

Catalogue of the ectoparasitic insects of the bats of Argentina

Analía G. Autino

Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)
PIDBA (Programa de Investigaciones de la Biodiversidad Argentina) y Cátedra de Vertebrados. Facultad
de Ciencias Naturales e Instituto Miguel Lillo, Universidad Nacional de Tucumán. Miguel Lillo 205
(4000), San Miguel de Tucumán, Argentina.
E-mail: pidbatuc@infovia.com.ar

and

Guillermo L. Claps

Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)
Instituto Superior de Entomología "Dr. Abraham Willink" (INSUE), Facultad de Ciencias Naturales e
Instituto Miguel Lillo, Universidad Nacional de Tucumán. Miguel Lillo 205 (4000), San Miguel de
Tucumán, Argentina. E-mail: instlillo@infovia.com.ar

Abstract. Taxonomy and distribution of the ectoparasitic insects of bats from Argentina, are reviewed. Seventeen species of Diptera (six of Nycteribiidae and eleven of Streblidae), six species of Siphonaptera (four of Ischnopsyllidae, one of Pulicidae, and one of Stephanocircidae), and seven species of Hemiptera (Polycetenidae) are known presently for Argentina. The information was obtained by reviewing the literature and collecting in the field between 1989 and 1998. The specimens collected in the field were compared with the type material deposited at the Field Museum of Natural History (CHNM).

Key words: Argentina, bats, Diptera, ectoparasites, Hemiptera, Siphonaptera.

Resumen. En este primer catálogo de insectos ectoparásitos de murciélagos de la Argentina, se ofrece información sobre taxonomía y distribución. Se conocen actualmente en el país 17 especies de Diptera (seis de Nycteribiidae y once de Streblidae), seis de Siphonaptera (cuatro de Ischnopsyllidae, una de Pulicidae y una de Stephanocircidae) y siete especies de Hemiptera (Polycetenidae). Se consultó numerosa literatura sobre los distintos grupos y se revisó abundante material obtenido en viajes de campaña realizados desde 1989 a 1998, a numerosas localidades de la Argentina. Se realizaron comparaciones con material tipo del Field Museum of Natural History (CHNM).

Palabras clave: Argentina, ectoparásitos, Diptera, Hemiptera, murciélagos, Siphonaptera.

Introduction

Catalogues of the ectoparasites of the bats of Argentina are not available. We here list the species of Diptera (Nycteribiidae and Streblidae), Siphonaptera (Ischnopsyllidae, Pulicidae, and Stephanocircidae), and Hemiptera (Polycetenidae) known for the country, and their hosts.

We examined a large number of specimens collected between 1989 and 1998 and also material deposited in other systematic collections. Specimens were compared with material borrowed from the Field Museum of Natural History (CHNM), Instituto-Fundación Miguel Lillo (IMLA), Annexes Mamíferos Lillo collection, Argentina (CML), and with published descriptions.

Although Argentina is a large country, the hosts and parasites are known only for bats collected at 97 localities, especially from the northern part of the country. Several species of ectoparasites have been added to those mentioned by other authors: Mazza and Jorg (1939); Romaña and Abalos (1950); Hopkins and Rothschild (1953, 1956); Capri and Capri (1959); García (1959); Ronderos (1961, 1962 a and b); Theodor (1967); Barquez *et al.* (1991); Autino *et al.* (1992, 1998); Claps *et al.* (1992); Autino (1996); Guerrero (1997) and Autino *et al.* (1999).

Treatment of species

The treatment of each species includes its synonymy, type locality, host type, distribution and, hosts. For each host, the localities of distribution in

Argentina are indicated by the corresponding numbers, from the Appendix, the published literature records are also provided. Locality numbers in bold indicate that it is a new record.

Systematics of bats follows Koopman (1993) and Barquez *et al.* (1999). Systematics of ectoparasites follows Guimarães and D'Andretta (1956); Hopkins and Rothschild (1956); Johnson (1957); Ronderos (1961, 1962 a and b); Theodor (1967); Guimarães (1968); Ueshima (1972); Wenzel (1970, 1976); Beacournu and Gallardo (1992) and Guerrero (1997).

Order Diptera

Family Streblidae

Subfamily Trichobiinae

Anatrichobius scorzai Wenzel, 1966

Anatrichobius scorzai Wenzel, 1966. In Wenzel, Tipton, and Kiewlicz, 1966: 503, figs. 76-78. Wenzel, 1976: 83, figs. 31, 32 A-C. Guerrero, 1997: 11.

Type locality. Panama (Chiriqui, Cueva Lara).

Host type. *Myotis* sp.

