

Catalogue of American Nycteribiidae (Diptera, Hippoboscoidea)

Gustavo Gracioli¹, Analía G. Autino² & Guillermo L. Claps³

¹ Universidade Federal de Mato Grosso do Sul, Centro de Ciências Biológicas e da Saúde, Departamento de Biologia, Cidade Universitária s/n, Cidade Universitária 79070-900 Campo Grande-MS, Brasil. Caixa-Postal: 549. ggracioli@yahoo.com.br

² PIDBA (Programa de Investigaciones de Biodiversidad Argentina). agautino@yahoo.com.ar

³ Instituto Superior de Entomología "Dr. Abraham Willink." guillermolclaps@csnat.unt.edu.ar

^{2,3} Facultad de Ciencias Naturales e Instituto Miguel Lillo – Universidad Nacional de Tucumán. Miguel Lillo 205. San Miguel de Tucumán (4000), Argentina.

ABSTRACT. Catalogue of American Nycteribiidae (Diptera, Hippoboscoidea). A catalogue of the family Nycteribiidae (Diptera, Hippoboscoidea) of the New World is presented. Two genera and 52 species are listed in alphabetical order. Each genus account lists synonymies and type species, and each species account lists type locality and host, disposition of type material, geographic and host distribution, and a detailed bibliography.

KEYWORDS. Bat fly; Chiroptera; New World; Taxonomy.

RESUMO. Catálogo dos Nycteribiidae Americanos (Diptera, Hippoboscoidea). Um catálogo da família Nycteribiidae (Diptera, Hippoboscoidea) no Novo Mundo é apresentado. Dois gêneros e 52 espécies são listados em ordem alfabética. São disponibilizados abaixo de cada gênero, sinônimos e espécies-tipo e sob cada espécie, informações sobre localidade-tipo, hospedeiro-tipo, acrônimos da instituição onde o material-tipo está depositado, distribuição geográfica, hospedeiros e detalhada referências bibliográficas.

PALAVRAS-CHAVES. Chiroptera; mosca ectoparasita de morcego; Novo Mundo; taxonomia.

Nycteribiidae is a small cosmopolitan family of Diptera with about 286 species divided into three subfamilies: Archinycteribiinae (from Malaysia to the Bismarck Archipelago), Cyclopodiinae (paleotropical areas) and Nycteribiinae (worldwide) (Maa, 1989; Claps & Autino, in press). Only two genera of Nycteribiinae, the endemic *Hershkovitzia* Guimarães & D'Andretta, 1956 and the cosmopolitan *Basilina* Miranda-Ribeiro, 1903, are found in the New World. The American *Basilina* comprise 52 species divided into five morphological groups based on female characters (Table I). *Basilina flava* and *B. rugosa* are not so classified because the females are unknown. There are four described species of *Hershkovitzia*.

Guimarães & D'Andretta (1956) considered that the American *Basilina* does not form a monophyletic group. They have hypothesized two dispersal events to North America from Old World. One event originated the species of *Forcipata* and *Ferruginea* groups (female tergite 2 with two lobes), having bats of genus *Myotis* Kaup, 1829 as host, and the another originated *Antrozoi*, *Speiseri* and *Juquiensis* groups (female tergite 2 without lobes) with original host *Antrozous* Allen, 1862 bats. Theodor (1967) favoured a common origin of American *Basilina* with center of origin in the Oriental Region, but he did not exclude the possibility that the *Antrozoi* group belonged to other lineage. Alternatively Dittmar *et al.* (2006) indicated that *Basilina* had origin in Oriental Region and dispersal to Neotropical Region. *Hershkovitzia* is considered the most basal genus of the family not related with *Basilina* (Guimarães & D'Andretta, 1956).

Most species of *Basilina* are associated with bats of the family Vespertilionidae, especially of the genus *Myotis*.

Hershkovitzia is found only on species of Thyropteridae.

The principal monograph on American Nycteribiidae was the revision by Guimarães & D'Andretta (1956). The most recent catalogue of American Nycteribiidae was that of Guimarães (1968), and included only Neotropical species. The catalog presented original descriptions, synonymies and type localities. Here we provide extensive information for each of the 52 American species of Nycteribiidae, including the type locality and type host, the institution where the type material is deposited and geographic and host distributions.

MATERIAL AND METHODS

This catalogue includes papers published prior to September, 9th 2006. Unfortunately, we were unable to examine all papers listed in this catalogue. For these cases, we cite information from Maa (1971). The papers not examined are indicated by an asterisk in the References. Morphologic nomenclature follows Peterson & Wenzel (1987). Host nomenclature and classification follows Simmons (2005). The great number of papers cited specimens collected without technicals to avoid cross-host contamination of bat flies. Therefore some host records are resulted to contamination or stragglings, dubious and erroneous hosts. These hosts are indicated by an "+". Unidentified fly species and those without association to a specific name are not included. Abbreviations for the institutions where types are located generally conform to Samuelson & Evenhuis (2004), and are as follows:

AMNH – USA, New York, American Museum of Natural History.

BMNH – United Kingdom, London, The Natural History

Museum [formerly British Museum (Natural History)].

BPBM – USA, Hawaii, Honolulu, Bernice P. Bishop Museum.

CAS – USA, California, San Francisco, California Academy of Sciences.

CISC – USA, California, Berkeley, California Insect Survey see EMEC.

CMNH – USA, Pennsylvania, Pittsburgh, Carnegie Museum of Natural History.

CNC – Canada, Ontario, Ottawa, Canadian National Collection of Insects.

DZUP – Brazil, Paraná, Curitiba, Universidade Federal do Paraná, Coleção de Entomologia Padre Jesus Santiago Moure.

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

FIOC – Brazil, Rio de Janeiro, Rio de Janeiro, Fundação Instituto Oswaldo Cruz.

FMNH – USA, Illinois, Chicago, Field Museum of Natural History.

IMR – Argentina, Tucumán, Instituto de Medicina Regional. Universidad Nacional de Tucumán.

IZAC – Cuba, Habana [=Havana], Academia de Ciencias de Cuba, Instituto de Zoología.

KUPC – Karel Hürka's personal collection.

LACM – USA, Los Angeles, Natural History Museum of Los Angeles County.

MACN – Argentina, Buenos Aires, Museo Argentino de Ciencias Naturales Bernardino Rivadavia.

MCZ – USA, Massachusetts, Cambridge, Harvard University, Museum of Comparative Zoology.

MIZT – Italy, Torino, Istituto e Museo di Zoologia della Università di Torino.

MNRJ – Brazil, Rio de Janeiro, São Cristovão, Universidade do Rio Janeiro, Museu Nacional.

MPEG – Brazil, Pará, Belém, Museu Paraense Emílio Goeldi.

MSNG – Italy, Genova, Museo Civico di Storia Naturale "Giacomo Doria"

MUSM – Peru, Lima, Universidad Nacional Mayor de San Marcos, Museo de Historia Natural.

MZSP – Brazil, São Paulo, São Paulo, Museu de Zoologia da Universidade de São Paulo.

NMW – Austria, Wien, Naturhistorisches Museum Wien.

UCV – Venezuela, Caracas, Universidad Central de Venezuela.

UNC – Argentina, Córdoba, Universidad Nacional de Córdoba, Facultad de Ciencias Exactas, Físicas y Naturales.

USNM – USA, Washington D.C., National Museum of Natural History [formerly United States National Museum]

Basilía Miranda-Ribeiro, 1903

Basilía Miranda-Ribeiro, 1903: 177. Speiser, 1908: 437 (synonymization in *Cyclopodia*). Ferris, 1924: 191 (synopsis of American species). Curran, 1935: 2 (key). Del Ponte, 1944: 123 (key for American species). Guimarães, 1946: 18 (taxonomic revision of South American species). Guimarães & D'Andretta, 1956: 1 (synopsis of American species). Maa, 1965: 379 (checklist). Peterson, 1960: 31 (key for Nearctic species). Guimarães, 1966:

393 (key for Panamanian species). Wenzel & Tipton, 1966: 704 (ecological aspects). Theodor, 1967: 192 (diagnosis of morphological groups), 247 (key for females), 250 (key for males); Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 1 (catalogue). Peterson, 1971: 1 (key for Costa Rican species). Guimarães, 1972: 8 (key for Venezuelan species). Graciolli & Carvalho, 2001: 45 (pictorial key for Paraná species). Graciolli, 2004: 972 (key for South Brazilian species, diagnosis). Type species. *Basilía ferruginea* Miranda-Ribeiro, 1903 (original designation). *Pseudelytromyia* Miranda-Ribeiro, 1907: 233. Type species. *Pseudelytromyia speiseri* Miranda-Ribeiro, 1907 (monotypy). Maa, 1965: 380 (new status, subgenus). *Cyclopodia* Brèthes, 1913: 297. *Guimaráesia* [sic] Schuurmans-Stekhoven Jr., 1951a: 109; Guimarães & D'Andretta, 1956: 19 (synonymization in *Basilía*). Type species. *Guimaráesia* [sic] *guimaráesi* Schuurmans-Stekhoven, Jr., 1951a (original designation).

***Basilía anceps* Guimarães & D'Andretta, 1956**

Basilía anceps Guimarães & D'Andretta, 1956: 113, figs. 188 (detail of pustulate setae on abdominal connexivum female), 189 (larvae), 190 (female abdomen, dorsal view), 191 (female abdomen, ventral view), 192 (female thoracic sternum). Type locality. Colombia, Caquetá, La Tagua, Tres Troncos, Rio Caquetá. Type host. *Myotis nigricans nigricans* (Schinz, 1821). Holotype female deposited at FMNH. Paratypes deposited at DZUP, FMNH.

Maa, 1965: 380 (subgenus *Pseudelytromyia*). Guimarães, 1966: 400 (host and geographic records, male description), figs. 35B (male terminalia, dorsal view), C (male terminalia, ventral view). Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 1 (catalogue). Guerrero, 1996: 670 (redescription), 674 (*juquiensis* group), figs. 2B (female abdominal connexivum, lateral view), C (female abdominal tergite 2), D (female abdominal sternites 4-5, omitting setae of sternite 5), 3C (male genitalia, lateral view), D (spiniform setae of sternite 5, omitting other setae). Graciolli, 2001: 308 (checklist). Miller & Tschakpa, 2001 (host and geographic records), figs. (female habitus, dorsal view; female abdomen, dorsal view; female habitus, ventral view; male habitus, dorsal view; male habitus, ventral view). Graciolli & Aguiar, 2002: 178 (host and geographic records). Ter Hofstede *et al.*, 2004: 621 (host and geographic records and prevalence). Hernández-Meza *et al.*, 2005: 2 (citation).

Basilía juquiensis anceps, Theodor, 1967: 279 (new status, subspecies).

Distribution. Belize (Orange Walk), Costa Rica (La Selva), Panama (Los Santos, San Blas), Colombia (Caquetá), Venezuela (Amazonas, Bolívar), Peru (Huánuco), Brazil (Distrito Federal).

Hosts. *Myotis albescens* (E. Geoffroy, 1806), *M. elegans* Hall, 1962, *M. keaysi* J. A. Allen, 1914, *M. nigricans*, *M. riparius* Handley, 1960, *M. simus* Thomas, 1901, **Rhogessa io* Thomas, 1903 (Vespertilionidae).

***Basilía andersoni* Peterson & Maa, 1970**

Basilía andersoni Peterson & Maa, 1970a: 1481, figs. 1 (female thoracic sternum, omitting discal setae), 2 (right female femur 3, anterior surface), 3 (right female tibia 3, anterior surface), 4 (female abdomen, dorsal view), 5 (female abdominal sternite 2, omitting ctenidium), 6 (female terminalia, ventral view), 7 (hypoproct), 8 (anal sclerite and adanal plates), 9 (male abdomen, dorsal view), 10 (male sternite 2, omitting ctenidium), 11 (male sternite 5), 12 (posterior margin of male sternite 5), 13 (male terminalia, ventral view), 14 (basal arc of genitalia), 15 (deck plate of genitalia), 16 (aedeagus, lateral view), 17 (postgonites, lateral view), 18 (male right femur, anterior view). Type locality. Uruguay, Departamento Tacuarembó, 40 km NW Tacuarembó. Type host. *Myotis nigricans*,

reidentified by Enrique M. González as *Myotis riparius* (Autino *et al.*, 2004: 82). The *Eptesicus brasiliensis* (Desmarest) specimens, host of some paratypes, were reidentified as *Eptesicus furinalis* (d'Orbigny) (Autino *et al.* 2004: 82). Holotype female deposited at AMNH. Paratypes deposited at AMNH, BPBM, CNC (see commentary in *Basilina astochia*), FMNH, MZSP, USNM.

Gracioli & Carvalho, 2001: 34 (diagnosis, distribution and host), figs. 1 (female abdomen, dorsal view), 2 (female abdomen, ventral view). Gracioli, 2001: 308 (checklist). Gracioli, 2004: 974 (diagnosis, host and geographic records), figs. 9 (female abdomen, dorsal view, redrawn from Gracioli & Carvalho (2001)), 22 (female abdomen, ventral view, redrawn from Peterson & Maa (1970a)). Gracioli & Carvalho (2001)), 36 (map of distribution). Autino *et al.*, 2004: 82 (host and geographic records). Bertola *et al.*, 2005: 27 (host and geographic records and ecological aspects). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State).

Distribution. Brazil (Paraná, Rio Grande do Sul, São Paulo) and Uruguay (Artigas, Tacuarembó).

Hosts. *Eptesicus furinalis* (d'Orbigny, 1847), *Histiotes velatus* (I. Geoffroy, 1824), *Myotis albescens*, *M. levis* (I. Geoffroy, 1824), *M. nigricans*, *M. riparius*, *Myotis* sp. (Vespertilionidae).

Basilina anomala Guimarães & D'Andretta, 1956

Basilina anomala Guimarães & D'Andretta, 1956: 67, figs. 83 (female genital sclerite), 95 (apex of female terminal abdominal segment, dorsal view), 96 (apex of female head, dorsal view), 97 (mentum and labelum, ventral view), 98 (pustulate setae of female abdominal connexivum), 99 (female abdomen, dorsal view), 100 (female abdomen, ventral view). Type locality. Mexico, Chiapas, Huehuetan. Type host. *Rhogeessa tumida* H. Allen, 1866. Holotype female deposited at FMNH. Paratypes deposited at FMNH, MZSP. Maa, 1965: 380 (subgenus *Basilina*). Theodor, 1967: 258 (diagnosis, distribution, host). Guimarães, 1968: 1 (catalogue). Guimarães, 1972: 1 (host and geographic records), 8 (key for females). Guimarães, 1977: 221 (host and geographic records), fig. 1 (female abdomen, dorsal view). Vonhof, 2000: 2 (citation). Gracioli, 2001: 308 (checklist).

Distribution. Mexico (Chiapas), Guatemala (Solá), Venezuela (Falcón, Miranda).

Host. *Rhogeessa tumida* (Vespertilionidae).

Basilina antrozoi (Townsend, 1893)

Nycteribia antrozoi Townsend, 1893: 79. Type locality. USA, New Mexico, Las Cruces. Type host. *Antrizous fallidus* (sic) (= *Antrozous pallidus* (Le Conte, 1856)). Holotype male disposition undetermined. Aldrich, 1905: 657 (catalogue). Speiser, 1907: 105 (checklist).

Penicillidia antrozoi, Ferris, 1916: 434 (redescription) plate XII, figs. 1 (male habitus, dorsal and ventral views), 2 (female abdomen, dorsal and ventral views). Cole, 1927: 454 (citation).

Basilina antrozoi, Ferris, 1924: 196 (host and geographic records). Smith, 1934: 62 (host and geographic records). Curran, 1935: 2 (key, citation). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 117 (citation), 124 (key). Eads & Menzies, 1948: 244 (host and geographic records). Augustson & Wood, 1953: 50 (host and geographic records). Orr, 1954: 234, 235 (host and geographic records). Guimarães & D'Andretta, 1956: 117 (host and geographic records), figs. 182 (hypoproct), 195 (female abdomen, dorsal view), 196 (apex of female head, dorsal view),

Table I. Morphological groups of the American *Basilina* by Theodor (1967) and Guerrero (1996). Parenthetical Roman numerals indicate morphological groups proposed by Guimarães & D'Andretta (1956).

