus, C. (1758) *Systema naturae per regna tria naturae.* 10th Edition. Volume 1. L. Salvii, Holmiae [=Stockholm]. 824 pp.
Linnaeus, C. (1761) *Fauna svecica sistens animalis Sveciae regni.* Editio Altera, Auctior. L. Salvii, Stockholmaie [=Stockholm]. 578 pp.
Lioy, P. (1864) I ditteri distribuiti secondo un nuovo metodo di classificazione naturale [part]. *Atti del Reale Instituto Veneto di Scienze, Lettere ed Arti*, (3) 9, 719–771.
Loew, H. (1847) Dipterologische Beiträge. Zweiter Theil. *Öffentliche Prüfung der Schüler des Königlichen Friedrich-Wilhems-Gymnasiums zu Posen*, 1847, 1–50.
Loew, H. (1854) Neue Beiträge zur Kenntnis der Dipteren. *Zweiter Beitrag. Berlin*. E.S. Mittler and Sohn, 1–24.
Loew, H. (1856) Diptera Americae septentrionalis indigena. Centuria decima. *Berliner Entomologische Zeitschrift,* 16, 49–124. http://dx.doi.org/10.1002/mmnd.18720160110
Loew, H. (1858) Bidrag till kännedomen om Afrikas Diptera (part). *Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar,* 14 (1857), 337–383.
Loew, H. (1869) Diptera Americae septentrionalis indigena. Centuria octava. *Berliner Entomologische Zeitschrift,* 13, 1–52.
Loew, H. (1870) Diptera Americae septentrionalis indigena. Centuria nona. *Berliner Entomologische Zeitschrift,* (1869) 13, 129–186.
Loew, H. (1872a) Diptera Americae septentrionalis indigena. Centuria decima. *Berliner Entomologische Zeitschrift,* 16, 49–115. http://dx.doi.org/10.1002/mmnd.18720160110
Loew, H. (1872b). *Diptera americae septentrionalis indigena. II*. A.W. Schadii, Berolini [=Berlin], 300pp.
Loew, H. (1874a) Diptera nova a Hug. Theod. Christopho collecta. *Zeitschrift für die Gesammten Naturwissenschaften,* 43, 413–420. http://dx.doi.org/10.1002/mmnd.18740180323
Loew, H. (1874b) Neue nordamerikanische Diptera. *Berliner Entomologische Zeitschrift,* 18, 378–384.
Loew, H. (1876) Beschreibung neuer amerikanischen Dipteren. *Zeitschrift für die Gesammten Naturwissenschaften,* 48, 317–340.
Lyneborg, L. (1968a) A comparative description of the male terminalia in *Thereva* Latr., *Dialineura* Rond., and *Psilocephala* Zett. (Diptera: Therevidae). *Entomologiske Meddelelser,* 36, 546–559.
Lyneborg, L. (1968b) On the genus *Dialineura* Rondani, 1856 (Diptera, Therevidae. *Entomologisk Tidskrift,* 89(3–4), 147–172.
Lyneborg, L. (1969) Redescriptions of six Therevidae from the Americas, described by J.C. Fabricius and L. Bellardi. (Diptera). *Entomologiske Meddelelser,* 37, 389–412.
Lyneborg, L. (1972) A revision of the *Xestomyza*-group of Therevidae (Diptera). *Annals of the Natal Museum,* 21(2), 297–376.
Lyneborg, L. (1975) The first record of an authentic *Dialineura* species in North America (Diptera: Therevidae). *Quaestiones Entomologicae,* 11, 577–578.

Lyneborg, L. (1976a) A revision of the Therevine stiletto-flies (Diptera: Therevidae) of the Ethiopian region. *Bulletin of the British Museum, Entomology*, 33(3), 189–346.
Lyneborg, L. (1976b) *Caenozona* Kröber, 1912, and *Reingiellum* Enderlein, 1933, two new synonyms of *Thereva* Latr., 1796, and *Thereva freidbergi*, nom. nov. for *T. arcuata* Kröber, 1912 nec Loew, 1847 (Diptera: Therevidae). *Entomologica Scandinavica*, 7, 238–239. http://dx.doi.org/10.1163/187631276X00405
Lyneborg, L. (1978a) The Afrotropical species of *Phycus* Walker (Diptera: Therevidae). *Entomologica Scandinavica*, 9, 212–233. http://dx.doi.org/10.1163/187631278X00467
Lyneborg, L. (1978b) *Neotherevella*, a new genus of Therevidae (Diptera) from the Palaearctic and Afrotropical Regions. *Entomologica Scandinavica*, 9, 75–76. http://dx.doi.org/10.1163/187631278X00241
Lyneborg, L. (1983) A review of the Palaearctic genera of Phycinae (Insecta, Diptera, Therevidae). *Steenstrupia*, 9(8), 181–205.
Lyneborg, L. (1984) *Ammothereva*, a new Palaearctic genus of Therevidae, with a review of the 13 included species (Insecta, Diptera). *Steenstrupia*, 10(7), 205–222.
Lyneborg, L. (1986a) Genera of Therevidae new to the Palaearctic region (Insecta, Diptera). *Steenstrupia*, 12(3), 61–71.
Lyneborg, L. (1986b) The Palaearctic species of *Pandivirilia* Irwin and Lyneborg, 1981 (Insecta, Diptera, Therevidae). *Steenstrupia*, 12(5), 85–98.
Lyneborg, L. (1987) Notes on the Phycini of southern Africa with a description of a new genus and two new species (Diptera: Therevidae: Phycinae). *Annal of the Natal Museum*, 28(2), 467–474.
Lyneborg, L. (1988) Revision of *Orthactia* Kröber, 1912, with descriptions of six new species (Diptera: Therevidae: Phycinae). *Annals of the Natal Museum*, 29(2), 537–555.
Lyneborg, L. (1989a) Family Therevidae. Pages 11–35. *In*: Soós, A and Papp, L. (eds.). *Catalogue of Palaearctic Diptera*, Volume 6. Académiae Kiadó, Budapest. 435 pp.
Lyneborg, L. (1989b) The first records of Phycini from Madagascar (Diptera: Therevidae: Phycinae). *Annals of the Natal Museum*, 30, 159–163.
Lyneborg, L. (1989c) *Iberotelus*, a new genus of Therevidae (Diptera) from Spain. *Eos*, 64, 89–94.
Lyneborg, L.(1989d) The subsaharan species of *Acathrito* Lyneborg, 1983 (Diptera: Therevidae: Therevinae). *Annals of the Natal Museum*, 30, 165–172.
Lyneborg, L. (2001) The Australian Stiletto-flies of the *Anabarhynchus* Genus-group (Diptera: Therevidae). *Entomonograph*, 13, 1–256.
Lyneborg, L. (2002) Two new species of *Ataenogera* Kröber from South America (Dipt., Therevidae). *The Entomologist's Monthly Magazine*, 138, 103–107.
Macquart, P.J.M. (1841a) Diptères exotiques nouveaux ou peu connus. Volume 2, Part 1. *Mémoires de la Société Royal es Sciences, de l'Agriculture et des Artes de Lille* 1840, 283–413. **Note 153.**
Macquart, P.J.M. (1841b) *Diptères exotiques nouveaux ou peu connu.* Volume 2, Part 1. N.E. Roret, Paris. 5–135 pp. **Note 153.**
Macquart, P.J.M. (1846a) Diptères exotiques nouveaux ou peu connus. Supplément. *Mémoires de la Société Royal es Sciences, de l'Agriculture et des Artes de Lille*, 1844, 133–364. **Note 153.**
Macquart, P.J.M. (1846b) *Diptères exotiques nouveaux ou peu connus. Supplément I*. N.E. Roret, Paris, (1844), 5–238 pp. **Note 153.**
Macquart, P.J.M. (1850) Diptères exotiques nouveaux ou peu connus. 4[e] supplément. *Mémoires de la Société Royal es Sciences, de l'Agriculture et des Artes de Lille*, 1849, 309–479.
Malloch, J.R. (1917) A preliminary classification of Diptera, exclusive of Pupipara, based upon larval and pupal characters, with keys to imagines in certain families. Part I. *Bulletin of the Illinois State Laboratory of Natural History*, 12(3), vi + 161–409.
Malloch, J.R. (1932) Therevidae. Pages 235–257. *In*: British Museum (Natural History), *Diptera of Patagonia and South Chile*, 5 (3). The British Museum, London.
Marschall, A.F. de (1873) *Nomenclator Zoologicus continens nomina systematica generum animalium tam viventium quam fossilium, secundum ordinem alphabeticum disposita.* C. Ueberreuter, Vindobonae [= Wien]. v + 482 pp.
Martin, C.H. (1968) The new family Leptogastridae (the grass flies) compared with the Asilidae (robber flies) (Diptera). *Journal of the Kansas Entomological Society* 41: 70–100.
Martin, C.H. & Wilcox, J. (1965) Asilidae. Pages 360–402. *In*: Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H and Coulson, J.R. (eds.). A catalog of the Diptera of America north of Mexico. *USA Department of Agriculture, Agricultural Handbook*, 276, 1–1696.
McAlpine, J.F. (1981) Key to Families—Adults. Chapter 4. Pages 89–124. *In*: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J. R. and Wood, D.M. (coords.). *Manual of Nearctic Diptera*, Volume 1. Research Branch, Agriculture Canada, Ottawa. Monograph 27, 674 pp.
McGillivray, A.D. & Houghton, C.O. (1903) A list of insects taken in the Adirondack Mountains, New York.—II. *Entomological News*, 14, 12–13.
Meigen, J.W. (1820) *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insecten.* Erster Band, Vierter Thiel. Schultz-Wundermann, Hamm. xii + 428 pp.
Melander, A.L. (1949) A report on some Miocene Diptera from Florrissant, Colorado. *American Museum Novitates*, 1407, 1–63.
Metz, M.A. (2003) Description of a new species of *Caenotus* Cole (Diptera: Scenopinidae) from Baja California Sur, Mexico,

