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Source: Proceedings of the Academy of Natural Sciences of Philadelphia, 168(1) : 149-188

Published By: The Academy of Natural Sciences of Philadelphia

URL: <https://doi.org/10.1635/053.168.0105>

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Catalogue of type specimens of lice (Insecta: Psocodea: Phthiraptera) held in the Field Museum of Natural History louse collection

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ABSTRACT.—This paper provides a catalogue of the type specimens of lice (Insecta: Psocodea: Phthiraptera) held in the collection of the Field Museum of Natural History (FMNH), Chicago, Illinois, USA. There are 178 nominal species, four of which are represented by holotype only; 14 by holotype, allotype and paratypes; 29 by holotype and paratypes; 127 by paratypes only; three by neoparatypes, and one by paralectotype. The main goal of this type catalog is to make the louse type specimens and their metadata more readily available to biodiversity researchers.

Key words: Amblycera, Anoplura, chewing lice, Ischnocera, sucking lice.

INTRODUCTION

Scientific collections are excellent sources for new discoveries and an inexhaustible source for morphological, molecular, and biogeographic data (de Vivo et al., 2014; Funk, 2018). The material deposited in museum collections are a seemingly endless source of knowledge about biodiversity, and thus the specimens should be treated as unique and irreplaceable. The review and study of scientific specimens not only provides new data and often for the description of new taxa, but also has a terrific potential to discover new or historical locality records for taxa where the geographic distributions are poorly known (Serrano-Villavicencio & Silveira, 2019).

The Field Museum of Natural History (FMNH—Chicago, Illinois, US) is among of the largest natural history museums in the world, housing over 40 million specimens and artifacts. The FMNH louse collection is global in scope and includes an estimated 20% of the described species-level taxa. The Field Museum's remarkable Phthiraptera collection is worldwide in representation and includes a large series of tinamou (Aves: Tinamiformes) lice collected by Ward (1957a) from ~1,500 FMNH bird skins that he ruffled for his dissertation research (Ward 1957a, b).

This paper provides a catalogue of the type material deposited in the Field Museum of Natural History louse

collection, and is part of a growing list of available louse type catalogs from collections including those of Mohammad A.R. Ansari (Naz et al., 2020), the Instituto Oswaldo Cruz (FIOCRUZ—Rio de Janeiro, Rio de Janeiro, Brazil) (Cardozo-de-Alemeida et al., 1999, 2003), Museo de La Plata (MLP—La Plata, Argentina) (Abrahamovich et al., 2006), Museum of Natural History, University of Wrocław (MNHUW—Wrocław, Poland) (Jaloszynski et al., 2014), Museum of Zoology of University of São Paulo (MZUSP—São Paulo, São Paulo, Brazil) (Valim, 2009), National Zoological Collection (NZC—Kolkata, India) (Sheela et al., 2015), U.S. National Museum of Natural History, Smithsonian Institution (USNM—Washington D.C., US) (Durdin & Adams, 2005), Zoological Survey of India (ZSI) (Lakshminarayana, 1982), and Zoologisches Forschungsinstitut und Museum Alexander Koenig (ZFMK—Bonn, Germany) (Lampe et al., 2010).

MATERIAL AND METHODS

Species accounts begin with the species name and authorship as originally proposed, followed by the abbreviated journal citation; genus-name headers also reflect the genus in which the species was first described (notes on present classification and taxonomic status

Submitted: 8 May 2023, Accepted 28 July 2023.

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may appear in the Remarks section). Subsequent lines provide, when available, the quantity of type specimens, their respective sexes, host name (as originally published, prefixed by “ex”), host specimen number (host #; sometimes prefixed by collector initials or field number), type locality, date, and host collector (“coll.”), according to the original slide label. For most cases the louse and host collectors are the same; when they differ, both collector(s) are noted. “No coll.” indicates collector unknown. “Same data” means the exact data provided in the previous citation. “Same slide as the holotype” means that all the data for a given specimen is the same as for the holotype. “Same host taxon” means that the host species is the same as the previously cited record. Data on DNA vouchers are given when known. All data presented here are from the original slide labels. Data absent from the slide labels are presented in curly brackets. These data are from the original publication and/or online databases (e.g., Vertnet, Specify).

Codes of the institutions holding the host specimens treated in this catalogue follow Sabaj (2020): American Museum of Natural History (AMNH), Bernice Pauahi Bishop Museum (BPBM), Charles R. Conner Museum, Washington State University (CRCM), Chicago Academy of Sciences (CHAS), Denver Museum of Nature & Science (DMNS = DMNH), Field Museum of Natural History (FMNH; formerly known as the Chicago Natural History Museum, CNHM), Louisiana State University, Museum of Natural Science (LSUMZ), Museum of Vertebrate Zoology, University of California (UC = MVZ), New Mexico State University (NMSU), Sam Noble Oklahoma Museum of Natural History (OMNH), University of Kansas, Biodiversity Institute & Natural History Museum (KU), University of Michigan - Museum of Zoology (UMMZ), and U.S. National Museum of Natural History, Smithsonian Institution (USNM).

