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Lionel Alvin Stange (1935–2020) – his contributions to the entomology.

Pro memoriam

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Abstract: This paper describes the lifetime scientific achievements of Lionel A. Stange. A list is appended of his scientific publications and the taxa he described in three orders of insects: Hemiptera, Hymenoptera and Neuroptera. It contains a list of the names of taxa dedicated to him: five generic names from three insect orders (Coleoptera, Hymenoptera, Neuroptera) and fifty specific epithets from eight orders of insects (Coleoptera, Diplura, Diptera, Hemiptera, Hymenoptera, Megaloptera, Neuroptera). Finally, it discusses his contribution to the expansion of the Neuropterida collection at the Upper Silesian Museum, Bytom, along with a list of the species he deposited there.

Key words: Lionel A. Stange, described taxa, patronyms, scientific achievements, USMB.

[...]

*I found it and I named it, being versed
in taxonomic Latin; thus became
godfather to an insect and its first
describer – and I want no other fame.*

*Wide open on its pin (though fast sleep),
and safe from creeping relatives and rust,
in the secluded stronghold where we keep
type specimens it will transcend its dust.*

*Dark pictures, thrones, the stones that pilgrims kiss,
poems that take a thousand years to die
but ape the immortality of this
red label on a little butterfly.*

Vladimir Nabokov “A Discovery” 1943

The day of February 27, 2021, was the first anniversary of the death of Lionel A. Stange (1935-2020), whose contribution to the development of various branches of entomology cannot be underestimated. Outstanding in this field, he was a very colorful character. He loved Nature, and especially insects and collecting them; thus his whole life, not just his professional activities, was associated with them. He was born on June 27, 1935, in Los Angeles, California. He became fascinated by Nature from a very early age. As a High School teenager, he participated in a Natural History Workshop research project on insects at the Los Angeles County Museum of Natural History. Having graduated from High School, he worked at this museum as an unpaid volunteer. This is where he first met Arnold Menke, a later companion of many travels and a lifelong friend, who in beautiful phrases, full of humor, described their friendship and his life devoted to his family, to insects and research expeditions, not to mention cigars and classical music (MENKE 2021). Lionel worked at the museum until 1956, when he enrolled at UCLA, and later was at the Department of Entomology at the University of California, Berkeley. He entered graduate school in 1958 at UC Davis, from where he received his Master's Degree. He wrote and defended his doctoral dissertation entitled "Revision of the Antlion Tribe Brachynemurini of North America" in 1965 at that same university. The thesis was published in 1970 (Fig. 1). In cooperation with Professors Stan Bailey and Al Grigarick, he continued to expand his knowledge of the Hymenoptera. Especially fruitful was his work in cooperation with Professor Richard Bohart: together they began a scientific study of the vespid wasps of the genus *Zethus* F. Lionel Stange continued and expanded this work over many years, which

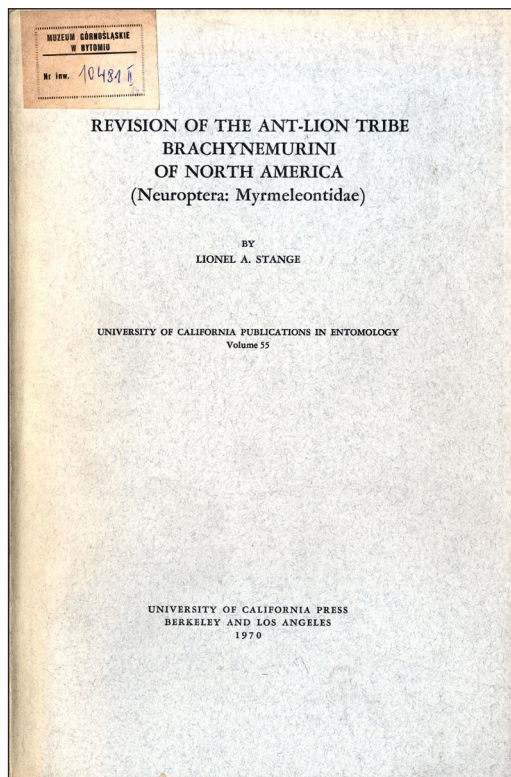


Fig. 1. Cover of the PhD thesis of Lionel A. Stange, published by the University of California Press (Photo: Witalis Szoltyś).

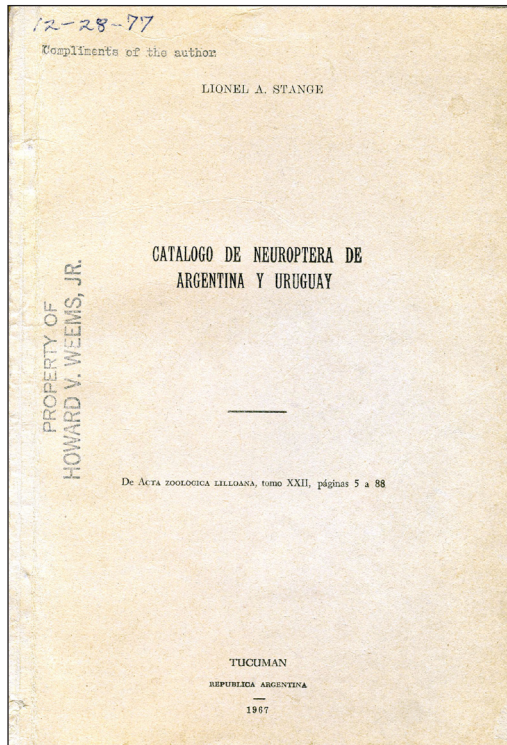


Fig. 2. An offprint of one of Lionel Stange's first works published in Argentina (Photo: Witalis Szołtys).

resulted in a great many publications. His acquaintance with Bram Willink, who had been a visitor at UC Davis in 1965, was to have profound consequences for his scientific and private life. Thanks to Willink, he obtained employment at the Fundacion Miguel Lillo in Tucuman, Argentina (at that time, Willink was the director of this Foundation). He also became a professor of entomology at the Universidad Nacional de Tucuman. It was there that he met his future wife Judith Lotti, a botanist at Fundacion Miguel Lillo, whom he married on January 6th, 1968. Their children Elisabeth and Eric were born in Argentina. The first years he spent in that country were filled not only with family happiness but also intensive work. Lionel quickly mastered Spanish, the main language of Argentina, so that after just three years he was able to teach students and write scientific papers in Spanish. One of his first publications there was a catalog of the Neuroptera of Argentina and Uruguay (Fig. 2). The offprint of this publication that is now in Bytom had originally been presented to Lionel's associate Dr Howard V. Weems Jr., but after the latter's death in 2011 was returned to the author, and a year later it came to Poland. During the thirteen years he spent in Argentina (1965-1978), he published a great many works on both his leading subject, the Neuroptera, and on the Aculeata (Hymenoptera). From 1970 onwards, the deteriorating economic situation in Argentina (hyperinflation) and changes in the Foundation compelled Lionel to seek a post in the USA or another country. Unfortunately, despite his intensive efforts to find employment elsewhere, it was not until the end of 1977 that he was taken on as a taxonomic entomologist with the Florida Bureau of Entomology in the Division of Plant Industry, where he worked until his retirement in 2005. On obtaining this post, Lionel began work on a new group, namely snails, but Neuroptera, and especially his beloved antlions, always came first. One year before his retirement, he published the results of his life's work: *A systematic catalog, bibliography and*