with a review of the genus. *Zootaxa*, 223, 1-11.
Metz, M.A. & Irwin, M.E. (2000) Revision of *Lindneria* Kröber, with the description of two new genera *Insulatitan* and *Ambradolon*, a fossil from Dominican amber (Diptera, Therevidae: Therevinae). *Annals of the Entomological Society of America*, 93(5), 977–1018. http://dx.doi.org/10.1603/0013-8746(2000)093[0977:ROLKBW]2.0.CO;2
Metz, M.A. & Webb, D.W. (2003) *Distostylus* gen. nov., a monotypic therevine genus (Diptera: Asiloidea: Therevidae) from the Caribbean Island of Dominca. *Zootaxa*, 222, 1–12.
Metz, M.A., Webb, D.W. & Irwin, M.E. (2003) A review of the genus *Psilocephala* Zetterstedt (Diptera: Therevidae), with the description of four new genera. *Studia Dipterologica*, 10(1), 227–266.
Miller, D. (1950) Catalogue of the Diptera of the New Zealand subregion. *Bulletin of the New Zealand Department of Scientific and Industrial Research*, 100, 194 pp.
Nagatomi, A. & Lyneborg, L. (1987) A new genus and species of Therevidae from Japan (Diptera). *Kontyû*, Tokyo, 55(1), 116–122.
Newman, E. (1834) Attempted division of British insects into natural orders. *Entomological Magazine*, 2, 379–431.
O'Hara, J.E., Cerretti, P., Pape, T. & Evenhuis, N.L. (2011) Nomenclatural studies toward a world list of Diptera genus-group names. Part II: Camillo Rondani. *Zootaxa*, 3141, 1–268.
Oldroyd, H. (1968) New Therevidae from Argentina. *Journal of Natural History*, 2, 377–385. http://dx.doi.org/10.1080/00222936800770371
Olivier, A.G. (1813) Premièr mèmoire sur quelques insectes qui attaquent les céréales. *Mémoires de la Société d'Agriculture, Departement de la Seine*, 16, 477–495.
Osten Sacken, R. (1858) Catalogue of the described Diptera of North America. *Smithsonian Miscellaneous Collections*, 3(1), 1–96.
Osten Sacken, C.R. (1877) Western Diptera: Descriptions of new genera and species of Diptera from the region west of the Mississippi and especially from California. *U. S. Geological and Geographical Survey of the Territories*, 3, 189–354.
Osten Sacken, C.R. (1878) Catalogue of the described Diptera of North America. *Smithsonian Miscellaneous Collections* (2nd. Edition), 270, 1–276.
Osten Sacken, C.R. (1887) Insecta. Diptera. Pages 161–176 (Part 7). *In*: Godman, F.D. and Salvin, O. (eds.). *Biologia Centrali-Americana. Insecta. Diptera*. Volume 1 (1886–1901). Taylor and Francis, London. 378 pp.
Ôuchi, Y. (1943a) Contributiones ad congnitionem insectorum Asiae orientalis 13. *Shanghai Sizenkagu Kenkyūsyo Ihō*, 13, 483–492.
Ôuchi, Y. (1943b) Diptera Sinica. Thervidae 1. On three new stilleto flies from East China. *Shanghai Sizenkagu Kenkyūsyo Ihō*, 13, 477–482.
Panzer, G.W.F. (1798) *Faunae insectorum germanicae initiae oder Deutschlands Insecten.* Volume 54. Felsecker, Nürnberg [=Nuremberg]. 24 pp.
Papavero, N. & Ibáñez-Bernal, S. (2001) Contributions to a history of Mexican dipterology. -Part I. Entomologists and their works before the *Biologia Centrali-Americana*. *Acta Zoología Mexicana*, (n.s.) 84, 65–173.
Papavero, N. & Ibáñez-Bernal, S. (2003) Contributions to a history of Mexican dipterology. -Part II. The *Biologia Centrali-Americana*. *Acta Zoología Mexicana*, (n.s.) 88, 143–232.
Pape, T. & Thompson, F.C. (eds.). (2010). *Systema Dipterorum*, Version 1.0. http://diptera.org/. Last revised 10 August 2010. [accessed 2012.08.24].
Perty, J.A.M. (1841) *Allgemeine Naturgeschichte, als philosophische und Humanitäts-Wissenschaft für Naturforscher, Philosophen und das höher gebildete Publikum.* Vol. 3. C. Fischer, Bern. xii + 467–1119.
Philippi, R.A. (1865) Aufzählung der chilenischen Dipteren. *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien*, 15, 595–782.
Poole, R.W. (1996) Diptera. Pages 15–604. *In*: Poole, R.W. and Gentili, P. (eds.), *Nomina Insecta Nearctica. A checklist of the insects of North America*. Volume 3: Diptera, Lepidoptera, Siphonaptera. Entomological Information Services, Rockville, Maryland. 1143 pp.
Reed, E.C. (1888) Catálogo de los Insectos Dipteros de Chile. *Anales de la Universidad de Chile*, 73, 271–316.
Richards, O.W. (1929) Systematic notes on the Borboridae (Diptera), with descriptions of new species of *Leptocera* (*Limosina*). *Entomologist's Monthly Magazine*, 65(3), 171–176.
Röder, V. von (1885a) Ueber die Dipteren Gattungen *Agapophytus* Guérin und *Phycus* Walk. *Berliner Entomologische Zeitschrift*, 29, 137–141. http://dx.doi.org/10.1002/mmnd.18850290121
Röder, V. von (1885b) Dipteren von der Insel Portorico. *Stettiner Entomologische Zeitung*, 46, 337–349.
Röder, V. von (1894) Genus *Caenophanes* Lw. *Entomologische Nachrichten*, 20, 173–174.
Rondani, C. (1848) Esame di varie specie d'insetti ditteri brasiliani. *Studi Entomologici (Turin)* 1: 63–112.
Rondani, C. (1856) *Dipterologiae Italicae prodromus*. Volume 1. Genera Italica ordinis dipterorum ordinatim disposita et distincta et in familias et stirpes aggregata. A Stocchi, Parmae [=Parma]. 228 pp.
Rondani, C. (1863) *Diptera exotica revisa et annotata.* Novis non nullis descriptis. E. Soliani, Modena. 99 pp.
Rye, E.C. (1874) Insecta. Diptera. *Zoological Record* (for 1872), 9. 382–390.
Sabrosky, C.W. (1978) A third set of corrections to "A Catalog of the Diptera of America North of Mexico." *Bulletin of the Entomological Society of America*, 24(2), 143–144.
Sabrosky, C.W. (1999) Family-group names and bibliography. *Myia*, 10, 1–576.
Say, T. (1823) Descriptions of dipterous insects of the United States. *Journal of the Academy of Natural Sciences, Philadelpha*,

3, 9–54, 73–104.
Say, T. (1824) Appendix. Part I. Natural History. 1. Zoology. E. Class Insecta. Pages 268–378. *In*: Keating, W.H. *Major Long's second expedition*, 2, 1–459. H.C. Carey and. I. Lea, Philadelphia Publishers, Philadelphia.
Say, T. (1829) Descriptions of North American dipterous insects. *Journal of the Academy of Natural Sciences of Philadelphia*, 6, 149–178.
Schiner, I.R. (1860) *Fauna Austriaca. Die Fliegen (Diptera)*. Theil 1, Heft 2, pages 73–184. C. Gerold's Sohn, Wien [=Vienna].
Schiner, J.R. (1868) Diptera. *Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorf-Urbair.* Volume 2, Part I, Section B. K. Gerold's Sohn, Wien [=Vienna]. vi + 1–388 pp, 4 pls.
Schoch, G. (1890) *Fauna insectorum Helvetiae, Diptera.* Bolli & Böcherer, Schaffhausen. 27 pp.
Séguy, E. (1941) Diptères recueillis par M. L. Chopard d'Alger a la Coté d'Ivoire. *Annales de la Société Entomologique de France*, (1840) 109, 109–130.
Sinclair, B.J., Cumming, J.M. & Wood, D.M. (1994) Homology and phylogenetic implications of male genitalia in Diptera – Lower Brachycera. *Entomologica Scandinavica*, 24, 407–432. http://dx.doi.org/10.1163/187631293X00190
Speiser, P. (1923) Aethiopische Dipteren. *Wiener Entomologische Zeitung*, 40, 81–99.
Stearns, R.E.C. (1866) Remarks of Rob't E.C. Stearns, and resolutions of the California Academy of Natural Sciences upon the death of Robert Kennicott. California Academy of Natural Sciences, San Francisco. 4 pp.
Stein, P. (1919) Die Anthomyidengattungen der Welt, analytisch bearbeitet, nebst einem kritisch-systematischen Verzeichnis aller aussereuropäischen Arten. *Archiv für Naturgeschichte*, 83(A1) [1917], 85–178.
Stone, A., Sabrosky, C.W., Wirth, W.W., Foote, R.H. & Coulson, J.R. (eds.) (1965) A catalog of the Diptera of America north of Mexico. *USA Department of Agriculture, Agricultural Handbook*, 276, 1–1696.
Stuardo-Ortiz, C.S. (1946) *Catalogo de los Dipteros de Chile*. Ministerio de Agriculture, Santiago, Chile. 250 pp.
Swainson, W. (1838) *On the natural history and classification of fishes, amphibians, and reptiles*. Volume I. Longman, Orme, Brown, Green & Longmans, London. 368 pp.
Teskey, H.J. (1976) Diptera larvae associated with trees in North America. *Memoirs of the Entomological Society of Canada*, 100, 1–53. http://dx.doi.org/10.4039/entm108100fv
Teskey, H.J. (1981) Key to Families—Larvae. Chapter 5. Pages 125–147. *In*: McAlpine, J.F., Peterson, B.V., Shewell, G.E., Teskey, H.J., Vockeroth, J.R. and Wood, D.M. (coords.). *Manual of Nearctic Diptera*, Volume 1. Research Branch, Agriculture Canada, Ottawa. Monograph 27, 674 pp.
Teskey, H.J. (1991a) Introduction. Pages 690–707. *In*: Chapter 37. Order Diptera. Pages 690–915 of Stehr, F.W. (ed.), *Immature Insects*. Volume 2. Kendall/Hunt Publishing, Dubuque, Iowa. 975 pp.
Teskey, H.J. (1991b) Key to Families of Larvae. Pages 708–730. *In*: Chapter 37. Order Diptera. Pages 690–915 of Stehr, F.W. (ed.), *Immature Insects*. Volume 2. Kendall/Hunt Publishing, Dubuque, Iowa. 975 pp.
Trautwein, M.D., Wiegmann, B.M. and Yeates, D.K. (2010). A multigene phylogeny of the fly superfamily Asiloidea (Insecta): Taxon sampling and additional genes reveal the sister-group to all higher flies (Cyclorrhapha). *Molecular Phylogenetics and Evolution*, 56(3), 918–930. http://dx.doi.org/10.1016/j.ympev.2010.04.017
Walbaum, J.J. (1792). *Petri Artedi sueci Genera Piscium in quibus systema totum Ichthyologiae proponitur cum classibus, ordinibus, generum characteribus, specierum differentiis, observationibus plurimis: redactis Speciebus 242 ad Genera 52. Ichthyologiae pars 3*. Ant. Ferdin. Röse: Grypeswaldiae [= Greifswald]. viii + 723 pp + 3 pl.
Walker, F. (1848) *List of the specimens of dipterous insects in the collection of the British Museum.* British Museum, London 1. 229 pp.
Walker, F. (1850) Vol. 1. Diptera. [Part 1] Pages 1–76. *In*: W.W.Saunders (ed.) [1850–1856]. *Insecta Saundersiana: or characters of undescribed insects in the collection of William Wilson Saunders.* John Van Voorst, London. 474pp.
Walker, F. (1852) Vol. 1. Diptera. [Part 3] Pages 157–414. *In*: W.W.Saunders (ed.) [1850–1856]. *Insecta Saundersiana: or characters of undescribed insects in the collection of William Wilson Saunders.* John Van Voorst, London. 474pp.
Walker, F. (1854) *List of specimens of dipterous insects in the collection of the British Museum,* 5 [Supplement 1], 1–330. British Museum, London.
Walker, F. (1857) Characters of undescribed Diptera in the collection of W.W. Saunders. *Transactions of the Entomological Society of London, new series* [= ser. 2], 4, 119–158.
Walker, F. (1874) *Notes on Diptera and lists of species.* First series. E.W. Janson, London. [1] + 37 pp.
Webb, D.W. (2003) The genera *Cliorismia, Dichoglena,* and *Psilocephala* in the Nearctic Region (Diptera: Therevidae: Therevinae). *Journal of the Kansas Entomological Society*, 76(3), 484–508.
Webb, D.W. (2005a) A revision of the Holarctic genus *Spiriverpa* Irwin and Lyneborg (Diptera: Therevidae: Therevinae). *Zootaxa*, 816, 1–56.
Webb, D.W. (2005b) Revision of the Neotropical stiletto fly genus *Notiothereva* Metz and Irwin (Diptera: Therevidae: Therevinae). *Zootaxa*, 1059, 1–32.
Webb, D.W. (2005c) New genera of Neotropical Therevidae (Insecta: Diptera). *Zootaxa*, 1091, 1–26.
Webb, D.W. (2006) The Neotropical genera *Microthereva* Malloch and *Peralia* Malloch (Diptera: Therevidae: Therevinae). *Zootaxa*, 1295, 1–27.
Webb, D.W. (2007) A new genus and new species of Nearctic Therevidae (Insecta: Diptera) from southern New Mexico. *Zootaxa*, 1495, 41–46.
Webb, D.W. (2009) A revision of the genera *Acrosathe* Irwin and Lyneborg, *Arenigena* Irwin and Lyneborg, and *Litolinga*