The nomenclature and classification used in this paper follow the world checklist by Price et al. (2003) for chewing lice (suborders Amblycera and Ischnocera), and by Durden & Musser (1994) for sucking lice (suborder Anoplura). Host names and their classifications were updated following Clements et al. (2022) for birds (Aves) and Wilson & Reeder (2005) for mammals (Mammalia). Host names are provided as in the original publications, with the current names in parentheses; additional notes on identification of host in Remarks section.

All specimens in the Field Museum’s collection, including types, were inspected and given a standardized record label with FMNH-INS followed by a ten-digit accession number (e.g., FMNH-INS 0000011111) (Fig. 1).

RESULTS AND DISCUSSION

The 178 nominal species with types in the collection include: four taxa with holotype only; 14 taxa with holotype, allotype and paratypes; 29 taxa with holotype and paratypes; 127 taxa with paratypes only; one taxon with paralectotype only and three taxa with neoparatype only (Table 1).

We document FMNH type specimens from species in all four suborders and 11 families of Phthiraptera: Anoplura (15 species), Amblycera (47), Ischnocera (115), Rhynchophthirina (1). The Phthiraptera families represented include: Anoplura: Polyplacidae (11 species), Hoplopleuridae (3), Pedicinidae (1); Amblycera: Boopiidae (1), Gyropidae (8), Ricinidae (2), Menoponidae (33), Trimenoponidae (3); Ischnocera: Philopteridae (66), Trichodectidae (49); Rhynchophthirina: Haematomyzidae (1). The USNM houses the largest louse collection in the world and has representatives of all four suborders, but has only one published checklist that covers only the anopluran primary types harbored in their collection (Table 1).

Table 1. Number of primary (1°) and secondary (2°) louse types in entomological collections around the world. *na* = not assessed.

Collection Code	Suborder								Source
	Anoplura		Amblycera		Ischnocera		Rhynchophthirina		
	1°	2°	1°	2°	1°	2°	1°	2°	
FMNH	2	76	16	167	29	267	1	8	Present study
FIOCRUZ	22	124	40	260	28	305	-	-	Cardozo-de-Almeida et al. (1999, 2003)
MLP	26	23	10	19	22	52	-	-	Abrahamovich et al. (2006)
MNHUW	-	-	38	-	52	-	-	-	Jaloszynski et al. (2014)
MZUSP	1	10	10	53	30	292	-	-	Valim (2009)
NZC	2	19	8	7	9	19	-	-	Sheela et al. (2015)
USNM	110	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>	Durden & Adams (2005)
ZFMK	-	4	6	326	-	34	-	-	Lampe et al. (2010)