Species Group	Species
<i>Antrozoi</i> (I)	<i>antrozoi</i> , <i>pizonychus</i>
<i>Speiseri</i> (II+III)	<i>andersoni</i> , <i>astochia</i> , <i>carteri</i> , <i>constricta</i> , <i>costaricensis</i> , <i>currani</i> , <i>dubia</i> , <i>dunni</i> , <i>ferrisi</i> , <i>guimaraesi</i> , <i>hughscotti</i> , <i>lindolphoi</i> , <i>mirandariberoi</i> , <i>peruvia</i> , <i>speiseri</i> , <i>travassosi</i> , <i>tuttlei</i> , <i>typhlops</i>
<i>Juquiensis</i> (IV)	<i>anceps</i> , <i>juquiensis</i> , <i>manu</i>
<i>Forcipata</i> (V+VI)	<i>anomala</i> , <i>forcipata</i> , <i>jellisoni</i>
<i>Ferruginea</i> (VII)	<i>bellardii</i> , <i>bequaerti</i> , <i>boardmani</i> , <i>corynorhini</i> , <i>cubana</i> , <i>ferruginea</i> , <i>handleyi</i> , <i>insularis</i> , <i>mimoni</i> , <i>neamericana</i> , <i>ortizi</i> , <i>plaumanni</i> , <i>producta</i> , <i>quadrosae</i> , <i>rondanii</i> , <i>ruiae</i> , <i>silvae</i> , <i>tiptoni</i> , <i>traubi</i> , <i>wenzeli</i>

197 (detail of female abdominal pustulate setae), 200 (female abdomen, ventral view), 201 (female terminal abdominal segment, dorsal view), 204 (male abdomen, dorsal and ventral view), 205 (posterior margin of male sternite 5), 208 (male genitalia, lateral view). Peterson, 1960: 31 (female key), 32 (male key and host and geographic records). Bradshaw & Ross, 1961: 111 (host and geographic records). Stock, 1961: 118 (geographic record). Peterson, 1963: 93 (host and geographic records). Maa, 1965: 380 (subgenus *Basilina*). Wenzel, 1965: 922 (catalogue). Theodor, 1967: 254 (diagnosis, distribution, host), figs. 411 (aedeagus and postgonite, lateral view), 443 (female abdomen, dorsal view), 444 (female terminalia, ventral view), 445 (female abdominal sternite 2). Guimarães, 1968: 1 (catalogue). Tipton & Saunders, 1971: 11 (citation). Whitaker, Jr. & Easterla, 1975: 222 (citation), 223 (key). Palmer & Gunier, 1975: 531 (host and geographic records). Whitaker, Jr. & Easterla, 1975: 245, 246, 250 (host and geographic records). Webb & Loomis, 1977: 79, 105 (checklist). Elzinga & Brose, 1986: 186 (proboscis description), figs 110 (head, lateral view), 111 (detail of labelum, lateral view). Peterson & Wenzel, 1987: figs. 112.2 (female head, lateral view), 112.3 (female habitus, omitting right legs, dorsal view), 112.4 (female thorax and abdomen, ventral view), 112.5 (female terminalia, posteroventral view). Wilkins, 1989: 5 (citation). Richerson *et al.*, 1992: 12 (host and geographic records). Moreno-Valdez, 1998: 13 (host and geographic records). Chilton *et al.*, 2000: 192 (host and geographic records). Gracioli, 2001: 308 (checklist). Ritz *et al.*, 2001: 402 (host and geographic records and parasitological indices).

Basilina antrozoi (sic), Hansen, 1964: 79 (host and geographic records). *Basilina antrozoo* (sic), Elzinga & Brose, 1986: 154 (proboscis measurement).

Distribution. Canada (British Columbia), USA (Arizona, California, Kansas, Louisiana, New Mexico, Oklahoma, Oregon, Texas, Utah), Mexico (Baja California, Coahuila, Guerrero (dubious record), Nuevo Leon).

Hosts. *Leptonycteris nivalis* (Saussure, 1860) (Phyllostomidae), *Antrozous pallidus*, *Antrozous* sp., *Corynorhinus rafinesquii* (Lesson, 1827), *Lasiurus cinereus* (Beauvois, 1796), *Myotis californicus* (Audubon & Bachman, 1842) (Vespertilionidae), *Tadarida brasiliensis* (I. Geoffroy, 1824) (Molossidae).

Basilina astochia Peterson & Maa, 1970

Basilina astochia Peterson & Maa, 1970b: 1519, figs. 1 (female thoracic sternum, omitting discal setae), 2 (left female femur 3, anterior surface), 3 (left female tibiae 3, anterior surface), 4 (female abdomen, dorsal view), 5 (female abdominal sternite 2, omitting ctenidium), 6 (female terminalia, ventral view), 7 (hypoproct, anal sclerite and adanal plates, ventral view), 8 (hypoproct and anal sclerite, ventral view). Type locality. Colombia, Santander, El Hoyo de Pajaros near San Gil. Type host. *Vampyrops helleri* Peters, 1866 (= *Platyrrhinus helleri*). Holotype female disposition undetermined. According to Peterson & Maa (1970b), the holotype was deposited at CNC, but the type cannot be located (James E. O'Hara, Invertebrate Biodiversity Agriculture and Agri-Food Canada, personal communication).

Webb & Loomis, 1977: 79, 112 (checklist). Marinkelle & Grose, 1981 (as *Basilina* sp. n.): 13 (host and geographic records). Ferrel & Wilson, 1991: 3 (citation). Gracioli, 2001: 309 (checklist).

Distribution. Colombia (Santander).

Host. *Platyrrhinus helleri* (Phyllostomidae).

Basilina bellardii (Rondani, 1878)

Nycteribia bellardii Rondani, 1878: 152. Type locality. "America meridionalis inventa" (Rondani, 1878), lectotype Mexico, Veracruz, Córdoba. Type host. Unknown. Lectotype female designated by Guimarães & D'Andretta (1956) deposited at MIZT.

Miranda-Ribeiro, 1903: 176 (citation).

Nycteribia mexicana Bigot, 1885: 245, Type locality. Mexico. Type host. Unknown. Holotype female deposited at BMNH.

Speiser, 1902: 172 (redescription). Aldrich, 1905: 658 (catalogue).

Penicillidia mexicana, Speiser, 1902: 172. Aldrich, 1905: 658 (catalogue). Speiser, 1907: 105 (checklist).

Basilina mexicana, Ferris, 1924: 195 (citation). Stiles & Nolan, 1931: 648. Curran, 1935: 4 (cited). Scott, 1936: 504 (designation of lectotype and taxonomic discussion). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation). Schuurmans-Stekhoven, Jr., 1951a: 112 (citation).

Basilina mexicana mexicana, Guimarães, 1946: 14, 28 (part, citation).

Basilina bellardii, Scott, 1936: 497. Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Guimarães & D'Andretta, 1956: 56 (redescription, lectotype designation), figs. 60 (female abdomen, dorsal view), 61 (female abdomen, ventral view), 62 (female terminal abdominal segment, dorsal view), 63 (pustulate setae of female sternites 3 and 4), 64 (apex of female head, dorsal view), 65 (posterior margin of female mesonotum), 66 (larva), 67 (female abdomen of type the *Basilina mexicana* Bigot, dorsal view), 68 (female abdomen of type the *Basilina mexicana* Bigot, ventral view). Maa, 1965: 380 (subgenus *Basilina*). Theodor, 1967: 261 (diagnosis, distribution, host), figs. 453 (female abdomen, dorsal view), 454 (female terminalia, ventral view). Guimarães, 1968: 1 (catalogue). Webb & Loomis, 1977: 79, 98, 108 (checklist). Ortega & Castro-Arellano, 2001: 5 (citation). Gracioli, 2001: 309 (checklist).

Distribution. Mexico (Veracruz).

Host. Unknown.

Basilina bequaerti Guimarães & D'Andretta, 1956

Basilina bequaerti Guimarães & D'Andretta, 1956: 37, figs 18 (female abdomen, dorsal view), 19 (female abdomen, ventral view), 20 (male abdomen, dorsal and ventral views), 21 (female terminal abdominal segment, dorsal view), 22 (detail of male abdominal sternite 5); 23 (posterior elevation of female mesonotum), 24 (anterior margin of female head, dorsal view), 24a (posterior margin of female abdominal sternite 7), 56 (male genitalia, lateral view);

77 (anal sclerite and hypoproct). Type locality. Paraguay, Sapucaý. Type host. *Histiopus dorianus* (= *Eptesicus brasiliensis* (Desmarest, 1819)). Holotype female deposited at BMNH. Paratypes deposited at BMNH, DZUP, FMNH, MCZ.

Bequaert, 1942 (as *Basilina* sp.): 84 (geographic record). Hürka, 1964: 77 (host and geographic records). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 262 (diagnosis, distribution, host), figs. 418 (aedeagus and postgonite, lateral view), 433 (hypoproct, anal sclerite and adanal plates), 455 (female abdomen, dorsal view), 456 (female terminalia, ventral view). Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 2 (catalogue). Guimarães, 1972: 2 (citation), 8 (key for females). Webb & Loomis, 1977: 79, 107 (checklist). Alonso-Mejía & Medellín, 1991: 3 (citation). Gracioli, 2001: 309 (checklist). Gracioli *et al.*, 2006: 39 (host and geographic records, parasitological indices). Gracioli *et al.*, 2006: 4 (host and geographic records).

Distribution. Colombia (Tolima), Venezuela (río Orinoco), Brazil (Mato Grosso do Sul), Paraguay (Concepción, Cordillera, Paraguari).

Hosts. *Micronycteris megalotis* (Gray, 1842) (Phyllostomidae), *Eptesicus brasiliensis*, *E. furinalis* (Vespertilionidae), *Molossus molossus* (Pallas, 1766) (Molossidae).

Basilina boardmani Rozeboom, 1934

Basilina boardmani Rozeboom, 1934: 315, fig. (female habitus, dorsal view, legs omitted). Type locality. USA, Florida, Gainesville. Type host. *Myotis austroriparius* (Rhoads, 1897). Holotype female and paratype deposited at USNM.

Scott, 1936: 497. Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Morlan, 1952: 84 (host frequency and abundance). Parmelee, 1955: 322 (host and geographic records). Guimarães & D'Andretta, 1956: 46, figs. 34 (female abdomen, dorsal view), 35 (female abdomen, ventral view), 36 (male abdomen, dorsal and ventral view), 37 (female terminal abdominal segment, dorsal view), 38 (posterior margin of male abdominal sternite 5), 41 (pustulate setae of female sternite 3), 43 (pustulate setae of female abdominal sternite 4), 45 (posterior margin of female head, dorsal view), 46 (posterior margin of female mesonotum), 52 (larva), 59 (male genitalia, lateral view), 78 (hypoproct). Rice, 1957: 31 (host and geographic records). Peterson, 1960: 31 (female key), 32 (male key), 33 (host and geographic records), figs. 1 (female abdomen, dorsal view taken from Guimarães and D'Andretta, 1956), 2 (female abdomen, ventral view taken from Guimarães and D'Andretta, 1956), 15 (posterior margin of female mesonotum taken from Guimarães and D'Andretta, 1956). Peterson, 1963: 94 (citation). Maa, 1965: 381 (subgenus *Basilina*). Wenzel, 1965: 922 (catalogue). Theodor, 1967: 263 (diagnosis, host and geographic records), figs. 417 (aedeagus and postgonite, lateral view), 457 (female abdomen and posterior process of mesonotum, dorsal view), 458 (female terminalia, ventral view). Whitaker, Jr. & Easterla, 1974: 222 (citation), 223 (key). Foster, 1979: 466 (host and geographic records). Jones & Manning, 1989: 3 (citation). Hobson, 2000: 291 (host and geographic records). Reeves & Reeves, 2000: 508 (puparium description), figs. 1 (puparium, dorsal view), 2 (puparium showing spiracular trunks, dorsal view). Gracioli, 2001: 309 (checklist). Reeves, 2001: 83 (geographic record). Ritzi & Clark, 2001: 136 (host and geographic records).

Basilina boardmani (sic), Del Ponte, 1944: 118 (citation), 123 (key). Schuurmans-Stekhoven, Jr., 1951a: 112 (citation).

Distribution. USA (Florida, Georgia, Illinois, North Carolina, South Carolina, Virginia).

Hosts. *Myotis austroriparius*, *M. lucifugus* (Le Conte, 1831) (Vespertilionidae).

Basilia carteri Scott, 1936

Basilia carteri Scott, 1936: 498, figs. 9 (female habitus, omitting legs, dorsal and ventral view), 10 (leg 1, anterior view). Type locality. Paraguay, Boquerón, Mathlawaiya (23° 25'S, 58° 19'W). Type host. *Molossops temminckii* (Burmeister, 1854). Holotype female and paratypes deposited at BMNH.

Scott, 1940: 60 (redescription, host and geographic records), fig. 4 (male abdomen, ventral view). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Guimarães, 1946: 49 (redescription), figs. 60 (female habitus dorsal and ventral views, omitting legs), 61 (anterior margin of the female head, dorsal view), 62 (female femur, tibia and tarsus 1, anterior view), 63 (female femur, tibia and tarsus 2, anterior view). Schuurmans-Stekhoven, Jr., 1951a: 112 (citation). Guimarães & D'Andretta, 1956: 98, figs. 151 (male genitalia, lateral view), 156 (female abdomen, dorsal view), 157 (female abdominal tergite 1), 158 (female abdomen, ventral view), 159 (female terminal abdominal segment, dorsal view), 161 (female terminalia, ventral view), 162 (larva, dorsal view), 162a (detail of larval cuticule), 162b (anus of larva), 163 (detail of female abdominal connexivum between sternites 3 and 4), 165 (male abdomen, dorsal and ventral views), 166 (posterior margin of male sternite 5). Hürka, 1964: 77 (specimen record). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 271 (diagnosis, host and geographic records), figs. 421 (aedeagus and postgonite, lateral view), 437 (hypoproct, anal sclerite and adanal plates), 469 (female abdomen, dorsal view), 470 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). Claps *et al.*, 1992: 88 (host and geographic records). Claps *et al.*, 1998: 113 (host and geographic records). Autino *et al.*, 1999: 141 (records, diagnosis and remarks), figs. 21 (female habitus, dorsal view), 22 (female abdomen, dorsal view), 23 (female abdomen, ventral view). Autino *et al.*, 2000: 110 (host and geographic records). Autino & Claps, 2001: 196 (synonymy, distribution and hosts in Argentina). Gracioli & Carvalho, 2001: 37 (diagnosis, host and geographic records), figs. 3 (female abdomen, dorsal view), 4 (female abdomen, ventral view). Gracioli, 2001: 309 (checklist). Gracioli *et al.*, 2002: 403 (host and geographic records). Claps *et al.*, 2004: 53 (host and geographic records). Gracioli, 2004: 974 (diagnosis, host and geographic records), figs. 10 (female abdomen, dorsal view, redrawn from Gracioli & Carvalho (2001)), 23 (female abdomen, dorsal view, redrawn from Gracioli & Carvalho (2001)), 37 (map of distribution). Hernández-Meza *et al.*, 2005: 2 (citation). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State). Gracioli *et al.*, 2006: 40 (host and geographic records, parasitological indices).

Basilia romañai [sic] Del Ponte, 1944: 118 (citation), 119, 123 (key), 126 (host and geographic records), figs. not numbered pg. 127 (female abdomen, dorsal view), plate pg. 128 (male and female habitus, dorsal view). Type locality. Argentina, Santiago del Estero, dpto. Pellegrini, La Fragua. Type host. *Myotis nigricans nigricans*. Holotype female and paratypes deposited at IMR. The types were lost.

Guimarães, 1946: 49 (description by Del Ponte (1944)), fig. 98 (female abdomen, dorsal view, redrawn from Del Ponte (1944)). Schuurmans-Stekhoven, Jr., 1951a: 112. Schuurmans-Stekhoven, Jr., 1951b: 551 (citation). Guimarães & D'Andretta, 1956: 99 (synonymization in *Basilia carteri*). García, 1959: 580 (host and geographic distribution in Argentina). Maa, 1965: 380 (subgenus *Pseudelytromya*).

Guimaraesia [sic] *carteri*; Schuurmans Stekhoven, Jr., 1951a: 112.

Guimaraesia [sic] *romañai*; Schuurmans Stekhoven, Jr., 1951a: 112. Schuurmans Stekhoven, Jr., 1951b: 551 (redescription), figs. 1A (female abdomen, dorsal view), B (female abdomen, dorsal view), C (setae of female abdominal connexivum), D (female head, lateral view), 2A (tibia and basitarsus of leg 2, ventrolateral view), B (theca and labelum, lateral view), C (female abdominal tergite 1, omitting setae), D (aristae, lateral view), 3A (male abdomen, ventral view), B (male abdomen, dorsal view).

Distribution. Brazil (Mato Grosso, Paraná, Santa Catarina, São Paulo), Bolivia (Cochabamba), Paraguay (Alto Paraguay, Amanbay, Boquerón, Concepción, Cordillera, Ñeembucu, Paraguairí, Presidente Hayes), Argentina (Buenos Aires, Jujuy, Salta, Santiago del Estero, Tucumán), Uruguay (Rocha).

Hosts. *Eptesicus brasiliensis*, *E. diminutus* Osgood, 1915, *E. furinalis*, *Myotis albescens*, *M. keaysi*, *M. levis*, *M. nigricans*, *M. riparius*, *M. ruber* (E. Geoffroy, 1806), *Myotis* sp., (Vespertilionidae); *Molossops temminckii*, *Molossus molossus*, *Tadarida brasiliensis* (Molossidae).

Basilia constricta Guimarães & D'Andretta, 1956

Basilia constricta Guimarães & D'Andretta, 1956: 80, figs. 86 (hypoproct and adanal plates), 112 (female abdomen, dorsal view), 113 (female abdomen, ventral view), 114 (male abdomen, dorsal and ventral view), 115 (apex of female head, dorsal view), 116 (female abdominal terminal segment, dorsal view), 117 (posterior margin of male sternite 5), 123 (margin posterior of female abdominal tergite 1), 130 (detail of female abdominal connexivum of sternite 3), 131 (detail of female abdominal connexivum of sternite 4), 148 (male genitalia, lateral view), 148a (postgonites, frontal view). Type locality. Ecuador, Gualaquiza. Type host. *Myotis nigricans*. Holotype female deposited at BMNH. Paratypes deposited at BMNH, FMNH, MZSP.