Irwin and Lyneborg (Diptera: Therevidae: Therevinae) from the Nearctic Region. *Zootaxa*, 2091, 1–67.
Webb, D.W. & Hauser, M. (2011) Revision of the genus *Stenogephyra* Lyneborg (Diptera: Therevidae: Phycinae). *Zootaxa*, 2837, 67–85.
Webb, D.W. & Irwin, M.E. (1988) The genera *Ataenogera* and *Phycus* in the New World. *Proceedings of the Entomological Society of Washington*, (1989) 91(1), 35–50.
Webb, D.W. & Irwin, M.E. (1991a) A revision of the Nearctic species of *Dialineura* Rondani and *Pallicephala* Irwin and Lyneborg (Diptera: Therevidae: Therevinae). *Proceedings of the Entomological Society of Washington*, 93(4), 869–898.
Webb, D.W. & Irwin, M.E. (1991b) The Nearctic genus *Nebritus* Coquillett (Diptera: Therevidae: Therevinae). *Proceedings of the Entomological Society of Washington*, 93(4), 899–913.
Webb, D.W. & Irwin, M.E. (1991c) The North American genus *Megalinga* Irwin and Lyneborg (Diptera: Therevidae: Therevinae). *Proceedings of the Entomological Society of Washington*, 93(4), 914–924.
Webb, D.W. & Irwin, M.E. (1995) The New World genus *Chromolepida* Cole (Diptera: Therevidae: Therevinae). *Proceedings of the Entomological Society of Washington*, 97, 197–224.
Webb, D.W. & Irwin, M.E. (1999) Revision of *Tabuda* Walker and *Tabudamima* Irwin and Lyneborg with the description of a new genus *Incoxoverpa* Webb and Irwin (Diptera: Therevidae: Therevinae). *Annals of the Entomological Society of America*, 92(5), 644–674.
Webb, D.W. & Metz, M.A. (2003a) The Nearctic species of *Pandivirilia* Irwin and Lyneborg (Diptera: Therevidae: Therevinae). *Annals of the Entomological Society of America*, 96(4), 369–402. http://dx.doi.org/10.1603/0013-8746(2003)096[0369:TNSOPI]2.0.CO;2
Webb, D.W. & Metz, M.A. (2003b) The South American genus *Protothereva* Malloch (Diptera: Therevidae: Therevinae) with description of two new species. *Zootaxa*, 234, 1–12.
Webb, D.W & Metz, M.A. (2004) The South American genus *Nigranitida* Metz (Diptera: Therevidae: Therevinae) with the description of three new species. *Zootaxa*, 757, 1–16.
Webb, D.W. & Metz, M.A. (2006) A revision of the New World genera *Brachylinga* Irwin and Lyneborg and *Lysilinga* Irwin and Lyneborg (Diptera: Therevidae: Therevinae) with the description of a new genus, *Elcaribe* Webb. *Zootaxa*, 1288, 1–241.
Webb, D.W. & Metz, M.A. (2008) Revision of the New World genus *Penniverpa* Irwin and Lyneborg (Diptera: Therevidae: Therevinae). *Zootaxa*, 1720, 1–45.
Wiedemann, C.R.W. (1820) *Munus rectoris in Academia Christiano-Albertina interum aditurus nova Dipterorum genera. Offert iconibusque illustrat.* C.F. Mohr, Kiliae [= Kiel]. viii + 23 pp.
Wiedemann, C.R.W. (1821) *Diptera exotica. Pars I. Tabulis aeneis duabus.* 2nd ed. Kiliae [= Kiel]. xix + 244 pp.
Wiedemann, C.R.W. (1824) *Munus Rectoris in Academia Christiana Albertina aditurus Analecta entomologica ex Museo Regio Havniensi maxime congesta profert iconibusque illustrat.* E regio typographeo scholarum, Kiliae [= Kiel]. 60 pp.
Wiedemann, C.R.W. (1828) *Aussereuropäische zweiflügelige Insekten.* Volume 1. Schulz, Hamm. 608 pp.
Williston, S.W. (1886) Dipterological notes and descriptions. *Transactions of the American Entomological Society,* 13, 287–307.
Williston, S.W. (1896) On the Diptera of St. Vincent (West Indies). *Transactions of the Entomological Society of London*, 1896(3), 253–449.
Williston, S.W. (1901) Supplement [part]. Pages 297–328 (Part 14). *In*: Godman, F.D. and Salvin, O. (eds.). *Biologia Centrali-Americana. Insecta. Diptera*. Volume 1 (1886–1901). Taylor and Francis, London. 378 pp.
Williston, S.W. (1908) *Manual of North American Diptera*. J.T. Hathaway, New Haven. 405 pp.
Winterton, S.L. (2004) Are hind coxal knobs a synapomorphy for therevids? An unusual new species of *Anabarhynchus* Macquart from Australia (Diptera: Therevidae: Therevinae). *Zootaxa*, 413, 1–8.
Winterton S.L. (2006) New species of *Eupsilocephala* Kröber from Australia (Diptera: Therevidae). *Zootaxa*, 1372, 17–25.
Winterton, S.L. (2007) New species of *Acraspisoides* Hill & Winterton and *Bonjeania* Irwin & Lyneborg (Diptera: Therevidae: Agapophytinae), with the description of a new genus. *Zootaxa*, 1438, 1-25.
Winterton S.L. (2011) New stiletto flies in the genera *Acupalpa* Kröber and *Pipinnipons* Winterton (Diptera: Therevidae: Agapophytinae) described using cybertaxonomic tools. *Zookeys*, 95, 29–78. http://dx.doi.org/10.3897/zookeys.95.1461
Winterton, S.L. & Irwin, M.E. (2001) Phylogenetic revision of *Agapophytus* Guérin (Diptera: Therevidae: Agapophytinae). *Invertebrate Taxonomy*, 15, 467–526. http://dx.doi.org/10.1071/IT00027
Winterton, S.L., Irwin, M.E. & Yeates, D.K. (1999) Phylogenetic revision of the *Taenogera* Kröber genus-group (Diptera: Therevidae), with descriptions of two new genera. *Australian Journal of Entomology*, 38, 274–290. http://dx.doi.org/10.1046/j.1440-6055.1999.00126.x
Winterton, S.L., Yang, L., Wiegmann, B.M. & Yeates, D.K. (2001) Phylogenetic revision of Agapophytinae subf. n. (Diptera: Therevidae) based on molecular and morphological evidence. *Systematic Entomology*, 26, 173–211. http://dx.doi.org/10.1046/j.1365-3113.2001.00142.x
Wolcott, G.N. (1951) The insects of Puerto Rico. *Journal of Agriculture of the University of Puerto Rico*, (1948) 32(3): 748 pp.
Wolcott, G.N. & Otero, J. (1936) "Insectae Borinquenses", a revised annotated check-list of the insects of Puerto Rico. *Journal of Agriculture of the University of Puerto Rico*, 20(1): 627 pp.
Woodley, N.E. (1989) Phylogeny and classification of the "Orthorrhaphous" Brachycera. Chapter 115. Pages 1371–1395. *In*: McAlpine, J.F. (ed.). *Manual of Nearctic Diptera*, Volume 3. Research Branch, Agriculture Canada, Ottawa. Monograph 32, 1333–1581.
Woodley, N.E. (2011) A catalog of the world Xylophagidae (Insecta: Diptera). *Myia*, 12, 455 -500