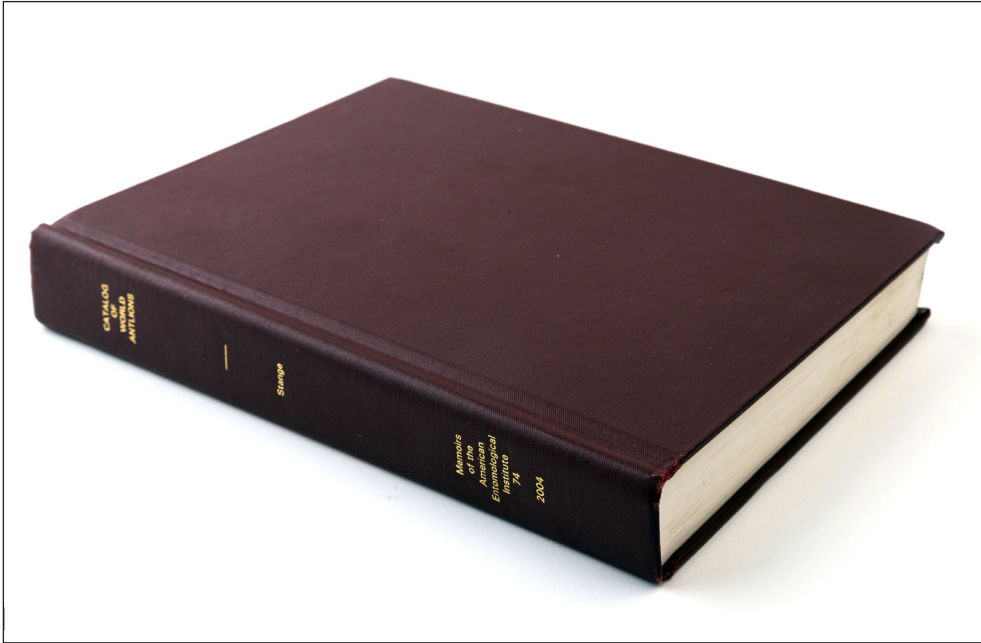


Fig. 3. The *Systematic catalog, bibliography and classification of the world antlions*, published in 2004, was Lionel Stange's crowning achievement regarding this group of insects (Photo: Witalis Szoltyś).

classification of the world antlions (Insecta: Neuroptera: Myrmeleontidae). This monumental volume, 565 pages in length, was the crowning achievement of his lifelong study of the most numerous of the neuropteran families (Fig. 3). Here, it behoves me to mention that for 42 years Lionel's closest colleague and friend with regard to the Myrmeleontidae was Robert B. Miller, who in spring 2020, a few weeks after Lionel's death, published a beautifully written appreciation in *Lacewing News* (MILLER 2020). Perusal of the list of Lionel's publications (Annex 1) reveals his highly consistent approach to describing this group of neuropterans and how much he did to understand and describe different taxa, especially his favorite antlions (Annex 2). He was not the typical "professional", however. The great many short papers and communications he wrote testified to the fact that he was an outstanding naturalist who saw far more than just museum specimens under a microscope. He was perfectly happy to publish regional revisions and seemingly insignificant papers, the import of which is only now become clearer, especially in the age of molecular analyses and the statistical modeling of distributions. Also in that edition of *Lacewing News* we find a finely written, very personal dedication to Lionel Stange from Adrian Ardila Camacho (ARDILA CAMACHO 2020), thanking him for his selfless assistance, which says a great deal about his openness and willingness to help younger entomologists.

Lionel Stange was passionate about entomological expeditions: this aspect cannot be omitted from any appreciation of him and his work. He undertook them practically throughout his life, and apart from unusual adventures and experiences, which his companion in many of them has described at length and with great humor (MENKE 2021), they yielded numerous collections of different groups of insects. Not only did he build up in Florida a collection of Neuroptera of worldwide significance, he also supplied unique research material to many specialists in numerous different groups of insects. This is confirmed by the long list of generic or specific patronyms dedicated to Lionel A. Stange (Annex 3).

Lionel A. Stange and his contribution to the development of the Neuropterida collection at the Upper Silesian Museum, Bytom

I had the honor to meet Lionel A. Stange for the first and unfortunately only time in Slovenia during the Tenth International Symposium on Neuropterology (Fig. 4). I don't remember exactly whether it was on the first day (June 22) or a day later. I recall being somewhat overawed (of course, I knew who Lionel Stange was), especially as on that extremely hot day he looked a little "odd" in a rather thick jacket, which was wholly inappropriate, given the high temperature and the burning sun. The matter was quickly cleared up, however, the rather prosaic reason being that the airline had lost his luggage. What surprised me was that he was not unduly perturbed by the incident. When I introduced myself and said that I hailed from Częstochowa, his wife Judith, a practicing Catholic as it turned out, reacted immediately, saying that she would like at some time to visit the shrine, significant to Christians, of the Holy Mother of Częstochowa on Jasna Góra. Of course, I offered to be her guide, but unfortunately that visit never came about. That was probably the only subject not involving insects that we touched upon during our conversations in the lobby of the Symposium. Naturally, among the main topics were scientific expeditions and collections of Neuropterida. A good many years have elapsed since then, but I remember how much I gained from those conversations. Lionel Stange was an extremely open and rewarding interlocutor, replying to practically every single question of mine regarding his methods and his unrivalled experience and knowledge. We talked much about the development of museum collections and their significance for revision studies. I was pleasantly surprised by Lionel's suggestion of an exchange of specimens between our institutions. This subsequently continued for nearly ten years and, thanks to Lionel, resulted in the enrichment of the Upper Silesian Museum's Collection



Fig. 4. Piran, Slovenia, June 24, 2008. Meeting with Judith and Lionel Stange during the Tenth International Symposium on Neuropterology (Photo archive: R. Dobosz).

of many very interesting and rare species of Neuropterida (Annex 4). Naturally, I tried to return the complement as best I could. It emerged from our talks that Lionel was all for the diversification of type collections. In consequence, throughout the years of our acquaintance, he deposited some of the paratypes of the taxa he described at the Upper Silesian Museum. (Figs. 5–15). Lionel impressed me not only with his extremely wide-ranging knowledge and experience. Despite the loss of his baggage, his good humor never left him. The moment his wife Judith went to their room, he asked me in a conspiratorial whisper for a cigarette. Having lit it, he admitted that his wife only let him smoke a cigar, and then not very often. So when I was reading the second paragraph of Arnold Menke's recollections of Lionel in which he recalled the latter's love of insects, cigars and classical music, I had to laugh. My memories of Lionel may not be typical. I never had the opportunity to get to know him better, but from the numerous e-mails we exchanged over the years (the last one from him I received on July 26, 2018) and those few conversations we had in Slovenia, I am convinced that I was extremely lucky to meet such an unusual person. The one thing I regret is that I was unable to organize an expedition to Morocco in order to get *Pseudimares aphrodite*. In his e-mails, Lionel frequently encouraged me to go there and catch it for him, too. Unfortunately, I did not manage to fulfil his request.

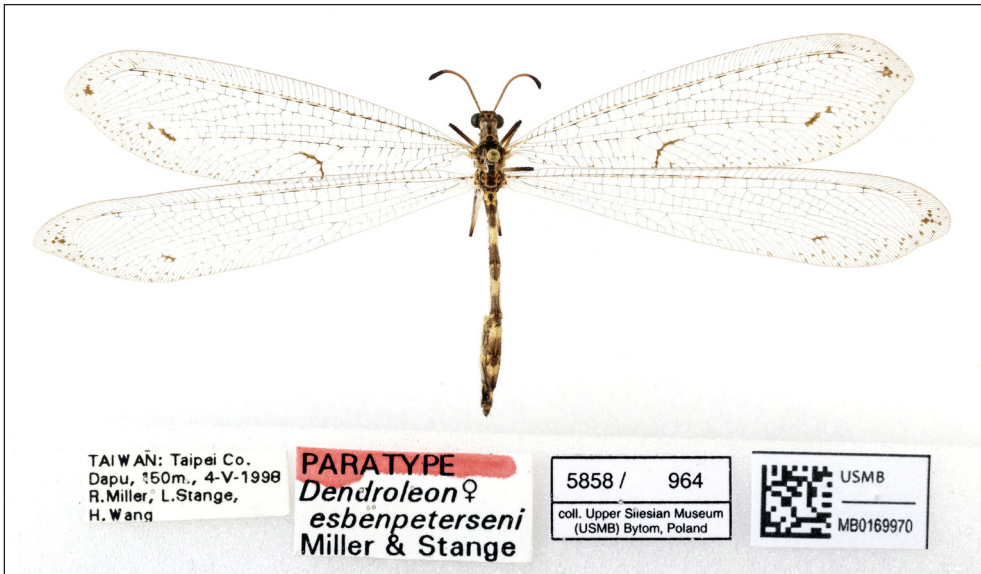


Fig. 5. *Dendroleon esbenpeterseni* MILLER & STANGE in MILLER *et al.*, 1999 – paratype (female) from Taiwan (Photo: Witalis Szoltyś).