Maa, 1965: 380 (subgenus *Pseudelytromya*). Machado-Allison, 1967: 370 (citation). Theodor, 1967: 273 (diagnosis, host and geographic records), figs. 426 (aedeagus and postgonite, lateral view), 438 (hypoproct, anal sclerite and adanal plates), 471 (female abdomen, dorsal view), 472 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). Guimarães, 1972: 4 (citation), 8 (key for females). Webb & Loomis, 1977: 79, 106, 111 (checklist). Baker & Clark, 1987: 2 (citation). Medellín & Arita, 1989: 4 (citation). Gracioli, 2001: 310 (checklist).

Distribution. Colombia (Bolívar), Venezuela (Mérida, Zulia), Ecuador (Morona, Oriente, Santiago), Peru (Huánuco, Tingo María).

Hosts. *Lophostoma silvicolium* d'Orbigny, 1836, *Macrophyllum macrophyllum* (Schinz, 1821), *Uroderma bilobatum* Petes, 1866 (Phyllostomidae), *Eptesicus brasiliensis*, *Myotis albescens*, *M. nigricans* (Vespertilionidae).

Basilia corynorhini (Ferris, 1916)

Penicillidia corynorhini Ferris, 1916: 435, Plate XXIII, fig. 3 (female habitus, ventral and dorsal views). Type locality. USA, California, Tulare Co., White River. Type host. *Corynorhinus townsendii* (Cooper, 1837). Holotype female deposited at EMEC, on loan of indefinite duration to the CAS.

Basilia corynorhini, Ferris, 1924: 196 (citation). Ferris, 1930: 295 (puparium description), figs. A (puparium, dorsal view), B (spiracular openings and tracheal trunk of right side), C, D and E (details of tracheal trunk). Curran, 1935: 2 (key, citation). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Eads & Menzies, 1948: 244 (host and geographic records). Guimarães & D'Andretta, 1956: 126 (as *Basilia* sp. D) (host and geographic records, 61 (host and geographic records), figs. 69 (female abdomen, dorsal view), 70 (female abdomen, ventral view), 71 (apex of female head, dorsal view), 72 (mentum and labelum, ventral view), 73 (female terminal abdominal segment, dorsal view), 81 (female hypoproct and anal sclerite), 212 (as *Basilia* sp. D) (male genitalia, lateral view). Peterson, 1960: 31 (female key), 32 (male key), 33 (host and geographical

records). Bradshaw & Ross, 1961: 111 (host and geographic records). Maa, 1965: 381 (subgenus *Basilina*). Wenzel, 1965: 922 (catalogue). Theodor, 1967: 265 (diagnosis, host and geographic records), figs. 415 (aedeagus and postgonites, lateral view), 436 (hypoproct, anal sclerite and adanal plates), 459 (female abdomen, dorsal view), 460 (female terminalia, ventral view). Tipton & Saunders, 1971: 11 (citation). Whitaker, Jr. & Easterla, 1975: 244, 245, 247 (host and geographic records). Webb & Loomis, 1977: 80, 105 (checklist). Peterson & Wenzel, 1987: fig. 112.7 (puparium, dorsal view, redrawn from Ferris (1930)). Hensley & Wilkins, 1988: 3 (citation). Graciolli, 2001: 310 (checklist), 319 (as *Basilina* sp. D) (checklist). Villegas-Guzmán *et al.*, 2005: 126 (host and geographic records and prevalence). Dittmar *et al.*, 2006: 158 (molecular phylogeny).

Distribution. USA (Arizona, California, Idaho, Nevada, New Mexico, Oklahoma, Texas, Utah), Mexico (Durango).

Hosts. ⁺*Leptoncyteris nivalis* (Phyllostomidae), ⁺*Antrozous pallidus*, *Corynorhinus mexicanus* G. M. Allen, 1916, *C. rafinesquii*, *C. townsendii*, *Corynorhinus* sp., *Pipistrellus hesperus* H. Allen, 1864 (Vespertilionidae).

Basilina costaricensis Guimarães & D'Andretta, 1956

Basilina costaricensis Guimarães & D'Andretta, 1956: 106, figs. 146 (male genitalia, lateral view), 164 (detail of female abdominal sternite 4), 169 (female abdomen, dorsal view), 170 (female abdomen, ventral view), 171 (posterior margin of female mesonotum), 172 (male abdomen, dorsal and ventral view), 173 (female terminalia, ventral view), 174 (posterior margin of male sternite 5), 178 (hypoproct). Type locality. Costa Rica, Guanaste, near de Las Cañas, Bebedero. Type host. Unknown. Holotype female deposited at NMW. Paratypes deposited at BMNH, DZUP, NMW. Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 274 (diagnosis, host and geographic records), figs. 425 (aedeagus and postgonite, lateral view), 439 (hypoproct, anal sclerite and adanal plates), 473 (female abdomen, dorsal view), 474 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). Peterson, 1971: 2 (female key), 3 (male key, citation). Timm *et al.*, 1989: 90 (host and geographic records). Graciolli, 2001: 311 (checklist).

Distribution. Costa Rica (Guanacaste, La Selva).

Host. *Myotis albescens* (Vespertilionidae).

Basilina cubana Hurka, 1970

Basilina cubana Hurka, 1970: 335, figs. 1a (male terminalia, ventral view), b (male genitalia, lateral view), c (aedeagus and postgonites, lateral view), d (female abdomen, dorsal view), e (lobes of female abdominal tergite 2), f (female terminalia, ventral view), g (pigmentation of female abdominal sternite 7), h (hypoproct, anal sclerite and adanal plates), i (hypoproct). Type locality. Cuba, Colombo, Isla de Pinos, Sierra Colombo. Type host. *Eptesicus fuscus* (Beauvois, 1796). Holotype female deposited at KHPC. Paratypes deposited at IZAC. García-Avila, 1976: 5, 13 (checklist). Dalmau & Ávila, 1983: 120 (catalogue). Graciolli, 2001: 311 (checklist).

Distribution. Cuba (Las Villas).

Host. *Eptesicus fuscus* (Vespertilionidae).

Basilina currani Guimarães, 1943

Basilina currani Guimarães, 1943: 257, figs. 1 (female habitus, dorsal and ventral views, omitting legs), 2 (male abdomen, dorsal and

ventral views). Type locality. Brazil, São Paulo, São Paulo. Type host. *Myotis ruber*. Holotype female and paratypes deposited at MZSP.

Scott, 1940 (as *B. carteri*): 60 (part, discussion). Guimarães, 1946: 14 (redescription), figs. 52 (female habitus, dorsal and ventral view, omitting legs), 53 (margin anterior of female head, dorsal view), 54 (female abdominal terminal segment, dorsal view), 55 (posterior margin of male sternite 5), 56 (male abdomen, dorsal and ventral views), 57 (female tibiae 1, lateral view), 58 (femur, tibiae, tarsum 3, anterior view), 59 (female tibiae 2, anterior view). Guimarães & D'Andretta 1956: figs. 90 (hypoproct), 140 (female abdomen, dorsal view), 141 (female abdomen, ventral view), 142 (male abdomen, dorsal and ventral view), 143 (apex of female abdomen, ventral view). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor 1967: 276 (diagnosis, distribution, host), figs. 428 (aedeagus and postgonites, lateral view), 442 (hypoproct, anal sclerite and adanal plate), 475 (female abdomen, dorsal view), 476 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). Autino *et al.*, 2000: 110 (host and geographic records). Autino & Claps, 2001: 196 (synonymy, distribution and hosts in Argentina). Graciolli, 2001: 311 (checklist). Graciolli, 2004: 975 (redescription), figs. 11 (female abdomen, dorsal view), 22 (female abdomen, ventral view), 36 (map of distribution).

Guimarãesia [sic] *currani*, Schuurmans-Stekhoven, Jr., 1951a: 112. Schuurmans-Stekhoven, Jr., 1951b (as *G. romañai* [sic]): 551 (citation).

Distribution. Brazil (Santa Catarina, São Paulo), Argentina (Catamarca, La Rioja, Tucumán).

Hosts. ⁺*Eptesicus brasiliensis*, *Myotis albescens*, *M. chiloensis* (Waterhouse, 1840), *M. levis*, ⁺*M. ruber* (Vespertilionidae), ⁺*Tadarida brasiliensis* (Molossidae).

Basilina dubia Guimarães & D'Andretta, 1956

Basilina dubia Guimarães & D'Andretta, 1956: 257, figs. 150 (male genitalia, lateral view), 154 (half female abdomen, dorsal view), 155 (female abdominal tergite 1), 160 (female terminal abdominal segment, dorsal view), 167 (male abdomen, dorsal and ventral view), 168 (posterior margin of male sternite 5), 177 (hypoproct). Type locality. Brazil, Mato Grosso, Xavantina. Type host. *Myotis nigricans nigricans*. Holotype female deposited at MZSP. Paratypes deposited at MZSP, FMNH, MCZ.

Bequaert, 1926 (as *B. speiseri*): 243 (host and geographic records): 244 (synonymization in *B. speiseri* not of Miranda-Ribeiro). Maa, 1965: 380 (subgenus *Pseudelytromya*). Machado-Allison, 1967: 370 (citation). Theodor, 1967: 276 (diagnosis, host and geographic records), fig. 423 (aedeagus and postgonites, lateral view). Guimarães, 1968: 2 (catalogue). Guimarães, 1972: 3 (host and geographic records), 8 (key for females). Guimarães, 1977: 221 (host and geographic records). Graciolli, 2001: 311 (checklist). Graciolli & Bernard, 2002: 83 (host and geographic records).

Distribution. Venezuela (Amazonas, Apure), Brazil (Amazônia, Mato Grosso, Pará), Peru (Cuzco).

Hosts. ⁺*Saccopteryx bilineata* (Temminck, 1838) (Emballonuridae), *Myotis albescens*, ⁺*M. nigricans*, *Myotis* sp. nov. (see Graciolli & Bernard, 2002) (Vespertilionidae).

Basilina dumni Curran, 1935

Basilina dumni Curran, 1935: 2 (key), 3, figs. 1 (female abdomen, dorsal view), 2 (female abdomen, ventral view). Type locality. Panama, Santa Rosa. Type host. *Myotis nigricans*. Holotype female deposited at AMNH.

Bequaert, 1940: 417 (citation). Schuurmans-Stekhoven, Jr., 1942: 104

(citation). Del Ponte, 1944: 118 (citation), 124 (key). Guimarães & D'Andretta, 1956: 95 (redescription), figs. 152 (female abdomen, dorsal view), 153 (female abdomen, ventral view). Maa, 1965: 380 (subgenus *Pseudelytomya*). Guimarães, 1966: 399 (host and geographic records, male description), figs. 37A (male terminalia, dorsal view), B (male terminalia, ventral view). Theodor, 1967: 278 (citation). Guimarães, 1968: 2 (catalogue). Guimarães, 1977: 222 (host and geographic records), fig. 1 (female abdomen, dorsal view). Gracioli, 2001: 311 (checklist). Gracioli & Linardi, 2002: 140 (host and geographic records).

Distribution. Panama (Canal Zone, Colón, Darién), Venezuela (Amazonas), Brazil (Roraima).

Hosts. *Myotis albescens*, *M. nigricans*, *Myotis* sp. (Vespertilionidae).

Basilis ferrisi Schuurmans-Stekhoven, Jr., 1931

Basilis ferrisi Schuurmans-Stekhoven, Jr., 1931: 217 (new name for *B. speiseri* of Ferris, 1924). Type locality. Costa Rica, Sipurio. Type host. *Myotis nigricans*. Lectotype female designated by Peterson (1971) deposited at USNM. Paralectotypes deposited at BMNH, CISC, USNM.

Ferris, 1924 (as *B. speiseri*): 198 (redescription), figs. A (female habitus, dorsal and ventral views), B (male abdomen, ventral and dorsal views), C (leg 1, anterior view), D (apex of female head, dorsal view). Stiles & Nolan, 1931 (as *B. speiseri*): 648 (part, citation). Schuurmans-Stekhoven, Jr., 1931 (as *B. bellardii*): 207 (redescription), fig. 1 (male habitus, ventral view), 2 (male head, lateral view), 3 (male terminalia, dorsal view), 4 (male femur and tibia 2, posterior view), 5 (female habitus, dorsal view), 6 (female abdomen, ventral view). Schuurmans-Stekhoven, Jr., 1931 (as *B. silvae*): 207 (citation). Hase, 1931 (as *B. bellardii*): 220 (behavior and physiology), figs. 4 (female leg, anterior view), 5 (female tarsomere, anterior view). Curran, 1935 (as *B. speiseri*): 4 (part, citation). Scott, 1936: 502 (new name for *B. speiseri* of Ferris, 1924, preoccupied name); Scott, 1939: 168. Scott, 1940: 61 (species author correction). Guimarães, 1940: 5 (identity of the species author). Bequaert, 1942 (as *B. bellardii*): 83 (geographic record). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Guimarães, 1946: 16, 19. Schuurmans-Stekhoven, Jr., 1951a (as *Guimarãesia* [sic] *bellardii*): 112, figs. 4A (female abdomen, dorsal view), B (posterior margin of male sternite 5). Guimarães & D'Andretta, 1956: 75 (citation). Maa, 1965: 380 (subgenus *Pseudelytomya*). Theodor, 1967: 278 (citation). Guimarães, 1968: 2 (catalogue). Peterson, 1971: 2 (female key), 3 (taxonomic discussion, host and geographic records), fig. 2 (male genitalia of paralectotype, lateral view). Guimarães, 1972: 7 (host and geographic records), 8 (key for females). Guimarães, 1977: 222 (host and geographic records). Webb & Loomis, 1977: 80, 102 (checklist). Méndez, 1988: 202 (citation), 203 (checklist). Gracioli, 2001: 312 (checklist). Gracioli & Linardi, 2002: 140 (host and geographic records). Miller & Tschakpa, 2001 (host and geographic records), figs. (female habitus, dorsal and ventral view; female abdomen, dorsal view; male habitus, dorsal and ventral view).

Basilis myotis Curran, 1935: 2 (key), 3, figs. 3 (female abdomen, dorsal view), 4 (male thorax and abdomen, ventral view), 5 (female abdomen, ventral view). Type locality. Panama, Tapiá. Type host. *Myotis nigricans*. Holotype female and paratypes deposited at AMNH.

Bequaert, 1940: 417 (host and geographic records); Cooper, 1941: 126 (number of chromosomes). Bequaert, 1942: 84 (geographic record). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Guimarães & D'Andretta, 1956: 76, figs. 106 (female abdomen, dorsal view), 107 (female abdomen, ventral view), 108 (male abdomen, dorsal and ventral view), 109 (margin posterior of female abdominal tergite 1, variation), 110

(margin posterior of female abdominal tergite 1, variation), 111 (posterior margin of male sternite 5), 124 (margin posterior of female abdominal tergite 1), 129 (detail of pustulate setae of female abdominal sternite 3), 145 (male genitalia, lateral view). Peterson, 1960: 31 (female key), 32 (male key), 34 (citation). Maa, 1965: 380 (subgenus *Pseudelytomya*). Guimarães, 1966: 398 (host and geographic records). Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 3 (catalogue). Peterson, 1971: 4 (synonymization in *B. ferrisi*), fig. 1 (male genitalia of paratype, lateral view). Webb & Loomis, 1977: 80, 111 (checklist). Baker & Clark, 1987: 2 (citation). Burnett *et al.*, 2001: 2 (citation).

Distribution. Guatemala (Escuintla), Costa Rica (Alajuela, La Selva, Sipurio), Panama (Barro Colorado, Canal Zone, Colón, Darién, Tapiá), Colombia (Antioquia, Bolívar, Chocó, Meta, Santander), Venezuela (Amazonas, Anzoátegui, Apure, Araguá, Bolívar, Falcón, Miranda, Monagas, Zulia), Brazil (Roraima), Guiana (Demerara), Peru (Loreto).

Hosts. *Desmodus rotundus* (E. Geoffroy, 1810), *Uroderma bilobatum* (Phyllostomidae), *Lasiurus (Daypterus) sp.*, *Myotis albescens*, *M. nigricans*, *Myotis* cf. *nigricans*, *M. riparius*, *M. simus*, *Myotis* sp. (Vespertilionidae), *Molossus molossus*, *Molossus* sp. (Molossidae).

Basilis ferruginea Miranda-Ribeiro, 1903

Basilis ferruginea Miranda-Ribeiro, 1903: 179, pl. 1, figs. 1 (male habitus, dorsal view), 2 (left half of male abdomen, ventral view).

Type locality. Brazil, Minas Gerais, Santana do Sapé (actual Guidoaldo). Type host. *Vespertilio aurantius* (= *Lasiurus blossevillii* (Lesson & Garnot, 1826)). Holotype male deposited at MPEG (see Overall, 1985).