Distribution. Argentina, Colombia, Costa Rica, Honduras, Panama, Peru, and Venezuela.

Hosts. *Myotis keaysi*: Tucumán (5, 68, 82) (Autino *et al.*, 1999; Claps *et al.*, 2000).

Aspidoptera phyllostomatis (Perty, 1833)

Lipoptena phyllostomatis Perty, 1833: 190, pl. 37. fig. 17.

Leptotena phyllostomatis Macquart, 1835: 645.

Lepopteryx phyllostomatis Speiser, 1900: 53, pl. 3, figs. 3,4.

Aspidoptera phyllostomatis Jobling, 1949: 137, fig. 1. Maa, 1965: 385. Wenzel, Tipton, and Kiewlicz, 1966: 553. Guerrero, 1997: 11.

Type locality. Brazil (Santa Catarina, Hansa Humboldt (= Corupá)) (Neotype).

Host type. *Phyllostomus* sp.

Distribution. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Guatemala, Mexico, Panama, Paraguay, Peru, Puerto Rico, Surinam, Trinidad, and Venezuela.

Hosts. *Sturnira lilium*: Jujuy (2, 7, 13, 35, 43, 44, 96) (Barquez *et al.* 1991; Autino *et al.* 1992, 1999), Misiones (62) (Autino *et al.* 1998), Salta (4, 15) (Autino *et al.* 1999), Tucumán (68) (Autino *et al.* 1999). *Sturnira erythromos*: Jujuy (7) (Autino *et al.*,

1992, 1999). *Desmodus rotundus*: Santa Fe (34) (García, 1959). *Artibeus fimbriatus*: Misiones (59, 62, 64) (Autino *et al.*, 1998, 2000). *Artibeus lituratus*: Misiones (58, 62) (Autino *et al.*, 1998). *Carollia perspicillata*: Misiones (61, 64) (Autino *et al.*, 2000).

Megistopoda aranea (Coquillett, 1899)

Pterellipsis aranea Coquillett, 1899: 334.

Megistopoda desiderata Speiser, 1900: 57, figs. 6-8.

Megistopoda aranea Machado Allison, 1966: 70, figs. 1-4. Wenzel, Tipton, and Kiewlicz, 1966: 542, figs. 100 A-D. Guerrero, 1997: 11.

Type locality. Jamaica.

Host type. Unidentified bat.

Distribution. Lesser Antilles, Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, El Salvador, Guatemala, French Guiana, Jamaica, Mexico, Montserrat, Panama, Paraguay, Peru, Puerto Rico, Surinam, Trinidad, Tobago, and Venezuela.

Hosts. *Artibeus fimbriatus*: Misiones (62, 64) (Autino *et al.*, 1998, 2000). *Artibeus lituratus*: Misiones (62) (Autino *et al.*, 1998). *Artibeus planirostris*: Jujuy (1, 2, 13, 14, 43, 44, 75) (Barquez *et al.*, 1991; Autino *et al.*, 1992, 1999), Salta (15, 71, 77) (Autino *et al.*, 1999). *Desmodus rotundus*: Jujuy (89) (García, 1959).

Megistopoda proxima (Sèguy, 1926)

Pterellipsis proxima Sèguy, 1926: 194.

Megistopoda proximum Maa, 1965: 385.

Megistopoda proxima Wenzel, Tipton, and Kiewlicz, 1966: 543, figs. 100 C, 101. Machado Allison, 1966: 74, figs. 5-7. Guerrero, 1997: 11.

Type locality. Argentina (Misiones, environs of San Ignacio, Villa Lutecia).

Host type. Unidentified bat.

Distribution. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Dominica, French Guiana, Martinique, Mexico, Panama, Paraguay, Peru, Virgin Islands (St. Croix), Uruguay, and Venezuela.

Hosts. Unidentified bat: Misiones (41) (Sèguy, 1926; Wenzel, 1970). *Sturnira erythromos*: Catamarca (20) (Autino *et al.*, 1999), Jujuy (1, 7, 8, 75) (Autino *et al.*, 1992, 1999; Claps *et al.*, 2000), Salta (4) (Autino *et al.*, 1999), Tucumán (6, 39, 68, 78, 80, 81) (Autino *et al.*, 1999). *Sturnira lilium*: Catamarca (20) (Autino *et al.*, 1999), Jujuy (2, 7, 43, 96) (Barquez *et al.*, 1999, Autino *et al.*, 1992, 1999), Misiones (60, 62) (Autino *et al.*, 1998, 2000), Salta (4, 15, 69, 71, 77) (Autino *et al.*, 1992, 1999), Tucumán (5, 6, 23, 37, 39, 68, 78, 80, 81) (Barquez *et al.*, 1991; Autino *et*

al., 1992, 1999). *Sturnira oporaphilum*: Jujuy (35) (Autino *et al.*, 1999).