Fig. 6. *Dimarella mixteca* MILLER in MILLER *et al.*, 1989 – paratype (male) from Mexico (Photo: Witalis Szoltyś).



Fig. 7. *Eremoleon inca* MILLER & STANGE, 2016 – paratype (female) from Peru (Photo: Witalis Szoltyś).

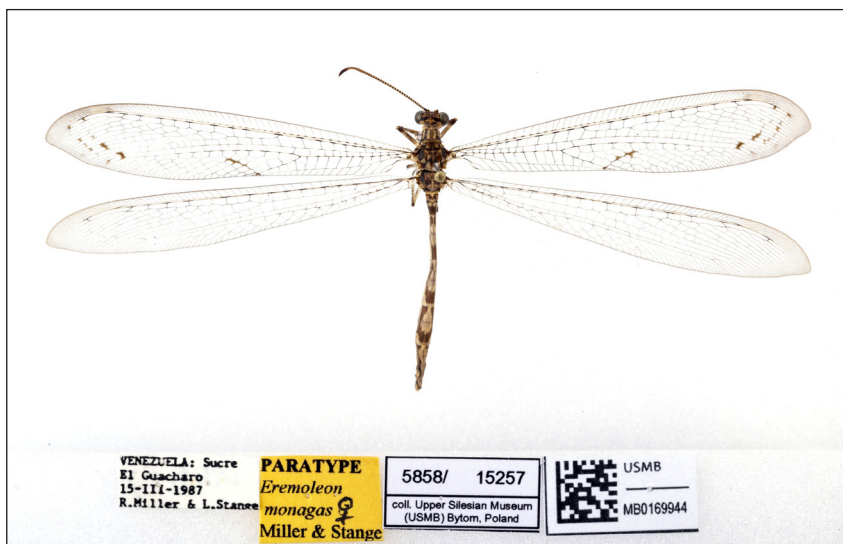


Fig. 8. *Eremoleon monagas* MILLER & STANGE, 2016 – paratype (female) from Venezuela (Photo: Witalis Szoltys).



Fig. 9. *Eremoleon pygmaeus* MILLER & STANGE, 2016 – paratype (male) from Venezuela (Photo: Witalis Szoltys).

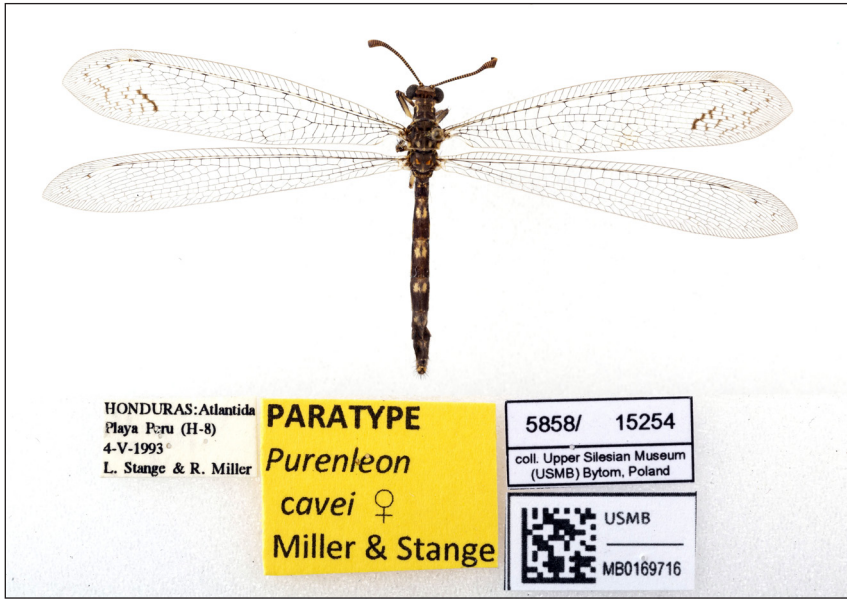


Fig. 10. *Eremoleon cavei* MILLER & STANGE, 2014 – paratype (male) from Honduras (Photo: Witalis Szoltys).



Fig. 11. *Pureleon nunezi* MILLER & STANGE, 2011 – paratype (female) from the Dominican Republic (Photo: Witalis Szoltys).

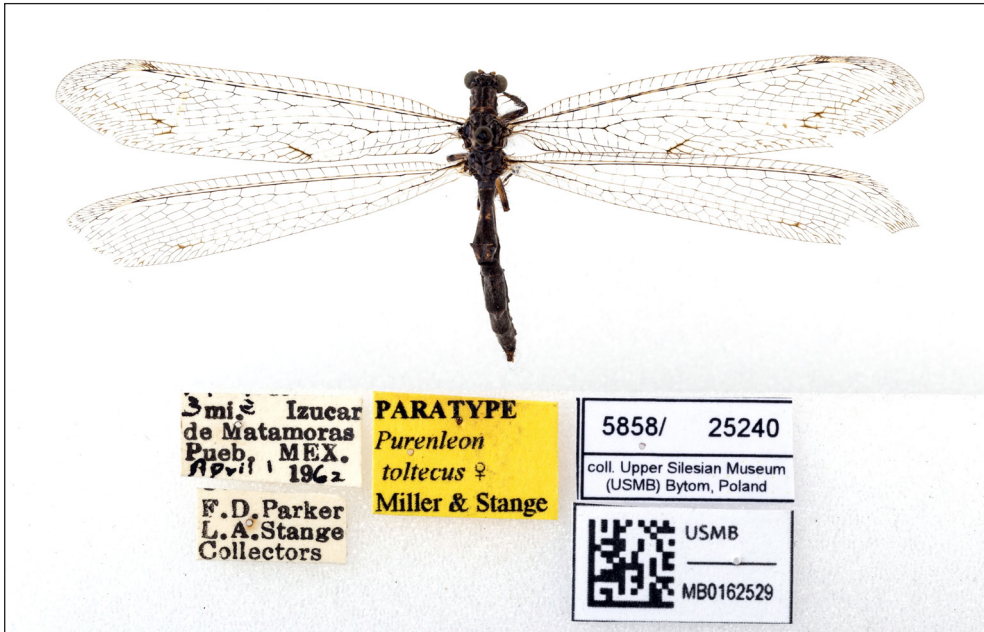


Fig. 12. *Pureneon toltecus* MILLER & STANGE, 2014 – paratype (female) from Mexico (Photo: Witalis Szoltys).

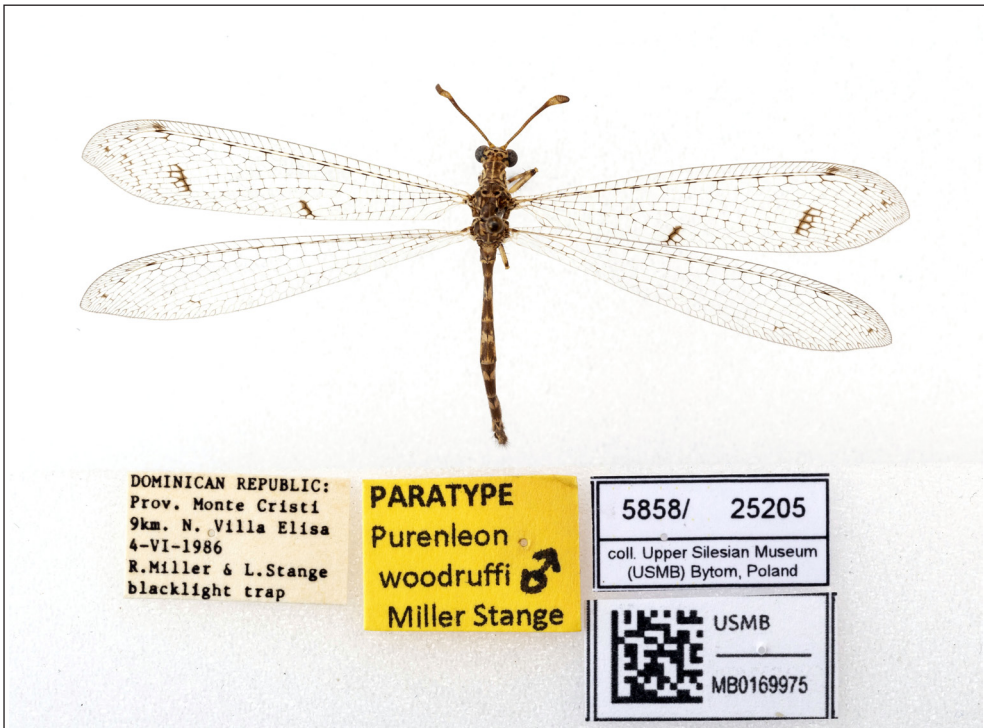


Fig. 13. *Pureneon woodruffi* MILLER & STANGE, 2011 – paratype (male) from the Dominican Republic (Photo: Witalis Szoltys).