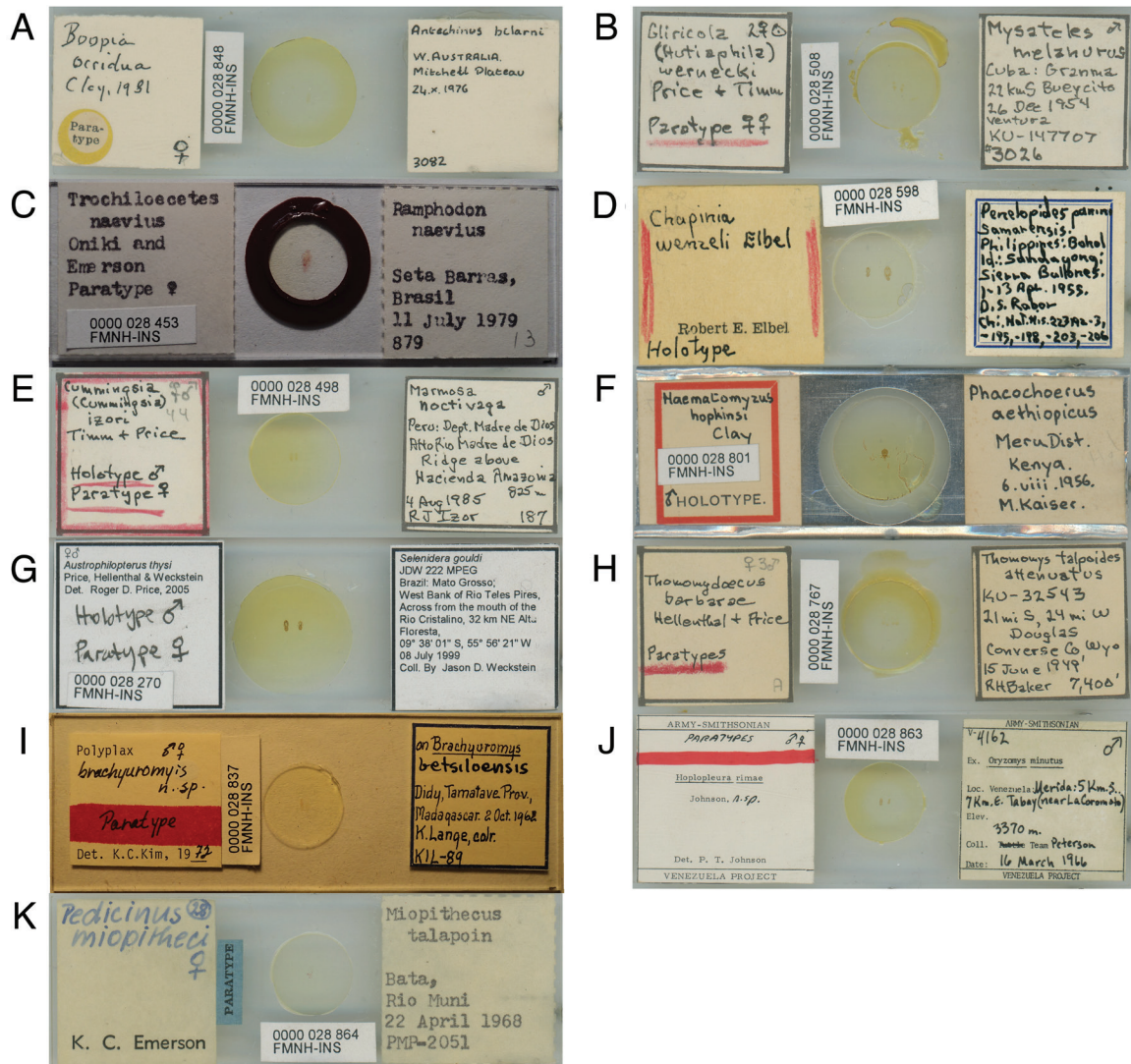


Fig. 1. Representatives of all louse families showing the variation in slide preparations. A. *Boopis occidua* Clay, 1981 (Family Boopidae), B. *Gliricola (Hutiaphilus) wernecki* Price & Timm, 1997 (Family Gyropidae), C. *Trochiloeetes naevius* Oniki & Emerson, 1982 (Family Ricinidae), D. *Chapinia wenzeli* Elbel, 1967 (Family Menoponidae), E. *Cummingsia (Cummingsia) izori* Timm & Price, 1988 (Family Trimenoponidae), F. *Haematomyzus hopkinsi* Clay, 1963 (Family Haematomyzidae), G. *Austrophilopterus thysi* Price & Weckstein, 2005 (Family Philopteridae), H. *Thomomydoecus barbarae* (Family Trichodectidae), I. *Polyplax brachyromyis* Kim & Emerson, 1974 (Family Polyplacidae), J. *Hopopleura rimae* Johnson, 1972 (Family Hopopleuridae), K. *Pedicinus miopitheci* Kuhn & Ludwig, 1970 (Family Pediciniidae).

Phthiraptera Haeckel, 1896
Suborder Amblycera Kellogg, 1896
Family Boopidae Mjöberg, 1910a
Genus Boopia Piaget, 1880: 599
Boopia occidua Clay, 1981

Rec. West. Aust. Mus., 8(4): 589.

Paratypes: 1♀, FMNH-INS 28848; ex *Antechinus bilarni* Johnson, 1954 (= *Pseudantechinus bilarni*), host #3082, (Mammalia, Dasyuromorphia, Dasyuridae); AUSTRALIA: Mitchell Plateau, Western Australia, {Kimberley Division}, 24.X.1976, no coll. 1♂, FMNH-INS 28850; same data, except host #2844, Brooking Springs, 30.IX.1976. 1♂, FMNH-INS 28851; same data, except host #2872, 1.X.1976, Kimberley expedition coll.

Family Gyropidae Kellogg, 1896
Genus Abrocomophaga Emerson & Price, 1976: 426
Abrocomophaga chilensis Emerson & Price, 1976

Fla. Entomol., 59(4): 426.