Woodley, N.E., Borkent, A. and Wheeler, T.A. (2009) Phylogeny of the Diptera. Chapter 5. Pages 79–94. *In*: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. and Zumbado, M. (eds.). *Manual of Central American Diptera*. Volume 1. National Research Council Research Press, Ottawa, Canada. 714 pp.
Woodworth, C.W. (1913) *Guide to California Insects*. The Law Press, Berkeley. 360 pp.
Wray, D.L. (1967) *Insects of North Carolina. Third Supplement*. North Carolina Department of Agriculture, Raleigh. 181 pp.
Wulp, F.M., van der (1882) Amerikaansche Diptera. *Tijdschrift voor Entomologie*, 25, 77–136.
Wulp, F.M., van der (1888) Nieuwe Argentijnsche Diptera van Wijlen Prof. H. Weyanbergh, Jr. *Tijdschrift voor Entomologie*, 31, 359–376.
Wulp, F.M., van der (1897) Zur Dipteren-Fauna von Ceylon. *Természetrajzi Füzetek*, 20, 136–144.
Wulp, F.M. van der (1898) Insecta. Diptera. Pages 377–384 (Part 22). *In*: Godman, F.D. and Salvin, O. (eds.). *Biologia Centrali-Americana. Insecta. Diptera*. Volume 2 (1888–1903). Taylor and Francis, London. 489 pp.
Yang, L., Wiegmann, B.M., Yeates, D.K. & Irwin, M.E. (2000) Higher-level phylogeny of the Therevidae (Diptera: Insecta) based on 28S Ribosomal and Elongation Factor-1alpha gene sequences. *Molecular Phylogenetics and Evolution*, 15, 440–451. http://dx.doi.org/10.1006/mpev.1999.0771
Yeates, D.K. (1994) The cladistics and classification of the Bombyliidae (Diptera: Asiloidea). *Bulletin of the American Museum of Natural History*, 219, 1–191.
Yeates, D.K. (2002) Relationships of extant lower Brachycera (Diptera): a quantitative synthesis of morphological characters. *Zoologica Scripta*, 31, 105–121. http://dx.doi.org/10.1046/j.0300-3256.2001.00077.x
Yeates, D.K., Irwin, M.E. & Wiegmann, B.M. (2003) Ocoidae, a new family of asiloid flies (Diptera: Brachycera: Asiloidea), based on *Ocoa chilensis* gen. and sp.n. from Chile, South America. *Systematic Entomology*, 28, 417–431. http://dx.doi.org/10.1046/j.1365-3113.2003.00224.x
Yeates, D.K., Irwin, M.E. & Wiegmann, B.M. (2006) Evocoidae (Diptera : Asiloidea), a new family name for Ocoidae, based on *Evocoa*, a new replacement name for the Chilean genus *Ocoa* Yeates, Irwin, and Wiegmann. *Systematic Entomology*, 31(2), 373. http://dx.doi.org/10.1111/j.1365-3113.2006.00332.x
Zaitzev, V.F. (1970) Revision of the genus *Platarista* Speiser (Diptera, Therevidae). *Zoologicheskiy Zhurnal*, 49, 1415–1418.
Zaitzev, V.F. (1971) A revision of the Palearctic species of the genus *Dialineura* Rondani (Diptera, Therevidae). *Entomologicheskoye Obozreniye*, 50, 183–199. (In Russian).
Zaitzev, V.F. (1975) On the fauna of Therevidae (Diptera) of Mongolia. II. *Insects of Mongolia*, 3, 539–545.
Zaitzev, V.F. (1986) On the fauna Therevidae (Diptera) of the Far East. *Proceedings of the Zoological Institute, Leningrad*, 16, 3–9.
Zetterstedt, J.W. (1838) *Dipterologis Scandinaviae*. Section 3. Pages 477–868. *In*: Zetterstedt, J.W. Insecta Lapponica. Lipsiae [= Leipzig]. 1140 pp.
Zimsen, E. (1954) The insect types of C.R.W. Wiedemann in the Zoological Museum of Copenhagen. *Spolia Zoologica Musei Hauniensis*, 14, 1–43.
Zimsen, E. (1964) *The type material of I.C. Fabricius*. Munksgaard, Copenhagen. 654 pp.

NOTES

Note 1. Shaun Winterton, who is a specialist on the agapophytine genera, examined the type of *Melanothereva blackmani* Oldroyd and identified it as a species of *Entesia* (pers. comm.).

Note 2. Although Kröber (1928a, 1928c) referred to this record as "n. sp.", the 1928c publication date is 5 January 1928, while the 1928a publication date is 20 March 1928 (Pape and Thompson, 2010), making the latter publication a subsequent reference.

Note 3. Kröber (1913b: 58) cited Jaennicke's original description of *Thereva maculicornis* as page 353.

Note 4. Holston, Irwin and Webb examined the holotype of *Thereva maculicornis* Jaennicke and identified it as a species of *Entesia*.

Note 5. Kröber (1911) reported that the type specimen was labelled "Th. maculipennis Jaen.", and was in very bad condition. Kröber redescribed the specimen, noting the details of the damage, and that the wing was white with the veins blackish brown and yellowish brown, the membrane before and after each crossvein is dark brown, and that the upper part of the discal cell is surrounded by a dark brown bow-shaped smear ["Bogenwisch"]. Kröber pointed out that because Jaennicke stated in the original description that the wings were spotted, that the name should probably be maculipennis, but given that the entry was under the heading *Thereva maculicornis* Jaennicke, Kröber did not appear to be proposing a new name.

Note 6. The depository of syntype(s) of *Thereva notabilis* Macquart is not listed in any publication, but Holston examined a syntype from the MNHN.

Note 7. Holston examined a syntype female of *Thereva notabilis* Macquart and determined it belonged in *Entesia*.

Note 8. There is no Perales is the Santiago Region. Although this place name is present in several Regions, the closest is in Petorca Province in the bordering region of Valparaiso.

Note 9. Webb examined the holotype male of *Dialineura pallidiventris* Malloch and identified it as a species of *Entesia*.

Note 10. *Psilocephala nigra* Bellardi (1861) was recorded from "Messico" [Mexico], but we consider this an error in the original label data. Previous examinations and descriptions of the holotype by Malloch (1932) when he described the genus *Melanothereva*, and Lyneborg (1969) who provided figures of the genitalia, support the identification of numerous specimens collected in South America as *lugubris* Macquart. Distributions of the other two New World agapophytine genera also appear to be restricted to Argentina, Bolivia, and Chile (i.e., the *Nothofagus* zone). However, subsequent Neotropical collecting has not confirmed the presence of *Melanothereva*, or any members of the subfamily Agapophytinae, in Central America (Gaimari and Webb 2009).

Note 11. Blanchard 1852 cites the author as "Meig.", but the citation following this ("Dipt. exot., t. 11, part 1, p. 24") is referring to Macquart.

Note 12. It is unlikely that the LT of *Psilocephala nigra* Bellardi has the correct locality data, since the specimen has been verified as a junior synonym of *Melanothereva lugubris*, but this species has never been encountered north of Bolivia.

Note 13. Cole (1923a) cited *Psilocephala penthoptera* Schiner as 1868, but in the references on page 132 listed Schiner as 1867. Also note, the references cited for this name are in the synonymy list for *Psilocephala lugubris* (Macquart), except for Aldrich (1905) which lists it as an unnecessary replacement name for *Psilocephala nigra* Bellardi.

Note 14. Irwin was unable to locate any of the three syntypes of *Pachyrrhiza pictipennis* Philippi while visiting the MNNC. A "cotype" male (MEI 113142) collected from Chile, Concepcion, 9.X.1908, and determined by Kröber (1911) as "*Dialineura pictipennis* Phil." is in the USNM (Type No. 24187), but cannot be a syntype because it was collected 43 years after *pictipennis* Philippi was described.

Note 15. This family-group name is preoccupied by Swainson (1838) for a group of fish, based on the genus *Physis* Walbaum [ex Artedi] (1792). An application to the ICZN has been submitted (Gaimari *et al.* 2012) to change the stem of the generic name *Phycus* Walker to "*Phycus*–", leaving the family-group name for the group of fish unmodified. Also note, a group of genera that included the "*Xestomyza*-group" were referred to as the "phycine-like genera" by Lyneborg (1972: 303). In the Irwin and Webb (1992: 86) treatment of *Henicomyia*, the genus was listed as belonging in Phycinae, although in the introduction discussed as Xestomyzinae. Also see **Note 141** under Xestomyzinae.

Note 16. The replacement name *Ziehenia* Kröber was published in January 1929, prior to Richards (1929).

Note 17. The replacement name *Epileptocera* Richards was published in August 1929, after Kröber (1929a).

Note 18. In the description of *Ataenogera abdominalis* Kröber, he cites three males, but then uses the singular when referring to the type ("Drei m#. Paraguay.—Type: Kgl. Zoologisches Museum, Berlin"), which can only be interpreted as his having designated a holotype. However, a lectotype was unnecessarily designated (Webb and Irwin 1988: 41), followed by Hauser and Webb (2007: 47) reporting that the lectotype and one paralectotype were lost in transportation to the MLUH. Hauser and Webb (2007: 47) then made another unnecessary (and otherwise invalid in any case) lectotype designation using the remaing paralectotype. It is unknown (and likely unknowable) whether the single remaining specimen is in fact the holotype.

Note 19. *Leptocera gracilis* Kröber was described from one male and one female syntype. The male was designated as lectotype (Webb and Irwin 1988: 41), but Hauser and Webb (2007: 47) reported that it was lost in transportation to the MLUH.

Note 20. The holotype of *Henicomyia brevicornis* Bromley is female, not male as stated by Bromley (1934: 361). Webb and Irwin (1988) cited this species as a synonym of *Ataenogera abdominalis* Kröber, but Hauser and Webb (2007) revised its status as a valid species.