Noctiliostrebla aitkeni Wenzel, 1966

Aspidoptera megastigma Speiser of Jobling, 1949: 140, figs. 3 A-C. Goodwin and Greenhall, 1961: 220.

Noctiliostrebla aitkeni Wenzel, Tipton and Kiewlicz, 1966: 567, figs. 107 C, 108. Wenzel, 1976: 117, figs. 46 A-C. Guerrero, 1997: 11.

Type locality. Trinidad, Manzanilla.

Host type. *Noctilio leporinus leporinus*.

Distribution. Argentina, Brazil, Monos Island (British West Indies), Peru, Surinam, Trinidad, and Venezuela.

Hosts. *Noctilio leporinus*: Corrientes (53) (Autino *et al.*, 1992).

Paradyschiria fusca Speiser, 1900

Paradyschiria fusca Speiser, 1900: 56, pl. 3, fig. 1. Maa, 1965: 385. Wenzel, Tipton, and Kiewlicz, 1966: 571. Guerrero, 1997: 11.

Paradyschiria dubia Rudow of Guimarães, 1941: 217, figs. 1-4. Goodwin and Greenhall, 1961: 220.

Type locality. Colombia (Orocué, department Boyacá).

Host type. *Noctilio leporinus*.

Distribution. Argentina, Brazil, Colombia, French Guiana, Peru, Surinam, Trinidad, and Venezuela.

Hosts. *Noctilio leporinus*: Corrientes (53) (Autino *et al.*, 1992), Salta (51) (Barquez *et al.*, 1991).

Trichobius dunni Wenzel, 1966

Trichobius dunni Wenzel, 1966. In Wenzel, Tipton, and Kiewlicz, 1966: 474, figs. 67 A-C.

Type locality. Panama (Darién, Rio Chucunaque).

Host type. *Molossus bondae*.

Distribution. Argentina and Panama.

Hosts. *Molossus molossus*: Formosa (74) (Claps *et al.*, 2000).

Trichobius parasiticus Gervais, 1844

Trichobius parasiticus Gervais, 1844: 14. Mazza and Jorg, 1939, 41: 87, figs. 1-3, 5, 6. Goodwin and Greenhall, 1961: 223, 269. Wenzel, Tipton, and Kiewlicz, 1966: 494, figs. 68 A, 73 A.

Trichobius kesseli Guimarães, 1938: 660, pl. 3, fig. 9.

Type locality. Guiana.

Host type. *Desmodus rufus* (= *D. rotundus*; Koopman, 1993).

Distribution. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Chile, El Salvador, Guatemala, Mexico, Panama, Paraguay, Peru, Surinam, Trinidad, and Venezuela.

Hosts. *Desmodus rotundus*: Jujuy (1) (Claps *et al.*, 2000), Salta (66) (Romaña and Abalos, 1950), Santa Fe (29) (Mazza and Jorg, 1939), Tucumán (5, 40, 52, 55, 67, 68) (Romaña and Abalos, 1950; García, 1959; Autino *et al.*, 1999).

Strebla wiedemannii Kolenati, 1856

Hippobosca vespertilionis Fabricius, 1805: 339 (suppressed by ICZN, 1936: 39).

Strebla wiedemannii Kolenati, 1856: 46 (substitute name). Wenzel, 1970: 15; 1976: 160. Guerrero, 1997: 11.

Eutenodes tupi García and Casal, 1965: 16.

Strebla vespertilionis Wiedemann of Wenzel, Tipton, and Kiewlicz, 1966: 609, figs. 123 B-125 B, 132.

Type locality. Brazil (Pernambuco) (Neotype; Wenzel, Tipton, and Kiewlicz, 1966: 610).

Host type. Unidentified bat.

Distribution. Argentina, Bolivia, Brazil, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Peru, Surinam, Trinidad, and Venezuela.

Hosts. *Desmodus rotundus*: Cordoba (19) (García and Casal, 1965).

Paratrachobius longicrus (Ribeiro, 1907)

Trichobius longicrus Ribeiro, 1907: 236, fig. 25.

Paratrachobius longicrus Stiles and Nolan, 1931: 656. Maa, 1965: 384. Wenzel, Tipton, and Kiewlicz, 1966: 521, fig. 89. Wenzel, 1976: 89-92, fig. 33. Guerrero, 1997: 10.