Paratypes: 1♂1♀, FMNH-INS 28461; 1♂1♀, FMNH-INS 28462; 1♂, FMNH-INS 28463; 1♂1♀, FMNH-INS 28464; 1♂, FMNH-INS 28465; 1♂1♀, FMNH-INS 28466; 1♂1♀, FMNH-INS 28467; 1♂1♀, FMNH-INS 28469; 1♂1♀, FMNH-INS 28470; 1♂, FMNH-INS 28471; 1♂, FMNH-INS 28474; 1♂1♀, FMNH-INS 28475; 1♂, FMNH-INS 28476; 1♂1♀, FMNH-INS 28478; 1♂1♀, FMNH-INS 28480; 1♂1♀, FMNH-INS 28481; 1♂1♀, FMNH-INS 28482; 1♂1♀, FMNH-INS 28483; 1♂1♀, FMNH-INS 28484; 1♂1♀, FMNH-INS 28485; 1♂1♀, FMNH-INS 28486; 1♂1♀, FMNH-INS 28487; 1♂1♀, FMNH-INS 28488; ex *Abrocoma bennettii* Waterhouse, 1837, host #REM 1105, (Mammalia, Rodentia, Abrocomidae); CHILE: Santiago, {10 km. W} Til Til, {33°05'S 70°56'W}, 2.XI.1974, R.E. Martin coll. 1♀, FMNH-INS 28468; 1♀, FMNH-INS 28472; 1♂1♀, FMNH-INS 28473; 1♂1♀, FMNH-INS 28477; 1♂1♀, FMNH-INS 28479; same data, except host #REM 1705.

Genus Gliricola Mjöberg, 1910b: 292
Gliricola tiptoni Emerson & Price, 1975

Brigham Young Univ. Sci. bull. Biol. ser., 20(3): 24.

Paratypes: 1♂1♀, FMNH-INS 29001; ex *Proechimys semispinosus* (Tomes, 1860), host #3703/{USNM 374726}, (Mammalia, Rodentia, Echimyidae); VENEZUELA: Trujillo, Sta. Apolonia, {La Ceiba, 48 km. WNW Valera, 09°24'00.0"N 71°01'48.0"W}, 7.XI.1965, no coll. 2♀, FMNH-INS 29002; same host taxon, host #1770/{USNM 372710}; VENEZUELA: Yaracuy, {Falcón}, Urama, {19 km. NW Urama, Km 40, 10°37'12.0"N 68°24'00.0"W}, 19.X.1965, no coll.

Remarks. Given the geographical location where these host specimens were collected, we presume that the correct taxonomic name for the host is *Proechimys guairae* Thomas, 1901 (see Valim & Linardi, 2008). Present status is *Gliricola* (*Gliricola*) *tiptoni* Emerson & Price, 1975 (Price et al., 2003:76).

Gliricola venezuelanus Emerson & Price, 1975

Brigham Young Univ. Sci. bull. Biol. ser., 20(3): 18.

Paratypes: 1♂1♀, FMNH-INS 29000; ex *Proechimys semispinosus* (Tomes, 1860), host #19490, (Mammalia, Rodentia, Echimyidae); VENEZUELA: Amazonas, Capibara, 4.VI.1967, no coll. 1♂1♀, FMNH-INS 29003; same data, except host #19489.

Remarks. Given the geographical location where these host specimens were collected, we presume that the correct taxonomic name for the host is *Proechimys guairae* Thomas, 1901 (see Valim & Linardi, 2008). Present status is *Gliricola* (*Gliricola*) *venezuelanus* Emerson & Price, 1975 (Price et al., 2003:76).

Gliricola wenzeli Emerson & Price, 1975

Brigham Young Univ. Sci. bull. Biol. ser., 20(3): 18.

Paratypes: 1♂1♀, FMNH-INS 28879; ex *Proechimys semispinosus* (Tomes, 1860), host #14325, (Mammalia, Rodentia, Echimyidae); VENEZUELA: Sucre, Manacal, 19.VII.1967, no coll.

Remarks. Given the geographical location where these host specimens were collected, we presume that the correct taxonomic name for the host is *Proechimys guairae* Thomas, 1901 (see Valim & Linardi, 2008). Present status is *Gliricola* (*Gliricola*) *wenzeli* Emerson & Price, 1975 (Price et al., 2003:76).

Gliricola (Hutiaphilus) pinei Price & Timm, 1997

Proc. Biol. Soc. Wash., 110(2): 294.

Paratype: 1♀, FMNH-INS 28509; ex *Mysateles melanurus* Poey, 1865 (= *Mesocapromys melanurus*), host #3500/KU 147709, (Mammalia, Rodentia, Capromyidae); CUBA: Holguin, Santa María, Gibara, {21°04'N 76°10'W}, 24.VIII.1951, M. Díaz-Piferrer & A. Schwartz coll.

Remarks. Mounted on the same slide as a male paratype of *Gliricola* (*Hutiaphilus*) *schwartzi* and thus they have the same FMNH-INS number.

Gliricola (Hutiaphilus) schwartzi Price & Timm, 1997

Proc. Biol. Soc. Wash., 110(2): 292.

