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The vision of David Grimaldi

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We are honored to present this special issue of *Palaeoentomology* in celebration of our dear friend, mentor, and collaborator, David A. Grimaldi (Fig. 1), and on the occasion of his 65th birthday on 22 September 2022. This issue has been compiled in recognition of David's remarkable ongoing impact on the fields of

paleontology, entomology, and evolutionary biology. Throughout his career David has worn an inspirational path across disciplines as an exceptional, thoughtful, and creative scientist. His body of work is vast, punctuated by long-lasting classics that are international in scale and recognition. David is a world authority in multiple



FIGURE 1. David A. Grimaldi alongside an exposure of *Metasequoia* fossils in the Matanusak River Valley, Alaska, July 2001 (photograph by Keith Luzzi).

arenas; his well-earned expertise ranges from the fossil record and evolutionary history of insects beginning 400 million years ago in the Devonian to the systematics and morphology of notoriously complex drosophilids at the species level. His contributions have helped shape modern palaeoentomology. We are grateful for David's work and fellowship and look forward to his continued accomplishments.

A short biography

David's academic training began with an atypical but important start as a student of both Biology and Fine Arts at the University of Connecticut, where he graduated with a Bachelor's degree in 1979. As an undergraduate David developed a fascination for insects as well as a sharp eye for illustration and morphology. It was this foundation that led him to graduate school, first as a Master's student at the Department of Biological Sciences of the State University of New York (SUNY) in Binghamton and

then onto a PhD in Entomology at Cornell University. At SUNY David worked with John Jaenike on the ecology and evolution of *Drosophila* (Jaenike *et al.*, 1982; Grimaldi & Jaenike, 1982; Grimaldi & Jaenike, 1983), beginning his now four-decade long research program on this group of iconic insects. As a PhD student, David studied with Quentin D. Wheeler and William "Bill" L. Brown, Jr. (1922–1997), both prolific giants in the fields of systematic theory and Hymenoptera systematics, respectively. It was here that perhaps David's trajectory toward the fossil record was set, Bill Brown was himself a student of Frank M. Carpenter (1902–1994), perhaps the most impactful American palaeontologist of the 20th century. Cornell was a breeding ground for a number of notable entomologists and was also home to prominent scientists who had impacts on Dave as a developing scholar. David availed himself of the influence and mentorship of Thomas Eisner (1929–2011), George C. Eickwort (1940–1994), and John "Jack" G. Franclemont

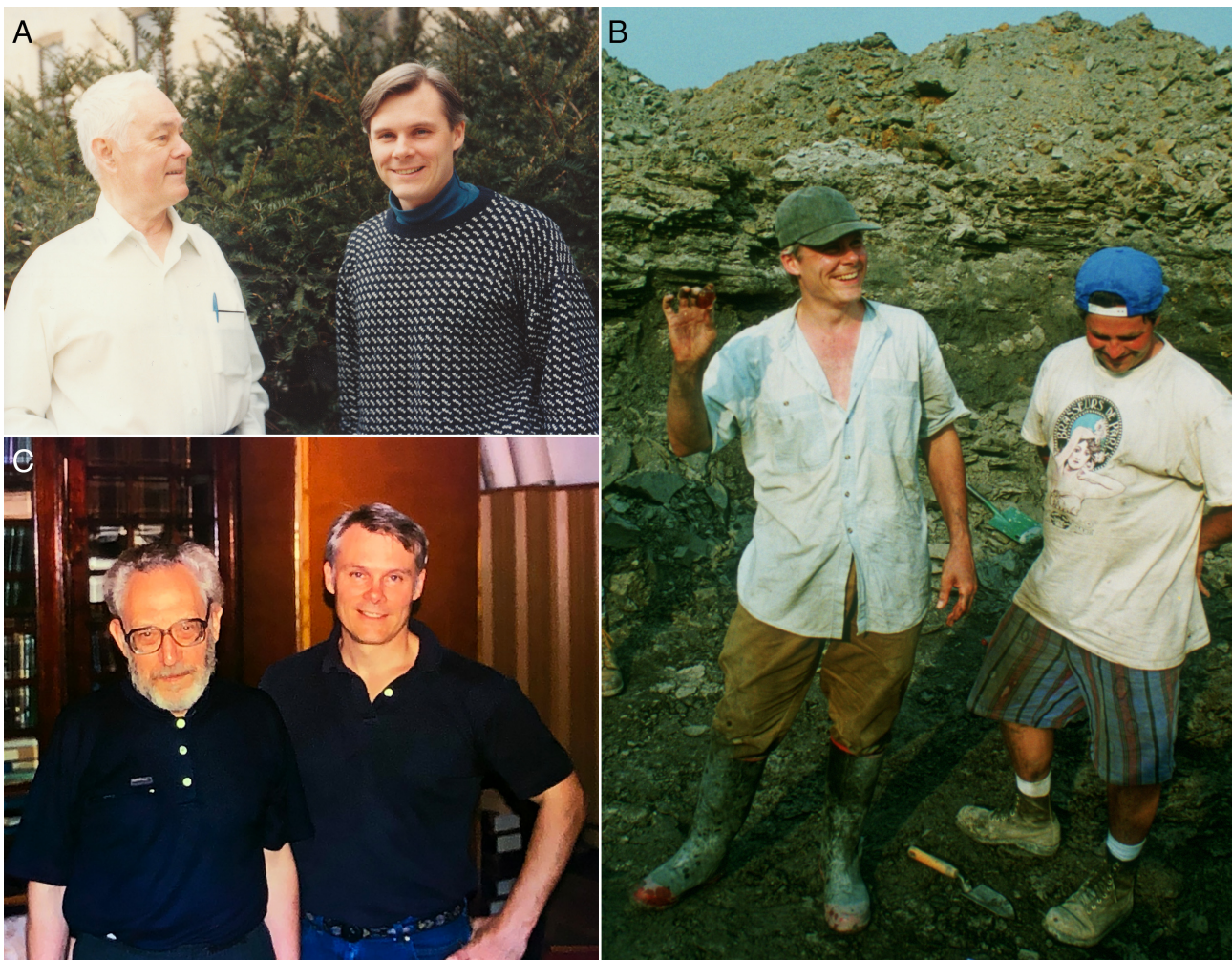


FIGURE 2. David A. Grimaldi through the years. **A**, George W. Byers (1923–2018), a leading taxonomist of extant Mecoptera and Tipulomorpha, and David (at right) outside of the Snow Entomological Museum, University of Kansas, Lawrence, Kansas, USA on 15 February 1992 (photographer unknown). **B**, Excavating New Jersey amber at Sayreville, New Jersey, USA in July 1995; Dave (at left) and Keith Luzzi (at right) (photographer Richard Luzzi, Jr.). **C**, Alexandr P. Rasnitsyn (left) and David at the Palaeontological Institute, Moscow, July 2002 (photograph by Michael S. Engel).



FIGURE 3. Michael S. Engel (left) and David A. Grimaldi (right) in conversation on 25 April 2009 at Alvamar Clubhouse, Lawrence, Kansas, USA (photographer unknown).

(1912–2004), among many others. David was a sponge, absorbing everything from these titans of entomology and evolutionary biology, all of which forged his keen mind.

In 1986, David's draft thesis on *Zygothrica* systematics demonstrated the talent and promise of an up-and-coming scientist so clearly that he was hired as an Assistant Curator in the Department of Entomology at the American Museum of Natural History directly from graduate school. The thesis reveals that the hallmarks of David's characteristic style and precision were in place early on. The published version of the dissertation is a 165-page monograph, which includes over 500 figures, ranging from meticulous SEM images to beautiful hand-drawn and shaded anatomical and habitus reconstructions (Grimaldi, 1987). Beyond the visual elements, there are detailed phylogenetic reconstructions, ecological and natural history data, behavioral observations, and insightful hypotheses rooted in synthesis. In reading David's first monograph, it is obvious that his passion for insects, ecology, and evolution is the engine responsible for his unmistakable contributions to science.

As Associate Curator and ultimately Curator in the Division of Invertebrate Zoology American Museum of

Natural History (AMNH), David oversees what is likely the world's most diverse collection of amber fossils, spanning thousands of specimens from major deposits in the Dominican Republic, Mexico, India, the Baltic region, Myanmar, Lebanon, and New Jersey as well as lesser-known localities in Alaska, Alabama, North Carolina, Wyoming, and Arkansas (Fig. 2). He curates an expansive collection of extant Lepidoptera and Diptera numbering into the millions of specimens, including a massive drosophilid collection that he has expanded. He has traveled the world in the service of expanding collections of extant and fossil insects including major long-term amber excavations of Paleocene-Eocene and Cretaceous material in India and New Jersey, respectively, as well as sampling living flies in places as varied as Venezuela, Costa Rica, and Fiji to Vietnam and Tanzania, among many others. In the 1990s, David led the first and so far only systematic excavation of so-called "Raritan" amber from New Jersey, yielding thousands of arthropod inclusions (Grimaldi & Nascimbene, 2010), which represent a unique window into Mesozoic insects. These excavations resulted in the discovery of what were at the time the earliest ants, the earliest amber mushrooms,



FIGURE 4. David A. Grimaldi in the field. **A**, David with a large piece of Alaskan amber uncovered on the Koalak River during his excavations near Arctic Ocean coast in July 2001 (photograph by Keith Luzzi). **B**, Exploring the Solite Quarry area in 2004; left to right: Michael S. Engel, David (with telescope), and Roy Larimer (photographer unknown). **C**, David wielding a jackhammer to loosen layers of shale at the Solite Quarry, Virginia in 2004 (photograph by Michael S. Engel). **D**, Excavating Cambay amber at the Tadkeshwar lignite mine in January 2009; left to right: Paul C. Nascimbene (back to camera at left), Rajendra S. Rana (head in profile), David (seated), Hukam Singh (seated at right to Dave), unknown mine official (squatting), Michael S. Engel (back to camera at right) (photographer unknown).

the first Mesozoic Tardigrada, and numerous other remarkable lineages of plants and animals, the initial reports of which appeared in high-profile journals such as *Nature* and *Proceedings of the National Academy of Sciences*, but were also organized into a specially edited volume (Grimaldi, 2000). It was also at this time that Dave devoted his tremendous energies and eye for aesthetics to a milestone exhibition at the AMNH on amber art and paleontology. The exhibition and the companion volume he produced, *Amber: Window to the Past* (Grimaldi, 1996),

exposed scores of thousands of people to the wonders of amber inclusions. The book was an instant classic, filled with gorgeous colorful images of objects d’art, stunning fossils, and a warehouse of information written so that it can be enjoyed by everyone from seasoned scholars to any inquisitive layperson.