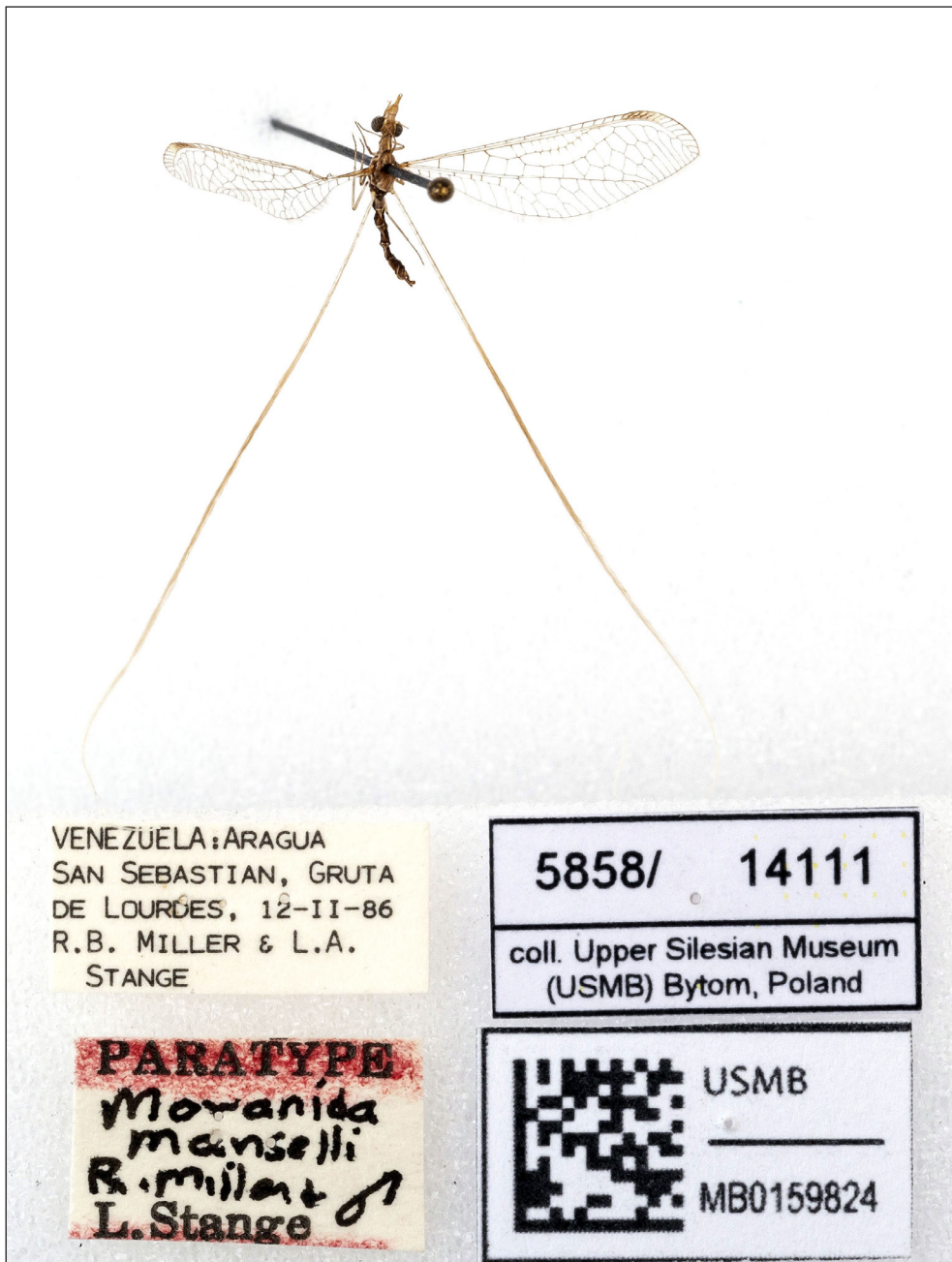


Fig. 14. *Moranida manselli* MILLER & STANGE, 1989 – paratype (male) from Venezuela (Photo: Witalis Szoltys).

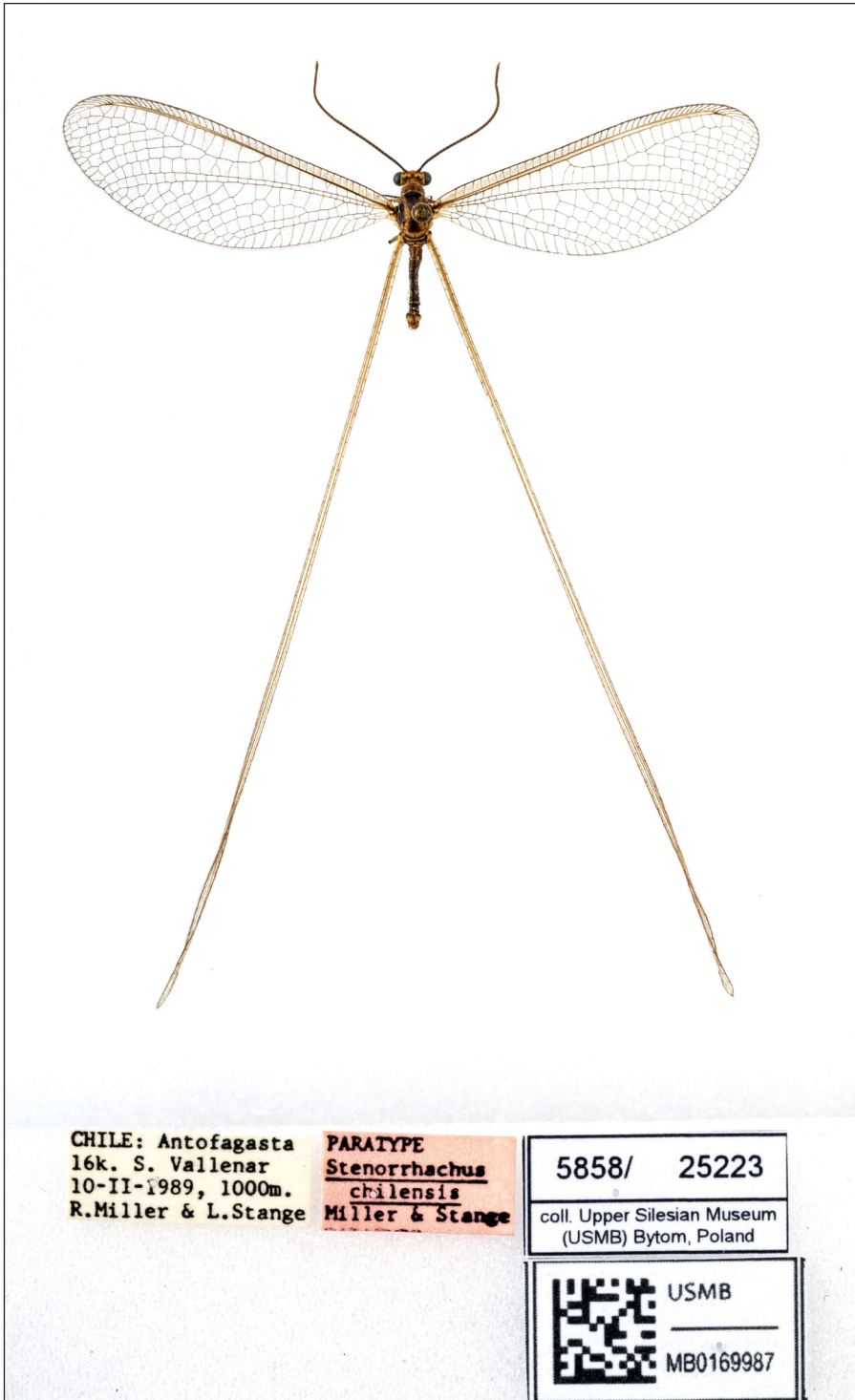


Fig. 15. *Stenorrhachus chilensis* MILLER & STANGE, 2012 – paratype (male) from Chile (Photo: Witalis Szoltys).