Miranda-Ribeiro, 1907: 229 (female description), 232 (host and geographic records), plate XXIV fig. 1 (female head, lateral view). Ferris, 1924: 195 (citation). Curran, 1935: 2 (citation). Scott, 1936: 503 (diagnosis), fig. 11 (female abdomen, dorsal and ventral views). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Guimarães, 1946: 20 (redescription), figs. 12 (female habitus, dorsal and ventral views, omitting legs), 13 (male abdomen, dorsal and ventral views), 14 (anterior margin of female head), 15 (femur, tibiae and tarsus 2, lateral view), 16 (femur, tibiae and tarsus 1, lateral view), 17 (female terminal abdominal segment, dorsal view), 18 (posterior margin of male sternite 5), 19 and 20 (lobes of female abdominal tergite 2). Miranda-Ribeiro, 1955: 394 (type series deposited). Guimarães & D'Andretta 1956: 23 (key), 28 (host and geographic records), figs. 5 (tibiae 2, lateral view), 6 (detail of pustulate setae, female abdomen), 74 (hypoproct). Maa, 1965: 381 (subgenus *Basilis*). Silva-Taboada, 1965: 4, 11, 12 (geographic and host list). Guimarães, 1966: 393 (key), 394 (host and geographic records). Theodor, 1967: 259 (diagnosis, distribution, host), figs. 451 (female abdomen, dorsal view), 452 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). García-Ávila, 1976: 5, 13 (checklist). Dalmau & Ávila, 1983: 120 (catalogue). Gracioli, 2001: 312 (checklist). Overall, 1985: 215 (holotype location). Gracioli & Bernard, 2002: 82 (host and geographic records). Gracioli, 2003: 6 (sensory hairs on male and female femur 2). Gracioli, 2004: 980 (diagnosis, host and geographic records), figs. 17 (female abdomen, dorsal view), 30 (female abdomen, ventral view), 38 (map of distribution). Gracioli *et al.*, 2006: 41 (citation).

Basilis ferruginia [sic], Whitaker, Jr. & McCracken, 2001: 65 (host and geographic records).

Distribution. Cuba (Habana), Panama (San Blas), Ecuador (Galapagos Is.); Brazil (Minas Gerais, Pará, Rio de Janeiro, Santa Catarina, São Paulo) and Paraguay (Paraguari).

Hosts. *Lasiurus blossevillii*, *L. cinereus*, *L. pfeiffei* (Gundlach, 1861) (Vespertilionidae).

Basilia flava (Weyenbergh, 1881)

Nycteribia flava Weyenbergh, 1881: 194. Type locality. Argentina, Córdoba. Type host. *Plecotus velatus* (= *Histiopus velatus*). Holotype male reported to be deposited at UNC, but the specimens cannot be located (Miguel Angel Delfino, Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba, personal communication).

Miranda-Ribeiro, 1903: 176 (citation). Brèthes, 1908: 302 (catalogue). Ferris, 1924: 193 (citation). Del Ponte, 1944: 119 (citation).

Basilia flava, Guimarães, 1946: 59 (redescription), figs. 71 (male abdomen, dorsal and ventral views), 72 (posterior margin of male sternite 5). Guimarães & D'Andretta, 1956: 123 (host and geographic records). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 284 (citation). Guimarães, 1968: 2 (catalogue). Autino & Claps, 2001: 196 (synonymy, distribution and hosts in Argentina). Gracioli, 2001: 313 (checklist).

Distribution. Argentina (Córdoba).

Host. *Histiopus velatus* (?) (Vespertilionidae). In Argentina, *Histiopus velatus* has been reported only from Corrientes, Jujuy, and Misiones (Barquez, 2006). Therefore the host may be either *H. montanus* or *H. macrotus macrotus*, as both species occur in the province of Córdoba.

Basilia forcipata Ferris, 1924

Basilia forcipata Ferris, 1924: 196, figs. 1 A (female abdomen, dorsal and ventral view), B (margin posterior of female head, dorsal view), C (male terminalia, ventral view). Type locality. USA, California, Covina. Type host. *Myotis californicus quercinus*. Holotype female deposited at EMEC, on loan of indefinite duration to the CAS. Paratypes deposited at USNM.

Curran, 1935: 2 (key), 4 (cited). Spencer, 1937: 41 (geographic record). Spencer, 1939: 17 (host and geographic records). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Roth, 1951: 96 (host and geographic records). Guimarães & D'Andretta, 1956: 63, figs. 58 (male genitalia, lateral view), 58a (postgonites, ventral view), 82 (hypoproct), 91 (female abdomen, dorsal view), 92 (female abdomen, ventral view), 93 (female abdominal terminal segment, dorsal view), 94 (posterior margin of female head, dorsal view); Peterson, 1960: 31 (female key), 32 (male key), 33 (host and geographic records). Bradshaw & Ross, 1961: 111 (host and geographic records). Stock, 1961: 118 (geographic record). Peterson, 1963: 93 (host and geographic records). Hansen, 1964: 79 (host and geographic records). Maa, 1965: 381 (subgenus *Basilia*). Wenzel, 1965: 922 (catalogue). Theodor, 1967: 257 (diagnosis, distribution, host), figs. 413 (aedeagus and postgonites, lateral view), 432 (hypoproct, anal sclerite and adanal plates), 449 (female abdomen, dorsal view), 450 (female terminalia, ventral view). Guimarães, 1968: 2 (catalogue). Maa, 1971: 73 (wrong label). Tipton & Saunders, 1971: 11 (citation). Whitaker, Jr. & Easterla, 1974: 222 (host and geographic records), 223 (key). Whitaker, Jr. & Easterla, 1975: 245, 250. Watkins, 1977: 3 (citation). O'Farrel & Studier, 1980: 3 (citation). Warner & Czaplewski, 1984: 3 (citation). Peterson & Wenzel, 1987: figs. 112.1 (female habitus, lateral-dorsal view), Chilton *et al.*, 2000: 192 (host and geographic records). Gracioli, 2001: 313 (checklist). Ritzi *et al.*, 2001: 401 (host and geographic records), 402 (parasitological indices). Dittmar *et al.*, 2006: 158 (phylogeny).

Basilia calvertii Fox & Stabler, 1953: 22, figs. 1 (female habitus, dorsal and ventral views), 2 (male habitus, ventral view). Type locality.

USA, Colorado, eight miles north of Divide, on Manchester Creek at approximately 8,000 feet altitude. Type host. *Myotis volans interior* (H. Allen, 1866). Holotype female deposited at CMNH. Paratypes deposited at FMNH, BMNH, MCZ, CMNH.

Maa, 1965: 381 (subgenus *Basilia*). Warner & Czaplewski, 1984: 3 (citation).

Distribution. Canada (British Columbia, Saskatchewan), USA (Arizona, Colorado, California, Idaho, Louisiana, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington), Mexico (Coahuila de Zaragoza, San Luis Potosi, Sinaloa).

Hosts. *Eptesicus fuscus*, *Euderma maculatum* (J. A. Allen, 1891), *Lasionycteris noctivagans* (Le Conte, 1831), *Myotis californicus*, *M. evotis* (H. Allen, 1864), *M. lucifugus*, *M. thysanodes* Miller, 1897, *M. velifer*, *M. volans* (H. Allen, 1866), *M. yumanensis* (H. Allen, 1864), *Myotis* sp., *Pipistrellus hesperus* (Vespertilionidae), *Tadarida brasiliensis* (Molossidae).

Basilia guimaraesi (Schuurmans-Stekhoven, Jr., 1951)

Guimaraesia [sic] *guimaraesi* [sic] Schuurmans-Stekhoven, Jr., 1951a: 114 (new name for *Basilia bellardii* of Guimarães, 1946). Type locality. Brazil, São Paulo, Cantareira. Type host. *Myotis nigricans*. Lectotype female and paralectotypes designated by Guimarães & D'Andretta (1956) deposited at MZSP.

Basilia guimaraesi [sic], Guimarães, 1946 (as *B. bellardii*): 62 (description), figs. 73 (female habitus, dorsal and ventral views, legs omitted), 74 (male abdomen, dorsal and ventral views), 75 (posterior margin of male sternite 5), 76 (anterior margin of female head, dorsal view), 77 (femur and tibia 2, anterior view), 78 (femur, tibia and tarsus 1, anterior view), 79 (tibia 3, anterior view), 80 (female terminal abdominal segment, dorsal view). Guimarães & D'Andretta, 1956: 90 (redescription), figs. 89 (hypoproct), 135 (female abdomen, ventral view), 136 (female abdomen, dorsal view), 137 (female abdominal terminal segment, dorsal view), 138 (apex of female abdomen, ventral view), 139 (female abdominal tergite 1). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 278 (citation). Guimarães, 1968: 2 (catalogue). Gracioli, 2001: 314 (checklist).

Distribution. Brazil (São Paulo).

Host. *Myotis nigricans* (Vespertilionidae).

Basilia handleyi Guimarães, 1966

Basilia handleyi Guimarães, 1966: 394, fig. 35A (female abdomen, dorsal view). Type locality. Panama, San Blas, Armilla. Type host. *Lasiurus castaneus* Handley, 1960. Holotype female deposited at FMNH. Paratype deposited at MZSP.

Guimarães, 1968: 2 (catalogue). Gracioli, 2001: 314 (checklist). Gracioli, 2003: 6 (sensory hairs on female femora 2, 3).

Distribution. Panama (San Blas).

Host. *Lasiurus castaneus* (Vespertilionidae).

Basilia hughscotti Guimarães, 1946

Basilia hughscotti Guimarães, 1946, figs. 94 (female habitus, dorsal and ventral views, legs omitted), 95 (femur and tibia 3, anterior view), 96 (anterior margin of female head, dorsal view), 97 (female abdominal terminal segment, dorsal view). Type locality. Brazil,

Rio Grande do Sul, São Lourenço. Type host. *Chrotopterus auritus* (Peters, 1856). Holotype female deposited at MZSP.
 Guimarães & D'Andretta, 1956: 116, figs. 181 (hypoproct), 193 (female sternum thoracic), 194 (detail of thoracic ctenidium). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 278 (diagnosis). Guimarães, 1968: 3 (catalogue). Whitaker, Jr. & Mumford, 1977 (as *Basilisa* sp. nov.): 257 (host and geographic records). Webb & Loomis, 1977: 80, 102 (checklist). Medellín, 1989: 3 (citation). Graciolli, 2001: 314 (checklist). Graciolli & Aguiar, 2002: 178 (host and geographic records). Graciolli, 2004: 976 (redescription, host and geographic records), figs. 7 (female tibia 2, anterior view), 12 (holotype abdomen, dorsal view), 13 (female abdomen, dorsal view), 25 (holotype abdomen, dorsal view), 26 (female abdomen, dorsal view), 36 (map of distribution).
Guimaraesia [sic] *hughscotti*, Schuurmans-Stekhoven, Jr., 1951a: 112.

Distribution. Brazil (Distrito Federal, Minas Gerais, Rio Grande do Sul).

Hosts. *Chrotopterus auritus* (Phyllostomidae), *Eptesicus furinalis*, *Myotis nigricans*, *M. riparius* (Vespertilionidae).

Basilisa insularis Graciolli, 2003

Basilisa insularis Graciolli, 2003: 2, figs. 1 (paratype female femur and tibiae, anterior view), 3 (detail of sensilla on female femur 2), 4 (female abdomen, dorsal view), 6 (female abdomen, ventral view), 8 (male genitalia, lateral view). Type locality. Brazil, São Paulo, Cardoso Island (25° 05' S; 47° 59' W). Type host. *Lasiurus ebenus* Fazzolari-Corrêa, 1994. Holotype female deposited at MZSP. Paratypes deposited at DZUP, MZSP.

Distribution. Brazil (São Paulo).

Host. *Lasiurus ebenus* (Vespertilionidae).

Basilisa jellisoni Theodor & Peterson, 1964

Basilisa jellisoni Theodor & Peterson, 1964: 109, figs. 7 (female tibia 2, anterior view), 8 (female abdomen and anal segment, dorsal view), 9 (female terminalia, ventral view). Type locality. USA, Montana, Missoula Co., Frenchtown. Type host. *Myotis yumanensis*. Holotype female deposited at FMNH.
 Graciolli, 2001: 314 (checklist).

Distribution. USA (Montana).

Host. *Myotis yumanensis* (Vespertilionidae).

Basilisa juquiensis Guimarães, 1946

Basilisa juquiensis Guimarães, 1946: 73; figs. 89 (female habitus, dorsal and ventral views), 90 (anterior margin of female head, dorsal view), 91 (female terminal abdominal segment, dorsal view), 92 (tibia 2, anterior view), 93 (femur and tibia 1, anterior view). Type locality. Brazil, São Paulo, Juquiá. Type host. *Myotis nigricans nigricans*. Holotype female deposited at MZSP.
 Guimarães & D'Andretta, 1956: 112 (host and geographic records), figs. 180 (hypoproct), 186 (female abdominal tergite 2), 187 (female abdominal lateral connexivum). Maa, 1965: 380 (subgenus *Pseudelytromya*). Guimarães, 1968: 3 (catalogue). Guimarães, 1972: 3 (host and geographic records), 8 (key for females). Guerrero, 1996: 674 (*juquiensis* group). Graciolli & Carvalho, 2001: 39 (diagnosis, male description), figs. 8 (female abdomen, dorsal view), 9 (female abdomen, ventral view), 10 (posterior margin of male sternite 5), 11 (aedeagus and postgonites, lateral view). Graciolli, 2001: 314 (checklist). Graciolli, 2004: 978 (diagnosis, host and geographic records), figs. 6 (female tibia 2, anterior view), 16

(female abdomen, dorsal view, redrawn from Graciolli & Carvalho (2001)), 29 (female abdomen, ventral view, redrawn from Graciolli & Carvalho (2001)), 37 (map of distribution). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State). Graciolli *et al.*, 2006: 40 (host and geographic records, parasitological indices).
Basilisa juquiensis juquiensis Theodor, 1967: 279 (diagnosis), figs. 477 (female abdomen, dorsal view), 478 (female terminalia, ventral view).

Guimaraesia [sic] *juquiensis*, Schuurmans Stekhoven, Jr., 1951a: 112.

Distribution. Venezuela (Apure), Brazil (Distrito Federal, Paraná, Santa Catarina, São Paulo), Paraguay (Canindeyú).

Hosts. *Myotis nigricans*, *M. riparius*, *Myotis* sp. (Vespertilionidae).

Basilisa lindolphoi Graciolli, 2001

Basilisa lindolphoi Graciolli, 2001 in Graciolli & Carvalho: 38, figs. 5 (female abdomen, dorsal view, omitting anal segment), 6 (female abdomen, ventral view), 7 (female terminal abdominal segment, dorsal view). Type locality. Brasil, Paraná, Rio Branco do Sul. Type host. *Myotis nigricans* (Schinz, 1821). Holotype female deposited at DZUP.
 Graciolli, 2001: 314 (checklist). Graciolli *et al.*, 2002: 403 (host and geographic records). Graciolli, 2004: 976 (diagnosis, male description, host and geographic records), figs. 14 (female abdomen, dorsal view, omitting terminal segment, redrawn from Graciolli & Carvalho (2001)), 27 (female abdomen, ventral view, redrawn from Graciolli & Carvalho (2001)), 34 (posterior margin of male sternite 5), 35 (male genitalia, lateral view), 36 (map of distribution). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State).

Distribution. Brazil (Paraná, Santa Catarina, São Paulo).

Hosts. *Mimon bennettii* (Gray, 1838) (Phyllostomidae), *Myotis nigricans*, *M. riparius*, *Myotis* sp. (Vespertilionidae).

Basilisa manu Guerrero, 1996

Basilisa manu Guerrero, 1996: 666, figs. 1 A (eye of female, apical and lateral view); B (female abdomen, dorsal view, omitting setae of tergite 2); C (female abdominal lateral connexivum); D (female abdominal tergite 2); E (female abdominal sternite 4 and 5, left side, omitting setae of sternite 5); 2A (hypoproct and adanal plates); 3A (male genitalia, lateral view); B (spiniform setae of male sternite 5, omitting other setae). Type locality. Perú, Madre de Dios, Pakitza. Type host. *Myotis riparius*. Holotype female deposited at MUSM. Paratypes deposited at MUSM, UCV, USNM.
 Guimarães & D'Andretta, 1956 (as *Basilisa* sp. B): 125, figs. 210 (male genitalia, lateral view), a (postgonites). Graciolli, 2001: 315 (checklist).

Distribution. Peru (Cuzco).

Hosts. *Myotis albescens*, *M. nigricans*, *M. riparius*, *M. simus* (Vespertilionidae).

Basilisa mimoni Theodor & Peterson, 1964

Basilisa mimoni Theodor & Peterson, 1964: 107, figs. 1 (female tibia 1, anterior view), 2 (male terminalia, ventral view), 3 (male genitalia, lateral view), 4 (female abdomen, dorsal view), 5 (female terminalia, ventral view), 6 (hypoproct and genital plates). Type locality. Peru, Loreto, Rio Yavari. Type host. *Mimon crenulatum* (E. Geoffroy, 1803). Holotype female and paratypes deposited at FMNH. Paratypes to have been deposited at Department of Parasitology, Hebrew University, Jerusalem, but the specimens

cannot be located (Yosef Schlein, Department of Parasitology, Hebrew University, personal communication).

Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 3 (catalogue). Guimarães, 1972: 2 (host and geographic records). Graciolli, 2001: 315 (checklist).