Note 21. According to Hauser and Irwin (2005a: 400), Evenhuis (1990) placed *P. scudderi* Cockerell in the genus *Desmatomyia* Williston (Bombyliidae), having mistaken the specimen in the USNM (reported in Cockerell, 1916 as an additional specimen of the species) as the type. However, the holotype of this species was in the AMNH. Both the holotype and specimen examined by Evenhuis were examined by

Martin Hauser and found not to be conspecific, with the latter possibly being within the genus *Desmatomyia*.

Note 22. Although Cole (1923b) describes only the female, he cites the holotype as being male, and Arnaud (1979) reports only the data from the original description so assumes it is male. However, the holotype is a female specimen.

Note 23. Cole (1965: 353) lists *Thereva bimaculata* Cole from Virginia, although all examined specimens had been collected from North Carolina.

Note 24. Kröber's records of *Thereva vialis* Osten Sacken from Toronto, Ontario, Canada (Kröber 1914a: 67) and North Carolina (Kröber 1928b: 120) are based on misidentifications.

Note 25. The five male and one female syntypes of *Thereva novella* Coquillett have not been located, nor were any syntypes examined by Cole (1923a).

Note 26. Hauser and Irwin (2003: Figs. 50-51) incorrectly referred to *Ammonaios confusus* Hauser and Irwin as *Ammonaios sabulosus* in the figure legend.

Note 27. Kröber referred to the "Type" female of this species deposited in MLUH. In his description he also refers to a cotype, which in context of his having designated a singular "Type" is clearly not a primary type. Metz *et al*. (2003) studied a male and a female "syntype", designating the female as the lectotype. However, given that Kröber designated this same female as the holotype, the lectotype designation was unnecessary and invalid.

Note 28. As reported by Holston (2004), Edwards in Malloch (1932) (as Malloch (1932)) and Stuardo-Ortiz (1946) recorded "? *Thereva chilensis*" in the synonymy of *Thereva albiventris* Philippi, 1865. The latter work was probably referring to the former in this possible synonymy. The citation of Edwards in Malloch (1932) is a footnote by F.W. Edwards, which reads "A female in Bigot's collection determined as *T. chilensis* seems to belong to this species; it is probably not the type, but may be correctly named."

Note 29. Kröber (1928c) refers to two localities in Chile in his description of this species—Olemué [=Olmué] and Conception [=Concepción]. However, he then cites the singular "Typus" for one female specimen in DEI. Although it is unknown which locality represents this holotype designation, only one specimen (from Olmué) of this species is present in DEI, which is labeled as "det. Kröber 1927," "Type" and "Holotype." Given the limited evidence, this can be considered the holotype. This is the specimen that Webb and Metz (2006) unnecessarily and invalidly designated as lectotype.

Note 30. The locality information on the holotype label of *Psilocephala placida* Coquillett reads “Fla.” Irwin (1977a: 293) noted that Florida was likely incorrect since the species was found in mountain areas of Arizona. Gaimari and Irwin (2000a: 170) indicated that the type locality is probably Flagstaff, Arizona, given the abbreviation “Fla.”

Note 31. The genus *Cerocatus* Rondani has been unrecognized since originally described (also see **Note 49** for the type species below), and none of the most recent uses of the name since that time (Hardy 1966; Kelsey 1969; O'Hara *et al.* 2011) was related to its recognition or description. Kröber (1913a) included *Cerocatus* in a key to genera of Scenopinidae, but likely did not see a specimen, given that he only reproduced Rondani's original description.

Note 32. Becker (1912) cited Walker's 1850 publication of *Cyclotelus* as 1856.

Note 33. Although Kröber (1911) states three different localities—Peru, Paraguay and Matto Grosso (Brazil)—in the description of this species, he refers to a singular female "Type" in the HNHM. Of the known specimens that Kröber studied, only one female (from San Bernardino, Paraguay) is present in that collection. The HNHM also houses a male paratype from the same locality, the USNM houses a female paratype from Matto Grosso, and the paratypes from Peru have not been located. Kröber (1914a) discusses an additional male from Paraguay, which he refers to as the Type, deposited in "Kgl. Zoologisches Museum, Berlin" (other specimens so deposited by Kröber are currently in ZMHB), but there is no evidence to suggest this was even one of the original paratypes, and is certainly not the holotype.

Note 34. Although the MCZ type database correctly lists a syntype for *Psilocephala scutellaris* Loew, Webb found that the specimen had been subsequently affixed with a holotype label. Also note, the South American specimens determined as this species by Kröber (1911: 502; 1912a: 231; 1913b: 34) are misidentifications of *Cyclotelus kroeberi* Cole (1960a: 169); and Osten Sacken (1878) and Aldrich (1905) cited Loew's description as page 74.

Note 35. Kröber (1914a: 56) listed *Psilocephala scutellaris* Loew from San Bernardino, Paraguay but Cole (1960a: 169) later described this material as *Furcifera kroeberi.*

Note 36. Kertész (1909) cited Macquart's 1846a description of *Thereva fascipennis* as page 104.

Note 37. Cole (1960a: 166) cited Kröber's 1928b description of *Furcifera flavipes* as page 112.

Note 38. *Furcifera kroeberi* Cole was described for the South American representatives of the material recorded by Kröber (1911: 502) as *Psilocephala scutellaris* Loew.

Note 39. The holotype of *Furcifera longicornis* Kröber was originally deposited in the Kröber collection but is currently in the MNHN.

Note 40. The holotype of this species is presumed destroyed, following Horn et al. (1990: 444) which states that the entire ZMUH collection was destroyed during a 1943 bombardment.

Note 41. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1870 description of *Psilocephala erythrura* as page 75.

Note 42. *Cerocatus raspii* Hauser is named for Alfio Raspi, in recognition of his facilitating our getting photographs of *Cerocatus tarsalis* Rondani, which allowed us to understand the identity of *Cerocatus* and to propose the synonymy of *Cyclotelus.*

Note 43. The holotype of *Ectinorhynchus fascipennis* Kröber was severely damaged while being mailed back to NHMW. Only the thorax remains of the specimen. Based on the description, and notes and illustrations made by Irwin prior to returning the holotype, we place this species in *Cerocatus.*

Note 44. *Cerocatus rondanii* Gaimari is named for Camillo Rondani, in recognition of the fact that he had to wait 164 years to have *Cerocatus* recognized as the valid name for a common, widespread New World genus.

Note 45. Although the MCZ type database correctly lists a syntype for *Psilocephala rufiventris* Loew, a holotype label was subsequently affixed to the specimen. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's description as page 17.

Note 46. Irwin and Lyneborg (1981a) cited Loew's 1869 description of *Psilocephala rufiventris* as page 126.

Note 47. In the original description of *Furcifera fascipennis*, Kröber (1911: 526) describes only the female, citing two localities, Brazil and Mexico, but he uses the singular "Type", and states it is deposited in the K.K. Hofmus. Wien (= NHMW). Peter Sehnal (NHMW) confirmed that the specimen labeled as the holotype of *Furcifera fascipennis* Kröber is present at that collection, and is from Brazil. The paratype, from Mexico, is in the USNM.

Note 48. Lyneborg (1969: 408) suggested that the concept of Cole (1960a) for *Psilocephala sumichrasti* Bellardi was likely incorrect, based upon comparison of Fig. 3c of Cole (male genitalia) with Fig. 31 of Lyneborg. Cole (1960a) had also expressed doubts of whether his concept of the species was correct, relative to other specimens he had studied. Lyneborg further noted that the concept of *sumichrasti* of Cole was likely closer to *Furcifera hardyi* Cole.

Note 49. *Cerocatus tarsalis* Rondani was originally described in the Scenopinidae, and was treated as such by Kertész (1909), Kröber (1913a, 1914b) and Hardy (1966), but therevid workers subsequently overlooked Kelsey (1969: 1), who stated that it should be moved "to Therevidae as indicated by Rondani's plates". The type specimen was located by Alfio Raspi and Nicola Maio, in the Museo dell' Istituto di Zoologia dell' Universita di Napoli and photographs were provided to Gaimari who determined the genus placement, and thus the genus synonymy. Although not mentioned in the original description, the specimen has a handwritten label "Cerocatus tarsalis, Rnd. Brasile", which indicates the type locality to that level. The top label reads "M. Zool. / N. 11,518", which according to Nicola Maio (MZUN, personal communication) is the number of the original catalog of Costa.

Note 50. Although the species-group name disagrees in gender with the genus-group name, Webb (2003: 491) specified the species-group name as a noun in apposition.

Note 51. *Dialineura gorodkovi* Zaitzev has been identified from Alaska (MEI 149680) since Webb and Irwin (1991a). This species is also Palaearctic.

Note 52. Cole (1925) stated that, agreeing with a personal communication from E. Bergroth, the character used to separate *Aristothereva* and *Psilocephala* (whether the eyes of the male are separated) was not sufficient to found a genus upon, and thus *Aristothereva latifrons* Frey and his species *Psilocephala latifrons* were congeneric, so his species name was preoccupied, with that of Frey having priority. So, Cole (1925) renamed his species *Psilocephala amplifrons*, although it is noteworthy that the combination of the species

of Frey with *Psilocephala* was never used after Cole (1925), and *Aristothereva* has since been considered a valid genus, including the concurrent paper of Kröber (1925: 56).

Note 53. Although the MCZ type database lists the type of *Psilocephala obscura* Coquillett as a syntype, Coquillett (1893b) had specified that there was only a single specimen, therefore it is the holotype.