Paratypes: 1♂, FMNH-INS 28509; ex *Mysateles*

melanurus Poey, 1865 (= *Mesocapromys m. melanurus*), host #3500/KU 147709, (Mammalia, Rodentia, Capromyidae); CUBA: Holguín, Santa María, Gibara, {21°04'N 76°10'W}, 24.VIII.1951, M. Díaz-Piferrer {& A. Schwartz} coll. 2♀, FMNH-INS 28510; same host taxon, host #3499/KU 147708; CUBA: Holguín, Cueto, Guira river, {20°38'37.0"N 75°56'07.0"W}, 11.VII.1949, M. Díaz-Piferrer {& A. Schwartz} coll.

Remarks. The male paratype (FMNH-INS 28509) is on the same slide as paratype of *Gliricola (Hutiaphilus) pinei*, thus these specimens have the same FMNH-INS number.

***Gliricola (Hutiaphilus) wernecki* Price & Timm, 1997**

Proc. Biol. Soc. Wash., 110(2): 295.

Paratypes: 2♀, FMNH-INS 28508; ex *Mysateles melanurus* Poey, 1865 (= *Mesocapromys m. melanurus*), host #3026/KU 147707, (Mammalia, Rodentia, Capromyidae); CUBA: Santiago de Cuba, 22 km. S Bueycito, {20°02'04.6"N 76°46'00.0"W}, 26.XII.1954, J. Ventura {& A. Schwartz} coll.

Remarks. On the slide FMNH-INS 28508, there is a single nymph that is not a paratype.

Genus *Gyropus* Nitzsch, 1818: 302

***Gyropus wernecki* Emerson & Price, 1975**

Brigham Young Univ. Sci. bull. Biol. ser., 20(3): 31.

Paratypes: 2♀, FMNH-INS 28511; ex *Proechimys semispinosus* (Tomes, 1860), host #2375/{USNM 496190}, (Mammalia, Rodentia, Echimyidae); VENEZUELA: Trujillo, Valera, {25 km. NW Valera, Nr.} Agua Santa, {09°31'48.0"N 70°40'12.0"W}, 24.VIII.1965, no coll. 2♀, FMNH-INS 28512; same host taxon, host #3703, VENEZUELA: Trujillo, St. Apolonia, Valle Verde, 7.XI.1965, no coll.

Remarks. Given the geographical location where these host specimens were collected, we presume that the correct taxonomic name for the host is *Proechimys guirae* Thomas, 1901 (see Valim & Linardi, 2008). On the slide label the host number is 2375, but on Vertnet the host number is 2376. This might be an error when transcribing the data to the label or some preliminary field note number used by Emerson & Price (1975).

Family Menoponidae Mjöberg, 1910a

Genus *Actornithophilus* Ferris, 1916: 303

***Actornithophilus lacustris* Clay, 1962**

Bull. Brit. Mus. (Nat. Hist.), Entomology, 11(5): 220.

Paratypes: 1♂1♀, FMNH-INS 4315950; ex *Catoptrophorus semipalmatus inornatus* Brewster, 1887

(= *Tringa semipalmata inornata*), host #KCE 161, (Aves, Charadriiformes, Scolopacidae); USA: Texas, Galveston, 8.VIII.1946, K.C. Emerson coll.

Remarks. K.C. Emerson collected both the host and parasites.

Genus *Amyrsidea* Ewing, 1927: 90

***Amyrsidea oculeae* Price & Elbel, 1969**

J. Kans. Entomol. Soc., 42: 336.

Holotype: ♀, FMNH-INS 28946; ex *Caloperdix o. oculea* Temminck, 1815 (= *Caloperdix o. oculeus*), host #Conover 709/{CNHM 400709}, (Aves, Galliformes, Phasianidae); {MYANMAR}: Lower Burma, Upper Tavoy river, 1.II.1918, J.C. Hopwood coll.

Paratypes: 2♂1♀, FMNH-INS 28945; same host taxon, host #RE 6926/{OMNH 14911.0}; THAILAND: Ranong, Kapoe, Muang Kluang, 26.XII.1962, W. Songprakob {& W.S. Laong} coll.

Remarks. Present status is *Amyrsidea (Amyrsidea) oculeae* Price & Elbel, 1969 (Price et al., 2003:87).

Genus *Bucerocolpocephalum* Elbel, 1967: 36

***Bucerocolpocephalum deignani* Elbel, 1967**

Proc. U.S. Nat. Mus., 120(3558): 38.

Paratypes: 1♂1♀, FMNH-INS 28444; 1♂1♀, FMNH-INS 28445; ex *Anorrhinus galeritus carinatus* (Blyth, 1845), host #RE 7112/{USNM 535802}, (Aves, Bucerotiformes, Bucerotidae); THAILAND: Trang, {Amphoe} Muang {Trang}, Lamo, 3.III.1963, W. Songprakob {& W.S. Laong} coll.