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Annex 1

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Annex 2

New genera described by Lionel A. Stange

Hemiptera

Nepidae

Austronepa MENKE & STANGE, 1964

Hymenoptera

Vespidae

Argentozethus STANGE, 1979

Neodiscolius STANGE, 1979

Neuroptera

Myrmeleontidae

Argentoleon STANGE 1994

Atricholeon STANGE 1994

Australeon MILLER & STANGE, 2012

Brasileon MILLER & STANGE, 1989

Dejunaleon MILLER & STANGE, 2017

Ecualeon STANGE 1994

Galapagoleon STANGE 1994

Gnopholeon STANGE, 1970

Menkeleon STANGE, 1970

Mexoleon STANGE 1994

Millerleon STANGE 1989

Newleon MILLER & STANGE, 2012

Pachyleon STANGE 1990

Peruveleon MILLER & STANGE, 2011

Purenleon STANGE 2002

Speleon MILLER & STANGE, 2012

Venezueleon STANGE 1994

New species described by Lionel A. Stange

Hymenoptera

Megahilidae

Dianthidium marshi GRIGARICK & STANGE, 1964

Dianthidium parkeri GRIGARICK & STANGE, 1964

Epanthidium boharti STANGE, 1983

Vespidae

Argentozethus willinki STANGE, 1979

Zethus adonis BOHART & STANGE, 1965

Zethus alticola BOHART & STANGE, 1965

Zethus angustior BOHART & STANGE, 1965

Zethus attenuatus BOHART & STANGE, 1965

Zethus bequaerti BOHART & STANGE, 1970
Zethus bodkini BOHART & STANGE, 1965
Zethus bahamensis salti BOHART & STANGE, 1965
Zethus boharti STANGE, 1976
Zethus bolivarensis STANGE, 1997
Zethus brasiliensis subsp. *fuscatus* BOHART & STANGE, 1965
Zethus caracis BOHART & STANGE, 1965
Zethus carpenteri STANGE, 1997
Zethus cavagneroi BOHART & STANGE, 1965
Zethus clypeolaris BOHART & STANGE, 1965
Zethus chimorum BOHART & STANGE, 1965
Zethus dentostipes BOHART & STANGE, 1965
Zethus diminutus santaremae BOHART & STANGE, 1965
Zethus elliotti STANGE, 2003
Zethus fritzi STANGE, 1978
Zethus garciai BOHART & STANGE, 1965
Zethus harlequinus BOHART & STANGE, 1965
Zethus huascari BOHART & STANGE, 1965
Zethus islandicus BOHART & STANGE, 1965
Zethus mapirensis BOHART & STANGE, 1965
Zethus melanis BOHART & STANGE, 1965
Zethus milleri STANGE, 1997
Zethus neffi STANGE, 1978
Zethus peruvicus BOHART & STANGE, 1965
Zethus rossi BOHART & STANGE, 1965
Zethus rubioi STANGE, 1997
Zethus satanicus BOHART & STANGE, 1965
Zethus schadei BOHART & STANGE, 1965
Zethus schlingeri BOHART & STANGE, 1965
Zethus shannoni BOHART & STANGE, 1965
Zethus simulans BOHART & STANGE, 1965
Zethus vincenti STANGE, 1997
Zethus weyrauchi BOHART & STANGE, 1965
Zethus woodruffi STANGE, 2003
Zethus yepezi STANGE, 1997

Neuroptera

Osmylidae

Isostenosmylus barbatus MARTINS, ARDILA-CAMACHO, FLINT & STANGE, 2019
Isostenosmylus triangulatus ARDILA-CAMACHO, MARTINS & STANGE, 2019

Hemerobiidae

Megalomus carpenteri PENNY, ADAMS & STANGE, 1997

Myrmeleontidae

Brachynemurus darwini STANGE, 1969
Brachynemurus marshi STANGE, 1970
Brachynemurus mimica STANGE, 1970

Brachynemurus mixtecus STANGE, 1970
Brachynemurus nigrescens STANGE, 1970
Brachynemurus parkeri STANGE, 1970
Brachynemurus persimilis STANGE, 1970
Brachynemurus seminolae STANGE, 1970
Brachynemurus setosa STANGE, 1970
Brachynemurus straminea STANGE, 1970
Brachynemurus westcotti STANGE, 1970
Dejunaleon maculosus STANG, 2017
Dendroleon porteri STANGE, 2008
Dendroleon esbenpeterseni MILLER & STANGE, 1999
Dimarella (Brasileon) amazonica STANGE, 1989
Dimarella blohmi STANGE, 1989
Dimarella bolivarensis STANGE, 1989
Dimarella guarica STANGE, 1989
Dimarella menkei STANGE, 1963
Dimarella nayarita STANGE, 1989
Dimarella psammophila STANGE, 1963
Distoleon littoralis MILLER & STANGE, 1999
Ecualeon ovispargus STANGE, 1994
Eremoleon adonis MILLER & STANGE, 2016
Eremoleon attenuatus MILLER & STANGE, 2016
Eremoleon dodsoni MILLER & STANGE, 2016
Eremoleon dunklei STANGE, 1999
Eremoleon durangoensis MILLER & STANGE, 2016
Eremoleon inca MILLER & STANGE, 2016
Eremoleon jacumba MILLER & STANGE, 2016
Eremoleon jamaica MILLER & STANGE, 2016
Eremoleon monagas MILLER & STANGE, 2016
Eremoleon morazani MILLER & STANGE, 2016
Eremoleon petrophila MILLER & STANGE, 2011
Eremoleon phasma MILLER & STANGE, 2011
Eremoleon pygmaeus MILLER & STANGE, 2016
Eremoleon samne MILLER & STANGE, 2016
Eremoleon tanya MILLER & STANGE, 2016
Eremoleon tepuyiensis MILLER & STANGE, 2016
Eremoleon venezolanus MILLER & STANGE, 2016
Froggattisca kakadu MILLER & STANGE, 2012
Froggattisca rennerensis MILLER & STANGE, 2012
Gatzara petrophila MILLER & STANGE, 1999
Gnopholeon zapotecus STANGE, 1970
Maracandula colima MILLER & STANGE, 2009
Maracandula oaxaca MILLER & STANGE, 2009
Maracandula puebla MILLER & STANGE, 2009
Myrmeleon alticolus MILLER & STANGE, 1999
Myrmeleon heppneri MILLER & STANGE, 1999
Myrmeleon littoralis MILLER & STANGE, 1999
Myrmeleon persimilis MILLER & STANGE, 1999