Note 54. Webb and Metz (2006) incorrectly treated *Psilocephala laticornis* Loew (1869) as a valid name, in combination with the genus *Elcaribe* Webb. Schiner (1860: 167) treated *Thereva laticornis* Loew (1856) as *Psilocephala laticornis*, so when Loew (1869) described *Psilocephala laticornis* Loew, the name was preoccupied in that combination. Realizing this, Loew (1872a) gave the replacement name *Psilocephala platycera*, which has been used by all authors referring to this taxon since that time. Kertész (1897: 614) and Zaitzev (1975: 540) also treated *Thereva laticornis* Loew (1856) as *Psilocephala laticornis*, while Kröber (1937) and Lyneborg (1984) treated *Thereva laticornis* Loew (1856), respectively, as *Cliorismia laticornis* and *Ammothereva laticornis* (which is the current combination). There was no usage of *Psilocephala laticornis* Loew (1869), in any combination, since Loew (1872a) renamed the species, and the Zoological Record listed this change of name (Rye 1874: 384), citing the name being preoccupied at the time. As such, when Webb and Metz (2006) listed *Psilocephala platycera* as an unjustified replacement name, stating "In 1869, Loew described *Psilocephala laticornis*, then in 1872a he renamed this species *Psilocephala platycera* but gave no justification for this new name. An examination of the literature determined that *laticornis* was not a primary homonym within *Psilocephala*, therefore, *Psilocephala platycera* is considered an unjustified new name for *P. laticornis*," they were in error. Given the history of the usage of names, and the unequivocal and long standing secondary homonymy, the new name *Psilocephala platycera* was justified and is permanent, following ICZN Article 59.3, including it's conditional clause stating that replacement names of junior homonyms made before 1961 are permanent UNLESS "the substitute name is not in use and the relevant taxa are no longer considered congeneric, in which case the junior homonym is not to be rejected on grounds of that replacement." In this case, the replacement name was in use since its designation, and the replaced name had not been in use during that entire time, so *Psilocephala platycera* was and is the permanent name for this taxon, and stability of nomenclature would be threatened by reasserting usage of *Psilocephala laticornis* Loew (1869) which had not been used since it was originally described. In addition, the species-group name *platycera* is a noun in apposition, and so its gender remains unchanged.

Note 55. Webb and Metz (2006) incorrectly reported the USNM Type Number for the holotype of *Elcaribe stellus* Webb as 201406.

Note 56. Webb (2003: 43) incorrectly refers to the syntype of *Psilocephala longipes* Loew at MCZ as the holotype, which according ICZN Article 74.7 is not a valid lectotype designation. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *Psilocephala longipes* as page 11.

Note 57. In the original description of *Psilocephala platyptera* Kröber, the type locality was given as Guatemala, Rockstone Essequebo, but Cole (1925) noted that, as Cockerell pointed out to him, the type locality was actually in British Guiana (= Guyana). This was also noted by Metz and Irwin (2000).

Note 58. Metz and Irwin (2000: 1014) indicated that the type locality for *Lindneria splendida* Kröber is in Bolivia rather than Argentina, as was indicated by Kröber (1929b: 171).

Note 59. Irwin and Lyneborg (1981a: 236) attributed the misspelling Thereva tergissa to LeConte (1859), referring to it as an unjustified emendation of *Thereva tergisa* Say.

Note 60. Kertész (1909: 165) attributed the misspelling Thereva tergis to LeConte (1859: 57), likely in reference to LeConte's use of *tergis*[*sa*].

Note 61. Aldrich (1905: 247) notes *Thereva corusca* Wiedemann was an unjustified replacement name by stating "no reason for change of name."

Note 62. A single specimen from Missouri (MEI 128575) is well outside the expected distribution of *Lysilinga occipitalis* (Adams), and may be a mislabeled specimen.

Note 63. The holotype of *Megalinga insignata* Irwin and Lyneborg is male, not female as reported by Webb and Irwin (1991c: 921).

Note 64. The holotype of *Zionea tanneri* Hardy was originally returned to V.M. Tanner, but now is deposited at the BYUC (Webb and Irwin 1991b).

Note 65. The neotype female of *Psilocephala costata* Wulp was designated by Metz *et al.* (2003: 241) utilizing the holotype female of *Psilocephala atra* Kröber,which is now an objective junior synonym of *Psilocephala costata*.

Note 66. The MEI number (MEI 018051) listed for the holotype of *Nigranitida margaretae* Webb in the "specimens examined" in Webb and Metz (2004: 15) is incorrect, but is correct on page 13.

Note 67. Although Kröber (1911), in his redescribing this species, indicates a "Type" female, he was not working with Philippi's specimens, so this cannot be considered a lectotype designation. Also see **Note 27.**

Note 68. According to the original description of *Psilocephala ruficornis* Kröber, the holotype was deposited in the Hermann Collection, but its current location is unknown. Metz *et al.* (2003: 18) considered it destroyed.

Note 69. Several of the species of *Ozodiceromyia* Bigot were referred to by Cole (1923a: 37) as the "*Psilocephala haemorrhoidalis*-group", and he correctly noted that certain species then in *Thereva* Latreille seemed closer to that group. Gaimari and Irwin (2000a: 190; 2000b: 563) noted this, and pointed out the synonymy with *Phycus* Walker proposed by Becker (1912).

Note 70. Irwin and Lyneborg (1981a) incorrectly attributed the misspelling Ozodiceronyma to Wulp (1898), a citation that does not contain anything about Therevidae. It was likely confusion regarding the authorship here attributed to Godman and Salvin (1901), the editors of the Biologia Centrali Americana in which Wulp was the author of Volume 2. The Godman and Salvin (1901) reference is at the very end of Volume 1.

Note 71. Aldrich (1905) refers to *Thereva argentata* Bellardi as *Psilocephala argentata* on page 246 and *Thereva argentata* on page 248.

Note 72. Kröber (1928b) reported *Psilocephala frontalis* Cole as "Ps. frontata Cole ?". Attribution to Cole, reference to the correct spelling in the preceding annotation, and proposal of all new species in the same reference with the notation “n. spec.” demonstrates that this name was an error for *Psilocephala frontalis*; the question mark indicates determination uncertainty and is used elsewhere in the same publication. This name is not a demonstrably intentional change, and is to be treated as an incorrect (unavailable) subsequent spelling of *Psilocephala frontalis* Cole 1923 according to the IZCN Articles 33.1 and 33.5. This name appears in an annotated inventory of North American species in the Halle Collection (MLUH).

Note 73. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *Psilocephala costalis* as page 16.

Note 74. Cole (1965: 350) stated that the N.J. paralectotype (then syntype) of *Psilocephala aldrichii* Coquillett "=*flavipennis*?".

Note 75. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1872a description of *Thereva melanoneura* as page 36. Also note, the Coquillett (1900) record from Alaska is a misidentification.

Note 76. Kröber (1912) noted the type locality of his species *Euphycus setosus* as Bilimek, Mexico but Bilimek refers to the collector D. Bilimek, former curator at the National Museum of Mexico.

Note 77. The holotype of *Breviperna milleri* Irwin was originally retained in the MEIC collection but will be deposited at CAS when a revision of *Ozodiceromyia* is completed by Gaimari.

Note 78. According to Gaimari & Irwin (2000: 191), the treatments of this species by Kröber (1914a) and Cole (1923a) were both based on misidentifications of *Ozodiceromyia germana* (Walker).

Note 79. Kröber records *Thereva nigra* Say from Mexico (Kröber 1912, 1913b) and from the southwestern United States (Kröber 1914a). The records from Mexico are likely following the misidentification by Wulp (1882), but those from the southwestern United States were based upon misidentification of what was then a new species, but is currently *Ozodiceromyia nanella* (Cole). Gaimari studied the relevant specimens for the latter at NHMW.

Note 80. Wulp (1882) lists *Psilocephala nigra* (Say) from Mexico, but this is a species misidentification, which was also followed by Osten Sacken (1887), and by Kröber (1912, 1913b) (as *Thereva nigra*).

Note 81. Lyneborg (1969) reported that syntypes of *Psilocephala univittata* Bellardi were not present in the Bellardi collection (MRSN), but were located in the Bigot collection (BMNH), although he did not examine them. In subsequent visits by Gaimari, no syntypes of this species were found at BMNH. Also note, Kröber (1914a: 55) records this species from Victoria, Texas, which likely represents a misidentification.

Note 82. Webb and Irwin (1991a: 879) indicated the holotype number for *Psilocephala variegata flavipilosa* Cole as CAS 01486, but the specimen is labeled as CAS Type No. 1485, which is correct according to Arnaud (1979), with the allotype being CAS Type No. 1486.

Note 83. As discussed by Gaimari and Irwin (2000a), *Thereva crassicornis* Williston (1886) was preoccupied by Bellardi (1861). Cole (1965) erected the new name *Dialineura willistoni* Cole for the species of Williston, apparently not recognizing the fact that Williston himself (1908) had recognized his own error and erected the new name *Thereva pachyceras* Williston for his homonymous species. Therefore the name of Cole (1965) was an unjustified replacement name, and the name of Williston (1908) is the valid name.

Note 84. In the description of "Psilocephala slossoni", Coquillett (1893b: 227) stated "collected by Mrs. A. T. Slosson, after whom the species is named", but the species name given was slossoni, an incorrect original spelling, later emended to *slossonae* by Cole (1965).

Note 85. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1870 description of *Psilocephala variegata* as pages 73 and 90, respectively.

Note 86. Cole (1923a: 74) designated the lectotype of *Thereva conspicua* Walker according to ICZN Article 74.5. As noted by Cole (1923a), the lectotype is a female, not male as stated by Walker (1848).

Note 87. Aldrich (1905) and Kertész (1909) cited Coquillett's 1894 description of *Psilocephala limata* as page 99.

Note 88. Webb and Metz (2003a: 382) cited Cole's 1923a description of *Psilocephala canadensis* as page 53.

Note 89. Although an apparently originally affixed holotype label was on Loew's original specimen of *Psilocephala melampodia*, in the original description Loew does not indicate how many specimens were examined, so the specimen must be considered a syntype (ICZN Article 73). Webb and Metz (2003a) designated the MCZ specimen as lectotype. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's description as page 12.

Note 90. The holotype of *Psilocephala argentifrons* Cole is not deposited in the Pennsylvania Department of Agriculture, Harrisburg as stated by Cole (1923a), but is in the collection of the CAS (Arnaud 1979).

Note 91. In designating the lectotype of *Psilocephala montivaga* Coquillett, Webb and Metz (2003a: 396) refer to the author of the species as Cole in the Type Material section.

Note 92. Kröber (1911) had selected one of the syntypes of *Psilocephala stigmaticalis* Schiner as the holotype of his new species *Psilocephala quadrimaculata*. Gaimari and Irwin (2000a) selected this specimen as the lectotype of *Psilocephala stigmaticalis*, making the species of Kröber a junior objective synonym of the Schiner species.