Type locality. Brazil (Guanabara, Rio de Janeiro, Quinta da Boa Vista).

Host type. *Artibeus jamaicensis*.

Distribution. Argentina, Bolivia, Brazil, Colombia, French Guiana, Peru, Surinam, Trinidad, USA (Arizona), and Venezuela.

Hosts. *Artibeus lituratus*: Misiones (61, 62, 63) (Autino, *et al.*, 1998, 2000).

Subfamily Streblinae

Metelasmus pseudopterus Coquillett, 1907

Metelasmus pseudopterus Coquillett, 1907: 292. Jobling, 1936: 370. Wenzel, Tipton, and Kiewlicz, 1966: 634, fig. 140.

Lemosia setosa Pessôa e Galvão, 1936: 244, figs. 1-4.

Type locality. Paraguay (Sapucay).

Host type. *Artibeus lituratus*.

Distribution. Argentina, Bolivia, Colombia, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Surinam, and Venezuela.

Hosts. *Artibeus fimbriatus*: Misiones (61) (Autino *et al.*, 2000). *Artibeus planirostris*: Jujuy (1, 13, 14, 43, 75, 84) (Barquez *et al.*, 1991, Autino *et al.*, 1999), Salta (71, 79) (Autino *et al.*, 1999), Tucumán (50) (Autino *et al.*, 1999).

Family Nycteribiidae

Basilia carteri Scott, 1936

Basilia carteri Scott, 1936: 498, figs. 9-10. Scott, 1940: 60, fig. 4. Del Ponte, 1944: 118. Guimarães, 1946: 14, figs. 60-63. Maa, 1965: 380 (Subgenus *Pseudelytromyia*). Guimarães, 1968: 2.

Basilia romanaiai Del Ponte, 1944: 119. Guimarães, 1946: 15, fig. 98.

Guimaraesia carteri Schuurmans Stekhoven, Jr., 1951a: 112.

Guimaraesia romanaiai Schuurmans Stekhoven, Jr., 1951a: 112; 1951b: 551, figs. 1-3.

Type locality. Paraguay (Makthlawaiya (23° 25' S 58° 19' W, chaco boreal)).

Host type. *Molossops temminckii*.

Distribution. Argentina, Brazil, Bolivia, Uruguay and Paraguay.

Hosts. *Molossops temminckii*: Jujuy (42) (Guimarães, 1946). *Myotis riparius*: Salta (69) (Autino *et al.*, 1999), Tucumán (68, 73) (Autino *et al.*, 1999 and 2000a). *Myotis albescens*: Salta (77) (Autino *et al.*, 1999), Tucumán (6, 23, 24) (Claps *et al.*, 1992; Autino *et al.*, 1999). *Myotis keaysi*: Tucumán (68) (Autino *et al.*, 2000a). *Myotis nigricans*: Santiago del Estero (26, 32, 45, 93) (Del Ponte, 1944; García, 1959), Tucumán (55) (García, 1959). *Myotis* sp.: Jujuy (89) (Guimarães, 1946). *Tadarida brasiliensis*: Santiago del Estero (32) (Del Ponte, 1944; Guimarães and D'Andretta, 1956), Tucumán (87, 94) (Schuurmans Stekhoven, Jr., 1951b).

Basilia currani Guimarães, 1943

Basilia currani Guimarães, 1943: 257, figs. 1-2. Guimarães 1946: 14, figs. 52-59. Guimarães and D'Andretta, 1956: 92, figs. 140-141. Maa, 1965: 381 (Subgenus *Basilia*).

Guimaraesia currani Schuurmans Stekhoven, Jr., 1951a: 112.

Type locality. Brazil (São Paulo, Estado de São Paulo).

Host type. *Myotis ruber*.

Distribution. Argentina and Brazil.

Hosts. *Myotis levis*: Catamarca (17) (Guimarães and D'Andretta, 1956), La Rioja (85) (Autino *et al.*, 2000a). *Tadarida brasiliensis*: Tucumán (94) (Schuurmans Stekhoven, Jr., 1951a).

Basilia flava (Weyenbergh, 1881)

Nycteribia flava Weyenbergh, 1881: 194. Speiser, 1901: 62. Stiles and Nolan, 1931: 650. Del Ponte, 1944: 119.

Basilia flava Guimarães, 1946: 59, figs. 71-72. Guimarães, 1968: 2. Maa, 1965: 380 (Subgenus *Pseudelytromyia*).

Type locality. Argentina (Córdoba).

Host type. *Plecotus velatus* (= *Histiotus velatus*; Koopman, 1993).

Distribution. Argentina.