For several years in the late 1990s David had envisioned a broadly synthetic book that would unite the paleontology of insects with knowledge of their biology, ecology, and general evolution. By 2000 he had drafted

an example chapter on Dictyoptera to share with potential publishers and had invited one of us (M.S.E.) to join him in the endeavor. In September 2001 a contract was eventually secured with Cambridge University Press, paving the way for the eventual appearance of the visually sumptuous *Evolution of the insects* (Grimaldi & Engel, 2005; Fig. 3). This book highlights all of the best qualities of David's work and further reveals the breadth and depth of his writ large understanding of insects, equally at home with the ecology of extant Lepidoptera and the comparative anatomy of lice to the geology of major deposits and the paleobiology of ancient griffenflies. It also showcases his exceptional artistic skills, from the fine arrangement of plates of insect photomicrographs to his outstandingly renderings of extant and fossil taxa. David has produced thousands of illustrations throughout his career, and this book highlights only a small selection of his craft. His artistic vision has also enhanced his monographs and shorter papers, with keen observation required to render images of specimens also granting him a uniquely detailed skill for finding key traits often overlooked by previous researchers.

While David has received significant accolades for his work, he has always remained humble and is one of the most approachable of scholars. In 2007 he was honored by the Entomological Society of America with the Thomas Say Award, and in 2015 he was awarded the Paleontological Research Institute's Gilbert Harris Award, the only entomologist to receive this honor (Fig. 4). David has been recognized for his collaborations and contributions through dozens of eponyms, including several new fossil arthropods reported for the first time in this issue. Prior to the pandemic, a visit to the AMNH amber collection was an almost guarantee to meet another visiting scientist, often gleefully chatting with David. His effortless familiarity with all things entomological translates into a natural springboard for meaningful conversation. As David's collaborators and mentees, we both find inspiration from even brief chats and suspect we are not alone in this regard. As a mentor and collaborator, David is thoughtful and generous. He has fledged numerous graduate students and supervised postdoctoral researchers who have gone on to scientific positions around the world.

A key feature of David's work is synthesis. As entomologists, it can be difficult sometimes to see the forest for the trees; there are many trees among millions of species. This never seems to be hard for David. Even his single species descriptions and taxonomic monographs yield insight into broader themes in ecology and evolution, often breadcrumbs for future readers and students. At the same time, David has cemented widely known scientific milestones in journals such as *Nature*, *Science*, and *Proceedings of the National Academy of Sciences*. These

high-profile contributions, too, reveal the breadth of David's research program: work on the earliest fossils in the Devonian, Triassic amber inclusions, the earliest ants and bees in the Cretaceous, vertebrate remains preserved in amber, and reports of new fossil localities. A survey of David's published work will reveal the breadth but also remarkable depth that typifies his work. Included in each paper are what a musician might call "deep cuts"—references carefully plucked out of seemingly obscure ecological and natural history literature to provide a key bit of nuance or insight. David's genuine curiosity and creativity are lighter fluid for discovery.

There are many kinds of biologists, and yet few who stand out as wholly unique in their impact. We would suggest that any reader of *Palaeoentomology* could identify a publication by David Grimaldi even were his name removed from the title. He has established a style and career all his own, unmistakable for any other scientist. We all look forward to continuing to learn from David's insightful contributions in the many years to come, even as his accomplishments have already inspired generations of scientists.

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Appendix I: Current publications of David A. Grimaldi

(1 January 1979–present, 9 September 2022)

David's publications span a remarkable breadth of topics and journals, including five in *Nature*, four in *Science*, and six in *Proceedings of the National Academy of Sciences, U.S.A.* He is the most accomplished living entomologist and paleontologist, with significant contributions to evolutionary biology, insect ecology, pollination ecology, insect comparative morphology, historical biogeography, insect phylogeny, extant dipteran systematics, museum curation and conservation, amber paleontology, taphonomy, and, of course, the systematics and classification of fossil insects. His list of publications is also peppered with popular science accounts, a reflection of his natural writing talent, his spectacular humor and wit, and his dedication to disseminating the results of scholarly work to a lay audience.

M.A. Thesis. Grimaldi, D.A. 1983. *Ecology and competitive interactions of four coexisting species of mycophagous Drosophila*. M.A. State University of New York at Binghamton, Department of Biological Sciences. Binghamton, New York, 66 pp.

Ph.D. Dissertation. Grimaldi, D.A. 1986. *Phylogenetics and taxonomy of Zygotherica (Diptera: Drosophilidae)*. Ph.D. Cornell University, Department of Entomology. Ithaca, New York, x+349 pp.

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1983

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1984

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1985

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1986

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Appendix II: Current taxa authored/coauthored by David A. Grimaldi
(2 July 1986–present, 9 September 2022)

As of this date, we have recorded 694 species-group (242 extant), 217 genus-group (four extant), and 31 family-group (eight extant) names established by David (boldfaced), the vast majority of which are insects and therein most are flies.

KINGDOM PLANTAE L.

Class Angiospermae Lindl.

Order Fagales Engl.

†**Soepadmoa** Nixon, Crepet, Gandolfo, & Grimaldi

†**Soepadmoa cupulata** Nixon, Crepet, Gandolfo, & Grimaldi

Order Laurales Juss. ex Bercht. & J.Presl.

†**Jamesrosea** Crepet, Nixon, Grimaldi, & Riccio

†**Jamesrosea burmensis** Crepet, Nixon, Grimaldi, & Riccio

KINGDOM FUNGI (L.) R.T.Moore

Class Agaricomycetes Doweld

Order Agaricales Underw.

Family Mycenaceae (Pers.) Roussel

†**Protomyцена** Hibbett, Grimaldi, & Donoghue

†**Protomyцена electra** Hibbett, Grimaldi, & Donoghue

Family Tricholomataceae R.Heim ex Pouzar

†**Archaeomarasmius** Hibbett, Grimaldi, & Donoghue

†**Archaeomarasmius leggetti** Hibbett, Grimaldi, & Donoghue

KINGDOM ANIMALIA L.

Phylum MOLLUSCA L.

Family Assimineidae Adams & Adams

†**Assiminea straitura** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

Family Cyclophoridae Gray

†**Eotrichophorus** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Eotrichophorus kachin** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Perissocyclos** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Perissocyclos kyrtostoma** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

Family Diplommatinidae Pfeiffer

†**Paleodiplommatina** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Paleodiplommatina spelomphalos** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Xenostoma** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Xenostoma lophopleura** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

Family Pupinidae Pfeiffer

†**Macropupina** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

†**Macropupina electricus** Bullis, Herhold, Czekanski-Moir, Grimaldi, & Rundell

Phylum TARDIGRADA Spallanzani

Family Milnesiidae Ramazzotti

†**Milnesium swolenskyi** Bertolani & Grimaldi

Phylum ONYCHOPHORA Grube

Family Peripatidae Evans

†**Cretoperipatus** Engel & Grimaldi

†**Cretoperipatus burmiticus** Engel & Grimaldi

Phylum ARTHROPODA von Siebold

Panhexapoda Grimaldi & Engel

Class Arachnida Lamarck

Order Acariformes Zakhvatkin

Family Eriophyiidae Nalepa

†**Ampezzo** Lindquist & Grimaldi

†**Ampezzo triassica** Lindquist & Grimaldi

†**Triasacarus** Lindquist & Grimaldi

†**Triasacarus fedelei** Lindquist & Grimaldi

Order Amblypygi Thorell

Unidistitarsata Engel & Grimaldi

Family Paracharontidae Weygoldt

†**Paracharonopsis** Engel & Grimaldi

†**Paracharonopsis cambayensis** Engel & Grimaldi

Family *Incertae sedis*

†**Kronocharon** Engel & Grimaldi

†**Kronocharon prendinii** Engel & Grimaldi

Order Parasitiformes Leach

Family Argasidae Koch

†**Carios jerseyi** Klompen & Grimaldi

Class Entognatha Grassi

Order Collembola Lubbock

Neopleona Grimaldi & Engel

Order Diplura Börner

Campodeomorpha Grimaldi & Engel

Japygomorpha Grimaldi & Engel

Class Insecta L.