Distribution. Brazil (Pará), Peru (Loreto).

Host. *Mimon crenulatum* (Phyllostomidae).

Basilina mirandaribeiroi Guimarães, 1942

Basilina mirandaribeiroi Guimarães, 1942: 146, fig. 1 (female habitus, dorsal and ventral views, legs omitted). Type locality. Brazil, São Paulo, São Paulo, Ipiranga. Type host. *Myotis nigricans nigricans*. Holotype female deposited at MZSP.

Del Ponte, 1944: 118 (citation), 124 (key). Guimarães, 1946: 39 (redescription), figs. 46 (female habitus, dorsal and ventral views, legs omitted), 47 (margin anterior of female head), 48 (margin posterior of female abdominal tergite 1), 49 (female abdominal terminal segment, dorsal view), 50 (femur, tibiae, tarsum 2, lateral view), 51 (femur, tibiae, tarsum 1, lateral view). Guimarães & D'Andretta, 1956: 110 (host and geographic records), figs. 179 (hypoproct and anal sclerite), 184 (female abdominal tergite 1), 185 (female terminalia, dorsal view). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 279 (diagnosis, host and geographic records), fig. 479 (female abdomen, dorsal view). Guimarães, 1968: 3 (catalogue). Graciolli, 2001: 315 (checklist). *Guimaraesia* [sic] *mirandaribeiroi*, Schuurmans-Stekhoven, Jr., 1951a: 112.

Distribution. Brazil (São Paulo).

Hosts. *Eptesicus brasiliensis*, *Myotis nigricans* (Vespertilionidae).

Basilina neamericana Schuurmans-Stekhoven, Jr., 1951

Basilina neamericana Schuurmans-Stekhoven, Jr., 1951a: 102, 112 (citation), figs. 1A (male habitus, dorsal view), B (male habitus, ventral view), 2A (posterior margin of male sternite 5), B (posterior margin of male sternite 5), C (male head, dorsal view), D (setae in anterior margin and between eye of male head), E (male maxillary palp), 3A (female habitus, dorsal view), B (female habitus, legs omitted, ventral view), C (lobes of female abdominal tergite 2), D (detail of female abdominal connexivum). Type locality. Argentina, La Rioja, El Tucson. Type host. *Eptesicus furinalis* (d'Orbigny, 1847). Holotype male and paratypes deposited at IMR. The types were lost.

Guimarães & D'Andretta, 1956: 36 (citation). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 266 (citation). Guimarães, 1968: 3 (catalogue). Autino *et al.* 1999: 142 (records, diagnosis and remarks), figs. 24 (female habitus, dorsal view), 25 (female abdomen, ventral view). Autino *et al.*, 2000: 111 (host and geographic records). Autino & Claps, 2001: 196 (synonymy, distribution and hosts in Argentina). Graciolli, 2001: 315 (checklist). Graciolli, 2003: 6 (presence of sensory hairs on femur 1 and 2).

Distribution. Argentina (Formosa, La Rioja, Salta, Santiago del Estero, Tucumán).

Hosts. *Eptesicus diminutus*, *E. furinalis* (Vespertilionidae).

Basilina ortizi Machado-Allison, 1963

Basilina ortizi Machado-Allison, 1963: 455, figs. 1 (labium, ventral view), 2 (posterior margin of female mesonotum), 3 (female abdominal tergite 1), 4 (posterior margin of female tergite 2), 5

(female abdominal terminal segment, dorsal view), 6 (posterior margin of male sternite 5). Type locality. Venezuela, Estado de Bolívar, Serranía de Nuria. Type host. *Eptesicus melanopterus* (= *Eptesicus furinalis*). Holotype female and paratypes deposited at UCV.

Maa, 1965: 381 (subgenus *Basilina*). Machado-Allison, 1967: 370 (citation). Guimarães, 1968: 3 (catalogue); Peterson, 1971: 2 (female key), 3 (male key), 5 (host and geographic records). Guimarães, 1972: 2 (host and geographic records), 8 (key for females). Guimarães, 1977: 223 (redescription), figs. 3 (male genitalia, lateral view), 4 (posterior margin of male sternite 5), 5 (female abdomen, dorsal view). Graciolli & Carvalho, 2001: 41 (diagnosis, host and geographic records), figs. 12 (female abdomen, dorsal view), 13 (female abdomen, ventral view). Miller & Tschakpa, 2001 (host and geographic records), figs. (female habitus, dorsal and ventral view; female abdomen, dorsal view). Graciolli, 2001: 315 (checklist). Graciolli, 2004: 980 (diagnosis), figs. 18 (female abdomen, dorsal view, redrawn for Graciolli & Carvalho (2001)), 31 (female abdomen, ventral view, redrawn for Graciolli & Carvalho (2001)), 38 (map of distribution). Ter Hofstede *et al.*, 2004: 620 (host and geographic records), 622 (host-site preference). Graciolli & Moura, 2005: 36 (host and geographic records). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State).

Distribution. Belize (Orange Walk), Costa Rica (La Selva, Puntarenas), Venezuela (Amazonas, Bolívar, Distrito Federal, Monagas), Brazil (Paraná, São Paulo).

Hosts. *Enchisthenes hartii* (Thomas, 1892) (Phyllostomidae), *Eptesicus brasiliensis*, *E. diminutus*, *E. furinalis*, *Eptesicus* sp., *Myotis riparius* (Vespertilionidae).

Basilina peruvia Guimarães & D'Andretta, 1956

Basilina peruvia Guimarães & D'Andretta, 1956: 84, figs. 87 (hypoproct and adanal plates), 118 (female abdomen, dorsal view), 119 (female abdomen, ventral view), 120 (male abdomen, dorsal and ventral view), 121 (female abdominal terminal segment, dorsal view), 122 (posterior margin of male sternite 5), 125 (posterior margin of female abdominal tergite 1), 128 (detail of female abdominal connexivum sternite 3), 149 (male genitalia, lateral view). Type locality. Peru, Cuzco, Marcapata, Rio Nuliniscaya, Blaceadero. Type host. *Myotis nigricans nigricans*. Holotype female deposited at FMNH. Paratypes deposited at FMNH, MZSP.

Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 282 (diagnosis, host and geographic records), fig. 424 (postgonites and aedeagus, lateral view). Guimarães, 1968: 3 (catalogue). Graciolli, 2001: 315 (checklist).

Distribution. Peru (Cuzco, Huánuco, Ucayali).

Host. *Myotis nigricans* (Vespertilionidae), *Tadarida brasiliensis* (Molossidae).

Basilina pizonychus Scott, 1939

Basilina pizonychus Scott, 1939: 168, pl. 16 figs. 1 (female habitus, dorsal view), 2 (male thorax and abdomen, ventral view), 3 (female abdomen, ventral view and male abdomen, dorsal view). Type locality. Mexico, Gulf of California, Angel de la Guardia Island. Type host. *Pizonix vivesi* (Menegaux, 1901) (= *Myotis vivesi*). Lectotype male designated by Haig (1978: 2) deposited at LACM. Paralectotypes deposited at BMNH, LACM.

Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 118 (citation), 124 (key). Reeder & Norris, 1954: 86 (host and geographic records). Guimarães & D'Andretta, 1956: 121 (host and geographic records), figs. 183 (hypoproct), 198 (female abdomen, dorsal view), 199 (anterior part of female head, dorsal

view), 202 (female abdomen, ventral view), 203 (female abdominal terminal segment), 206 (male abdomen, dorsal and ventral view), 207 (posterior margin of male sternite 5), 209 (male genitalia, lateral view). Ryckman & Ryckman, 1963: 72 (host and geographic records). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 256 (diagnosis, distribution, host), figs. 412 (aedeagus and postgonite, lateral view), 431 (hypoproct, anal sclerite and adanal plates), 446 (female abdomen, dorsal view), 447 (female terminalia, ventral view), 448 (sternite 2). Guimarães, 1968: 3 (catalogue). Blood & Clark, 1998: 4 (citation). Graciolli, 2001: 316 (checklist).

Distribution. Mexico (Baja California).
Host. *Myotis vivesi* (Vespertilionidae).

Basilina plaumanni Scott, 1940

Basilina plaumanni Scott, 1940: 58, figs. 1 (female habitus, legs omitted, dorsal view), 2 (female thorax and abdomen, ventral view), 3 (male abdomen, ventral view); Type locality. Brazil, Santa Catarina, Seara, Nova Teutônia. Type host. *Histiopus* sp. (possibly *H. velatus*). Holotype female and paratypes deposited at BMNH.

Del Ponte, 1944: 118 (citation), 123 (key), 126 (host and geographic records). Guimarães, 1946 (as *B. mexicana mexicana*): 28 (redescription), figs. 21 (female habitus, dorsal and ventral views, legs omitted), 22 (male abdomen, dorsal and ventral views), 23 (leg 2, omitting trochanter and coxa, anterior view), 24 (leg 1, trochanter and coxa omitted, anterior view), 25 (posterior margin of male sternite 5), 26 (anterior margin of the head, dorsal view), 27 (female tergites 1 and 2), 28 (female tergites 1 and 2), 29 (female tergites 1 and 2), 32 (detail of the lobes of female tergite 2), 33 (posterior margin of female mesonotum), 34 (detail of the lobes of female tergite 2), 35 (posterior margin of female mesonotum), 36 (detail of the lobes of female tergite 2), 37 (posterior margin of female mesonotum), 38 (detail of the lobes of female abdominal tergite 2). Schuurmans-Stekhoven, Jr., 1951a: 112 (citation). Guimarães & D'Andretta, 1956: 83; figs. 1 (male genitalia, frontal view), 2 (male genitalia, lateral view), 14 (female abdomen, dorsal view), 15 (female abdomen, ventral view), 16 (female abdominal terminal segment, dorsal view), 17 (pustulate setae of female abdomen). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 266 (diagnosis, host and geographic records), figs. 416 (aedeagus and postgonites), 434 (hypoproct, anal sclerite and adanal plates), 461 (female abdomen, dorsal view), 462 (female terminalia, ventral view). Guimarães, 1968: 3 (catalogue). Peterson & Maa, 1970a: 1487 (host and geographic records). Claps *et al.*, 1992: 88 (host and geographic records). Autino *et al.* 1999: 145 (records, redescription and remarks), figs. 26 (female habitus, dorsal view), 27 (female abdomen, ventral view). Graciolli & Carvalho, 2001: 43 (diagnosis, host and geographic records), figs. 14 (female abdomen, dorsal view), 15 (female abdomen, ventral view). Graciolli, 2001: 316 (checklist). Autino & Claps, 2001: 196 (synonymy, distribution and hosts in Argentina). Graciolli, 2003: 6 (presence of sensory hairs on femur 1 and 2). Autino *et al.*, 2004: 82 (geographic and host records). Graciolli, 2004: 980 (diagnosis, host and geographic records), figs. 1 (female habitus, dorsal view), 2 (female thorax and abdomen, ventral view), 5 (female femur 3, anterior view), 19 (female abdomen, dorsal view), 32 (female abdomen, ventral view), 39 (map of distribution). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State). Graciolli *et al.*, 2006: 41 (host and geographic records, parasitological indices).

Basilina mexicana plaumanni, Guimarães, 1946: 38 (host and geographic records), figs. 31 (female abdominal tergite 1 and 2), 39 (detail of the lobes of female abdominal tergite 2), 40 (posterior margin of female mesonotum), 44 (female abdominal terminal segment, dorsal view). García, 1959: 579 (host and geographic distribution in Argentina).

Distribution. Brazil (Minas Gerais, Paraná, Rio Grande do Sul, Santa Catarina, São Paulo), Paraguay (Alto Paraguay,

Boquerón, Caaguazú, Canindeyú, Misiones), Argentina (Córdoba, Jujuy, Santiago del Estero), Uruguay (Río Negro, Tacuarembó).

Hosts. *Eptesicus brasiliensis*, *E. diminutus*, *E. furinalis*, *E. fuscus*, *Histiopus laeophotis* Thomas, 1916, *H. macrotus* (Poeppig, 1835), *H. montanus* (Poeppig, 1835), *Histiopus* sp., *Myotis albescens*, *M. nigricans* (Vespertilionidae).

Basilina producta Maa, 1968

Basilina producta Maa, 1968: 30, figs. 15 (female thoracic sternum), 16 (left half of female abdominal sternite 3), 20 (female femur 3, anterior view), 21 (female tibia 1, anterior view), 22 (female tibia 3, anterior view), 23 (female abdomen, dorsal view), 24 (female sternite 2 without ctenidium), 25 (female terminalia, ventral view), 26 (anal esclerite), 27 (hypoproct). Type locality. Brazil, Paraná, Palmeira. Type host. *Myotis albescens*. Holotype female deposited at MSNG. Paratypes at BPBM.

Guimarães & D'Andretta, 1956: 34 (part of material examined of *B. plaumanni*). Graciolli & Carvalho, 2001: 44 (diagnosis), fig. 16 (female abdomen, dorsal view redrawn from Maa (1968)). Graciolli, 2001 (part as *B. plaumanni*): 316 (checklist). Graciolli, 2004: 982 (diagnosis, host and geographic records), figs. 20 (female abdomen, dorsal view redrawn from Maa (1968)), 37 (map of distribution). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State).

Distribution. Brazil (Paraná, Santa Catarina).

Hosts. *Myotis albescens*, *M. nigricans* (Vespertilionidae).

Basilina quadrosae Graciolli & Moura, 2005

Basilina quadrosae Graciolli & Moura, 2005: 34, figs. 1 (female habitus, dorsal view), 2 (female habitus, ventral view, legs omitted), 3 (male habitus, dorsal view, legs omitted), 4 (male habitus, ventral view, legs omitted), 5 (detail of female abdominal connexivum), 6 (hypoproct, adanal plates and anal sclerite), 7 (male genitalia, lateral view). Type locality. Brazil, São Paulo, Cardoso Island. Type host. *Eptesicus brasiliensis*. Holotype female and paratypes deposited MZSP.

Distribution. Brazil (São Paulo).

Host. *Eptesicus brasiliensis* (Vespertilionidae).

Basilina rondanii Guimarães & D'Andretta, 1956

Basilina rondanii Guimarães & D'Andretta, 1956: 50, figs. 39 (pustulate setae of female sternite 3), 40 (pustulate setae of female sternite 4), 42 (posterior margin of female mesonotum), 44 (posterior margin of female head, dorsal view), 47 (female abdomen, dorsal view), 48 (female abdomen, ventral view), 49 (male abdomen, dorsal and ventral view), 50 (female abdominal terminal segment, dorsal view), 51 (posterior margin of male sternite 5), 53 (larva), 55 (male genitalia, lateral view), 79 (hypoproct). Type locality. Guatemala, Escuintla, Finca los Arcos. Type host. *Myotis nigricans*. Holotype female deposited at FMNH. Paratypes deposited at FMNH, MCZ, MZSP.

Peterson, 1960: 31 (female key), 32 (male key), 34 (citation). Peterson, 1963: 94 (host and geographic records). Maa, 1965: 381 (subgenus *Basilina*). Wenzel, 1965: 922 (catalogue). Theodor, 1967: 267 (diagnosis, host and geographic records), figs. 414 (aedeagus and postgonites, lateral view), 463 (female abdomen, dorsal view), 464 (female terminalia, ventral view). Guimarães, 1968: 3 (catalogue). Peterson, 1971: 7 (host and geographic records). Whitaker, Jr. & Easterla, 1975: 244, 245, 248-250 (host and geographic records). Webb & Loomis, 1977: 80, 98, 105 (checklist). Watkins, 1977: 3

(citation). Ortega & Castro-Arellano, 2001: 5 (citation). Gracioli, 2001: 316 (checklist). Ritzi *et al.*, 2001: 402 (host and geographic records and parasitological indexes).

Distribution. USA (Texas), Mexico (Armenia, San Blas, Veracruz), Guatemala (Escuintla), Honduras (Lempira), Costa Rica (Alajuela, Guanacaste).

Hosts. **Artibeus jamaicensis* Leach, 1821, **Hylonycteris underwoodii* Thomas, 1903, **Sturnira lilium* (E. Geoffroy, 1810) (Phyllostomidae), *Antrozous pallidus*, *Euderma maculatum*, *Myotis fortidens* Miller & Allen, 1928, *M. nigricans*, *M. volans*, *M. yumanensis*, *Pipistrellus hesperus* (Vespertilionidae).

Basilina rugosa Schuurmans-Stekhoven, Jr., 1942

Basilina rugosa Schuurmans-Stekhoven, Jr., 1942: 101, figs. 1 (male head and thorax, dorsal view), 1A (male head, ventral view), 2 (male abdomen, dorsal view), 3 (male abdomen, ventral view), 4 (male left leg 1, anterior view), 5 (male right leg 2, posterior view), 6 (male left leg 3, posterior view). Type locality. Peru, Silvia, 520 m. Type host. "Fledermaus" (undetermined bat). Location of Holotype male and paratypes cannot be determined. Depository Institution did not cited in Schuurmans-Stekhoven, Jr. (1942).

Guimarães & D'Andretta, 1956: 123 (citation). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 284 (citation). Guimarães, 1968: 3 (catalogue). Gracioli, 2001: 317 (checklist).

Distribution. Peru (Ayacucho).

Host. Unknown.