Hosts. *Histiotus velatus*: Córdoba (18) (Weyenbergh, 1881; Del Ponte, 1944; Guimarães and D'Andretta, 1956).

Histiotus velatus only has been mentioned for Corrientes and Misiones in Argentina (Barquez *et al.*, 1999). Therefore the host could be either *H. montanus* or *H. macrotus macrotus*; both species occur in the province of Córdoba.

Basilia neamericana Schuurmans Stekhoven Jr., 1951

Basilia neamericana Schuurmans Stekhoven Jr., 1951a: 102, figs. 1 - 3. Guimarães and D'Andretta, 1956: 36. Maa, 1965: 381 (Subgenus *Basilia*).

Type locality. Argentina (La Rioja, El Tucson).

Host type. *Eptesicus furinalis*.

Distribution. Argentina.

Hosts. *Eptesicus furinalis*: Formosa (25, 74) (Autino *et al.*, 2000a), La Rioja (31) (Schuurmans Stekhoven, Jr., 1951a; Guimarães and D'Andretta, 1956), Salta (71) (Autino *et al.*, 1999), Santiago del Estero (36) (Schuurmans Stekhoven, Jr., 1951a), Tucumán (5) (Autino *et al.*, 1999 and 2000a). *Eptesicus diminutus*: Salta (69, 71) (Autino *et al.*, 1999).

Basilia plaumanni Scott, 1940

Basilia plaumanni Scott, 1940: 58, figs. 1-2. Schuurmans Stekhoven, Jr., 1951a: 112. Maa, 1965: 380 (Subgenus *Basilia*).

Basilia mexicana plaumanni Guimarães, 1946: 38, figs. 31, 39, 40, 44.

Type locality. Brazil (Santa Catarina: Nova Teutonia).

Host type. *Histiotus* sp. (probably *H. velatus*; Scott 1940).

Distribution. Argentina, Brazil, Paraguay and Uruguay.

Hosts. *Eptesicus furinalis*: Santiago del Estero (36) (García, 1959). *Histiotus laephotis*: Córdoba (86) (García, 1959), Jujuy (7, 27, 89) (Del Ponte, 1944; García, 1959; Claps *et al.*, 1992; Autino *et al.*, 1999).

Histiotus laephotis previously has not been reported for Córdoba province (Barquez *et al.*, 1999); consequently this species could be *H. m. macrotus* or *H. montanus*, which have been mentioned.

***Basilia speiseri* (Ribeiro, 1907)**

Pseudelytromia speiseri Ribeiro, 1907: 233.

Basilia speiseri Guimarães, 1946: 67. Guimarães and D'Andretta, 1956: 70. Theodor, 1967: 282.

Type locality. Brazil (Guanabara, Rio de Janeiro, Quinta da Boa Vista).

Host type. *Atalapha frantzii* (= *Lasiurus blossevillii*; Shump and Shump, 1982; Barquez *et al.*, 1999).

Distribution. Argentina, Brazil, and Paraguay.

Hosts. *Phyllostoma* sp.: Santa Fe (38) (Theodor, 1967)

Cabrera (1957) cited as synonyms of *Phyllostoma* numerous genera, some of which are represented in Argentina by the following: *Artibeus*, *Carollia*, *Desmodus*, *Glossophaga*, *Macrophyllum*, *Pygoderma*, *Tonatia*, *Sturnira*, *Vampyressa* and *Platyrrhinus*. All of these genera are in the family Phyllostomidae, however the type host for *B. speiseri* (Ribeiro, 1907) is *Lasiurus blossevillii* (Vespertilionidae). Theodor (1967) reported as hosts of *B. speiseri*, *Molossus obscurus* (= *M. molossus*; Koopman, 1993) (Molossidae) in Brazil, *Eptesicus brasiliensis* and *Myotis albescens* (both in the family Vespertilionidae) in Paraguay.

***Basilia* sp.**

Hosts. *Myotis levis* (72) (San Juan).

The specimen collected is a female whose characteristics do not match that of any species of *Basilia* known at present. This specimen represents a new species and it is being described.

Order Hemiptera

Family Polyctenidae

***Hesperoctenes abalosi* Del Ponte, 1945**

Hesperoctenes abalosi Del Ponte, 1945: 129. Ronderos, 1961: 178.

Type locality. Argentina (Santiago del Estero, Girardet).

Host type. *Promops nasutus*.

Distribution. Argentina.

Hosts. *Eumops perotis*: Santiago del Estero (36) (Romaña and Abalos, 1950). *Promops nasutus*: Santiago del Estero (36) (Del Ponte, 1945; Ronderos, 1962a). *Tadarida brasiliensis*: Salta (92) (Ronderos, 1962a).