†**Diathemoptera** Grimaldi & Engel

†**Dicliptera** Grimaldi & Engel

Holodonata Grimaldi & Engel

Holophasmatodea Grimaldi & Engel

Pandermaptera Grimaldi & Engel

Polyorthoptera Engel & Grimaldi

†**Protoneuroptera** Grimaldi & Engel

Order Zygentoma Börner

Euzygentoma Grimaldi & Engel

Order Odonata Fabricius

Eteoanisoptera Grimaldi & Engel

Order Zoraptera Silvestri

Family Zorotypidae Silvestri

†**Xenozorotypus** Engel & Grimaldi

†**Xenozorotypus burmiticus** Engel & Grimaldi

†**Zorotypus acanthothorax** Engel & Grimaldi

†**Zorotypus cretatus** Engel & Grimaldi

†**Zorotypus goeleti** Engel & Grimaldi

†**Zorotypus nascimbenei** Engel & Grimaldi

Order Embiidea Kusnezov

Clothododea Engel & Grimaldi

Neoembiodea Engel & Grimaldi

Family Archembiidae Ross

†**Kumarembia** Engel & Grimaldi

†**Kumarembia hurleyi** Engel & Grimaldi

†**Sorellembia** Engel & Grimaldi

†**Sorellembia estherae** Engel & Grimaldi

†**Sorellembiidae** Engel & Grimaldi [currently subfamily]

Family Notoligotomidae Davis

†**Burmitembiinae** Engel & Grimaldi

Order Dermaptera De Geer

Family Anisolabididae Verhoeff

†**Toxolabis** Engel & Grimaldi

†**Toxolabis zigrasi** Engel & Grimaldi

Family Labiduridae Verhoeff

†**Myrrholabia** Engel & Grimaldi

†**Zigrasolabis** Engel & Grimaldi

†**Zigrasolabis speciosa** Engel & Grimaldi

Family Pygidicranidae Verhoeff

- †*Burmapygia* Engel & Grimaldi
- †*Burmapygia resinata* Engel & Grimaldi
- †*Burmapygiinae* Engel & Grimaldi

Order Orthoptera Olivier

Family †Elcanidae Handlirsch

- †*Burmelcana* Peñalver & Grimaldi
- †*Burmelcana longirostris* Peñalver & Grimaldi
- †*Hispanelcana* Peñalver & Grimaldi
- †*Hispanelcana alavensis* Peñalver & Grimaldi
- †*Hispanelcana arilloi* Peñalver & Grimaldi
- †*Hispanelcana lopezvallei* Peñalver & Grimaldi

Order Notoptera Crampton

Family Mantophasmatidae Zompro, Klass, Kristensen, & Adis

- †*Adicophasma* Engel & Grimaldi
- †*Adicophasma spinosa* Engel & Grimaldi

Order Mantodea Burmeister

- Eumantodea** Grimaldi
- Neomantodea** Grimaldi

Family †Umenocoleidae Chen & Tan

- †*Jantaropterix* Vršanský & Grimaldi (in Vršanský, 2003)
- †*Jantaropterix lebani* Vršanský & Grimaldi (in Vršanský, 2003)
- †*Ponopterix* Vršanský & Grimaldi (in Vršanský, 1999)
- †*Ponopterix axelrodi* Vršanský & Grimaldi (in Vršanský, 1999)

Family †Ambermantidae Grimaldi

- †*Ambermantis* Grimaldi
- †*Ambermantis wozniaki* Grimaldi

Family †Santanmantidae Grimaldi

- †*Santanmantis* Grimaldi
- †*Santanmantis axelrodi* Grimaldi

Family Incertae sedis

- †*Burmantis* Grimaldi
- †*Burmantis asiatica* Grimaldi
- †*Burmantis lebanensis* Grimaldi
- †*Jersimantis* Grimaldi
- †*Jersimantis burmiticus* Grimaldi
- †*Jersimantis luzzii* Grimaldi

Order Blattodea Brunner von Wattenwyl

Family †Mesoblattinidae Handlirsch

- †*Nymphoblatta* Vršanský & Grimaldi (in Vršanský, 2004)
- †*Nymphoblatta azari* Vršanský & Grimaldi (in Vršanský, 2004)

Family †Raphidiomimidae Vishniakova

- †*Raphidiomimula* Ross & Grimaldi
- †*Raphidiomimula burmitica* Ross & Grimaldi

Clade Isoptera Brullé

- Euisoptera** Engel, Grimaldi, & Krishna
- Neoisoptera** Engel, Grimaldi, & Krishna

Family †Archeorhinotermitidae Krishna & Grimaldi

- †*Archeorhinotermes* Krishna & Grimaldi
- †*Archeorhinotermes rossi* Krishna & Grimaldi

Family Archotermopsidae Engel, Grimaldi, & Krishna

Family †Cratomastotermitidae Engel, Grimaldi, & Krishna

Family Kalotermitidae Froggatt

- †*Kachinitermes* Engel, Grimaldi, & Krishna
- †*Proelectrotermes holmgreni* Engel, Grimaldi, & Krishna

Family †Krishnatermitidae Engel

- †*Gigantotermes* Engel, Barden, & Grimaldi
- †*Gigantotermes rex* Engel, Barden, & Grimaldi
- †*Ginormotermes* Engel, Barden, & Grimaldi
- †*Krishnatermes* Engel, Barden, & Grimaldi
- †*Krishnatermes yoddha* Engel, Barden, & Grimaldi

Family Mastotermitidae Desneux

- †*Garmitermes* Engel, Grimaldi, & Krishna
- †*Garmitermes succineus* Engel, Grimaldi, & Krishna
- †*Mastotermes electrodanicus* Krishna & Grimaldi

Family †Melqartitermitidae Engel

- †*Melqartitermes* Engel, Grimaldi, & Krishna
- †*Melqartitermes myrrheus* Engel, Grimaldi, & Krishna

Family †Mylacrotermitidae Engel

- †*Mylacrotermes* Engel, Grimaldi, & Krishna
- †*Mylacrotermes cordatus* Engel, Grimaldi, & Krishna

Family Heterotermitidae Froggatt

- †*Coptotermes hirsutus* Krishna & Grimaldi
- †*Coptotermes paleodominicanus* Krishna & Grimaldi

Family Stylotermitidae Holmgren & Holmgren

- †*Parastylotermes krishnai* Engel & Grimaldi
- †*Prostylotermes* Engel & Grimaldi
- †*Prostylotermes kamboja* Engel & Grimaldi

Family †Tanytermitidae Engel

- †*Tanytermes* Engel, Grimaldi, & Krishna
- †*Tanytermes anawrahtai* Engel, Grimaldi, & Krishna

Family Termitidae Latreille

- †*Amitermes lucidus* Krishna & Grimaldi
- †*Anoplotermes bohio* Krishna & Grimaldi
- †*Anoplotermes cacique* Krishna & Grimaldi
- †*Anoplotermes carib* Krishna & Grimaldi
- †*Anoplotermes maboja* Krishna & Grimaldi
- †*Anoplotermes naboria* Krishna & Grimaldi
- †*Anoplotermes nitaino* Krishna & Grimaldi
- †*Anoplotermes quisqueya* Krishna & Grimaldi
- †*Anoplotermes taino* Krishna & Grimaldi
- †*Atlantitermes antillea* Krishna & Grimaldi
- †*Atlantitermes caribea* Krishna & Grimaldi
- †*Atlantitermes magnoculus* Krishna & Grimaldi
- †*Caribitermes hispaniola* Krishna & Grimaldi
- †*Microcerotermes insulanus* Krishna & Grimaldi
- †*Microcerotermes setosus* Krishna & Grimaldi
- †*Nanotermes* Engel & Grimaldi
- †*Nanotermes isaacae* Engel & Grimaldi
- †*Nasutitermes ampliocolatus* Krishna & Grimaldi
- †*Nasutitermes crinitus* Krishna & Grimaldi
- †*Nasutitermes incisus* Krishna & Grimaldi
- †*Nasutitermes magnocellus* Krishna & Grimaldi
- †*Nasutitermes mediocolatus* Krishna & Grimaldi
- †*Nasutitermes pilosus* Krishna & Grimaldi
- †*Nasutitermes rotundicephalus* Krishna & Grimaldi
- †*Nasutitermes seminudus* Krishna & Grimaldi
- †*Parvitermes longinasus* Krishna & Grimaldi
- †*Subulitermes hispaniola* Krishna & Grimaldi
- †*Subulitermes insularis* Krishna & Grimaldi
- †*Termes primitivus* Krishna & Grimaldi
- †*Velocitermes bulbus* Krishna & Grimaldi

Family †Termopsidae Holmgren

- †*Termopsis ukapirmasi* Engel, Grimaldi, & Krishna

Family Incertae sedis

- †*Baissatermes* Engel, Grimaldi, & Krishna
- †*Baissatermes lapideus* Engel, Grimaldi, & Krishna
- †*Carinatermes* Krishna & Grimaldi
- †*Carinatermes nascimbenei* Krishna & Grimaldi
- †*Carinatermitinae* Krishna & Grimaldi
- †*Dharmatermes* Engel, Grimaldi, & Krishna
- †*Dharmatermes avernalis* Engel, Grimaldi, & Krishna
- †*Khanitermes* Engel, Grimaldi, & Krishna
- †*Meiatermes hariolus* Grimaldi

Order Psocodea Hennig

Family Liposcelididae Broadhead

- †*Belaphopsocus dominicus* Grimaldi & Engel
- †*Cretoscelis* Grimaldi & Engel
- †*Cretoscelis burmitica* Grimaldi & Engel

Family Sphaeropsocidae Kolbe

- †*Asphaeropsocites* Azar, Engel, & Grimaldi
- †*Asphaeropsocites neli* Azar, Engel, & Grimaldi
- †*Sphaeropsocites* Grimaldi & Engel

†*Sphaeropsocites lebanensis* Grimaldi & Engel
 †*Sphaeropsocoides* Grimaldi & Engel
 †*Sphaeropsocoides canadensis* Grimaldi & Engel

Order Hemiptera L.
Neosternorrhyncha Grimaldi

Family Aphididae Latreille
 †**Gondvanoaphidinae** Wegeriek & Grimaldi
 †*Gondvanoaphis* Wegeriek & Grimaldi
 †*Gondvanoaphis estephani* Wegeriek & Grimaldi

Family †**Apticocidae** Ve & Grimaldi
 †*Apticoccus fortis* Ve & Grimaldi
 †*Apticoccus longitenuis* Ve & Grimaldi

Family Aradidae Spinola
 †**Archeardinae** Heiss & Grimaldi
 †*Archeardus* Heiss & Grimaldi
 †*Archeardus burmensis* Heiss & Grimaldi
 †*Cretopiesma* Grimaldi & Engel
 †*Cretopiesma suukiyae* Grimaldi & Engel

Family Belostomatidae Leach
 †*Triassonepa* Criscione & Grimaldi
 †*Triassonepa solensis* Criscione & Grimaldi

Family Coccidae Fallén
 †*Rosahendersonia* Ve & Grimaldi
 †*Rosahendersonia prisca* Ve & Grimaldi