Basilina ruiae Gracioli, 2003

Basilina ruiae Gracioli, 2003: 4, figs. 2 (female femur and tibiae, anterior view), 5 (female abdomen, dorsal view), 7 (female abdomen, ventral view), 9 (male genitalia, lateral view). Type locality. Brazil, Rio Grande do Sul, Maquiné, Estação de Pesquisa e Produção de Maquiné da Fundação de Pesquisa Agropecuária da Secretaria do Estado do Rio Grande do Sul (FEPAGRO) (29° 40' 30" S; 50° 12' 26" W). Type host. *Myotis ruber*. Holotype female and paratypes deposited at DZUP.

Gracioli *et al.*, 2002 (as *Basilina* sp.): 403 (host and geographic records). Gracioli, 2004: 982 (diagnosis, host and geographic records), figs. 4 (female femur 3, anterior view), 8 (female tibiae 2, anterior view), 21 (female abdomen, dorsal view, redrawn for Gracioli (2003)), 33 (female abdomen, ventral view, redrawn for Gracioli (2003)), 38 (map of distribution). Prevedello *et al.*, 2005: 197 (biome distribution in Paraná State).

Distribution. Brazil (Paraná, Rio Grande do Sul, São Paulo).

Host. *Myotis ruber* (Vespertilionidae).

Basilina silvae (Brèthes, 1913)

Cyclopodia silvae Brèthes, 1913: 297. Type locality. Chile, Santiago de Chile. Type host. *Vesperugo velatus* I. Geoffroy, 1824 (= *Histiopus macrotus* or *H. montanus*). Cotype deposited at MACN.

Basilina silvae, Schuurmans-Stekhoven, Jr., 1931: 207 (synonymization in *B. bellardi* not of Rondani). Curran, 1935: 5 (citation). Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 119 (citation). Stuardo-Ortiz, 1946: 188 (catalogue). Schuurmans-Stekhoven, Jr., 1951a: 112 (citation). Guimarães & D'Andretta, 1956: 30 (redescription, host and geographic records), figs. 7 (female abdomen, dorsal view), 8 (female abdomen ventral view), 9 (male

abdomen, dorsal and ventral views), 10 (detail of pustulate setae, female abdomen), 11 (female abdominal terminal segment), 12 (prementum and labelum, ventral view), 13 (head apex, dorsal view). Maa, 1965: 381 (subgenus *Basilina*). Theodor, 1967: 269 (diagnosis, host and geographic records), figs. 420 (aedeagus and postgonite, lateral view), 435 (hypoproct, anal sclerite and adanal plates), 465 (female abdomen, dorsal view), 466 (female terminalia, ventral view). Guimarães, 1968: 3 (catalogue). Gracioli, 2001: 317 (checklist). Muñoz *et al.*, 2001 (host and geographic records).

Basilina mexicana silvae, Guimarães, 1946: 38, figs. 30 (female abdominal tergite 1 and 2), 41 (detail of the lobes of female tergite 2), 42 (posterior margin of female mesonotum), 45 (female abdominal terminal segment, dorsal view).

Distribution. Chile (Coquimbo, Ñuble).

Hosts. *Histiopus montanus*, *Histiopus* sp., *Myotis chiloensis* (Vespertilionidae).

Basilina speiseri (Miranda-Ribeiro, 1907)

Pseudelytromyia speiseri Miranda-Ribeiro, 1907: 233, plate XXIII (male habitus, dorsal view), plate XXIV figs. 2 (left half of male abdomen, ventral view), 3 (female abdomen, dorsal view), 4 (right half of female, ventral view). Type locality. Brazil, Rio de Janeiro, Quinta da Boa Vista. Type host. *Atalapha frantzii* Peters (= *Lasiurus blossevillii*). Holotype in undetermined location, type series deposited at MNRJ.

Miranda-Ribeiro, 1955: 394 (cotypes).

Basilina speiseri, Speiser, 1901 (as *Nycteribia (Acrocholidia) bellardii*): 46, 61. Ferris, 1924: 198. Stiles & Nolan, 1931: 648. Schuurmans-Stekhoven, Jr., 1931: 216. Curran, 1935: 2 (key), 4 (cited). Scott, 1936: 497 (as *B. bellardii* too) (host and geographic distribution), 501 (taxonomic discussion) Del Ponte, 1944: 118 (citation as *B. speiseri* and *B. bellardii*), 124 (key). Guimarães, 1946: 15 (as *B. bellardii*) (citation), 67 (redescription), figs. 1 (male head, ventral view), 2 (male head, dorsal view), 3 (male head, lateral view), 4 (male antennae, lateral view), 5 (male thorax, dorsal view), 6 (male thorax, ventral view), 7 (male thorax, lateral view, legs omitted), 8 (female abdomen, lateral view), 9 (male abdomen, lateral view), 10 (female genitalia, lateral view), 11 (female genitalia, ventral view), 81 (female habitus, dorsal and ventral views, legs omitted), 82 (male abdomen, dorsal and ventral views), 83 (posterior margin of male sternite 5), 84 (female abdominal terminal segment, dorsal view), 85 (femur and tibia 1, anterior view), 86 (femur and tibia 3, anterior view), 87 (femur and tibia 2, anterior view), 88 (margin anterior of head, dorsal view). Guimarães & D'Andretta, 1956: 70 (citation, geographic and host records), figs. 3 (apex of female abdomen, posterior view), 4 (apex of female abdomen, lateral view), 84 (hypoproct and anal sclerites), 101 (female abdomen, dorsal view), 102 (female abdomen, ventral view), 103 (male abdomen, dorsal and ventral view), 104 (female abdominal terminal segment, dorsal view), 105 (posterior margin of male sternite 5), 126 (posterior margin of female abdominal tergite 1), 127 (pustulate setae of female abdominal sternite 3), 132 (pustulate setae of female abdominal sternite 4), 144 (male genitalia, lateral view). Hurka, 1964: 77 (citation). Maa, 1965: 380 (subgenus *Pseudelytromyia*). Theodor, 1967: 282 (diagnosis, host and geographic records), figs. 427 (aedeagus and postgonites), 440 (hypoproct, anal sclerite and adanal plates), 482 (female abdomen, dorsal view), 483 (female terminalia, ventral view). Guimarães, 1968: 3 (catalogue). Webb & Loomis, 1977: 80, 97, 100, 108 (checklist). Autino & Claps, 2001: 197 (synonymy, distribution and hosts in Argentina). Gracioli, 2001: 317 (checklist). Gracioli *et al.*, 2002: 403 (host and geographic records). Gracioli, 2003: 6 (presence of sensory hairs on male and female femur 2). Gracioli, 2004: 978 (diagnosis, host and geographic records), figs. 15 (female abdomen, dorsal view), 28 (female abdomen, ventral view), 36 (map of distribution). Prevedello *et al.*, 2005: 197 (biome

distribution in Paraná State). Graciolli *et al.*, 2006: 42 (host and geographic records, parasitological indeces).

Guimaraesia [sic] *speiseri*, Schuurmans-Stekhoven, Jr., 1951a: 112.

Distribution. Brazil (Mato Grosso, Paraná, Rio de Janeiro, Santa Catarina, São Paulo), Argentina (Santa Fé), Paraguay (Alto Paraguay, Concepción, Cordillera, Ñeembucú, Paraguairí, Presidente Hayes).

Hosts. *Anoura geoffroyi* Gray, 1838, *Carollia perspicillata* (L., 1758), *Phyllostoma* sp. (Phyllostomidae), *Eptesicus brasiliensis*, *Lasiurus blossevilli*, *Myotis albescens*, *M. nigricans* (Vespertilionidae), *Molossus molossus* (Molossidae)

Phyllostoma Cuvier, 1800 is a synonymous junior of *Phyllostomus* Lacépède, 1799. Several species were described in the genus *Phyllostoma* that are placed in others genera of Phyllostomidae (see Vieira, 1942, Simmons, 2005). Speiser (1901) examined specimen with follow collect data, *Phyllostoma* sp., Brazil. Therefore it is not possible determine the correct host species.

Basilina tiptoni Guimarães, 1966

Basilina tiptoni Guimarães, 1966: 396, figs. 36A (female abdomen, dorsal view), B (male abdomen, dorsal view), C (cerci and posterior margin of male sternite 5), Type locality. Panama, Boca del Toro, 22 miles south of Changuinola. Type host. *Lonchorhina* sp. or *Tonatia* sp.. Holotype female and paratypes deposited at FMNH.

Guimarães, 1968: 3 (catalogue). Guimarães, 1972: 2 (host and geographic records), 8 (key for females). Webb & Loomis, 1977: 80, 108 (checklist). Timm *et al.*, 1989: 45 (host and geographic records). Komeno & Linhares, 1999: 152 (host and geographic records). Graciolli, 2001: 317 (checklist). Miller & Tschakpa, 2001 (host and geographic records), figs. (female habitus, dorsal and ventral view; female abdomen, dorsal view; male habitus, dorsal and ventral view).

Distribution. Costa Rica (La Selva), Panama (Boca del Toro), Venezuela (Apure, Falcon, Trujillo), Brazil (Minas Gerais). Host. *Mimon crenulatum* (Phyllostomidae).

Basilina traubi Maa, 1968

Basilina traubi Maa, 1968: 28, figs. 8 (female abdomen, dorsal view), 9 (female abdominal sternite 2 without ctenidium), 10 (female terminalia, ventral view), 11 (anal sclerite), 12 (hypoproct), 13 (female thoracic sternum), 14 (left half of female abdominal sternite 3), 17 (female femur 3, anterior view), 18 (female tibia 3, anterior view), 19 (female tibia 1, anterior view). Type locality. Mexico, Oaxaca, 8 km W de Chiltepee. Type host: *Myotis* sp. Holotype female deposited at BPBM. Paratypes at BPBM, USNM. Graciolli, 2001: 318 (checklist).

Distribution. Mexico (Oaxaca).

Host. *Myotis* sp. (Vespertilionidae).

Basilina travassosi Guimarães, 1938

Basilina travassosi Guimarães, 1938: 183, figs. 1 (antennae, lateral view), 2 (female abdomen, ventral view), 3 (female abdomen, dorsal view). Type locality. Brazil, Pernambuco, Tapera. Type host. Unknown. Holotype female deposited at MZSP. Paratype deposited at LPFM.

Schuurmans-Stekhoven, Jr., 1942: 104 (citation). Del Ponte, 1944: 119 (citation), 124 (key). Guimarães, 1946: 54 (redescription, host and geographic records), figs. 64 (female habitus dorsal and ventral view, legs omitted), 65 (male abdomen, dorsal and ventral views), 66 (posterior margin of male sternite 5), 67 (female abdominal terminal segment, dorsal view), 68 (tibia 1, anterior view), 69 (tibia 2, anterior view), 70 (femur, tibia and tarsus 3, anterior view). Guimarães & D'Andretta, 1956: 88, figs. 88 (hypoproct and adanal plates), 133 (female abdominal tergite 1), 134 (female abdominal tergite 2), 147 (male genitalia, lateral view). Maa, 1965: 380 (subgenus *Pseudelytromya*). Theodor, 1967: 284 (diagnosis). Guimarães, 1968: 3 (catalogue). Graciolli, 2001: 318 (checklist).

Guimaraesia [sic] *travassosi*, Schuurmans-Stekhoven, Jr., 1951a: 112.

Distribution. Brazil (Ceará, Pernambuco).

Host. *Myotis albescens* (Vespertilionidae).

Basilina tuttlei Guimarães, 1972

Basilina tuttlei Guimarães, 1972: 4, fig. 1 (female abdomen, ventral view), 8 (key for females). Type locality. Venezuela, Amazonas, Rio Cunucunuma, Belén (Mouth of Caño Culebra) 150 m elev. Type host. *Myotis nigricans*. Holotype female deposited at USNM. Graciolli, 2001: 318 (checklist).

Distribution. Venezuela (Amazonas).

Host. *Myotis nigricans* (Vespertilionidae).

Basilina typhlops Guimarães, 1972

Basilina typhlops Guimarães, 1972: 5, fig. 2 (female abdomen, dorsal view), 8 (key for females). Type locality. Venezuela, Bolívar, 85 km SSE El Dorado at km 125, 826 m. elev. Type host. *Myotis oxyotus* (Peters, 1867). Holotype female deposited at USNM. Paratype deposited in location undetermined. Graciolli, 2001: 318 (checklist).

Distribution. Venezuela (Bolívar).

Host. *Myotis oxyotus* (Vespertilionidae).

Basilina wenzeli Guimarães & D'Andretta, 1956

Basilina wenzeli Guimarães & D'Andretta, 1956: 42, figs. 25 (female abdomen, dorsal view), 26 (female abdomen, ventral view), 27 (male abdomen, dorsal and ventral view), 28 (detail of female dorsal connexivum abdominal), 29 (female mentum and labelum, ventral view), 30 (margin posterior of male sternite 5), 31 (posterior female head, dorsal view), 32 (anal segment, dorsal view), 33 (margin posterior of female mesonotum), 57 (male genitalia, lateral view), 80 (hypoproct). Type locality. Venezuela, Aragua, Rancho Grande. Type host. *Eptesicus fuscus*. Holotype female deposited at UCV. Paratypes deposited at DZUP, FMNH, UCV.

Hurka, 1964: 77 (geographic record). Maa, 1965: 381 (subgenus *Basilina*). Guimarães, 1966: 396 (record). Theodor, 1967: 270 (diagnosis, host and geographic records), figs. 419 (aedeagus and postgonites, lateral view), 467 (female abdomen, dorsal view), 468 (female terminalia, ventral view). Guimarães, 1968: 3 (catalogue). Guimarães, 1972: 2 (host and geographic records), 8 (key for females). Webb & Loomis, 1977: 80, 98, 106 (checklist). Lassieur & Wilson, 1989: 3 (citation). Mies *et al.*, 1996: 4 (citation). Graciolli, 2001: 318 (checklist).

Distribution. Panamá (Armillá, Bocas del Toro, Los Santos, San Blas, Sirube), Colombia (Cundinamarca), Venezuela

(Aragua, Distrito Federal, Mérida).

Hosts. *Artibeus jamaicensis*, *Lonchorhina aurita* Tomes, 1863 (Phyllostomidae), *Eptesicus andinus* J. A. Allen, 1914, *E. fuscus*, *Histiopus* sp. (Vespertilionidae).

Herskovitzia Guimarães & D'Andretta, 1956

Herskovitzia Guimarães & D'Andretta, 1956: 127. Maa, 1965: 379 (checklist). Wenzel & Tipton, 1966: 704 (ecological aspects). Machado-Allison, 1967: 370 (citation). Theodor, 1967: 345 (diagnosis). Guimarães, 1968: 4 (catalogue). Radovsky & Furman, 1969: 393 (citation). Peterson & Lacey, 1985: 581 (key for females), 582 (key for males).

Type species. *Herskovitzia primitiva* Guimarães & D'Andretta, 1956, by monotypy.

Herskovitzia cabala Peterson & Lacey, 1985

Herskovitzia cabala Peterson & Lacey, 1985: 578, figs. 1 (female habitus, right legs omitted, dorsal view), 2 (female thorax and abdomen, ventral view). Type locality. Brazil, Amazonas, Uruá, Parque Nacional da Amazônia, Rio Tapajós, trail to cataracts. Type host. *Thyroptera tricolor* Spix, 1823. According to Peterson & Lacey (1985), the holotype female was to have been deposited at MZSP, but the specimens cannot be located.

Gracioli, 2001: 319 (checklist). Gracioli & Bernard, 2002: 84 (host).

Distribution. Brazil (Amazônia).

Host. *Thyroptera tricolor* (Thyropteridae).

Herskovitzia coeca Theodor, 1967

Herskovitzia coeca Theodor, 1967: 346, figs. 578 (female thorax, dorsal view), 579 (female thoracic sternum), 580 (female tibia 1 and tarsomeres 1-4, anterior view), 581 (female tibia 2 and tarsomeres 1-4, anterior view), 582 (female tibia 3 and tarsomeres 1-4, anterior view), 583 (female abdomen, dorsal view), 584 (female abdomen, ventral view and genital plate). Type locality. Unknown. Type host. Unknown. Holotype female deposited at BMNH.

Guimarães, 1968: 4 (catalogue). Gracioli, 2001: 319 (checklist).

Distribution. Unknown.

Host. Unknown.

Herskovitzia inaequalis Theodor, 1967

Herskovitzia inaequalis Theodor, 1967: 348, figs. 585 (female thorax, dorsal view), 596 (female thoracic sternum), 587 (female tibia 1 and tarsomeres 1-4, anterior view), 588 (female tibia 2 and tarsomeres 1-4, anterior view), 589 (female tibia 3 and tarsomeres 1-4, anterior view), 590 (male abdomen, dorsal view), 591 (male abdomen, ventral view), 592 (male genitalia, lateral view), 593 (female abdomen, dorsal view), 594 (female abdomen, ventral view and hypoproct). Type locality. Peru, Loreto, Maynas. Type host. *Thyroptera discifera* (possibly *Thyroptera lavalii* Pine, 1993 (Gracioli & Bernard 2002)). Holotype female deposited at FMNH. Paratypes deposited FMNH.

Guimarães, 1968: 4 (catalogue). Gracioli, 2001: 319 (checklist). Gracioli & Bernard, 2002: 83 (host and geographic records, type host identity).