Remarks. #RE7112 is the only number associated with the host voucher, although it is likely to be R. Elbel's preparation number.

***Bucerocolpocephalum emersoni* Elbel, 1967**

Proc. U.S. Nat. Mus., 120(3558): 37.

Paratypes: 2♂2♀, FMNH-INS 28580; ex *Ptilolaemus tickelli indochinensis* (Delacour, Jabouille, 1928) (= *Anorrhinus austeni*), host #FMNH 78001–3, (Aves, Bucerotiformes, Bucerotidae); LAOS: Muong Yo {1200 ft.} & INDOCHINA (= VIETNAM), Tonkin, Muong Moun {2300 ft.}, 18.III–18.V.1929, J. Van Tyne coll.

Remarks. There are three host vouchers listed as the host for these four lice. We could not identify from which host individual the louse specimens were collected. The collection date for the specimens 78001–3 are 18.III.1929, 11.V.1929, and 18.V.1929, respectively. Parasites were collected by R. Elbel from the bird skin.

Genus *Chapinia* Ewing, 1927: 88***Chapinia blakei*** Elbel, 1967 (Fig. 2 herein)

Proc. U.S. Nat. Mus., 120(3558): 29.

Holotype: ♂, FMNH-INS 28607; ex *Aceros l. leucocephalus* Vieillot, 1816 (= *Rhabdotorrhinus l. leucocephalus*), host #CNHM 227206–7; (Aves, Bucerotiformes, Bucerotidae); PHILIPPINES: Mindanao Island, Mt. Malindano, Zamboanga, 9–14.V.1956, D.S. Rabor coll.

Allotype: ♀, FMNH-INS 28605; same host taxon, host #CNHM 188463–4, 188467, 188469; PHILIPPINES: Mindanao Island, Buconq, Pagadian, Zamboanga, 18–23.VI.1948, D.S. Rabor coll.

Paratype: 1♀, FMNH-INS 28857; same host taxon, host #970; PHILIPPINES: Mindanao {Island}, Davao Prov., Madau, Tagum, 13.X.1946, H. Hoogstraal coll.

Remarks. There are two host vouchers listed as the host for the holotype and four host vouchers listed as the host for the allotype. We could not identify from which host individual the louse specimens were collected.

Chapinia clayae Elbel, 1967

Proc. U.S. Nat. Mus., 120(3558): 21.

Paratypes: 1♂, FMNH-INS 28582; ex *Tockus birostris* Scopoli, 1786 (= *Ocyrceros birostris*), host #CNHM 231279–80, (Aves, Bucerotiformes, Bucerotidae); INDIA: Central Provinces, {Madhya Pradesh}, Kisli, Belwani, 31.VII–1.VIII.1946, W.{N.} Koelz coll. 1♀, FMNH-INS 28583; same host taxon, host #CNHM 231274, 231276; INDIA: Central Provinces, {Madhya Pradesh}, Kanha, 29.VIII.1946, R. Chand coll. 1♂1♀, FMNH-INS 28584; same host taxon, host #CNHM 231273, 231277, 231281–2, 231295–6, 231299–300; INDIA: Central Provinces, {Madhya Pradesh}, Behraghat, 5.III–30.IV.1946, W.{N.} Koelz & R. Chand coll. 1♀, FMNH-INS 28585; same host taxon, host #CNHM 231291–2; 231308; 231310; NEPAL: Simra, 4.III.1947, W. Koelz & R. Chand coll. 1♂, FMNH-INS 28581; ex *Tockus griseus* Latham, 1790 (= *Ocyrceros griseus*), host #CNHM 231320–1, (Aves, Bucerotiformes, Bucerotidae); INDIA: Madras, Presidency Nilambur (= Nilambur), 23.II–3.III.1937, W.{N.} Koelz coll.

Remarks. On slide FMNH-INS 28582 there is one nymph that is not a paratype.

Chapinia fasciati Elbel, 1967

Proc. U.S. Nat. Mus., 120(3558): 12.

Paratypes: 1♂2♀, FMNH-INS 28588; 1♂1♀, FMNH-INS 28593; 1♀, FMNH-INS 28595; 1♀, FMNH-INS 28599; 2♀, FMNH-INS 28601; ex *Tockus f. fasciatus* Shaw, 1811 (= *Lophoceros f. fasciatus*), host #CNHM 113159–67,

(Aves, Bucerotiformes, Bucerotidae); UGANDA: {Central Province}, Entebbe {4000–4500 ft.}, 26.VIII.1895–25.VII.1916, F.J. Jackson et al. coll. 1♀, FMNH-INS 28604; same host taxon, host #CNHM 194211–4; UGANDA: {Western, Toro, Bwamba, W side} Ruwenzori, 21.VII.1944–14.IX.1946, V. Someren coll. 1♀, FMNH-INS 28594; same host taxon, host #CNHM 121813–6; CAMEROON: Bitya, R. Ja. {= Dja River, 2000 ft.}, 8.XI.1924–22.I.1927, G.L. Bates coll. 1♀, FMNH-INS 28606; same host taxon, host #CNHM 189029; CAMEROON: Yokadouma, 19.X.1946, A.I. Good coll.