Family Diaspididae Targioni Tozzetti
 †*Nomarkicoccus* Ve & Grimaldi
 †*Nomarkicoccus cambayae* Ve & Grimaldi

Family Enicocephalidae Stål
 †*Alienates brodzinskyi* Grimaldi, Michalski, & Schmidt
 †*Alienates electrodominicus* Grimaldi, Michalski, & Schmidt
Enicocephalus almanzari Grimaldi, Michalski, & Schmidt
Enicocephalus bahorucensis Grimaldi, Michalski, & Schmidt
 †*Enicocephalus omen* Grimaldi, Michalski, & Schmidt
 †*Enicocephalus prius* Grimaldi, Michalski, & Schmidt
 †*Enicocephalus seniculus* Grimaldi, Michalski, & Schmidt
 †*Enicocephalus subvitreus* Grimaldi, Michalski, & Schmidt

Family †**Hodgsonicocidae** Ve & Grimaldi
 †*Hodgsonicoccus* Ve & Grimaldi
 †*Hodgsonicoccus patefactus* Ve & Grimaldi

Family Hydrometridae Billberg
 †*Carinametra* Andersen & Grimaldi
 †*Carinametra burmensis* Andersen & Grimaldi

Family †**Kozariidae** Ve & Grimaldi
 †*Kozarius* Ve & Grimaldi
 †*Kozarius achronus* Ve & Grimaldi
 †*Kozarius perpetuus* Ve & Grimaldi

Family Leptopodidae Brullé
 †*Archaeosalepta* Grimaldi & Engel
 †*Archaeosalepta schuhi* Grimaldi & Engel
 †*Leptosalda dominicana* Grimaldi & Engel
 †*Leptosalda niarchos* Grimaldi & Engel

Family Magarodidae Cockerell
 †*Heteromargarodes hukamsinghi* Ve & Grimaldi

Family Ortheziidae Amyot & Audinet-Serville
 †*Arctorthezia baltica* Ve & Grimaldi
 †*Burmorthezia* Ve & Grimaldi
 †*Burmorthezia insolita* Ve & Grimaldi
 †*Burmorthezia kotejai* Ve & Grimaldi
 †*Mixorthezia dominicana* Ve & Grimaldi
 †*Mixorthezia kozari* Ve & Grimaldi

Family Pityococcidae McKenzie
 †*Pityococcus moniliformalis* Ve & Grimaldi

Family †Protopsyllidiidae Becker-Migdisova
 †*Postopsyllidium* Grimaldi
 †*Postopsyllidium emilyae* Grimaldi
 †*Postopsyllidium rebecca* Grimaldi

Family Pseudococcidae Westwood
 †*Gilderius* Ve & Grimaldi

†*Gilderius eukrinops* Ve & Grimaldi
 †*Williamsicoccus* Ve & Grimaldi
 †*Williamsicoccus megalops* Ve & Grimaldi

Family Termitaphididae Myers
 †*Termitaradus avitinquilinus* Grimaldi & Engel

Family †Weitschatiidae Koteja
 †*Pseudoweitschatus* Ve & Grimaldi
 †*Pseudoweitschatus audebertis* Ve & Grimaldi

Family *Incertae sedis*
 †*Alacrena* Ve & Grimaldi [Coccoidea]
 †*Alacrena peculiaris* Ve & Grimaldi [Coccoidea]
 †*Magnilens* Ve & Grimaldi [Coccoidea]
 †*Magnilens glaesaria* Ve & Grimaldi [Coccoidea]
 †*Pedicellicoccus* Ve & Grimaldi [Coccoidea]
 †*Pedicellicoccus marginatus* Ve & Grimaldi [Coccoidea]
 †*Xiphos* Ve & Grimaldi [Coccoidea]
 †*Xiphos vani* Ve & Grimaldi [Coccoidea]

Order Thysanoptera Haliday

Family †**Triassothripidae** Grimaldi & Shmakov
 †*Triassothrips* Grimaldi & Fraser
 †*Triassothrips virginicus* Grimaldi & Fraser

Family *Incertae sedis*
 †*Cretothrips* Grimaldi
 †*Cretothrips antiquus* Grimaldi

Order Hymenoptera L.

Archihymenoptera Grimaldi & Engel
Aulaciformes Grimaldi & Engel
Euaculeata Grimaldi & Engel
Euhymenoptera Engel & Grimaldi
Evaniiformes Grimaldi & Engel
Neohymenoptera Grimaldi & Engel

Family Apidae Latreille
 †*Proplebeia tantilla* Camargo, Grimaldi, & Pedro
 †*Proplebeia vetusta* Camargo, Grimaldi, & Pedro
 †*Trigona prisca* Michener & Grimaldi

Family †**Bryopompilidae** Engel & Grimaldi
 †*Bryopompilus* Engel & Grimaldi
 †*Bryopompilus interfactor* Engel & Grimaldi

Family Formicidae Latreille
 †*Baikurus casei* Grimaldi, Agosti, & Carpenter
 †*Brownimecia* Grimaldi, Agosti, & Carpenter
 †*Brownimecia clavata* Grimaldi, Agosti, & Carpenter
 †*Camelomecia* Barden & Grimaldi
 †*Camelomecia janovitz* Barden & Grimaldi
 †*Cananeuretus* Engel & Grimaldi
 †*Cananeuretus occidentalis* Engel & Grimaldi
 †*Gerontofornica maraudera* Barden & Grimaldi
 †*Haidomyrmex scimitarus* Barden & Grimaldi
 †*Haidomyrmex zigrasi* Barden & Grimaldi
 †*Kyromyrma* Grimaldi & Agosti
 †*Kyromyrma neffi* Grimaldi & Agosti
 †*Linguamyrmex* Barden & Grimaldi
 †*Linguamyrmex vladi* Barden & Grimaldi
 †*Myanmyrma* Engel & Grimaldi
 †*Myanmyrma gracilis* Engel & Grimaldi
 †*Sphecomyrma mesaki* Engel & Grimaldi
 †*Sphecomyrmodes* Engel & Grimaldi
 †*Sphecomyrmodes contegus* Barden & Grimaldi
 †*Sphecomyrmodes gracilis* Barden & Grimaldi
 †*Sphecomyrmodes magnus* Barden & Grimaldi
 †*Sphecomyrmodes orientalis* Engel & Grimaldi
 †*Sphecomyrmodes pilosus* Barden & Grimaldi
 †*Sphecomyrmodes robustus* Barden & Grimaldi
 †*Sphecomyrmodes rugosus* Barden & Grimaldi
 †*Sphecomyrmodes spiralis* Barden & Grimaldi
 †*Sphecomyrmodes subcuspis* Barden & Grimaldi
 †*Sphecomyrmodes tendir* Barden & Grimaldi

†*Zigrasimecia* Barden & Grimaldi
 †*Zigrasimecia tonsora* Barden & Grimaldi
 Family †Gallorommatidae Gibson, Read, & Huber
 †*Galloromma kachinensis* Engel & Grimaldi
 Family Mymarommatidae Debauche
 †*Archaeromma carnifex* Engel & Grimaldi
 †*Archaeromma gibsoni* Engel & Grimaldi
 Family Peleciniidae Haliday
 †*Henopelecinus* Engel & Grimaldi
 †*Henopelecinus pygmaeus* Engel & Grimaldi
 †*Zoropelecinus* Engel & Grimaldi
 †*Zoropelecinus zigrasi* Engel & Grimaldi
 Family Sclerogibbidae Ashmead
 †*Sclerogibbodes* Engel & Grimaldi
 †*Sclerogibbodes embioleia* Engel & Grimaldi
 †*Sclerogibbodinae* Engel & Grimaldi
 Family Scelebythidae Evans
 †*Boreobythus* Engel & Grimaldi
 †*Boreobythus turonius* Engel & Grimaldi
 †*Uliobythus* Engel & Grimaldi
 †*Uliobythus terpsichore* Engel & Grimaldi
 †*Zapenesia* Engel & Grimaldi
 †*Zapenesia libanica* Engel & Grimaldi
 Family †Serphitidae Brues
 †*Serphites navesinkae* Engel & Grimaldi
 †*Serphites raritanensis* Engel & Grimaldi
 Family †Spathiopterygidae Engel & Ortega-Blanco
 †*Spathopria* Engel, Ortega-Blanco, & Grimaldi
 †*Spathopria sayrevillensis* Engel, Ortega-Blanco, & Grimaldi
 Family Stephanidae Leach
 †*Archaeostephanus* Engel & Grimaldi
 †*Archaeostephanus corae* Engel & Grimaldi
 †*Denaeostephanus* Engel & Grimaldi
 †*Kronostephanus* Engel & Grimaldi
 †*Kronostephanus zigrasi* Engel & Grimaldi
 †*Madegafoenini* Engel & Grimaldi
 †*Megischini* Engel & Grimaldi
 Family †Stigmaphronidae Kozlov
 †*Burmaphron* Engel & Grimaldi
 †*Burmaphron prolatum* Engel & Grimaldi
 †*Burmaphron tridentatum* Engel & Grimaldi
 †*Elasmophron* Engel & Grimaldi
 †*Elasmophron kurthi* Engel & Grimaldi
 †*Libanophron* Engel & Grimaldi
 †*Libanophron astarte* Engel & Grimaldi
 †*Tagsmiphron* Engel & Grimaldi
 †*Tagsmiphron ascalaphus* Engel & Grimaldi
 †*Tagsmiphron canadense* Engel & Grimaldi
 †*Tagsmiphron gigas* Engel & Grimaldi
 †*Tagsmiphron muesebecki* Engel & Grimaldi
 Family Vespidae Latreille
 †*Agelaia electra* Carpenter & Grimaldi
 Family *Incertae sedis*
 †*Prosphe* Grimaldi & Engel [Chrysidoidea]
 †*Prosphe anthophilos* Grimaldi & Engel [Chrysidoidea]
 Order Raphidioptera Navás
 Family †Mesoraphidiidae Martynov
 †*Mesoraphidia luzzii* Grimaldi
 Order Megaloptera Latreille
 Family Sialidae Leach
 †*Sialis (Protosialis) casca* Engel & Grimaldi
 Order Neuroptera L.
 Family Ascalaphidae Rambur
 †*Amoea electrodominicana* Engel & Grimaldi
 †*Ululodes paleonesia* Engel & Grimaldi
 Family Berothidae Handlirsch