Myrmeleon taiwanensis MILLER & STANGE, 1999
Myrmeleon wangi MILLER & STANGE, 1999
Navasoleon amazonas STANGE, 2018
Navasoleon egeri STANGE, 2018
Navasoleon lotti STANGE, 2018
Navasoleon venezolanus STANGE, 2018
Newleon fragilis MILLER & STANGE, 2012
Pachyleon alvarengai STANGE, 1970
Paraglenurus littoralis MILLER & STANGE, 1999
Paraglenurus lotzi MILLER & STANGE, 1999
Paraglenurus riparius MILLER & STANGE, 1999
Paranthaclisis floridensis STANGE & MILLER, 2012
†*Porrerus dominicanus* POINAR & STANGE, 1996
Purenleon abruptus STANGE, 2002
Purenleon adamsi MILLER & STANGE, 2014
Purenleon andinus MILLER & STANGE, 2014
Purenleon apache MILLER & STANGE, 2014
Purenleon aztecus MILLER & STANGE, 2014
Purenleon cavei MILLER & STANGE, 2014
Purenleon farri MILLER & STANGE, 2014
Purenleon fernandezi MILLER & STANGE, 2014
Purenleon nunezi MILLER & STANGE, 2011
Purenleon oaxacae MILLER & STANGE, 2014
Purenleon tibialis MILLER & STANGE, 2014
Purenleon toltecus MILLER & STANGE, 2014
Purenleon woodruffi MILLER & STANGE, 2011
Ripalda wayana BADANO, MILLER & STANGE, 2018
Speleon cavernicolus MILLER & STANGE, 2012
Speleon pilliga MILLER & STANGE, 2012
Speleon yallingup MILLER & STANGE, 2012
Stenoleon xanthopus MILLER & STANGE, 2012
Venezueleon guaricus STANGE, 1994
Xantholeon cavernicolus MILLER & STANGE, 2012
Xantholeon kakadu MILLER & STANGE, 2012
Xantholeon newi MILLER & STANGE, 2012
Xantholeon pallens MILLER & STANGE, 2012
Xantholeon pentlandensis MILLER & STANGE, 2012

Nemopteridae

Moranida manselli MILLER & STANGE, 1989
Stenorrhachus chilensis MILLER & STANGE, 2012
Veurise fritzi STANGE & WILLINER, 1981

Mantispidae

Plega yucatanae PARKER & STANGE, 1965

Annex 3

New insect genera named after Lionel A. Stange – Patronyms

Coleoptera

Elateridae

Stangellus GOLBACH, 1975

Argentina

Hymenoptera

Ichneumonidae

Stangepelma PORTER, 1976

Argentina

Sphecidae

Stangeella MENKE, 1962

Argentina

Neuroptera

Myrmeleontidae

Stangeleon MILLER, 2009

Venezuela

Coniopterygidae

Stangesemidalis GONZÁLEZ OLAZO, 1984

Argentina

New insect species named after Lionel A. Stange – Patronyms

Coleoptera

Cerambycidae

Odontocera stangei WAPPES & SANTOS-SILVA, 2017

Venezuela

Cleridae

Labasiella stangei OPITZ, 2019

Peru

Heteroceridae

Heterocerus stangerus PACHECO, 1963

Mexico

Pselaphidae

Hesperotychus stangei GRIGARICK & SCHUSTER, 1962

USA, California

Tenebrionidae

Philorea stangei PENA, 1980

Peru

Diplura

Projapygidae

Symphylurinus stangei SMITH, 1960

Mexico

Diptera

Mycetophilidae

Cluzobra stangei MATILE, 1996

Argentina

<i>Dziedzickia stangei</i> DURET, 1978	Chile
<i>Tetragoneura stangei</i> DURET, 1980	Chile
Tephritidae	
<i>Anastrepha stangei</i> NORRBOM & KORYTKOWSKI, 2012	Venezuela
Acroceridae	
<i>Coquena stangei</i> SCHLINGER, 2013	Argentina

Hemiptera

Belostomatidae	
<i>Abedus stangei</i> MENKE, 1960	Mexico
Pseudococcidae	
<i>Rhizecus neostangei</i> MILLER & MCKENZIE, 1971	Mexico
Naucoridae	
<i>Limnocoris stangei</i> LA RIVERS, 1976	Mexico

Hymenoptera

Aulacidae	
<i>Pristaulacus stangei</i> SMITH, 2008	Mexico
Bethylidae	
<i>Pseudisobrachium stangei</i> EVANS, 1961	Argentina
Braconidae	
<i>Aphelagathis stangei</i> SHARKEY, 2015	Mexico
Chrysididae	
<i>Chrysis stangei</i> BOHART, 1988	South Africa
Embolimidae	
<i>Embolimus stangei</i> OLMÍ, 1995	Colombia
Ichneumonidae	
<i>Anacis stangeorum</i> PORTER, 1970	Argentina
<i>Chirotica stangei</i> TOWNES, 1983	Argentina
<i>Itamuton stangei</i> PORTER, 1989	Chile
<i>Myrmeleonostenus stangei</i> PORTER, 1998	Taiwan
<i>Compsocryptus stangei</i> PORTER, 1989	Dominican Rep.
Megachilidae	
<i>Osmia stangei</i> GENARO, 2001	Dominican Rep.
Pergidae	
<i>Perreyia stangei</i> SMITH, 1990	Brasil
Plumariidae	
<i>Plumarius stangei</i> DIEZ, FIDALGO & ROIG-ALSINA, 2013	Argentina

Pompilidae*Dicranoplius stangei* EVANS, 1969

Argentina

Sphecidae*Ammophila stangei* MENKE, 1964

USA, California

Astata stangei PARKER, 1964

Mexico

Crossocerus stangei LECLERCQ, 2000

Mexico

Eucerceris stangei SCULLEN, 1968

Mexico

Larra stangei MENKE, 1992

Bolivia

Leurogorytes stangei BOHART, 2000

Argentina

Oxybelus stangei BOHART, 1993

Argentina

Pison stangei MENKE, 1968

Argentina

Solierella stangei MENKE, 1968

Argentina

Spilomena stangei ANTROPOV, 1992

Argentina

Tachytes stangei BOHART, 1979

Paraguay

Vespidae*Gastrodynerus stangei* BOHART, 1984

Mexico

Leptochilus stangei PARKER, 1966

Mexico

Zethus stangei PORTER, 2008

Costa Rica

Megaloptera**Corydalidae***Protohermes stangei* LIU & DOBOSZ 2019

Vietnam

Neuroptera**†Araripeneuridae***Phylloleon stangei* LU, OHL & LIU, 2019Burmese
(Myanmar) amber**Mantispidae***Plega stangei* ARDILA, CANCINO, ACEVEDO & CONTRERAS, 2019

Mexico

Chrysopidae*Meleoma stangei* PENNY, 2006

Mexico

Ungla stangei C. TAUBER, 2017

Bolivia

Hemerobiidae*Sympherobius stangei* NAKAHARA, 1960

USA, California

Megalomus stangei GONZÁLEZ OLAZO, 1981

Chile

Myrmeleontidae*Scotoleon stangei* MILLER, 2016

Mexico

Annex 4

Materials presented to the Upper Silesian Museum, Bytom

Megaloptera

Corydalidae

Platyneuromus soror (HAGEN, 1861) 1 ex. Mexico

Neuroptera

Ascalaphidae

Ameropterus trivialis (GERSTAECKER, 1888) 1 ex. Honduras
Amoea vacua (GERSTAECKER, 1894) 1 ex. Mexico
Ascalobyas microcerus (RAMBUR 1842) 2 exx. Mexico, Panama
Ascaloptynx appendiculata (FABRICIUS, 1793) 3 exx. USA
Ascalorphne umbrina (GERSTAECKER, 1894) 1 ex. Bolivia
Haploglenius flavicornis McLACHLAN 2 exx. Mexico, Guatemala
Ululodes cajennensis (FABRICIUS, 1787) 1 ex. Ecuador
Ululodes floridanus (BANKS, 1906) 2 exx. USA
Ululodes macleayanus (GULDING, 1823) 2 exx. USA
Ululodes mexicanus (McLACHLAN, 1871) 2 exx. USA
Ululodes quadripunctatus (BURMEISTER, 1839) 2 exx. USA
Ululodes subvertens (WALKER, 1853) 1 ex. Argentina
Ululodes vetulus (RAMBUR, 1842) 1 ex. Argentina
Ululodes villosus (PALISOT DE BEAUVOIS, 1807) 2 exx. Hispaniola

Berothidae

Lomamyia banksi CARPENTER, 1940 1 ex. USA
Lomamyia flavicornis (WALKER, 1853) 1 ex. USA
Lomamyia hamata (WALKER, 1853) 2 exx. USA
Lomamyia latipennis CARPENTER, 1940 1 ex. USA
Lomamyia squamosa CARPENTER, 1940 2 exx. USA
Lomamyia texana (BANKS, 1897) 1 ex. USA