Distribution. Brazil (Amazônia), Peru (Loreto).

Host. *Thyroptera discifera* (or *T. lavalii*) (Thyropteridae).

Herskovitzia primitiva Guimarães & D'Andretta, 1956

Herskovitzia primitiva Guimarães & D'Andretta, 1956: 130, figs. 213 (female head, ventral view), 214 (female head, dorsal view), 215 (male maxillary palp, ventral view), 216 (mentum and labelum, ventral view), 217 (male thorax, dorsal view), 218 (male thorax, ventral view), 219 (lateral margin of male sternum), 220 (male leg 1, anterior view), 221 (male leg 2, anterior view), 222 (male leg 3, anterior view), 223 (female abdomen, dorsal view), 224 (female abdomen, ventral view), 225 (hypoproct), 226 (male abdomen, dorsal view), 227 (male abdomen, ventral view), 228 (setae of abdominal ctenidium), 229 (one cercus, ventral view), 230 (hypoproct, paratype), 231 (male genitalia, frontal view), 232 (male genitalia, lateral view). Type locality. Colombia, Departamento de Bolívar, Rio Sinú, Socorré. Type host. *Thyroptera discifera* (Lichtenstein & Peters, 1855). Holotype female deposited at FMNH. Paratypes deposited at MZSP.

Maa, 1965: 379 (checklist). Theodor, 1967: 345 (diagnosis). Guimarães, 1968: 4 (catalogue). Wilson, 1978: 2 (citation). Gracioli, 2001: 319 (checklist). Miller & Tschakpa, 2001 (host and geographic records), figs. (female habitus, dorsal view; female abdomen, dorsal view; female habitus, ventral view).

Distribution. Costa Rica (La Selva), Colombia (Bolívar).

Host. *Thyroptera discifera* (Thyropteridae).

Acknowledgements. We thank Cheryl Barr (Essig Museum of Entomology), James O'Hara (Invertebrate Biodiversity Agriculture and Agri-Food Canada), Miguel Angel Delfino (Universidad Nacional de Córdoba), Weiping Xie (Natural History Museum of Los Angeles County), and Dr. Yosef Schlein (Hebrew University) for information about location of type material. Dr. Carl W. Dick (Field Museum of Natural History) for information about type material and for sending us literature unavailable in Brazil and Argentina.

REFERENCES

- Aldrich, J. M. 1905. A catalogue of North American Diptera (or two-winged flies). **Smithsonian Miscellaneous Collections** 66: 1–680.
- Alonso-Mejía, A. & R. A. Medellín. 1991. *Micronycteris megalotis*. **Mammalian species** 376: 1–6.
- Augustson, G. F. & S. F. Wood. 1953. Notes on California mammal ectoparasites from the Sierra Nevada Foothills of Madera County. **Bulletin Southern California Academy of Science** 52: 48–56.
- Autino, A. G. & G. L. Claps. 2001 [2000]. Catalogue of the ectoparasitic insects of the bats of Argentina. **Insecta Mundi** 14: 193–209.
- Autino, A. G.; G. L. Claps & R. M. Barquez. 1999. Insectos ectoparásitos de murciélagos de las yungas de la Argentina. **Acta Zoológica Mexicana, Nueva Serie** 78: 119–169.
- Autino, A. G.; G. L. Claps & R. M. Barquez. 2000. Nuevos registros de Diptera (Nycteribiidae) y Siphonaptera (Ischnopsyllidae) de Chiroptera (Vespertilionidae) de la Argentina. **Boletín de Entomología Venezolana** 15: 109–12.
- Autino, A. G.; G. L. Claps & E. M. González. 2004. Nuevos registros de insectos (Diptera y Siphonaptera) ectoparásitos de murciélagos (Vespertilionidae) del norte de Uruguay. **Mastozoología Neotropical** 11: 81–83.
- Baker, R. J. & C. L. Clark. 1987. *Uroderma bilobatum*. **Mammalian species** 279: 1–4.
- Barquez, R. M. 2006. Orden Chiroptera, p. 56–86. In: R. M. Barquez; M. M. Díaz & R. A. Ojeda (eds.). **Mamíferos de Argentina. Sistemática y distribución**. Sociedad Argentina para el Estudio de los Mamíferos (SAREM), Mendoza, 356 pp.
- Bequaert, J. 1926. Medical report of the Hamilton Rice seventh

- expedition to the Amazon, in conjunction with Department of Tropical Medicine of Harvard University, 1924/25. **Contribution from the Harvard Institute for Tropical Biology and Medicine** 4: 240–245.
- Bequaert, J. 1940. Mocas parásitas Pupíparas de Colombia y Panamá. **Revista de la Academia Colombiana de Ciencias** 3: 414–418.
- Bequaert, J. 1942. The Diptera Pupipara of Venezuela. **Boletín de Entomología Venezolana** 1: 79–88.
- Bertola, P. B.; C. C. Aires; S. E. Favorito; G. Gracioli; M. Amaku & R. Pinto-da-Rocha. 2005. Bat flies (Diptera: Streblidae, Nycteribiidae) parasitic on bats (Mammalia: Chiroptera) at Parque Estadual da Cantareira, São Paulo, Brazil: parasitism rates and host-parasite associations. **Memórias do Instituto Oswaldo Cruz** 100: 25–32.
- Bigot, J. M. P. 1885. Diptères nouveaux ou peu connus 27 partie. XXXV Famille des Anomalocarerati (mihi) **αγομαλον-χεραζ** (Coriace, Pupipara, Nycteribiidae Auctor). **Annales de la Société Entomologique de France**: 15–246.
- Blood, B. R. & M. K. Clark. 1998. *Myotis vivesi*. **Mammalian species** 588: 1–5.
- Bradshaw, G. V. R. & A. Ross. 1961. Ectoparasites of Arizona bats. **Journal of the Arizona-Nevada Academy of Science** 1: 109–112.
- Brèthes, J. 1908. Catálogo de los Dípteros de las Repúblicas del Plata. **Anales del Museo Nacional de Buenos Aires** 9: 277–305.
- Brèthes, J. 1913. Une nouvelle espèce de Diptère Pupipare du Chili. **Boletín del Museo Nacional** 5: 297–299.
- Burnett, S. E.; J. B. Jennings; J. C. Rainey & T. L. Best. 2001. *Molossus bondae*. **Mammalian Species** 668: 1–3.
- Chilton, G.; M. J. Vohhof; B. V. Peterson & N. Wilson. 2000. Ectoparasitic insects of bats in British Columbia, Canada. **Journal of Parasitology** 86: 191–192.
- Claps, G. L. & A. G. Autino. In press. Nycteribiidae. In: S. Roig-Juñent; G. Debandi & L. E. Claps (eds.). **Biodiversidad de los Artrópodos Argentinos II**. Sociedad Entomológica Argentina Ediciones.
- Claps, G. L.; A. G. Autino & R. M. Barquez. 1992. Nuevas citas de dípteros ectoparásitos (Nycteribiidae) para murciélagos de la Argentina. **Revista de la Sociedad Entomológica Argentina** 50: 88.
- Claps, G. L.; A. G. Autino; M. L. Merino & A. M. Abba. 2004. Nuevas citas de insectos ectoparásitos de murciélagos para las provincias de Buenos Aires y Corrientes, Argentina. **Physis (Buenos Aires, Secc. C)**, 59: 53–56.
- Claps, G. L.; A. G. Autino & A. M. Saralegui. 1998. Insectos ectoparasitos de dos especies de *Myotis* (Chiroptera: Vespertilionidae) del Uruguay. **Neotrópica** 44: 113–114.
- Cole, F. R. 1927. A study of terminal abdominal structures of male Diptera (two-winged flies). **Proceedings of the California Academy of Sciences** 16: 397–499.
- Cooper, K. W. 1941. An investigation of the aberrant chromosome behavior in the male germ cells of flies parasitic on tropical bats and vultures (Diptera, section Pupipara). **Proceedings of the Year Book of American Philosophical Society** 1941: 122–127.
- Curran, C. H. 1935. New species of Nycteribiidae and Streblidae (Diptera). **American Museum Novitates** 765: 1–15.
- Dalmáu, P. A. & I. G. Ávila. 1983. **Lista anotada de los dípteros de Cuba**. Editorial Científico-Técnica, Habana, 204 p.
- Del Ponte, E. 1944. *Basilisa romañai* (sic) *nobis* (Diptera, Nycteribiidae) de la Argentina. **Annales del Instituto de Medicina Regional, Universidad de Tucumán** 1: 117–128.
- Dittmar, K.; M. L. Porter; S. Murray & M. F. Whiting. 2006. Molecular phylogenetic analysis of nycteribiid and streblid bat flies (Diptera: Brachycera, Calyptratae): implications for host associations and phylogeographic origins. **Molecular Phylogenetics and Evolution** 38: 155–177.
- Eads, R. B. & G. C. Menzies. 1948. Additional records of bat parasites of the family Nycteribiidae. **Entomological News** 59: 244.
- Elzinga, R. J. & A. B. Broce. 1986. Labellar modifications of Muscomorpha flies (Diptera). **Annals of the Entomological Society of America** 79: 150–209.
- Ferrel, C. S. & D. E. Wilson. 1991. *Platyrrhinus helleri*. **Mammalian species** 373: 1–5.
- Ferris, G. F. 1916. Some ectoparasites of Bats (Dipt.). **Entomological News** 27: 433–438 + 2 plates.
- Ferris, G. F. 1924. The New World Nycteribiidae (Diptera Pupipara). **Entomological News** 35: 191–199 + 3 plates.
- Ferris, G. F. 1930. The puparium of *Basilisa corynorhini* (Ferris) (Diptera: Nycteribiidae). **Entomological News** 41: 295–297.
- Foster, G. W. 1979. *Polychromophilus* from Southeastern brown bats (*Myotis austroriparius*) in North-Central Florida. **Journal of Parasitology** 65: 465–466.
- Fox, R. M. & R. M. Stabler. 1953. *Basilisa calverti* n. sp. (Diptera: Nycteribiidae) from the Interior Long-Legged Bat. **Journal of Parasitology** 39: 22–27.
- García, M. 1959. Diptera Pupipara. **Primeras Jornadas Entomopidemiológicas Argentinas** 2: 579–580.
- García-Ávila, I. 1976. Insectos hematófagos de Cuba. **Poeyana** 154: 1–15.
- Gracioli, G. 2001. Distribuição geográfica e hospedeiros quirópteros (Mammalia, Chiroptera) de moscas nycteribidas americanas (Diptera, Nycteribiidae). **Revista Brasileira de Zoologia** 18: 307–311.
- Gracioli, G. 2003. Two new species of *Basilisa* Miranda-Ribeiro, 1903 (Diptera: Nycteribiidae), members of the *ferruginea* group, from Southern Brazil. **Zootaxa** 261: 1–7.
- Gracioli, G. 2004. Nycteribiidae (Diptera, Hippoboscoidea) no Sul do Brasil. **Revista Brasileira de Zoologia** 21: 971–985.
- Gracioli, G. & L. S. Aguiar. 2002. Ocorrência de moscas ectoparasitas (Diptera, Streblidae e Nycteribiidae) de morcegos (Mammalia, Chiroptera) no Cerrado de Brasília, Distrito Federal, Brasil. **Revista Brasileira de Zoologia** 19: 177–181.
- Gracioli, G. & E. Bernard. 2002. Novos registros de moscas ectoparasitas (Diptera, Streblidae e Nycteribiidae) em morcegos (Mammalia, Chiroptera) do Amazonas e Pará, Brasil. **Revista Brasileira de Zoologia** 19: 77–86.
- Gracioli, G.; N. C. Cáceres & M. R. Borschein. 2006. Novos registros de moscas ectoparasitas (Diptera, Streblidae e Nycteribiidae) de morcegos (Mammalia, Chiroptera) em áreas de transição cerrado-floresta estacional no Mato Grosso do Sul, Brasil. **Biota Neotrópica** 6: 1–4. <http://www.biotaneotropica.org.br/v6n2/pt/abstract?short-communication+bn03206022006>.
- Gracioli, G. & C. J. B. de Carvalho. 2001. Mosca ectoparasita (Diptera, Hippoboscoidea, Nycteribiidae) de morcegos (Mammalia, Chiroptera) do Estado do Paraná. I. *Basilisa*, taxonomia e chave pictórica para as espécies. **Revista Brasileira de Zoologia** 18: 33–49.
- Gracioli, G.; C. W. Dick & D. Gettinger. 2006. A faunal survey of nycteribiid flies (Diptera: Nycteribiidae) associated with bats in Paraguay. **Zootaxa** 1220: 35–46.
- Gracioli, G. & P. M. Linardi. 2002. Some Streblidae and Nycteribiidae (Diptera, Hippoboscoidea) from Maracá Island, Roraima, Brazil. **Memórias do Instituto Oswaldo Cruz** 97: 139–141.
- Gracioli, G. & M. O. Moura. 2005. *Basilisa quadrosae* sp. nov. (Diptera: Nycteribiidae), member of the *ferruginea* group, from Southern Brazil. **Zootaxa** 1087: 33–38.
- Gracioli, G.; F. C. Passos; W. A. Pedro & B. K. Lim. 2002. Records of Streblidae and Nycteribiidae (Diptera) on vespertilionid bats (Chiroptera: Vespertilionidae) from São Paulo State, Brazil. **Journal of New York Entomological Society** 110: 402–404.
- Guerrero, R. 1996. The *Basilisa junquiensis* species-group (Diptera: Nycteribiidae) with description of a new species from Pakitza, Perú, p. 665–674. In: D. E. Wilson & A. Sandoval (eds.). **MANU, The Biodiversity of southeastern Perú**. Smithsonian Institution, Washington, 679 p.
- Guimarães, L. R. 1938. Sobre uma nova espécie de Nycteribiidae (Diptera-Pupipara). **Livro Jubilar Prof. Travassos III**: 183–184+1 plate.
- Guimarães, L. R. 1940. Sobre a prioridade de *Basilisa ferrisi* Schuurmans