***Hesperoctenes angustatus* Ferris and Usinger, 1939**

Hesperoctenes angustatus Ferris and Usinger, 1939: 18. Ueshima, 1972: 17

Type locality. Guyana.

Host type. *Eumops glaucinus*.

Distribution. Argentina, Guyana, Panama, Peru, and Venezuela.

Hosts. *Molossus molossus*: Jujuy (7) (Autino *et al.*, 1999).

***Hesperoctenes chorote* Ronderos, 1962**

Hesperoctenes chorote Ronderos, 1962a: 67.

Type locality. Argentina (Salta: Santa Victoria Este, Toldería La Merced).

Host type. *Molossops temminckii*.

Distribution. Argentina.

Hosts. *Molossops temminckii*: Salta (92) (Ronderos, 1962a).

***Hesperoctenes eumops* Ferris and Usinger, 1939**

Hesperoctenes longiceps Waterhouse of Ferris, 1919: 261, pl. 25. Costa Lima, 1920: 70 (In part.). Jordan, 1922: 214 (In part.).

Hesperoctenes eumops Ferris and Usinger, 1939: 19, fig. 14, 17, 18.

Type locality. United States of America (California, San Bernardino).

Host type. *Eumops californicus* (= *E. perotis*; Koopman, 1993).

Distribution. Argentina, Brazil, and USA (California).

Hosts. *Eumops patagonicus*: Tucumán (39) (Autino *et al.*, 1999).

***Hesperoctenes fumarius* (Westwood, 1874)**

Polyctenes fumarius Westwood, 1874: 198, pl. 38. Waterhouse, 1880: 319. Speiser, 1904: 376.

Hesperoctenes fumarius Kirkaldy, 1906: 375. Costa Lima, 1920: 69. Ueshima, 1972: 17.

Type locality. Jamaica.

Host type. *Molossus fumarius* (= *Molossus molossus*; Cabrera, 1957).

Distribution. Argentina, Bolivia, Brazil, Colombia, Cuba, Guatemala, British Honduras, Virgin Islands (St. Croix), Jamaica, Puerto Rico, and Venezuela.

Hosts. Unidentified bat: Jujuy (89) (Ronderos, 1962a). *Eumops bonariensis*: Tucumán (5) (Autino *et al.*, 1999). *Molossus molossus*: Salta (71, 92) (Ronderos, 1962a; Autino *et al.*, 1999). *Promops nasutus*: Salta (33) (Autino *et al.*, 1999).

***Hesperoctenes giganteus* Ronderos, 1961**

Hesperoctenes giganteus Ronderos, 1961: 176.

Type locality. Argentina (Santiago del Estero: Girardet).

Host type. *Eumops perotis*.

Distribution. Argentina.

Hosts. *Eumops perotis*: Santiago del Estero (36) (Ronderos, 1961).

***Hesperoctenes minor* Ronderos 1962**

Hesperoctenes minor Ronderos, 1962b: 261.

Type locality. Argentina (Chaco: El Pintado).

Host type. *Tadarida brasiliensis*.

Distribution. Argentina.

Hosts. *Tadarida brasiliensis*: Chaco (28) (Ronderos, 1962b).

***Hesperoctenes* sp.**

Hosts and distribution in Argentina. *Molossops temminckii* (76) (Formosa).

Two specimens of this species have been collected, an adult male and a nymph. Using published keys, the specimens cannot be identified as either *H. impressus* and *H. fumarius*. Because the characters of the specimens do not correspond with any of the known species at present, a description of this taxon as new species is being prepared.

Order Siphonaptera

Family Ischnopsyllidae

Subfamily Ischnopsyllinae

***Hormopsylla fosteri* (Rothschild, 1903)**

Ceratopsylla fosteri Rothschild, 1903: 324, pl. 10, figs. 23 - 26.

Hexactenopsylla fosteri Cunha, 1914: 124, pl. 1, fig. 1.

Hormopsylla fosteri Jordan and Rothschild, 1921: 158. Pinto, 1930: 357, fig. 135.

Guimarães, 1940: 221. Hopkins and Rothschild, 1956: 213. Johnson, 1957: 96.

Ischnopsyllus wolffshoni Schreiter and Shannon, 1927: 14.

Type locality. Paraguay, Paraguairí, Sapucay (55 miles E.S.E. of Asunción; Hopkins and Rothschild, 1956).

Host type. *Nyctinomops laticaudatus*.

Distribution. Argentina, Brazil, and Paraguay.

Hosts. *Eumops perotis*: Tucumán (87) (Schreiter and Shannon, 1927; García, 1959).