Note 93. Metz and Irwin (in Metz *et al.*, 2003) had misinterpreted *Psilocephala senilis* Bromley as a junior secondary homonym, preoccupied by *Bibio senilis* Fabricius (1805), which was a congener, but had already been renamed *Penniverpa lyneborgi* Irwin and Webb due to its own homonymy with *Bibio senilis* Panzer (1798).

Note 94. Metz and Irwin (in Metz *et al.*, 2003) renamed *Psilocephala senilis* Bromley, citing its being preoccupied by *Bibio senilis* Fabricius (1805). However, *Bibio senilis* Fabricius was preoccupied by *Bibio senilis* Panzer (1798), and had been renamed *Penniverpa lyneborgi* Irwin and Webb (1992). *Bibio senilis* Fabricius was permanently invalid due to its primary homonymy according to ICZN Article 57.2, and had already been given a replacement name, so was not eligible for further issues of Priority. So, the replacement name *Penniverpa bromleyi* Metz and Irwin was unjustified.

Note 95. Aldrich (1905) cited Coquillett's 1893b description of *Psilocephala festina* as page 22.

Note 96. The holotype of *Anabarhynchus hermanni* Kröber was originally deposited in the Hermann Collection (Kröber 1911) but is currently in the ZSMC (Webb 2006).

Note 97. The citation of Edwards in Malloch (1932) is in a footnote by F.W. Edwards, which reads "According to material in Bigot's collection the following belong to the genus *Peralia*: *Thereva vittata*, Phil.; *Dialineura costalis*, Bigot; *Anabarhynchus niger*, Bigot. Of these, *T. vittata* is probably an earlier name for P. *grisea*, and the type of *A. niger* may be a greasy specimen of the same species."

Note 98. Kertész (1909) cited Jaennicke's 1867 description of *Thereva schineri* as page 352.

Note 99. The Bigot syntypes of his species *Dialineura costalis* have not been located at Oxford or the BMNH (Adrian Pont, pers. comm.), although three males and two females of this species were on a purchase list in the G.H. Verrall archives.

Note 100. The holotype of *Anabarhynchus griseus* Kröber was orginally deposited in the Hermann Collection (Kröber 1911) but is currently in the ZSMC (Webb 2006).

Note 101. The holotype of *Anabarhynchus maculifrons* Kröber was orginally deposited in the Hermann Collection (Kröber 1911) but is currently in the ZSMC (Webb 2006).

Note 102. Because *Bibio imberbis* Fallén was designated the type species of *Paraclia* Enderlein, *Paraclia* immediately became a junior objective synonym of *Psilocephala* Zetterstedt.

Note 103. Kröber (1912: 240) comments that in his opinion *Psilocephala melanoprocta* Loew (1869) and *Psilocephala munda* Loew (1869) are synonyms. Irwin and Lyneborg (1981a) lists *P. munda* as the senior synonym of *P. melanoprocta*, citing Kröber (1912) as the source for the "subsequent synonymy". However, Kröber (1913b, 1914a) treats both species as valid. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *P. munda* as page 13 and *Psilocephala melanoprocta* as page 15.

Note 104. In his description of *Psilocephala maculipennis*, Kröber (1914a: 46) refers to two males, but then refers to the singular "Type" in the USNM. One of these two specimens, both from the same locality according to the description, is the holotype.

Note 105. In describing *Psilocephala schmidti*, Kröber (1928a: 13) refers to male and female types deposited in ZMUH. Metz *et al.* (2003) presumed these to have been destroyed (also see **Note 40**), but found a female syntype that had been deposited in DEI, and designated it lectotype.

Note 106. Since Webb (2005a), specimens of *Spiriverpa albiceps* (Loew) have been identified from Canada (Saskatchewan) and the USA (Idaho, Nevada, New Mexico).

Note 107. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *Thereva albiceps* as page 69.

Note 108. Webb (2005a: 20) incorrectly refers to the male syntype of *Thereva bella* Kröber as the holotype, but in the original description, Kröber indicates both a female type and a male type, which are both syntypes. The syntypes were deposited in the Johnson collection according to the original description, which was subsequently transferred to MCZ.

Note 109. The holotype of *Thereva bella nigrimana* Kröber was originally deposited in the Johnson collection according to the original description, which was subsequently transferred to MCZ. Also note, Webb (2005a) designated this as new synonym of *bella* Kröber, but had overlooked Poole (1996).

Note 110. The BMNH Diptera type database lists two specimen numbers (241986 and 253876) for the lectotype of *Thereva senex* Walker, which was designated by Cole (1923a) according to ICZN Article 74.5. Webb (2005a: 38) lists only 241986 as the Type Number in the BMNH, referring to the lectotype as the holotype.

Note 111. Webb (2005a: 36, 38) incorrectly refers to the syntype of *Thereva candidata* Loew at MCZ as the holotype, which according ICZN Article 74.7 is not a valid lectotype designation. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *Thereva candidata* as page 10.

Note 112. Aldrich (1905) cited Walker's 1852 description of the genus *Tabuda* as 1853.

Note 113. Aldrich (1905) cited Coquillett's 1894 description of the genus *Metaphragma* as page 98.

Note 114. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1872a description of *Xestomyza planiceps* as page 38.

Note 115. Cole (1923a: 128) designated the lectotype of *Thereva varia* Walker according to ICZN Article 74.5. The lectotype is a male, not female as stated by Walker (1848) and Cole (1923a).

Note 116. Lyneborg (1968b: 168) states that "though Walker did not make any comments on it, there can be little doubt that he created *Tabuda fulvipes* as a new name after discovering that *Thereva nervosa* was preoccupied by Loew (1847). Walker's two descriptions are practically identical and have surely been made from the same specimen," and treated this taxon as such. Although Cole (1923a: 128) had already called the syntype specimen of *Thereva nervosa* "the type"—a lectotype designation according to ICZN Article 74.5—Lyneborg (1968b: 169) also refers to the specimen (but as *Tabuda fulvipes*) as the holotype. Irwin and Lyneborg (1981: 223) followed Lyneborg (1968b) in refering to *Tabuda fulvipes* as a "new name for *Thereva nervosa* Walker". However, although Walker (1852) did not state any locality or collection information for his species *Tabuda fulvipes*, he also made no reference of any kind to use of the name *Thereva nervosa* by himself or by Loew. Additionally, Walker (1852) described *Tabuda* (and *Tabuda fulvipes*) in a different family (Leptides), treating *Thereva* as belonging to the Xylotomae in the same paper (Walker, 1852) and the previous one (Walker, 1848) where he described *Thereva nervosa*. The descriptions are similar, as Lyneborg (1968b) noted, but were clearly made independently because the

characters used and the ways they were described are quite different, in addition to the clear discrepency that the stated body and wing lengths are different between the two descriptions. Even if the description of *Tabuda fulvipes* was based on the same specimen as *Thereva nervosa* (for which there is no evidence), it would still be an independent new species description, and not a new name. However, since Curran (1934) synonymized *Tabuda fulvipes* under *Thereva nervosa*, and given that both are considered synonyms of *Thereva varia* Walker (1848), the end result is the same, with *Thereva varia* Walker as the valid name, with both *Thereva nervosa* Walker and *Tabuda fulvipes* as junior synonyms. The name *Thereva nervosa* Walker is permanently invalid according to ICZN Article 57.2, due to the primary homonymy with Loew's (1847) species. So unless a demonstrable type specimen of *Tabuda fulvipes* Walker is found, and is deemed to be a different species from *Thereva nervosa* Walker, we can follow the synonymy of Curran (1934) to apply ICZN Article 60.2 to use the name *Tabuda fulvipes* Walker in the event that the synonymy with *Tabuda varia* (Walker) is rejected. Also note, Aldrich (1905) cited Walker's publication date for *Tabuda fulvipes* as 1853.

Note 117. Although Bigot (1890) did not expressly cite the combination *Baryphora fulvipes* (Walker), the genus was monotypic when he proposed the synonymy of *Tabuda* Walker.

Note 118. Irwin and Lyneborg (1981a) cited Loew's 1876 description of *Thereva melanophleba* as page 112.

Note 119. Holston *et al.* (2003) petitioned the ICZN (Case 3251) to conserve the usage of *Thereva* Latreille by the designation of *Musca plebeja* Linnaeus, 1758 as the type species. The Commission in 2006 ruled (Opinion 2142) that usage of the name *Thereva* Latreille, 1797 is conserved by the designation of *Musca plebeja* Linnaeus, 1758 as the type species of the genus *Thereva*. Holston (2004: 25) provides an interesting synopsis, prior to the 2006 ICZN opinion, of the bifurcated history of the use of the name *Thereva* (viz. usage by Latreille versus Fabricius), which had stabilized by 1820, but had still remained unresolved in terms of a designated type species. Also note, Curran (1934: 188) mistakenly attributed authorship of the genus to Zetterstedt in his key to genera.

Note 120. The holotype of *Thereva albopilosa* Kröber was originally deposited in the Kröber collection but is currently in USNM.

Note 121. Holston and Irwin (2005: 79) incorrectly recorded MEI 118374 for the holotype male of *Thereva aurofasciata* Kröber, but it should be MEI 119840. MEI 118374 is the holotype of *Thereva niveipennis* Kröber.

Note 122. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1869 description of *Thereva comata* as page 9.

Note 123. The holotype of *Thereva nebulosa* Kröber was originally deposited in the Kröber collection, but is currently in MNHN (Holston and Irwin 2005).

Note 124. Kröber (1912a: 253) and Cole (1923a: 116; 1965: 353) incorrectly recorded *Thereva diversa* Coquillett from Florida, following the original interpretation of "Fla." by Coquillett from the paralectotype (then syntype) label (MEI 111122) (Holston and Irwin 2005). Gaimari and Irwin (2000a: 170) interpreted this locality data as Flagstaff, Arizona, for the type of *Psilocephala placida* Coquillett (1894) (currently in *Breviperna*).

Note 125. Cole (1925) noted the following, regarding the locality record for a paratype of *Thereva neomexicana* Cole (1923a): "I am also indebted to Prof. Cockerell for correcting a locality record given on page 118 of my paper; *Thereva neomexicana* was taken at Arroyo Pecos (probably by Cockerell), and Arroyo Pecos has nothing to do with Pecos River; it is at Las Vegas."