Chapinia traylori Elbel, 1967

Proc. U.S. Nat. Mus., 120(3558): 31.

Holotype: ♂, FMNH-INS 28557; ex *Buceros hydrocorax semigaleatus* Tweeddale, 1878, host #CNHM 247522–3, (Aves, Coraciiformes, Bucerotidae); PHILIPPINES: Samar Island, San Isidro, 28.IV–2.V.1957, D.S. Rabor coll.

Allotype: ♀, FMNH-INS 28557; on the same slide as the holotype.

Paratypes: 4♂2♀, FMNH-INS 28548; 4♂2♀, FMNH-INS 28551; 3♂3♀, FMNH-INS 28562; 4♂4♀, FMNH-INS 28563; same host taxon, host #CNHM 247524–30; PHILIPPINES: Samar Isl., Mount Capato-an, 6–13.V.1957, D.S. Rabor coll. 1♂1♀, FMNH-INS 28549; 1♂1♀, FMNH-INS 28561; ex *Buceros hydrocorax mindanensis* Tweeddale, 1877, host #CNHM 227190–1; 227202; PHILIPPINES: Zamboanga, Mindanao Isl., Mount Malindang, {Gumay, 2700 ft.}, 15.V.1956, D.S. Rabor coll. 2♂, FMNH-INS 28550; 1♂2N, FMNH-INS 28552; same data, except host #CNHM 227189; 227192–3; 227195–201; 227203; {Masawan, 3500 ft.}, 31.III–8.V.1956. 1♀, FMNH-INS 28558; same host taxon, host #CNHM 184207–8; PHILIPPINES: Cotabata (= Cotabato), Mindanao Isl., Burungkot Upi, {1500 ft.}, 4.I.1947, F.G. Werner & G.L. Alcasid coll. 1♂, FMNH-INS 28572; same data, except host #1980/{FMNH 184208}. 1♂1♀, FMNH-INS 28559; same host taxon, host #CNHM 227189; 227192–3; 227195–201; 227203; PHILIPPINES: Zamboanga, Mindanao Isl., Mount Malindang, {Masawan, 3500 ft.}, 31.III–8.V.1956, D.S. Rabor coll. 1♂1♀, FMNH-INS 28560; 1♂1♀, FMNH-INS 28587; same host taxon, host #1018–20/{FMNH 184202, 184204}; PHILIPPINES: Davao, Mindanao Isl., Tagum, Taglawig, {at sea level}, 11.X.1946, {B. Serrano &} M. Celestino coll. 1♀, FMNH-INS 28576; same data except, host #1046/{FMNH 184203}; 14.X.1946, {B. Serrano &} H. Hoogstraal coll. 1♂1♀, FMNH-INS 28566; 1♂1♀, FMNH-INS 28571; 2♂, FMNH-INS 28574; same host taxon, host #632; PHILIPPINES: Davao, Mindanao Isl., E. Slope Mount McKinley, 15.VIII.1946, H. Hoogstraal coll. 1♂1♀, FMNH-INS 28578; same data, except host

#708/{FMNH 184206}, 24.VIII.1946. 2♂1♀, FMNH-INS 28567; 2♂1♀, FMNH-INS 28568; 2♂1♀, FMNH-INS 28569; 2♂1♀, FMNH-INS 28570; 1♂2♀, FMNH-INS 28573; 2♂1♀, FMNH-INS 28575; 2♂, FMNH-INS 28579; same host taxon, host #1096; PHILIPPINES: Davao, Mindanao Isl., Todaya, E. Slope Mount Apo, 25.X.1946, H. Hoogstraal & X. Hey coll. 2♂1♀, FMNH-INS 28577; same host taxon, host #1800/{FMNH 184209}; PHILIPPINES: Cotabata (= Cotabato), Mindanao Isl., Kidapawan, Malasila, {1350 ft.}, 2.XII.1946, {F. Werner &} G.L. Alcasid coll.