***Myodopsylla isidori* (Weyenbergh, 1881)**

Ceratophyllus isidori Weyenbergh, 1881: 271.

Ischnopsyllus isidori Jordan and Rothschild, 1906: 177. Del Ponte and Riesel, 1939: 550.

Myodopsylla isidori Hopkins and Rothschild, 1956: 242. Johnson, 1957: 97. Del Ponte, 1977: 133.

Type locality. Argentina.

Host type. *Vespertilio isidori* (= *Myotis albescens*; Hopkins and Rothschild, 1956).

Distribution. Argentina, Chile, Mexico, and Uruguay.

Hosts. Unidentified bat: Buenos Aires (54) (Del Ponte, 1977; Ayala Barajas *et al.*, 1988), La Rioja (49) (Hopkins and Rothschild, 1956; Del Ponte, 1977), San Luis (97) (Del Ponte and Riesel, 1939). *Myotis albescens*: Córdoba (18) (Lahille, 1920; Del Ponte, 1977), Salta (77) (Autino *et al.*, 1999), San Luis (97) (Hopkins and Rothschild, 1956), Tucumán (6, 23) (Autino *et al.*, 1999). *Myotis chiloensis*: Entre Ríos (56) (Del Ponte, 1977). *Myotis levis*: Catamarca (20) (Autino *et al.*, 1999), Neuquén (3) (Autino *et al.*, 2000a), Tucumán (5, 6, 22) (Autino *et al.*, 1999). *Myotis nigricans*: Catamarca (48) (Del Ponte, 1977), Río Negro (76) (Hopkins and Rothschild, 1956), San Luis (97) (Hopkins and Rothschild, 1956; García, 1959), Santiago del Estero (93) (Del Ponte, 1977), Tucumán (65) (Autino *et al.*, 2000a). *Myotis* sp.: Buenos Aires (21) (Del Ponte, 1977), Córdoba (16) (García, 1959).

Myotis nigricans has not been reported for the provinces of Río Negro, and San Luis; neither has *M. albescens* for Córdoba and San Luis, nor *M. chiloensis* for Entre Ríos for which we suppose we are dealing with misidentifications (Autino *et al.*, 1999; Barquez *et al.*, 1999).

***Myodopsylla wolffsohni wolffsohni* (Rothschild, 1903)**

Ceratopsylla wolffsohni Rothschild, 1903: 321, pl. 9, fig. 13; pl. 10, figs. 14-16.

Myodopsylla wolffsohni wolffsohni Jordan, 1931: 366. Guimarães, 1940: 220, fig. 1. Hopkins and Rothschild, 1956: 240. Del Ponte, 1977: 134.

Ischnopsyllus wolffsohni Shreiter and Shannon, 1927: 7.

Type locality. Paraguay, Tacuaral (according to Hopkins and Rothschild, 1956, this locality probably is Tacuaras, Department Paraguari, 26° 38' S 57° 56' W).

Host type. *Myotis albescens*.

Distribution. Argentina, Brazil, Chile, Mexico and Paraguay

Hosts. *Myotis chiloensis*: Entre Ríos (11) (Del Ponte, 1977). *Myotis chiloensis* is known to occur only in the southern provinces of Argentina, including Neuquén, Río Negro, and Chubut (Barquez *et al.*, 1999). Therefore we suggest that the host was misidentified, and probably is *Myotis albescens*.

***Myodopsylla* sp.**

Hosts. *Myotis nigricans*: Santiago del Estero (93) (Romaña and Abalos, 1950). They mentioned one specimen of *Myodopsylla* sp. for *M. nigricans* (Vespertilionidae).

***Sternopsylla distincta distincta* (Rothschild, 1903)**

Ceratopsylla distinctus Rothschild, 1903: 325, pl. 10, fig. 27.

Sternopsylla distinctus Jordan and Rothschild, 1921: 158.

Sternopsylla distincta Guimarães, 1940, 2: 221, figs. 2,4-7. Hopkins and Rothschild, 1956: 217.

Sternopsylla distincta distincta Del Ponte, 1977: 137. Johnson, 1957: 100, pl. 47-48, figs. 1, 2, 5; pl. 49-50, fig. 9.

Type locality. Paraguay (Department Guairá, Villa Rica).

Host type. Unidentified bat.

Distribution. Argentina, Brazil, Chile, Ecuador, and Paraguay.

Hosts. *Tadarida brasiliensis*: Buenos Aires (10) (Hopkins and Rothschild, 1956; Del Ponte, 1977).