Chrysopidae

Abachrysa eureka (BANKS, 1931) 2 exx. USA
Nothochrysa californica BANKS, 1892 1 ex. USA

Dilaridae

Nallachus americanus (McLACHLAN, 1881) 2 exx. USA
Nallachus ovalis ADAMS, 1990 1 ex. Brazil

Hemerobiidae

Conchopterella maculata HANDSCHIN, 1955 1 ex. Easter Island
Gayomyia falcata (BLANCHARD, 1851) 1 ex. Argentina
Hemerobius bolivari BANKS, 1910 3 exx. Uruguay, Argentina
Hemerobius conjunctus FITCH, 1855 2 exx. USA
Hemerobius costalis CARPENTER, 1940 1 ex. USA
Hemerobius discretus NAVÁS, 1917 2 exx. USA

<i>Hemerobius humulinus</i> LINNAEUS, 1758	2 exx.	USA
<i>Hemerobius kokaneeanus</i> CURRIE, 1904	1 ex.	USA
<i>Hemerobius nairobicus</i> NAVÁS, 1910	2 exx.	Zimbabwe
<i>Hemerobius pacificus</i> BANKS, 1987	2 exx.	USA
<i>Hemerobius stigma</i> STEPHENS, 1836	2 exx.	USA
<i>Megalomus angulatus</i> CARPENTER, 1940	1 ex.	USA
<i>Megalomus darwini</i> BANKS, 1924	2 exx.	Galapagos Islands
<i>Megalomus fidelis</i> (BANKS, 1897)	2 exx.	USA
<i>Megalomus moestus</i> BANKS, 1895	2 exx.	USA
<i>Megalomus minor</i> BANKS, 1905	2 exx.	USA
<i>Micromus montanus</i> HAGEN, 1886	2 exx.	USA
<i>Micromus linearis</i> HAGEN, 1858	1 ex.	Taiwan
<i>Micromus oblongus</i> KIMMINS, 1935	2 exx.	RSA
<i>Micromus posticatus</i> WALKER, 1853	2 exx.	USA
<i>Micromus subanticus</i> (WALKER, 1853)	2 exx.	USA
<i>Micromus variolosus</i> HAGEN, 1886	1 ex.	USA
<i>Nomerobius psychodoides</i> (BLANCHARD, 1851)	2 exx.	Chile
<i>Nomerobius signatus</i> (HAGEN, 1888)	1 ex.	Chile
<i>Nusalala colombiensis</i> (BANKS, 1910)	2 exx.	Venezuela
<i>Nusalala tesellata</i> (GERSTAECKER, 1888)	1 ex.	Honduras
<i>Sympherobius amicus</i> (FITCH, 1855)	1 ex.	USA
<i>Sympherobius arizonicus</i> BANKS, 1911	1 ex.	USA
<i>Sympherobius barberi</i> (BANKS, 1903)	2 exx.	USA
<i>Wesmaelius coloradensis</i> (BANKS, 1897)	2 exx.	USA
<i>Wesmaelius longifrons</i> (WALKER, 1853)	1 ex.	USA

Ithonidae

<i>Polystoechotes punctata</i> (FABRICIUS, 1793)	1ex.	USA
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Mantispidae

<i>Climaciella brunnea</i> (SAY, 1824)	2 exx.	USA
<i>Dicromantisa interrupta</i> (SAY, 1825)	2 exx.	USA
<i>Dicromantispa sayi</i> BANKS, 1897	2 exx.	USA
<i>Leptomantispa pulchella</i> (BANKS, 1912)	1 ex.	USA
<i>Mantispilla japonica</i> (McLACHLAN, 1875)	1 ex.	Korea
<i>Paramantispa ambusta</i> (ERICHSON, 1839)	2 exx.	Argentina, Brasil
<i>Plega hagenella</i> (WESTWOOD, 1867)	1 ex.	Venezuela
<i>Plega signata</i> (HAGEN, 1877)	2 exx.	USA
<i>Plega banksi</i> REHN, 1939	2 exx.	USA
<i>Plega dactylota</i> REHN, 1939	2 exx.	USA
<i>Therestria aruntae</i> LAMBKIN, 1986	1 ex.	Australia
<i>Therestria rieki</i> LAMBKIN, 1986	1 ex.	Australia
<i>Trichoscelia iridella</i> (WESTWOOD, 1867)	2 exx.	Brasil
<i>Trichoscelia varia</i> (WALKER, 1853)	2 exx.	Uruguay
<i>Zeugomantispa minuta</i> (FABRICIUS, 1775)	2 exx.	USA

Myrmeleontidae

<i>Ripalda withycombei</i> (ESBEN-PETERSEN, 1927)	1ex.	Venezuela
<i>Atricholeon parkeri</i> (STANGE, 1970)	1 ex.	Mexico

<i>Austrogymnocnemia bipunctata</i> (ESBEN-PETERSEN, 1915)	1 ex.	Australia
<i>Austrogymnocnemia nigrescens</i> NEW, 1985	1 ex.	Australia
<i>Austrogymnocnemia pallida</i> NEW, 1985	1 ex.	Australia
<i>Bandidus brevisculus</i> (GERSTAECKER, 1885)	1 ex.	Australia
<i>Bandidus marginalis</i> (BANKS, 1910)	1 ex.	Australia
<i>Brachynemurus hubbardi</i> CURRIE, 1898	4 exx.	USA
<i>Brachynemurus nebulosus</i> (OLIVIER, 1811)	4 exx.	USA
<i>Brachynemurus ramburi</i> BANKS, 1907	1 ex.	USA
<i>Brachynemurus sackeni</i> HAGEN, 1888	4 exx.	USA
<i>Brachynemurus seminolae</i> STANGE, 1970	1 ex.	USA
<i>Brachynemurus versutus</i> (WALKER, 1853)	2 exx.	USA
<i>Chaetoleon pusillus</i> (CURRIE, 1899)	2 exx.	USA
<i>Chaetoleon tripunctatus</i> (BANKS, 1922)	1 ex.	USA
<i>Chaetoleon variabilis</i> BANKS, 1942	1 ex.	USA
<i>Clathroneuria coquilletti</i> (CURRIE, 1898)	4 exx.	USA
<i>Clathroneuria schwarzi</i> (CURRIE, 1903)	4 exx.	USA
<i>Dejuna persimilis</i> (STANGE, 1970)	2 exx.	Mexico
<i>Dejuna mimica</i> (STANGE, 1970)	2 exx.	Mexico
<i>Dendroleon esbenpeterseni</i> MILLER & STANGE, 1999	1 ex.	Taiwan, paratype
<i>Dendroleon obsoletus</i> (SAY, 1839)	2 exx.	USA
<i>Dendroleon speciosus</i> BANKS, 1905	2 exx.	USA
<i>Dimarella angusta</i> (BANKS, 1908)	2 exx.	Brazil
<i>Dimarella blohmi</i> STANGE, 1989	2 exx.	Venezuela
<i>Dimarella mixteca</i> MILLER, 1989	2 exx.	Mexico, paratype
<i>Dimarella praedator</i> (WALKER, 1853)	1 ex.	Brasil
<i>Dimarella psammophila</i> STANGE, 1963	1 ex.	Mexico
<i>Dimares elegans</i> (PERTY, 1833)	4 exx.	Argentina, Bolivia
<i>Distoplectron gerstaeckeri</i> (ESBEN-PETERSEN, 1918)	2 exx.	Australia
<i>Elicura litigator</i> NAVÁS, 1911	2 exx.	Chile
<i>Eremoleon anomalus</i> (RAMBUR, 1842)	2 exx.	Venezuela
<i>Eremoleon cerverai</i> (NAVÁS, 1921)	2 exx.	Hispaniola
<i>Eremoleon inca</i> MILLER & STANGE, 2016	1 ex.	Peru, paratype
<i>Eremoleon macer</i> (HAGEN, 1861)	2 exx.	Mexico, Honduras
<i>Eremoleon monagas</i> MILLER & STANGE, 2016	2 exx.	Venezuela, paratypes
<i>Eremoleon nigribasis</i> BANKS, 1920	2 exx.	USA
<i>Eremoleon pallens</i> BANKS, 1941	2 exx.	USA
<i>Eremoleon pygmaeus</i> MILLER & STANGE, 2016	3 exx.	Venezuela, paratypes
<i>Euptilon arizonense</i> (BANKS, 1935)	2 exx.	USA
<i>Euptilon sinuatum</i> (CURRIE, 1903)	2 exx.	USA
<i>Froggattisca anicis</i> NEW, 1985	1 ex.	Australia
<i>Froggattisca testacea</i> (ESBEN-PETERSEN, 1923)	1 ex.	Australia
<i>Froggattisca tipularis</i> (GERSTAECKER, 1885)	1 ex.	Australia
<i>Furgella intermedia</i> MARKL, 1953	4 exx.	RSA, Namibia
<i>Glenoleon osmyloides</i> (GERSTAECKER, 1885)	1 ex.	Australia
<i>Glenoleon pulchellus</i> (RAMBUR, 1842)	1 ex.	Australia
<i>Glenurus gratus</i> (SAY, 1839)	2 exx.	USA
<i>Glenurus luniger</i> GERSTAECKER, 1894	2 exx.	USA
<i>Heoclisia acuta</i> (KIMMINS, 1939)	1 ex.	Australia