- Stekhoven, 1931. **Papéis Avulsos do Departamento de Zoologia** 1: 5–8.
- Guimarães, L. R. 1942. Nova espécie do gênero *Basilina* (Nycteribiidae-Diptera) do Brasil. **Papéis Avulsos do Departamento de Zoologia** 2: 145–149.
- Guimarães, L. R. 1943. Mais uma nova espécie sulamericana de Nycteribiidae (Diptera). **Papéis Avulsos do Departamento de Zoologia** 3: 257–260.
- Guimarães, L. R. 1946. Revisão das espécies sul-americanas do gênero *Basilina* (Diptera-Nycteribiidae). **Arquivos de Zoologia** 5: 1–88.
- Guimarães, L. R. 1966. Nycteribiid batflies from Panama (Diptera: Nycteribiidae), p. 393–404. In: R. L. Wenzel & V. J. Tipton (eds.). **Ectoparasites of Panama**. Field Museum of Natural History, Chicago, XII+861 pp.
- Guimarães, L. R. 1968. 101. Family Nycteribiidae. In: N. Papavero (ed.). **A catalogue of the Diptera of the Americas south of the United States**, 7p.
- Guimarães, L. R. 1972. Venezuelan nycteribiid batflies (Diptera: Nycteribiidae). **Brigham Young University Science Bulletin, Biological Series** 17: 1–11.
- Guimarães, L. R. 1977. Supplementary note on Venezuelan bat flies (Diptera: Nycteribiidae). **The Great Basin Naturalist** 37: 221–224.
- Guimarães, L. R. & M. A. V. D'Andretta. 1956. Sinopse dos Nycteribiidae (Diptera) do Novo Mundo. **Arquivos de Zoologia** 9: 1–175.
- Haig, J. 1978: A catalog of arthropod types in the Allan Hancock Foundation. Part 1. Non-crustacean arthropods. **Allan Hancock Foundation Technical Reports** 1: 2–3.
- Hansen, C. G. 1964. Ectoparasites of mammals from Oregon. **The Great Basin Naturalist** 24: 75–81.
- Hase, A. 1931. Über die Lebensgewohnheiten einer Fledermausfliege in Venezuela; *Basilina bellardii* Rondani (Fam. Nycteribiidae – Diptera Pupipara). **Beiträge zur Experimentellen Parasitologie** 5: 220–257.
- Hensley, A. P. & K. T. Wilkins. 1988. *Leptoncyteris nivalis*. **Mammalian species** 307: 1–4.
- Hernández-Mesa, B.; Y. Domínguez-Castellanos & J. Ortega. 2005. *Myotis keaysi*. **Mammalian species** 785: 1–3.
- Hobson, C. S. 2000. First record of Nycteribiidae (Diptera) in Virginia, and a discussion of the host specificity and distribution of *Basilina boardmani*. **Entomological News** 111: 291–293.
- Hürka, K. 1964. Revision der Nycteribiidae und Streblidae-Nycteriboscinae aus der Dipterenammlung des Zoologischen Museums in Berlin. **Mitteilungen aus dem Zoologischen Museum in Berlin** 40: 72–86.
- Hürka, K. 1970. *Basilina (Basilina) cubana* sp. n., new bat fly from Cuba (Diptera, Nycteribiidae). **Acta entomologica bohemoslovaca** 67: 335–338.
- Jameson, D. K. 1959. A survey of the parasites of five species of bats. **The Southwestern Naturalist** 4: 61–65.
- * Jones, J. K. & H. H. Genoways. 1967. Annotated checklist of bats from South Dakota. **Transactions of the Kansas Academy of Science** 70: 184–196.
- Jones, C. & R. W. Manning. 1989. *Myotis austroriparius*. **Mammalian species** 332: 1–3.
- Komono, C. A. & A. X. Linhares. 1999. Batflies parasitic on some phyllostomid bats in Southeastern Brazil: parasitism rates and host-parasite relationships. **Memórias do Instituto Oswaldo Cruz** 94: 151–156.
- Lassieur, S. & D. E. Wilson. 1989. *Lonchorhina aurita*. **Mammalian species** 347: 1–4.
- Maa, T. C. 1965. An interim World list of batflies (Diptera: Nycteribiidae and Streblidae). **Journal of Medical Entomology** 1: 377–386.
- Maa, T. C. 1968. New *Basilina* species from Thailand, Mexico and Brazil (Diptera, Nycteribiidae). **Pacific Insects** 10: 25–32.
- Maa, T. C. 1971. An annotated bibliography of batflies (Diptera: Streblidae, Nycteribiidae). **Pacific Insects Monograph** 28: 119–211.
- Maa, T. C. 1989. Family Nycteribiidae, p. 790–794. In: N. L. Evenhuis (ed.). **Catalogue of the Australasian and Oceanic Regions**. Bishop Museum Press & E. J. Brill. Bishop Special Publications 86, Honolulu, 1150 p.
- Machado-Allison, C. E. 1963. Un nuevo Nycteribiidae (Diptera) de Venezuela. **Acta Biológica Venezolánica** 3: 455–459.
- Machado-Allison, C. E. 1967. Sobre algunos ectoparásitos de mamíferos de la Biota Amazónica. **Ata do Simpósio sobre a Biota Amazônica** 5 (Zoologia): 365–372.
- Marinkelle, C. J. & E. S. Grose. 1981. A list of ectoparasite of Colombian bats. **Revista de Biología Tropical** 29: 11–20.
- Medellín, R. A. 1989. *Chrotopterus auritus*. **Mammalian species** 343: 1–5.
- Medellín, R. A. & H. T. Arita. 1989. *Tonatia evaotis* and *Tonatia silvicola*. **Mammalian species** 334: 1–5.
- Méndez, E. 1988. Parasites of vampire bats, p. 191–206. In: A. M. Greenhall & H. Schmidt (eds.). **Natural history of vampire bats**. CRC Press, Boca Ratón, 246 p.
- Mies, R.; A. Kurta & D. G. King. 1996. *Eptesicus furinalis*. **Mammalian species** 526: 1–7.
- Miller, J. & M. Tschakpa. 2001. **The bat flies of La Selva (Diptera: Nycteribiidae, Streblidae)**. [http://www.calacademy.com/research/entomology/personnel/jmiller/Batfly_1.0/index.html] [Accessed: 31 January 2007].
- Miranda-Ribeiro, A. 1903. *Basilina ferruginea*, genero e especie nova da Família das nycteribias. **Archivos do Museu Nacional do Rio de Janeiro** 12: 175–179+1 plate.
- Miranda-Ribeiro, A. 1907. Alguns dipteros interessantes. **Archivos do Museu Nacional do Rio de Janeiro** 14: 229–239.
- Miranda-Ribeiro, P. de. 1955. Tipos das espécies e subespécies do Prof. Alípio de Miranda Ribeiro depositados no Museu Nacional. **Archivos do Museu Nacional do Rio de Janeiro** 42: 389–417.
- Moreno-Valdez, A. 1998. Mamíferos del Cañón de Huajuco, Municipio de Santiago, Nuevo León, México. **Revista Mexicana de Mastozoología** 3: 5–25.
- Morlan, H. B. 1952. Host relationships and seasonal abundance of some Southwest Georgia ectoparasites. **American Midland Naturalist** 48: 74–93.
- Muñoz, L. E.; D. A. González & I. Fernández. 2001. Primer registro de *Basilina silvae* (Diptera: Nycteribiidae) sobre *Histiopus montanus* (Chiroptera: Vespertilionidae) en Chile. **Gayana** 65: 221–222.
- O'Farrel, H. J. & E. H. Studier. 1980. *Myotis thysanodes*. **Mammalian species** 137: 1–5.
- Orr, R. J. 1954. Natural history of the pallid bat *Antrozous pallidus* (Le Conte). **Proceedings of the California Academy of Sciences** 28: 165–246.
- Ortega, J. & I. Castro-Arellano. 2001. *Artibeus jamaicensis*. **Mammalian species** 662: 1–9.
- Overall, W. L. 1985. Redescoberta do holótipo de *Basilina ferruginea* Ribeiro, 1903 (Diptera: Nycteribiidae). **Anais da Sociedade Entomológica do Brasil** 14: 215–216.
- Palmer, D. B. & W. J. Gunier. 1975. A preliminary survey of arthropods associated with bats and bat caves in Missouri and two counties of Oklahoma. **Journal of the Kansas Entomological Society** 48: 524–531.
- Parmalee, P. W. 1955. A nycteribiid fly new to Illinois. **Journal of Parasitology** 41: 322.
- Peterson, B. V. 1960 [1959]. New distribution and host records for bat flies, and a key to the North American species of *Basilina* Ribeiro (Diptera: Nycteribiidae). **Proceedings of the Entomological Society of Ontario** 90: 30–37.
- Peterson, B. V. 1963 [1962]. Additional records of some American bat flies (Diptera: Nycteribiidae). **Proceedings of the Entomological Society of Ontario** 93: 93–94.
- Peterson, B. V. 1971. Notes on the bat flies of Costa Rica. **Contributions of Science** 212: 1–8.
- Peterson, B. V. & L. A. Lacey. 1985. A new species of *Hershkovitzia* (Diptera: Nycteribiidae) from Brazil, with a key to the described species of the genus. **Proceedings of the Entomological Society of Washington** 87: 578–582.
- Peterson, B. V. & T. C. Maa. 1970a. One new and one previously unrecorded species of *Basilina* (Diptera: Nycteribiidae) from Uruguay.

- The Canadian Entomologist** 102: 1480–1487.
- Peterson, B. V. & T. C. Maa. 1970b. A new species of *Basilia* (Diptera: Nycteribiidae) from Colombia. **The Canadian Entomologist** 102: 1519–1523.
- Peterson, B. V. & R. L. Wenzel. 1987. Nycteribiidae, p: 1283–1291. In: J. F. Mc Alpine; B. V. Peterson; G. E. Shewell; H. J. Tekey; J. R. Vockeroth & D. M. Wood (eds.). **Manual of Nearctic Diptera**, vol. 2, Monograph nro 28. Research Branch Agriculture Canada, Ottawa, 1332 p.
- Prevedello, J. A.; G. Gracioli & C. J. B. de Carvalho. 2005. A fauna de dípteros (Streblidae e Nycteribiidae) ectoparasitos de morcegos (Chiroptera) do estado do Paraná, Brasil: composição, distribuição e áreas prioritárias para novos estudos. **Biociências** 13: 193–209.
- Radovsky, F. J. & D. P. Furman. 1969. An usual new genus and species of Macronyssidae (Acarina) parasitic on disc-winged bat. **Journal of Medical Entomology** 6: 385–393.
- Reeder, W. G. & K. S. Norris. 1954. Distribution, type locality, and habitats of the fish-eating bat, *Pizonyx vivesi*. **Journal of Mammalogy** 35: 81–87.
- Reeves, W. K. 2001. Invertebrate and slime mold cavernicoles of Santee cave, South Carolina, U.S.A. **Proceedings of the Academy of Natural Sciences of Philadelphia** 151: 81–85.
- Reeves, W. K. & M. H. Reeves. 2000. The puparium of *Basilia boardmani* (Diptera: Nycteribiidae) from eastern North America. **Studia Dipterologica** 7: 507–509.
- Rice, D. W. 1957. Life history and ecology of *Myotis austroriparius* in Florida. **Journal of Mammalogy** 38: 15–32.
- Richerson, J. V.; J. F. Scudday & S. P. Tabor. 1992. An ectoparasite survey of mammals in Brewster County, Texas, 1982–1985. **Southwestern Entomologist** 17: 7–15.
- Ritzi, C. M.; L. K. Ammerman; M. T. Dixon & J. V. Richerson. 2001. Bat ectoparasites from the Trans-Pecos region of Texas, including notes from Big Bend National Park. **Journal of Medical Entomology** 38: 400–404.
- Ritzi, C. M. & M. K. Clark. 2001. New ectoparasites records of bats from North Carolina. **The Journal of the Elisha Mitchell Scientific Society** 117: 135–137.
- Rondani, C. 1878. Muscaria exotica Musei Civici Januensis observata et distincta. Fragmentum IV. Hippoboscita exótica non vel minus cognita. **Annali Del Museo Civico Di Storia Naturale Di Genova** 12: 150–169.
- Roth, V. D. 1951. New records for Streblidae and Nycteribiidae. **The Pan-Pacific Entomologist** 27: 96.
- Rozeboom, L. E. 1934. A new nycteribiid from Florida. **Journal of Parasitology** 20: 315–316.
- Ryckman, R. E. & A. E. Ryckman. 1963. Loma Linda University's 1962 Expedition to Baja California: Medical entomology and parasitology. **Medical Arts and Sciences** 17: 65–76.
- Samuelson, G. A. & Evenhuis, N. L. 2004. Insect and spider collections of the world. [http://hbs.bishopmuseum.org/codens/] [Accessed: 22 July 2006].
- Schuermans-Stekhoven, J. H., Jr. 1931. Eine seltene, ungenügend beschriebene *Basilia*-Art (Diptera Pupipara) aus Venezuela. **Zeitschrift für Parasitenkunde** 3: 205–219.
- Schuermans-Stekhoven, J. H., Jr. 1942. Pupiparen (Dipt.), p. 95–106. In: E. Titschak (ed.). **Beiträge zur Fauna Perus, Bd. 2**.
- Schuermans-Stekhoven, J. H., Jr. 1951a. Algunas especies del genero "*Basilia*" Ribeiro y creación del Nuevo genero "*Guimaræsia*". **Acta Zoológica Lilloana** 12: 101–115.
- Schuermans-Stekhoven, J. H., Jr. 1951b. Nuevos hechos relacionados con "*Guimaræsia* [sic] *romañai* [sic]" (Del Ponte). **Acta Zoológica Lilloana** 12: 551–561.
- Scott, H. 1936. Descriptions and records of Nycteribiidae, with a discussion of the genus *Basilia*. **Journal of Linnean Society of London, Zoology** 39: 479–505.
- Scott, H. 1939. A new species of Nycteribiidae (Diptera Pupipara) from islands in the Gulf of California. **Allan Hancock Pacific Expeditions** 2: 167–170+1plate.
- Scott, H. 1940. Nycteribiidae from Southern Brazil (Diptera). **Proceedings of the Royal Entomological Society of London (B)** 9: 57–61.
- Simmons, N. S. 2005. Order Chiroptera, p. 312–529. In: D. E. Wilson & D. M. Reeder (eds.). **Mammal species of the World: a taxonomic and geographic reference**. Third Edition, Volume 1, Johns Hopkins University Press. 743 p.
- Silva-Taboada, G. 1965. Lista de los parásitos hallados en murciélagos cubanos. **Poeyana** 12: 1–14.
- Smith, H. M. 1934. Notes on some bat-flies of Southern Kansas and Northern Oklahoma. **Journal of Entomological Society** 7: 62–64.
- Speiser, P. 1901. Ueber die Nycteribiiden, Fledermausparasiten aus der Gruppe der pupiparen Dipteren. **Archiv für Naturgeschichte** 66: 31–70.
- Speiser, P. 1902. Studien über Diptera pupipara. **Zeitschrift für Systematische Hymenoptero-logie und Dipterologie** 2: 145–180.
- Speiser, P. 1907. Check-list of North American Diptera Pupipara. **Entomological News** 18: 103–105.
- Speiser, P. 1908. Die geographische Verbreitung der Diptera pupipara und ihre Phylogenie. **Zeitschrift für Wissenschaftliche Insektenbiologie** 4: 437–447.
- Spencer, G. J. 1937. Ectoparasites of birds and mammals of British Columbia. **Proceedings of British Columbia Entomological Society** 34: 39–45.
- Spencer, G. J. 1939. Ectoparasites of birds and mammals of British Columbia. IV. The parasite of bats. **Proceedings of British Columbia Entomological Society** 36: 16–18.
- Stiles, C. W. & M. O. Nolan. 1931. Key catalogue of parasites reported for Chiroptera (bats) with their possible public health importance. **Natural Institute of Health Bulletin** 155: 603–742.
- Stock, A. D. 1961. Bat ticks found in the Navajo Reservoir Basin, Colorado and New Mexico. **University Utah Anthropol Papers** 55: 118–118.
- Stuardo-Ortiz, C. 1946. **Catálogo de los Dípteros de Chile**. Ministerio de la Agricultura, Santiago de Chile, 253 pp.
- Ter Hofstede, H. M.; M. B. Fenton & J. O. Whitaker, Jr. 2004. Host and host-site specificity of bat flies (Diptera: Streblidae and Nycteribiidae) on Neotropical bats (Chiroptera). **Canadian Journal of Zoology** 82: 616–626.
- Theodor, O. 1967. An illustrated catalogue of the Rothschild collection of Nycteribiidae (Diptera) in the British Museum (Natural History) with keys and short descriptions for the identification of subfamilies, genera, species and subspecies. **British Museum (Natural History)**, Publication 665, 1–506.
- Theodor, O. & B. V. Peterson. 1964. On some new species of Nycteribiidae (Diptera: Pupipara). **The Great Basin Naturalist** 24: 107–115.
- Timm, R. M.; D. E. Wilson; B. L. Clauson; R. K. La Val & C. S. Vaughan. 1989. Mammals of the La Selva-Braulio Carrillo Complex, Costa Rica. **North American Fauna** 75: 1–162.
- Tipton, V. J. & R. C. Saunders. 1971. A list of arthropods of medical importance which occur in Utah with a review of arthropod-borne diseases endemic in the state. **Brigham Young University Science Bulletin, Biological Series** 15: 1–30.
- Townsend, C. H. T. 1893. A nycteribiid from a New Mexico bat. **Journal of the New York Entomological Society** 1: 79–80.
- Vieira, C. O. da C. 1942. Ensaio monográfico sobre os quirópteros do Brasil. **Arquivos de Zoologia** 8: 219–471.
- Villegas-Guzmán, G. A.; C. López-González & M. Vargas. 2005. Ectoparasites associated to two species of *Corynorhinus* (Chiroptera: Vespertilionidae) from the Guanacévi mining Region, Durango, Mexico. **Journal of Medical Entomology** 42: 125–127.
- Vonhof, M. J. 2000. *Rhogeessa tumida*. **Mammalian species** 633: 1–3.
- Warner, R. M. & N. J. Czaplewski. 1984. *Myotis volans*. **Mammalian species** 224: 1–4.
- Watkins, L. C. 1977. *Euderma maculatum*. **Mammalian species** 77: 1–4.

- Webb, J. P. & R. B. Loomis. 1977. Ectoparasites, p. 57–119. *In*: R. J. Baker; J. R. Jones & D. C. Carter (eds.). *Biology of bats of the New World Family Phyllostomatidae. Part II. Special Publications the Museum Texas Tech University, number 13.*
- Wenzel, R. L. 1965. Family Nycteribiidae, p. 922. *In*: A. Stone.; C. W. Sabrosky; W. W. Wirth; R. H. Foote & J. R. Coulson (eds.). **A catalog of the Diptera of America North of Mexico.** United States Department of Agriculture, Washington, D. C., 1,696 p.
- Wenzel, R. L. & V. J. Tipton. 1966. Some relationships between mammals hosts and their ectoparasites, p. 677–723. *In*: R. L. Wenzel & V. J. Tipton (eds.). **Ectoparasites of Panama.** Field Museum of Natural History, Chicago, XII+861p.
- Weyenbergh, D. H. 1881. Dos nuevas especies del grupo de los Dípteros Pupíparos. **Anales de la Sociedad Científica Argentina 11:** 193–200.
- Whitaker, Jr., J. O. & D. A. Easterla. 1974. Batflies (Streblidae and Nycteribiidae) in the Eastern United States, and a nycteribiid record from Saskatchewan. **Entomological News 85:** 221–223.
- Whitaker, Jr., J. O. & D. A. Easterla. 1975. Ectoparasites of bats from Big Bend National Park, Texas. **The Southwestern Naturalist 20:** 241–254.
- Whitaker, Jr., J. O. & G. F. McCracken. 2001. Food and ectoparasites of bats on the Galapagos Islands. **Acta Chiropterologica 3:** 63–69.
- Whitaker, Jr., J. O. & R. E. Mumford. 1977. Records of ectoparasites from Brazilian mammals. **Entomological News 88:** 255–258.
- Wilkins, K. T. 1989. *Tadarida brasiliensis*. **Mammalian species 331:** 1–10.
- Wilson, D. E. 1978. *Thyroptera discifera*. **Mammalian species 104:** 1–3.