***Sternopsylla distincta speciosa* Johnson, 1957**

Sternopsylla distincta speciosa Johnson, 1957: 100, pl. 48, figs. 3-4; pl. 50, figs. 3, 8. Del Ponte,

1977: 138. Tipton and Machado Allison, 1972: 99, figs. 83 A-B, 84 A-C, 85 A-B, 86 A-C.

Type locality. Paraguay (Department Guairá, Villa Rica).

Host type. Unidentified bat.

Distribution. Argentina, Chile, Colombia, Peru, Panama, and Venezuela.

Hosts. *Myotis albescens*: Tucumán (23) (Autino *et al.*, 1999). *Myotis* sp.: Mendoza (91) (Del Ponte, 1977). *Tadarida brasiliensis*: Catamarca (30) (Del Ponte, 1977), Salta (83) (Del Ponte, 1977), Tucumán (22, 23, 87) (Del Ponte, 1977). *Tadarida* sp.: Buenos Aires (90) (Del Ponte, 1977).

According to Del Ponte (1977) a female specimen of *Sternopsylla distincta* was collected in Buenos Aires (90) by Fornes and Massoia in 1965, and possibly belongs to this subspecies. However, this cannot be confirmed.

***Sternopsylla* sp.**

Hosts: *Tadarida brasiliensis*: Santiago del Estero (88) (Romaña and Abalos, 1950), Tucumán (95) (Romaña and Abalos, 1950).

Romaña and Abalos (1950) mentioned *Sternopsylla* sp. for *T. brasiliensis*. However we think it is *S. distincta* because that is the only species known for Argentina (Autino and Lareschi, 1998).

Family Pulicidae**Subfamily Hectopsyllinae*****Rhynchopsyllus pulex* Haller, 1880**

Rhynchopsyllus pulex Haller, 1880: 46, pl. 6, figs. 1-13. Traub and Gammons, 1950: 271, figs. 6-7. Barrera and Díaz Ungría, 1957: 170. Johnson, 1957: 237, pl. 112, figs. 3, 5. Machado Allison, 1963: 271; 1966: 24. Tipton and Mendez, 1966: 296. Tipton and Machado Allison, 1972: 4, fig. 1.

Maxilliopsylla lilloi Schreiter and Shannon, 1927: 6.

Type locality. Brazil (no specific locality, Haller, 1880).

Host type. *Molossus* sp.

Distribution. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Panama, Paraguay, Peru, Trinidad, USA (Texas), and Venezuela.

Hosts. Unidentified bat: Buenos Aires (9) (Hopkins and Rothschild, 1953). *Eumops perotis*: Tucumán (87) (Schreiter and Shannon, 1927). *Myotis nigricans*: Buenos Aires (46, 47) (Jordan, 1934; Hopkins and Rothschild, 1956; Capri and Capri, 1959; García,

1959). *Tadarida brasiliensis*: Buenos Aires (12) (Hopkins and Rothschild, 1956), Catamarca (30) (Del Ponte, 1977), Salta (57, 70) (Autino *et al.*, 1999).

To date, *Myotis nigricans* has not been reported from Buenos Aires (Barquez *et al.*, 1999). Therefore we suggest that the host was misidentified.

Subfamily Stephanocircidae

Craneopsylla wolffhuegeli (Rothschild, 1909)

Stephanocircus wolffhuegeli Rothschild, 1909: 8, pl. 1, fig. 1. Uriarte, 1934: 69-70, pl. 11, 12, 14. Costa Lima and Hathaway, 1946: 76. Hopkins and Rothschild, 1956: 142, figs. 237-239, pl. 17 A.

Craneopsylla wolffhuegeli Del Ponte, 1977: 122, figs. 33-34.

Type locality. Argentina (Porvenir, Estancia La Daniella). The type specimens were collected in Porvenir, Estancia La Daniella, although the province of origin was not specified. The province in which this locality is situated has been discussed by several authors. Hopkins and Rothschild (1956) proposed that the locality is in Tucumán Province, later Del Ponte (1977) suggested that this locality was located in SE General Pinto (34° 30' S 63° 41' W), Buenos Aires Province, and proposed it as the type locality.

Host type. *Lutreolina crassicaudata*.

Distribution. Argentina, Brazil, Chile, Ecuador, Peru.

Hosts. *Myotis nigricans*: Córdoba (18) (Del Ponte, 1977).

To date, *Myotis nigricans* has not been reported for Córdoba Province (Barquez *et al.*, 1999).

The only known reference for *C. wolffhuegeli* for Chiroptera was that of Hopkins and Rothschild (1956). We believe that it could be an accidental infestation because this ectoparasite is characteristic of rodents and opossums.

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