†*Dasyberotha* Engel & Grimaldi
 †*Dasyberotha eucharis* Engel & Grimaldi
 †*Ethiroberotha* Engel & Grimaldi
 †*Ethiroberotha elongata* Engel & Grimaldi
 †*Haploberotha* Engel & Grimaldi
 †*Haploberotha persephone* Engel & Grimaldi
 †*Iceloberotha* Engel & Grimaldi
 †*Iceloberotha kachinensis* Engel & Grimaldi
 †*Iceloberotha simulatrix* Engel & Grimaldi
 †*Jersiberotha* Grimaldi
 †*Jersiberotha luzzii* Grimaldi
 †*Jersiberotha myanmarensis* Engel & Grimaldi
 †*Jersiberotha similis* Grimaldi
 †*Jersiberotha tauberorum* Engel & Grimaldi
 †*Nascimberotha* Grimaldi
 †*Nascimberotha picta* Grimaldi
 †*Systemoberotha* Engel & Grimaldi
 †*Systemoberotha magillae* Engel & Grimaldi
 †*Telisterotha* Engel & Grimaldi
 †*Telisterotha libitina* Engel & Grimaldi
 Family Chrysopidae Schneider
 †*Chrysopa glaesaria* Engel & Grimaldi
 †*Chrysopa vetula* Engel & Grimaldi
 †*Leucochrysa (Nodita) prisca* Engel & Grimaldi
 Family Coniopterygidae Burmeister
 †*Apoglaesoconis* Grimaldi
 †*Apoglaesoconis ackermanni* Grimaldi
 †*Apoglaesoconis luzzii* Grimaldi
 †*Apoglaesoconis swolenskyi* Grimaldi
 †*Coniopteryx antiqua* Engel & Grimaldi
 †*Glaesoconis nearctica* Grimaldi
 †*Neoconis paleocaribis* Grimaldi & Engel
 †*Spiloconis eominuta* Grimaldi & Engel
 †*Spiloconis oediloma* Engel & Grimaldi
 Family Mantispidae Leach
 †*Dicromantispa electromexicana* Engel & Grimaldi
 †*Dicromantispa moronei* Engel & Grimaldi
 †*Mantispidiptera* Grimaldi
 †*Mantispidiptera enigmatica* Grimaldi
 †*Mantispidiptera henryi* Grimaldi
 Family Nymphidae Rambur
 †*Elenchonymphes* Engel & Grimaldi
 †*Elenchonymphes electrica* Engel & Grimaldi
 Family Psychopsidae Handlirsch
 †*Litopsychopsis* Engel & Grimaldi
 †*Litopsychopsis burmitica* Engel & Grimaldi
 Family Rhachiberthidae Tjeder
 †*Rhachibermissa* Grimaldi
 †*Rhachibermissa phenax* Engel & Grimaldi
 †*Rhachibermissa splendida* Grimaldi
 †*Scoloberotha* Engel & Grimaldi
 †*Scoloberotha necatrix* Engel & Grimaldi
 Order Coleoptera L.
 Family Curculionidae Latreille
 †*Microborus inertus* Cognato & Grimaldi
 Family Hydroscaphidae LeConte
 †*Leehermania* Chatzimanolis, Grimaldi, & Engel
 †*Leehermania prorova* Chatzimanolis, Grimaldi, & Engel
 Family Prostomidae Thomson
 †*Vetuprostomis* Engel & Grimaldi
 †*Vetuprostomis consimilis* Engel & Grimaldi
 Family Staphylinidae Latreille
 †*Protoclaviger* Parker & Grimaldi
 †*Protoclaviger trichodens* Parker & Grimaldi
 †*Protoclavigerini* Parker & Grimaldi
 Order Strepsiptera Kirby
 Family Bohartillidae Kinzelbach

†*Bohartilla kinzelbachi* Kathirithamby & Grimaldi
 Family †Cretostyloidae Kathirithamby & Engel
 †*Cretostylops* Grimaldi & Kathirithamby
 †*Cretostylops engeli* Grimaldi & Kathirithamby
 Family Myrmecolacidae Saunders
 †*Caenocholax brodzinskyi* Kathirithamby & Grimaldi
 †*Caenocholax dominicanus* Kathirithamby & Grimaldi

Order †Necrotrochoptera Engel
 Family †Necrotauliidae Handlirsch
 †*Necrotaulius americanus* Pierwola & Grimaldi

Order Lepidoptera L.
 Family Nymphalidae Rafinesque
 †*Dynamine alexae* Peñalver & Grimaldi

Order Mecoptera (Packard) Comstock
 Family Meropeidae Handlirsch
 †*Burmomerope* Grimaldi & Engel
 †*Burmomerope eureka* Grimaldi & Engel
 Family †Pseudopolycentropodidae Handlirsch
 †*Parapolycentropus* Grimaldi & Rasnitsyn
 †*Parapolycentropus burmiticus* Grimaldi & Rasnitsyn
 †*Parapolycentropus paraburmiticus* Grimaldi & Rasnitsyn
 †*Pseudopolycentropodes* Grimaldi & Fraser
 †*Pseudopolycentropodes virginicus* Grimaldi & Fraser

Order Siphonaptera Latreille
 Family Pulicidae Billberg
 †*Pulex (Pulex) larimerius* Lewis & Grimaldi

Order Diptera L.
 Family Acroceridae Leach
 †*Burmacyrtus* Grimaldi & Hauser
 †*Burmacyrtus rusmithi* Grimaldi & Hauser
 †*Ogcodes exotica* Grimaldi
 †*Schlingeromyia* Grimaldi & Hauser
 †*Schlingeromyia minuta* Grimaldi & Hauser
 Family Anisopodidae Knab
 †*Mesochria neotropica* Grimaldi
 †*Mycetobia antillea* Grimaldi
 †*Mycetobia cryptambra* Grimaldi
 †*Olbiogaster perezii* Grimaldi & Amorim
 Family Apsilocephalidae Nagatomi, Saigusa, Nagatomi, & Lyneborg
 †*Burmapsilocephala evocoo* Grimaldi
 †*Kumaromyia* Grimaldi & Hauser
 †*Kumaromyia burmitica* Grimaldi & Hauser
 Family Apystomyiidae Nagatomi & Liu
 †*Hilarimorphites* Grimaldi & Cumming
 †*Hilarimorphites burmanica* Grimaldi & Cumming
 †*Hilarimorphites cummingi* Grimaldi
 †*Hilarimorphites longimedia* Grimaldi & Cumming
 †*Hilarimorphites setosa* Grimaldi & Cumming
 †*Hilarimorphites superba* Grimaldi & Cumming
 †*Hilarimorphites yeatesi* Grimaldi & Cumming
 Family †Archizelmiridae Rohdendorf
 †*Archimelzira* Grimaldi, Blagoderov, & Amorim
 †*Archimelzira americana* Grimaldi, Blagoderov, & Amorim
 †*Archizelmira baissa* Grimaldi, Blagoderov, & Amorim
 †*Burmazelmira* Grimaldi, Blagoderov, & Amorim
 †*Burmazelmira aristica* Grimaldi, Blagoderov, & Amorim
 †*Zelmiarcha* Grimaldi, Blagoderov, & Amorim
 †*Zelmiarcha lebanensis* Grimaldi, Blagoderov, & Amorim
 Family Asilidae Latreille
 †*Araripogon* Grimaldi
 †*Araripogon axelrodi* Grimaldi
 †*Burmapogon* Dikow & Grimaldi
 †*Burmapogon bruckschi* Dikow & Grimaldi
 †*Cretagaster* Dikow & Grimaldi

†*Cretagaster raritanensis* Dikow & Grimaldi
 Family Asteiidae Rondani
Asteia pleurovitta Grimaldi
Asteia pleurovittata Grimaldi
Asteia rotundiscuta Grimaldi
Asteia vanuaensis Grimaldi
Asteia vitiensis Grimaldi
 Family Atelestidae Hennig
 †*Alavesia angusta* Sinclair & Grimaldi
 †*Alavesia brevipennae* Sinclair & Grimaldi
 †*Alavesia lanceolata* Sinclair & Grimaldi
 †*Alavesia latala* Sinclair & Grimaldi
 †*Alavesia longicornuta* Sinclair & Grimaldi
 †*Alavesia magna* Sinclair & Grimaldi
 †*Alavesia pankowskiorum* Sinclair & Grimaldi
 †*Alavesia spinosa* Sinclair & Grimaldi
 †*Alavesia zigrasi* Sinclair & Grimaldi
 †*Atelestites* Grimaldi & Cumming
 †*Atelestites senectus* Grimaldi & Cumming
 †*Cretodromia* Grimaldi & Cumming
 †*Cretodromia glaesa* Grimaldi & Cumming
 †*Nemedromia* Grimaldi & Cumming
 †*Nemedromia campania* Grimaldi & Cumming
 †*Nemedromia telescopica* Grimaldi & Cumming
 †*Nemedromia turonia* Grimaldi & Cumming
 †*Neoturonius* Grimaldi & Cumming
 †*Neoturonius asymmetrus* Grimaldi & Cumming
 †*Neoturonius cretatus* Grimaldi & Cumming
 †*Neoturonius vetus* Grimaldi & Cumming
 †*Phaetempis* Grimaldi & Cumming
 †*Phaetempis lebanensis* Grimaldi & Cumming
 †*Prolatomyia* Grimaldi & Cumming
 †*Prolatomyia elongata* Grimaldi & Cumming
 Family Bombyliidae Latreille
 †*Endymiomia* Grimaldi
 †*Endymiomia quadra* Grimaldi
 †*Nealimya* Grimaldi
 †*Nealimya evenhuisi* Grimaldi
 †*Pioneeria* Grimaldi
 †*Pioneeria bombylia* Grimaldi
 †*Procrocidium* Grimaldi
 †*Procrocidium minutum* Grimaldi
 Family Braulidae Egger
Megabraula Grimaldi & Underwood
Megabraula antecessor Grimaldi & Underwood
Megabraula onerosa Grimaldi & Underwood
 Family Camillidae Frey
 †*Protocamilla groehni* Grimaldi
 Family Campichoetidae Griffiths
 †*Pareuthychaeta eoidica* Grimaldi
 †*Pareuthychaeta mcalpinei* Grimaldi
 Family Carnidae Newman
Carnus floridensis Grimaldi
Carnus mexicana Grimaldi
Carnus occidentalis Grimaldi
 †*Meoneura vieja* Grimaldi
 Family †Chimeromyiidae Grimaldi & Cumming
 †*Chimeromyia* Grimaldi & Cumming
 †*Chimeromyia acuta* Grimaldi & Cumming
 †*Chimeromyia alava* Arillo & Grimaldi
 †*Chimeromyia burmitica* Grimaldi & Cumming
 †*Chimeromyia intriguea* Grimaldi & Cumming
 †*Chimeromyia mediobscura* Grimaldi & Cumming
 †*Chimeromyia pilitibia* Grimaldi & Cumming
 †*Chimeromyia reducta* Grimaldi & Cumming
 †*Chimeromyia* Arillo & Grimaldi
 †*Chimeromyia concilia* Arillo & Grimaldi
 Family †Crosaphididae Kovalev
 †*Crosaphis virginensis* Blagoderov & Grimaldi