Note 126. The collector of the lectotype of *Thereva flavicincta* Loew was S.H. Scudder, with the locality only listed as "White Mountains" by Loew. Scudder wrote numerous papers on the insect fauna of the White Mountains in central New Hampshire, so it seems likely that the locality referred to by Loew is the White Mountains of New Hampshire, USA.

Note 127. Kröber (1914a: 68) lists *Thereva flavicincta* Loew from Mexico, which represents a specimen misidentification. Also note, Osten Sacken (1878) and Aldrich (1905) cited Loew's 1870 description of *Thereva flavicincta* as page 70.

Note 128. In referring to the Harris collection, Johnson (1925: 73), stated that a specimen of *Thereva frontalis* Say is labeled as "No. 70", and that No. 170 has a label written in pencil "Thereva aurata Say ms.", and another in ink "*frontalis* Say, Append. Long, is probably the same as No. 70." So it seems very likely that the *nomen nudum* Thereva aurata Harris is attributable to *Thereva frontalis* according to Johnson (1925).

Note 129. The holotype of *Thereva ustulata* Kröber was originally deposited in the Kröber collection, but is currently at USNM (Holston and Irwin 2005).

Note 130. No locality is given on the type specimen of *Thereva fucata* Loew, but the locality is recorded as California (collected by H. Edwards) by Loew (1872a) in the original description of the species.

Note 131. Osten Sacken (1878) and Aldrich (1905) cited Loew's 1872a description of *Thereva fucata* as page 37.

Note 132. The holotype of *Thereva fucatoides* Bromley was originally returned to G. Knowlton, but is currently at USNM (Holston and Irwin 2005).

Note 133. In his description of *Thereva hirticeps*, Loew (1874b) did not refer to the number of specimens in the type series. Holston and Irwin (2005: 44) refer to the type specimen as the holotype, not recognizing that Cole (1923a: 121) had designated a lectotype according to ICZN Article 74.5.

Note 134. Coquillett did not state where the holotype of *Thereva johnsoni* Coquillett was deposited (presumably in the C.W. Johnson collection), but it is currently at the MCZ (Holston and Irwin 2005).

Note 135. The ZMUC collection database does not indicate the type status for the single species record for *Bibio nobilitata* Fabricius. Zimsen (1964: 454) reported a single type for *Bibio nobilitata*, consisting only of wings when this specimen was located in Kiel, Germany.

Note 136. *Thereva nobilitata* (Fabricius) is widespread throughout western Europe, the likely source of introduction to North America, where it is known from seven specimens collected from 1970–1999 in the Greater Vancouver Regional District, British Columbia, Canada (Holston and Irwin 2005).We are not providing the extensive bibliographic information or synonymies here for the Palaearctic literature on this common Palearctic species that was introduced into North America. For additional references, consult Kertész (1909), Kröber (1913b), Lyneborg (1989a) and Holston and Irwin (2005).

Note 137. Although the nebulous type locality "English River" (collected by Kennicott) is given for *Thereua strigipes* Loew in the original description and on the labeled syntype, according to Stearns (1866: 3), Robert Kennicott (the collector of the syntype) collected in this region from 1859-1862, specifically "the route traversed by Mr. Kennicott was [thence] nearly north to Fort Churchill, on English River, up the latter to Methy portage, at which point he first reached the head waters of the streams flowing into the Arctic ocean", thus the type locality is surely in Manitoba, Canada. Also note, the syntype in the MCZ was subsequently affixed with a holotype label. Cole (1923a: 118) listed Lake Winnipeg, Canada as type locality, likely having followed the entries in Osten Sacken (1878: 96) and Aldrich (1905: 248), which apparently is an error (Holston and Irwin 2005: 36). According to Kennicott's journal (see Anonymous, 1869: 164), he had crossed Lake Winnipeg some weeks prior to reaching the English River.

Note 138. Johannsen (1903: 15) treated *Thereva strigipes* Loew as belonging to *Thereva* Latreille, but suggested that due to the open medial cell would be referable to *Dialineura* Rondani. Also note, Kröber (1912a: 255, 268) lists this species from Colorado which is apparently a misidentification, and Osten Sacken (1878) and Aldrich (1905) cited Loew's 1870 description of the species as page 72.

Note 139. The first treatments of xestomyzine genera as a modern higher-level taxonomic group referred to included genera under the informal names "*Xestomyza*-group" (Lyneborg 1972: 297) or "Xestomyzine-genera" (Lyneborg 1972: 303) whose circumscription differed significantly from the "Xestomyza-Gruppe" of Kröber (1924a: 2), which included Palaearctic therevine stiletto fly genera with a swollen antennal scape (Holston 2004). Irwin and Lyneborg (1981a: 262; 1981b: 518) treat the genus *Henicomyia* as Phycinae, although in the latter reference as the *Xestomyza*-group of Phycinae. In Irwin and Webb (1992: 85), Xestomyzinae was discussed as a subfamily including *Henicomyia*, but this genus was later listed in Phycinae.

Note 140. Lyneborg (1972: 368) deposited the holotype of his species *Henicomyia bicolor* at the USNM, but it has since been transferred to the CNC, which is its correct depository (Irwin 1978: 74).

Note 141. Hauser compared the holotype and several paratypes of *Henicomyia amazonica* Irwin and Webb with the widespread *Henicomyia flava* Lyneborg and determined the species to be conspecific. Therefore *H. amazonica* is regarded as a junior synonym of *H. flava*.

Note 142. Lyneborg (1972: 364) placed *Henicomyia varipes* Kröber as a possible synonym of *Henicomyia hubbardii* Coquillett and assumed the type to be lost, and further speculated that although Kröber (1912a: 215) cites the type as being male that it is likely female based on the morphology described. The type was found at the MNHN, was female, and Hauser determined it to represent a distinct species distributed in

Mexico. Cole (1965: 349) cited the distribution of *Henicomyia varipes* as Mexico and Colorado. The Colorado specimen misidentified by Cole (1965) is *Henicomyia hubbardii*.

Note 143. According to the original description of *Psilocephala antennata* Kröber, the male and female syntypes were deposited in the Hermann Collection, but their current location is unknown.

Note 144. Philippi (1865) did not indicate the sex of the syntype(s) of *Thereva luteiventris* Philippi. Kröber (1911; 1913b) included this species in keys to females, although he recognized initially that the sex was not known from the original description and that the species was unknown to him (Kröber 1911). It is possible that a male specimen (MEI 141813) from the MNNC with a greyish blue handwritten label “Thereva leucogas [sic] tra Ph. n. sp.” is a syntype bearing an unpublished manuscript name.

Note 145. *Psilocephala macrochaeta* Bigot is currently considered a junior synonym of *Atherimorpha praefica* (Philippi).

Note 146. *Psilocephala pilosula* Bigot is currently considered a junior synonym of *Atherimorpha praefica* (Philippi).

Note 147. *Thereva appendiculata* Macquart was determined by K.C. Holston and J. Chainey (BMNH) to belonged in the genus *Scepsis* Walker (Tabanidae), and is currently considered the senior synonym of *Scepsis nivalis* Walker, 1850.

Note 148. In reference to the Harris collection, Johnson (1925) stated under the record for *Neopogon trifasciatus* (Say) the following "No. 248, Cambridge, July 18 and 20, 1836, 'on sand at the Port' (Cambridgeport was that part of the present Cambridge adjacent to the lower part of the Charles River). Listed as Thereva plagiata Say, ms. One specimen is marked with a *u*. It seems strange that Say should have applied the Thereva plagiata to this in 1833, when he described it in 1823 as *Dasypogon trifasciatus*." The *nomen nudum* Thereva plagiata Harris is surely referring to the manuscript name of Say.

Note 149. Osten Sacken (1878) and Williston (1886) recorded this species as "Thereva plagiata (Harris) Walker," and Back (1909) referred to the Harris name as a "ms. name", all of which referred to this species as a junior synonym of the asilid species *Stichopogon trifasciatus* (Say). Irwin and Lyneborg (1981a) made no reference to Walker, but repeated Osten Sacken's synonymy.

Note 150. For the chapter on Therevidae, Curran (1965) is identical in page numbering and content to Curran (1934).

Note 151. In the *Biologica Centralia-Americana*, authorship is not stated for the "List of species recorded from Mexico or Central America since 1887, not enumerated in the Supplement" at the end of volume 1, but it is clearly placed after, and separate from, the section (pp 366–376) on Empidae (sic) by Wheeler and Melander, so authorship is here attributed to the editors.

Note 152. Evenhuis (1997) gave the date of Latreille’s *Précis* as 1797, based primarily on the weekly minutes of the *Académie* [*l' Académie des Sciences de Paris*] that recorded the presentation of this work as 13 January 1797. The year 1797 will be used in reference to Latreille's *Précis*; the date given in most catalogues of Diptera is 1796.

Note 153. The various parts of Macquart's *Diptères exotiques nouveaux ou peu connus* were published in both a journal version and a separate version. The two parts where he described New World therevids are the *Tome deuxième, 1.re partie* (Volume 2, Part 1) and the *Supplément.* According to Evenhuis (1997: 513), for the former, both the journal and separate versions were published in 1841, with the journal version published first (7 April 1841) and the separate version published second (September 1841). Also according to Evenhuis (1997: 514), the *Supplément* was first published in the journal version (22 July 1846) and the separate version published second (7 November 1846). Therefore, for the two Macquart works cited herein, the journal versions were published first.

INDEX

The index only refers to names in the catalogue itself, not in other sections of this work. Obsolete combinations are not indexed, but instead can be found via the currently valid combination. The following conventions are followed:

BOLDFACE—valid name for family-group name
Boldface Author—Available generic name, valid
Italics Author—Available generic name, synonym or homonym
Normal Author—Unavailable generic name, not misspelling (e.g., *nomen nudum*)
Normal: Author—Unavailable generic name, original or subsequent misspelling
bold italics Author, valid genus—Available species name, valid, in original combination
bold italics (Author), valid genus—Available species name, valid, in subsequent combination
italics Author, valid genus of senior name—Available species name, synonym or homonym
normal Author, valid genus—Unavailable species name, not misspelling (e.g., *nomen nudum*)
normal: Author, valid genus—Unavailable species name, original or subsequent misspelling