<i>Heoclisia fundata</i> (WALKER, 1853)	2 exx.	Australia
<i>Incamoleon punctipennis</i> (BANKS, 1910)	2 exx.	Venezuela
<i>Indopalpares pardus</i> (RAMBUR, 1842)	2 exx.	India
<i>Jaffuelia chilensis</i> NAVÁS, 1918	2 exx.	Chile
<i>Macronemurus euanthe</i> BANKS, 1911	2 exx.	RSA
<i>Maracandula apicalis</i> (BANKS, 1901)	1 ex.	Mexico
<i>Menkeleon bellulus</i> (BANKS, 1905)	2 exx.	USA
<i>Mestressa subfasciata</i> (BANKS, 1913)	2 exx.	Australia
<i>Mexoleon papago</i> (CURRIE, 1899)	4 exx.	USA
<i>Mossega indecisa</i> (BANKS, 1913)	1 ex.	Australia
<i>Myrmeleon acer</i> WALKER, 1853	2 exx.	Australia
<i>Myrmeleon comptus</i> GERSTAECKER, 1885	1 ex.	Australia
<i>Myrmeleon croceicollis</i> GERSTAECKER, 1885	1 ex.	Australia
<i>Myrmeleon houstoni</i> NEW, 1985	2 exx.	Australia
<i>Myrmeleon mexicanus</i> BANKS, 1903	4 exx.	USA
<i>Myrmeleon pallidus</i> (ESBEN-PETERSEN, 1918)	2 exx.	Australia
<i>Myrmeleon pictifrons</i> GERSTAECKER, 1885	2 exx.	Australia
<i>Myrmeleon regularis</i> (ESBEN-PETERSEN, 1918)	2 exx.	Australia
<i>Myrmeleon rusticus</i> HAGEN, 1861	2 exx.	USA
<i>Myrmeleon tenuipennis</i> RAMBUR, 1842	3 exx.	India
<i>Nadus overlaeti</i> (NAVÁS, 1931)	2 exx.	Malawi, Zimbabwe
<i>Obus arenosus</i> NAVÁS, 1912	1 ex.	RSA
<i>Obus elizabethae</i> (BANKS, 1911)	1 ex.	RSA
<i>Palparidius concinnus</i> PÉRINGUEY, 1910	4 exx.	RSA
<i>Palpares contrarius</i> (WALKER, 1853)	1 ex.	India
<i>Paranthaclisis congener</i> (HAGEN, 1861)	4 exx.	USA
<i>Paranthaclisis hageni</i> (BANKS, 1899)	2 exx.	USA
<i>Periclystus aureolatus</i> TILLYARD, 1916	1 ex.	Australia
<i>Protoplectron venustum</i> GERSTAECKER, 1885	1 ex.	Australia
<i>Purenleon abruptus</i> STANGE, 2002	1 ex.	Mexico
<i>Purenleon bistictus</i> (HAGEN, 1861)	2 exx.	USA
<i>Purenleon cavei</i> MILLER & STANGE, 2014	1 ex.	Honduras, paratype
<i>Purenleon clavatus</i> (NAVÁS, 1914)	1 ex.	Venezuela
<i>Purenleon connexus</i> (BANKS, 1920)	2 exx.	USA
<i>Purenleon inscriptus</i> (HAGEN, 1861)	1 ex.	USA
<i>Purenleon minor</i> (BANKS, 1927)	2 exx.	USA
<i>Purenleon nunezi</i> MILLER & STANGE, 2011	2 exx.	Hispaniola, paratypes
<i>Purenleon parallelus</i> (BANKS, 1935)	1 ex.	Mexico
<i>Purenleon reductus</i> (BANKS, 1941)	1 ex.	Cayman Islands
<i>Purenleon toltecus</i> MILLER & STANGE, 2014	1 ex.	Mexico, paratype
<i>Purenleon woodruffi</i> MILLER & STANGE, 2011	1 ex.	Dominican Rep., paratype
<i>Scotoleon carrizonus</i> (HAGEN, 1888)	4 exx.	USA
<i>Scotoleon intermedius</i> (CURRIE, 1903)	4 exx.	USA
<i>Scotoleon longipalpis</i> (HAGEN, 1888)	4 exx.	USA
<i>Tomatares citrinus</i> (HAGEN, 1853)	1 ex.	RSA
<i>Tytholeon puerilis</i> ADAMS, 1957	2 exx.	USA
<i>Vella americana</i> (DRURY, 1773)	2 exx.	USA

<i>Vella eggerti</i> ESBEN-PETERSEN, 1928	1 ex.	Bahamas
<i>Vella fallax</i> (RAMBUR, 1842)	2 exx.	USA
<i>Xantholeon montanus</i> NEW, 1985	1 ex.	Australia
Nemopteridae		
<i>Amerocroce boliviana</i> MANSELL, 1983	1 ex.	Bolivia
<i>Austrocroce mira</i> (McKEOWN, 1939)	1 ex.	Australia
<i>Austrocroce occidens</i> MANSELL, 1983	1 ex.	Australia
<i>Moranida manselli</i> MILLER & STANGE, 1989	1 ex.	Venezuela, paratype
<i>Nemeura gracilis</i> (HAGEN, 1886)	3 exx.	RSA
<i>Nemia costalis</i> (WESTWOOD, 1836)	1 ex.	RSA
<i>Nemopterella africana</i> (LEACH, 1815)	2 exx.	RSA
<i>Stenorrhachus walkeri</i> (McLACHLAN, 1885)	2 exx.	Chile
<i>Stenorrhachus chilensis</i> MILLER & STANGE, 2012	1 ex.	Chile, paratype
<i>Tjederia brevicornis</i> MANSELL, 1981	1 ex.	RSA

Osmylidae

<i>Osmylus decoratus</i> NAKAHARA, 1914	1 ex.	Japan
<i>Spilosmylus asahinai</i> NAKAHARA, 1966	1 ex.	Taiwan

Psychopsidae

<i>Cabralis gloriosus</i> NAVÁS, 1912	1 ex.	RSA
<i>Silveira marshalli</i> (McLACHLAN, 1902)	1 ex.	RSA

Sisyridae

<i>Climacia areolaris</i> (HAGEN, 1861)	2 exx.	USA
<i>Climacia chapini</i> PARFIN & GURNEY, 1956	1 ex.	USA, Arizona
<i>Sisyra apicalis</i> BANKS, 1908	2 exx.	USA
<i>Sisyra terminalis</i> CURTIS, 1854	1 ex.	Switzerland
<i>Sisyra vicaria</i> (WALKER, 1853)	2 exx.	USA

Raphidioptera

Inocellidae

<i>Negha inflata</i> (HAGEN, 1861)	2 exx.	USA
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Raphidiidae

<i>Agulla bicolor</i> (ALBARDA, 1891)	2 exx.	USA
<i>Agulla modesta</i> CARPENTER, 1936	2 exx.	USA

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