Family Culicidae Meigen

- †*Burmaculex* Borkent & Grimaldi
- †*Burmaculex antiquus* Borkent & Grimaldi
- †*Burmaculicinae* Borkent & Grimaldi

Family Curtonotidae Enderlein

- †*Curtonotum electrodominicum* Grimaldi & Kirk-Spriggs
- †*Depressonotum* Grimaldi & Kirk-Spriggs
- †*Depressonotum priscum* Grimaldi & Kirk-Spriggs

Family Diadocidiidae Winnterz

- †*Docidiadia* Blagoderov & Grimaldi
- †*Docidiadia burmitica* Blagoderov & Grimaldi

Family Dolichopodidae Latreille

- †*Archichrysotus incompletus* Grimaldi & Cumming
- †*Archichrysotus manitobus* Grimaldi & Cumming
- †*Avenaphora* Grimaldi & Cumming
- †*Avenaphora hispida* Grimaldi & Cumming
- †*Cretomicrophorus novemundus* Grimaldi & Cumming
- †*Microphorites oculus* Grimaldi & Cumming
- †*Microphorites similis* Grimaldi & Cumming
- †*Schistostoma burmanicum* Brooks, Cumming, & Grimaldi
- †*Schistostoma foliatum* Brooks, Cumming, & Grimaldi
- †*Sympycnites* Grimaldi & Cumming
- †*Sympycnites primaevus* Grimaldi & Cumming

Family Drosophilidae Rondani

- Acletoxenina* Grimaldi
- Chymomyza diatropa* Grimaldi
- Chymomyza exophthalma* Grimaldi
- Chymomyza guyanensis* Grimaldi
- Chymomyza jamaicensis* Grimaldi
- Chymomyza microdiopsis* Grimaldi
- Chymomyza mycopelates* Grimaldi
- †*Chymomyza primaeva* Grimaldi
- Chymomyza procnemolita* Grimaldi
- Cladochaeta abarista* Grimaldi & Nguyen
- Cladochaeta abbrevifusca* Grimaldi & Nguyen
- Cladochaeta abeja* Grimaldi & Nguyen
- Cladochaeta abrupta* Grimaldi & Nguyen
- Cladochaeta adusta* Grimaldi & Nguyen
- Cladochaeta akantha* Grimaldi & Nguyen
- Cladochaeta albifrons* Grimaldi & Nguyen
- Cladochaeta ambidextra* Grimaldi & Nguyen
- Cladochaeta amblyharpa* Grimaldi & Nguyen
- Cladochaeta antalba* Grimaldi & Nguyen
- Cladochaeta aquila* Grimaldi & Nguyen
- Cladochaeta arthrostyla* Grimaldi & Nguyen
- Cladochaeta austrinversa* Grimaldi & Nguyen
- Cladochaeta bispina* Grimaldi & Nguyen
- Cladochaeta brunnea* Grimaldi & Nguyen
- Cladochaeta calvovis* Grimaldi & Nguyen
- Cladochaeta carinata* Grimaldi & Nguyen
- Cladochaeta centetor* Grimaldi & Nguyen
- Cladochaeta chaeta* Grimaldi & Nguyen
- Cladochaeta chelifera* Grimaldi & Nguyen
- Cladochaeta crassa* Grimaldi & Nguyen
- Cladochaeta dejecta* Grimaldi & Nguyen
- Cladochaeta devriesi* Grimaldi & Nguyen
- Cladochaeta dextra* Grimaldi & Nguyen
- Cladochaeta dikra* Grimaldi & Nguyen
- Cladochaeta diminuta* Grimaldi & Nguyen
- Cladochaeta dolichofrons* Grimaldi & Nguyen
- Cladochaeta dominicana* Grimaldi & Nguyen
- Cladochaeta dominitica* Grimaldi & Nguyen
- Cladochaeta dracula* Grimaldi & Nguyen
- Cladochaeta ectopia* Grimaldi & Nguyen
- Cladochaeta erecta* Grimaldi & Nguyen
- Cladochaeta fasciata* Grimaldi & Nguyen
- Cladochaeta florinversa* Grimaldi & Nguyen
- Cladochaeta fuscora* Grimaldi & Nguyen
- Cladochaeta genuinus* Grimaldi & Nguyen
- Cladochaeta glans* Grimaldi & Nguyen
- Cladochaeta glapica* Grimaldi & Nguyen
- Cladochaeta hadrunca* Grimaldi & Nguyen
- Cladochaeta hamula* Grimaldi & Nguyen
- Cladochaeta heedi* Grimaldi & Nguyen
- Cladochaeta hermani* Grimaldi & Nguyen
- Cladochaeta hodita* Grimaldi & Nguyen
- Cladochaeta howdeni* Grimaldi & Nguyen
- Cladochaeta incessa* Grimaldi & Nguyen
- Cladochaeta inornata* Grimaldi & Nguyen
- Cladochaeta jamaicensis* Grimaldi & Nguyen
- Cladochaeta janzeni* Grimaldi & Nguyen
- Cladochaeta labidia* Grimaldi & Nguyen
- Cladochaeta laevacerca* Grimaldi & Nguyen
- Cladochaeta longistyla* Grimaldi & Nguyen
- Cladochaeta masneri* Grimaldi & Nguyen
- Cladochaeta mathisi* Grimaldi & Nguyen
- Cladochaeta mexinversa* Grimaldi & Nguyen
- Cladochaeta mystaca* Grimaldi & Nguyen
- Cladochaeta neblina* Grimaldi & Nguyen
- Cladochaeta neoinversa* Grimaldi & Nguyen
- Cladochaeta neosimplex* Grimaldi & Nguyen
- Cladochaeta obscura* Grimaldi & Nguyen
- Cladochaeta obunca* Grimaldi & Nguyen
- Cladochaeta onyx* Grimaldi & Nguyen
- Cladochaeta ostia* Grimaldi & Nguyen
- Cladochaeta paravolsella* Grimaldi & Nguyen
- Cladochaeta paulhansoni* Grimaldi & Nguyen
- Cladochaeta polia* Grimaldi & Nguyen
- Cladochaeta proctobarba* Grimaldi & Nguyen
- Cladochaeta propenicula* Grimaldi & Nguyen
- Cladochaeta pruinopleura* Grimaldi & Nguyen
- Cladochaeta pseudikra* Grimaldi & Nguyen
- Cladochaeta pseudunca* Grimaldi & Nguyen
- Cladochaeta psychotria* Grimaldi & Nguyen
- Cladochaeta ranhyae* Grimaldi & Nguyen
- Cladochaeta reversa* Grimaldi & Nguyen
- Cladochaeta robusta* Grimaldi & Nguyen
- Cladochaeta santana* Grimaldi & Nguyen
- Cladochaeta scleristyla* Grimaldi & Nguyen
- Cladochaeta sepia* Grimaldi & Nguyen
- Cladochaeta sicula* Grimaldi & Nguyen
- Cladochaeta similex* Grimaldi & Nguyen
- Cladochaeta simplex* Grimaldi & Nguyen
- Cladochaeta spinacosta* Grimaldi & Nguyen
- Cladochaeta spinula* Grimaldi & Nguyen
- Cladochaeta spira* Grimaldi & Nguyen
- Cladochaeta starki* Grimaldi & Nguyen
- Cladochaeta sternospina* Grimaldi & Nguyen
- Cladochaeta telescopica* Grimaldi & Nguyen
- Cladochaeta tepui* Grimaldi & Nguyen
- Cladochaeta tica* Grimaldi & Nguyen
- Cladochaeta trauma* Grimaldi & Nguyen
- Cladochaeta tricerabops* Grimaldi & Nguyen
- Cladochaeta tripunctata* Grimaldi & Nguyen
- Cladochaeta tubula* Grimaldi & Nguyen
- Cladochaeta unca* Grimaldi & Nguyen
- Cladochaeta vapida* Grimaldi & Nguyen
- Cladochaeta venebula* Grimaldi & Nguyen
- Cladochaeta verdifrons* Grimaldi & Nguyen
- Cladochaeta vermes* Grimaldi & Nguyen
- Cladochaeta vittata* Grimaldi & Nguyen
- Cladochaeta vivipara* Grimaldi & Nguyen
- Cladochaeta volsella* Grimaldi & Nguyen
- Cladochaeta vomica* Grimaldi & Nguyen
- Cladochaeta wilhansoni* Grimaldi & Nguyen
- Cladochaeta wirthi* Grimaldi & Nguyen
- Cladochaeta yanomama* Grimaldi & Nguyen
- Cladochaeta zurquia* Grimaldi & Nguyen

Cladochaetini Grimaldi

Colocasiomyia nepalensis Grimaldi
Drosophila billheedi Grimaldi
Drosophila cameroonensis Grimaldi & Jones
Drosophila freidbergi Grimaldi & Jones
Drosophila hypandrilata Grimaldi & Jones
Drosophila jambiya Grimaldi & Jones
Drosophila malagasy Grimaldi & Jones
Drosophila manni Grimaldi
Drosophila mexiflora Grimaldi
Drosophila neotestacea Grimaldi, James, & Jaenike
Drosophila nigrospinipes Grimaldi & Jones
Drosophila orientacea Grimaldi, James, & Jaenike
Drosophila paramanni Grimaldi
Drosophila parisena Heed & Grimaldi
Drosophila penispina Grimaldi
Drosophila phalloserra Grimaldi & Jones
Drosophila sevensteri Grimaldi
Drosophila starki Grimaldi
Drosophila straubae Heed & Grimaldi
Drosophila stylipennis Grimaldi
Drosophila thurstoni Grimaldi
†*Drosophila (Drosophila) poinari* Grimaldi
†*Drosophila (Drosophila) succini* Grimaldi
Drosophila (Hirtodrosophila) caputudis Grimaldi
Drosophila (Hirtodrosophila) chandleri Grimaldi
†*Drosophila (Hirtodrosophila) paleothoracis* Grimaldi

Gitonini Grimaldi

Hirtodrosophila batracida Grimaldi
Hirtodrosophila florida Grimaldi
Hirtodrosophila jaenikei Grimaldi
Hyalistata dominica Grimaldi
Hyalistata floridana Grimaldi
Hyalistata mexicoa Grimaldi
†*Hyalistata vitrea* Grimaldi

Laccodrosophilini Grimaldi

†*Miomyia* Grimaldi
†*Miomyia io* Grimaldi
†*Neotanygastrella wheeleri* Grimaldi

Palmomyia Grimaldi

Palmomyia incerta Grimaldi
Palmophila Grimaldi
Palmophila dentata Grimaldi
Palmophila ecuadoriensis Grimaldi
Palmophila rozeni Grimaldi
†***Protochymomyza*** Grimaldi

†*Protochymomyza miocena* Grimaldi

Rhinoleucophenga missionera Poppe, Schmitz, Grimaldi, & Valente

Rhinoleucophenga pampeana Poppe, Schmitz, Grimaldi, & Valente

Rhinoleucophenga sulina Poppe, Schmitz, Grimaldi, & Valente

†*Scaptomyza dominicana* Grimaldi

Zygothrica abbrevidispar Grimaldi

Zygothrica africana Grimaldi

Zygothrica aliucapa Grimaldi

Zygothrica aliunota Grimaldi

Zygothrica ampliadrichi Grimaldi

Zygothrica andea Grimaldi

Zygothrica anota Grimaldi

Zygothrica antedispar Grimaldi

Zygothrica bilinefilia Grimaldi

Zygothrica britannia Grimaldi

Zygothrica caputrichia Grimaldi

Zygothrica carsoni Grimaldi

Zygothrica celsa Grimaldi

Zygothrica centralis Grimaldi

Zygothrica circumveha Grimaldi

Zygothrica cryptica Grimaldi

Zygothrica dissimulata Grimaldi

Zygothrica femina Grimaldi

Zygothrica flavifrons Grimaldi

Zygothrica florinjecta Grimaldi

Zygothrica fuscilata Grimaldi

Zygothrica glossusta Grimaldi

Zygothrica joeyesco Grimaldi

Zygothrica karenae Grimaldi

Zygothrica kokodana Grimaldi

Zygothrica latipanops Grimaldi

Zygothrica latipaps Grimaldi

Zygothrica leptorostra Grimaldi

Zygothrica malaysiana Grimaldi

Zygothrica manni Grimaldi

Zygothrica mediogaster Grimaldi

Zygothrica mediovitta Grimaldi

Zygothrica microeristes Grimaldi

Zygothrica neolinea Grimaldi

Zygothrica nigra Grimaldi

Zygothrica nigropleura Grimaldi

Zygothrica ora Grimaldi

Zygothrica orientalis Grimaldi

Zygothrica oviserrata Grimaldi

Zygothrica paleovitta Grimaldi

Zygothrica pallida Grimaldi

Zygothrica panamensis Grimaldi

Zygothrica panopia Grimaldi

Zygothrica paravitta Grimaldi

Zygothrica perplexa Grimaldi

Zygothrica peruviana Grimaldi

Zygothrica pictura Grimaldi

Zygothrica posthona Grimaldi

Zygothrica prensiseta Grimaldi

Zygothrica prosopeiona Grimaldi

Zygothrica radialis Grimaldi

Zygothrica simulans Grimaldi

Zygothrica somatia Grimaldi

Zygothrica sphaerocera Grimaldi

Zygothrica spinathigma Grimaldi

Zygothrica tambopata Grimaldi

Zygothrica trinidadana Grimaldi

Zygothrica vietnamensis Grimaldi

Zygothrica vitrea Grimaldi

Zygothrica wauai Grimaldi

Zygothrica zonata Grimaldi

Zygothrica zygia Grimaldi

Family Empididae Latreille

†*Apalocnemis canadambri* Grimaldi & Cumming

†***Emplita*** Grimaldi & Cumming

†*Emplita casei* Grimaldi & Cumming

†***Turonempis*** Grimaldi & Cumming

†*Turonempis styx* Grimaldi & Cumming

Family Ephydridae Zetterstedt

Beckeriella fasciata Mathis & Grimaldi

Beckeriella maculata Mathis & Grimaldi

Family †**Eucaudomyiidae** Grimaldi

†***Eucaudomyia*** Grimaldi

†*Eucaudomyia longicerci* Grimaldi

Family Hybotidae Macquart

†*Cretoplatypalpus americanus* Grimaldi & Cumming

†***Mesoplatypalpus*** Grimaldi & Cumming

†*Mesoplatypalpus carpenteri* Grimaldi & Cumming

Family Ironomyiidae McAlpine & Martin

†***Lebambromyia*** Grimaldi & Cumming

†*Lebambromyia acrai* Grimaldi & Cumming

†*Palaeopetia dorsalis* Grimaldi

†*Palaeopetia terminus* Grimaldi

†***Proironia*** Grimaldi

†*Proironia burmitica* Grimaldi

†*Proironia gibbera* Grimaldi

- Family Limoniidae Rondani
†*Metarchilimonia* Blagoderov & Grimaldi
†*Metarchilimonia krzeminskorum* Blagoderov & Grimaldi
†*Metarchilimonia solita* Blagoderov & Grimaldi
- Family Lonchopteridae Macquart
†*Alonchoptera* Grimaldi
†*Alonchoptera lebanica* Grimaldi
†*Lonchopterites* Grimaldi & Cumming
†*Lonchopterites burmensis* Grimaldi
†*Lonchopterites prisca* Grimaldi & Cumming
†*Lonchopteromorpha* Grimaldi & Cumming
†*Lonchopteromorpha asetocella* Grimaldi & Cumming
- Family Lygistorrhinidae Edwards
†*Archaeognoriste* Blagoderov & Grimaldi
†*Archaeognoriste primitiva* Blagoderov & Grimaldi
†*Indorrhina* Stebner & Grimaldi
†*Indorrhina sahnii* Stebner & Grimaldi
†*Lebanognoriste* Blagoderov & Grimaldi
†*Lebanognoriste prima* Blagoderov & Grimaldi
†*Leptognoriste* Blagoderov & Grimaldi
†*Leptognoriste davisii* Blagoderov & Grimaldi
†*Leptognoriste microstoma* Blagoderov & Grimaldi
Loyugesia Grimaldi & Blagoderov
Loyugesia khuati Grimaldi & Blagoderov
Lygistorrhina edwardsina Grimaldi & Blagoderov
†*Lygistorrhina indica* Stebner & Grimaldi
†*Palaeognoriste orientale* Stebner & Grimaldi
†*Plesiognoriste* Blagoderov & Grimaldi
†*Plesiognoriste carpenteri* Blagoderov & Grimaldi
†*Plesiognoriste zherikhini* Blagoderov & Grimaldi
†*Protognoriste* Blagoderov & Grimaldi
†*Protognoriste amplicauda* Blagoderov & Grimaldi
†*Protognoriste goeleti* Blagoderov & Grimaldi
†*Protognoriste nascifoa* Blagoderov & Grimaldi
- Family Mesembrinellidae Shannon
†*Mesembrinella caenozaica* Cerretti, Stireman, Pape, O'Hara, Marinho, Rognes, & Grimaldi
- Family Mythicomyiidae Melander
†*Microburmyia* Grimaldi & Cumming
†*Microburmyia analvena* Grimaldi & Cumming
†*Microburmyia veanalvena* Grimaldi & Cumming
- Family Mycetophilidae Newman
†*Alavamanota burmitina* Blagoderov & Grimaldi
†*Allocotocera burmitica* Blagoderov & Grimaldi
†*Apolephthisa bulunensis* Blagoderov & Grimaldi
†*Disparoleia* Blagoderov & Grimaldi
†*Disparoleia cristata* Blagoderov & Grimaldi
†*Dziedzickia nashi* Blagoderov & Grimaldi
†*Ectrepesthoneura succinimontana* Blagoderov & Grimaldi
†*Ectrepesthoneura swolenskyi* Blagoderov & Grimaldi
†*Gaalomyia* Blagoderov & Grimaldi
†*Gaalomyia carolinae* Blagoderov & Grimaldi
†*Gregikia* Blagoderov & Grimaldi
†*Gregikia pallida* Blagoderov & Grimaldi
†*Hemolia* Blagoderov & Grimaldi
†*Hemolia glabra* Blagoderov & Grimaldi
†*Hemolia matilei* Blagoderov & Grimaldi
†*Izleiina* Blagoderov & Grimaldi
†*Izleiina mirifica* Blagoderov & Grimaldi
†*Izleiina spinitibialis* Blagoderov & Grimaldi
†*Lecadonileia* Blagoderov & Grimaldi
†*Lecadonileia parvistyla* Blagoderov & Grimaldi
†*Nedocosia* Blagoderov & Grimaldi
†*Nedocosia canadensis* Blagoderov & Grimaldi
†*Nedocosia exsanguis* Blagoderov & Grimaldi
†*Nedocosia novacaesarea* Blagoderov & Grimaldi
†*Nedocosia sibirica* Blagoderov & Grimaldi
†*Neuratelia maimecha* Blagoderov & Grimaldi
†*Protragoneura* Blagoderov & Grimaldi
†*Protragoneura platycera* Blagoderov & Grimaldi
†*Pseudomanota* Blagoderov & Grimaldi
†*Pseudomanota perplexa* Blagoderov & Grimaldi
†*Saigusia pikei* Blagoderov & Grimaldi
†*Synapha longistyla* Blagoderov & Grimaldi
†*Syntenna fissurata* Blagoderov & Grimaldi
†*Temaleia* Blagoderov & Grimaldi
†*Temaleia birmatica* Blagoderov & Grimaldi
†*Zeliinia* Blagoderov & Grimaldi
†*Zeliinia occidentalis* Blagoderov & Grimaldi
†*Zeliinia orientalis* Blagoderov & Grimaldi
- Family †Mysteromyiidae Grimaldi
†*Mysteromyia* Grimaldi
†*Mysteromyia plumosa* Grimaldi
- Family Nemestrinidae Griffith & Pidgeon
†*Hirmoneura caudiprima* Grimaldi
†*Hirmoneura zigrasi* Grimaldi
- Family †Paraxymyiidae Rohdendorf
†*Veriplecia rugosa* Blagoderov & Grimaldi
- Family Periscelididae Oldenberg
Cyamops femobrunneus Grimaldi
Cyamops femoctenidius Grimaldi
†*Periscelis (Myodris) amberifera* Grimaldi & Mathis
†*Periscelis (Myodris) brodzinskyi* Grimaldi & Mathis
†*Periscelis (Myodris) facianota* Grimaldi & Mathis
†*Planinasus electrus* Grimaldi & Mathis
Stenocyamops luteus Grimaldi
Stenocyamops pseudoluteus Grimaldi
Stenocyamops robustus Grimaldi
Stenocyamops vittatus Grimaldi
†*Stenomicro anacrostichalis* Grimaldi & Mathis
Stenomicro ariela Grimaldi
Stenomicro brunnea Grimaldi
Stenomicro castanea Grimaldi
Stenomicro distincta Grimaldi
Stenomicro pallida Grimaldi
†*Stenomicro sabroskyi* Grimaldi & Mathis
Stenomicro sylpha Grimaldi
Stenomicro tokotaai Grimaldi
Stenomicro xoutha Grimaldi
- Family Phoridae Curtis
†*Archiphora pria* Grimaldi & Cumming
†*Archisciada* Grimaldi & Cumming
†*Archisciada lebanensis* Grimaldi & Cumming
†*Eosciadocera pauciseta* Grimaldi
†*Metopina goeleti* Grimaldi
†*Prioriphora luzzii* Grimaldi & Cumming
†*Prioriphora casei* Grimaldi & Cumming
†*Prophora* Grimaldi
†*Prophora dimorion* Grimaldi
- Family Platypezidae Latreille
†*Burmapeza* Grimaldi
†*Burmapeza radialis* Grimaldi
†*Calvopeza* Grimaldi
†*Calvopeza divergens* Grimaldi
†*Canadopeza* Grimaldi
†*Canadopeza biacrosticha* Grimaldi
†*Chandleromyia* Grimaldi
†*Chandleromyia anomala* Grimaldi
†*Electrosania* Grimaldi & Cumming
†*Electrosania cretica* Grimaldi & Cumming
†*Lebanopeza* Grimaldi
†*Lebanopeza azari* Grimaldi
†*Lindneromyia neomedialis* Grimaldi
†*Lindneromyia dominicana* Grimaldi
- Family †Procramptonomyiidae Kovalev
†*Yalea rectimedia* Blagoderov & Grimaldi
- Family †Prosechamyiidae Blagoderov & Grimaldi
†*Prosechamyia* Blagoderov & Grimaldi

- †*Prosechanyia dimedia* Blagoderov & Grimaldi
 †*Prosechanyia trimedia* Blagoderov & Grimaldi
- Family †Protorhynchidae Handlirsch
 †*Brachyrhynchus* Blagoderov & Grimaldi
 †*Brachyrhynchus distortus* Blagoderov & Grimaldi
- Family Psychodidae Newman
 †*Lutzomyia miocena* Peñalver & Grimaldi
 †*Lutzomyia paleopestis* Peñalver & Grimaldi
 †*Lutzomyia succini* Peñalver & Grimaldi
 †*Lutzomyia (Micropygomyia) filipalpis* Peñalver & Grimaldi
 †*Lutzomyia (Trichopygomyia) schleei* Peñalver & Grimaldi
 †*Triassopsychoda* Blagoderov & Grimaldi
 †*Triassopsychoda olseni* Blagoderov & Grimaldi
- Family †Rhagionemestrinidae Ussatchov
 †*Jurassinemestrinus eurema* Grimaldi
- Family Rhagionidae Latreille
 †*Jersambromyia* Grimaldi & Cumming
 †*Jersambromyia borodini* Grimaldi & Cumming
Litoleptis tico Grimaldi
 †*Mesobolbomyia* Grimaldi & Cumming
 †*Mesobolbomyia acraei* Grimaldi & Cumming
 †*Paleochrysopilus* Grimaldi & Cumming
 †*Paleochrysopilus hirsutus* Grimaldi & Cumming
- Family Scenopinidae Fallén
 †*Metatrichia pria* Yeates & Grimaldi
 †*Proratites* Grimaldi & Cumming
 †*Proratites simplex* Grimaldi & Cumming
- Family Simuliidae Newman
 †*Archicnephia* Currie & Grimaldi
 †*Archicnephia ornithoraptor* Currie & Grimaldi
- Family Stratiomyidae Latreille
 †*Lysistrata* Grimaldi & Arillo
 †*Lysistrata emerita* Grimaldi & Arillo
 †*Narcissomyia* Grimaldi
 †*Narcissomyia bella* Grimaldi
 †*Normyia* Grimaldi
 †*Normyia longistyli* Grimaldi
 †*Normyia telescopica* Grimaldi
 †*Normyia woodleyi* Grimaldi
- Family Syringogastridae Prado
 †*Syringogaster craigi* Grimaldi
 †*Syringogaster miocenicus* Grimaldi
- Family Tabanidae Latreille
 †*Cratotabanus asiaticus* Grimaldi
 †*Cratotabanus newjerseyensis* Grimaldi
 †*Tabanipriscus* Grimaldi
 †*Tabanipriscus transitivus* Grimaldi
- Family †Tethepomyiidae Grimaldi & Arillo
 †*Tethepomima* Grimaldi & Arillo
 †*Tethepomima holomma* Grimaldi & Arillo
 †*Tethepomyia* Grimaldi & Cumming
 †*Tethepomyia coxa* Grimaldi
 †*Tethepomyia buruhandi* Grimaldi & Arillo
 †*Tethepomyia thauma* Grimaldi & Cumming
 †*Tethepomyia zigrasi* Grimaldi & Cumming
- Family Valeseguyidae Amorim & Grimaldi
 †*Cretoseguya* Amorim & Grimaldi
 †*Cretoseguya burmitica* Amorim & Grimaldi
 †*Valeseguya disjuncta* Grimaldi
- Family Xenasteiidae Hardy
Xenasteia fijiana Grimaldi
- Family Xylomyidae Verrall
 †*Archsolva* Grimaldi
 †*Archsolva biceps* Grimaldi
 †*Archsolva sulcata* Grimaldi
 †*Cretasolva* Grimaldi
 †*Cretasolva burmitica* Grimaldi
 †*Cretoxyla* Grimaldi & Cumming
 †*Cretoxyla azari* Grimaldi & Cumming
- Family †Zhangsolvidae Nagatomi & Yang
 †*Cratomyia mimetica* Grimaldi
 †*Linguatormyia* Grimaldi
 †*Linguatormyia teletacta* Grimaldi
- Family Incertae sedis
 †*Aschizomyia* Grimaldi [Syrphoidea]
 †*Aschizomyia burmensis* Grimaldi [Syrphoidea]
 †*Atherhagiox* Grimaldi [Tabanomorpha]
 †*Atherhagiox ambiguum* Grimaldi [Tabanomorpha]
 †*Atherhagiox simulans* Grimaldi [Tabanomorpha]
 †*Galloatherix completus* Grimaldi [Tabanomorpha]
 †*Gracilomyia* Grimaldi [orthorrhaphan]
 †*Gracilomyia wit* Grimaldi [orthorrhaphan]
 †*Myanmyia* Grimaldi [Muscomorpha]
 †*Myanmyia asteiformia* Grimaldi [Muscomorpha]
 †*Palaepangonius glossa* Grimaldi [Tabanomorpha]
 †*Prosyrrhus* Grimaldi [Syrphoidea]
 †*Prosyrrhus thompsoni* Grimaldi [Syrphoidea]
 †*Thereotricha* Blagoderov & Grimaldi [Sciaroidea]
 †*Thereotricha agapa* Blagoderov & Grimaldi [Sciaroidea]
 †*Thereotricha sibirica* Blagoderov & Grimaldi [Sciaroidea]
 †*Virginiptera* Blagoderov & Grimaldi [Sciaroidea]
 †*Virginiptera certa* Blagoderov & Grimaldi [Sciaroidea]
 †*Virginiptera lativentra* Blagoderov & Grimaldi [Sciaroidea]
 †*Virginiptera similis* Blagoderov & Grimaldi [Sciaroidea]