Remarks. Some nymphs were originally labeled as paratypes but they are missing in the type material listed and described by Elbel (1967), thus they should not be regarded as types (in a strict sense). They are: 1N, FMNH-INS 28554; ex *Buceros hydrocorax mindanensis* Tweeddale, 1877, host #FMNH 184209; PHILIPPINES: Cotabata (= Cotabato), Mindanao Island, Kidapawan, {Malasila, 1350 ft.}, 2.XII.1946, F.G. Werner & G.L. Alcasid coll. 1N, FMNH-INS 28555; same host taxon, host #FMNH 227189; 227192–3; 227195–201; 227203; PHILIPPINES: Zamboanga, Mindanao Island, Mount Malindang, {Masawan, 3500 ft.}, 31.III–8.V.1956, D.S. Rabor coll.

Chapinia wenzeli Elbel, 1967

Proc. U.S. Nat. Mus., 120(3558): 28.

Holotype: ♂, FMNH-INS 28598; ex *Penelopides panini samarensis* Steere, 1890 (= *Penelopides samarensis*), host #CNHM 223192–3; 223195; 223198; 223203; 223206, (Aves, Bucerotiformes, Bucerotidae); PHILIPPINES: Sandayong, Sierra Bullones, Bohol Island, {1000 ft.}, 1–13.IV.1955, D.S. Rabor coll.

Allotype: ♀, FMNH-INS 28598; on the same slide as the holotype.

Paratypes: 2♀, FMNH-INS 28603; same data as holotype. 2♂, FMNH-INS 28602; same host taxon, host #CNHM 247533–40; PHILIPPINES: Samar Island, Matuguinao, 7–15.IV.1957, D.S. Rabor coll. 1♂, FMNH-INS 28597; ex *Penelopides panini mindorensis* Steere, 1890 (= *Penelopides mindorensis*), host #CNHM 19949, (Aves, Bucerotiformes, Bucerotidae); PHILIPPINES: Mindanao, Rio Baca, Balete, 1.IV.1905, R.C. McGregor, M. Celestino & M. Canton coll. 3♂, FMNH-INS 28586; 3♂, FMNH-INS 28589; 1♂, FMNH-INS 28590; ex *Penelopides panini affinis* Tweeddale, 1877 (= *Penelopides affinis*), host #2050/{FMNH 184201}, (Aves, Bucerotiformes, Bucerotidae); PHILIPPINES: Davao, Caburan, Mindanao, {at sea level}, 18.I.1947, F.G. Werner coll. 1♀, FMNH-INS 28591; same host taxon, host #CNHM 184196; 184199–201; PHILIPPINES: Mindanao, 14.IX.1946–18.I.1947, G.L. Alcasid coll.

Genus *Colpocephalum* Nitzsch, 1818: 298
Colpocephalum holzenthali Clayton & Price, 1989

J. Parasitol., 75(4): 505.

Holotype: ♂, FMNH-INS 28596; ex *Micrastur ruficollis* (Vieillot, 1817), {host #FMNH 320370}, (Aves, Falconiformes, Falconidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palatua, 1030 m., 30.VIII.1985, {B.L. Clauson &} D.H. Clayton coll.

Paratypes: 1♂2♀, FMNH-INS 28596; 4♀, FMNH-INS 28592; same data as the holotype.

Remarks. The male holotype is on the same slide as the four paratypes (FMNH-INS 28596), the male on the most left side is the holotype. On the slide, the host's name is *Micrastur ruficollis* (Vieillot, 1817). In the original publication, the host's name is *Micrastur ruficollis zonothorax* (Cabanis, 1866). On Vertnet, the host's name is *Micrastur ruficollis concentricus* (Lesson, 1830).

Genus *Kaysius* Price & Clayton, 1989: 29
Kaysius emersoni Price & Clayton, 1989

Ann. Entomol. Soc. Am., 82(1): 31.

Holotype: ♂, FMNH-INS 28765; ex *Glyphorhynchus spirurus* (Vieillot, 1819), host #DHC {85}-1014/{FMNH 321244}, (Aves, Passeriformes, Dendrocolaptidae); PERU: Madre de Dios, Cerro de Pantiacolla, {above Rio Palatua}, 680 m., 8.XI.1985, D.H. Clayton coll.

Paratypes: 1♂2♀, FMNH-INS 28765; same data as for the holotype. 1♂, FMNH-INS 28769; same data, except host #85-305, 85-310, 85-314, 1,030 m, 30.VIII.1985. 1♀, FMNH-INS 28770; same data except, host #85-248, 25.VIII.1985. 1♀, FMNH-INS 28771; same data, except no host number, 1985.

Remarks. The holotype (the second male from the right side) is on the same slide as one male and one female paratype (FMNH-INS 28765). This species is currently included in the genus *Niethammerella* Eichler, 1954 (Palma et al., 2007:68), which is a senior synonym of *Kaysius*.

Genus *Kurodaia* Uchida, 1926: 50
Kurodaia edwardsi Emerson, 1961

Proc. Biol. Soc. Wash., 74: 190.

Paratypes: 2♀, FMNH-INS 28858; ex Great Horned Owl (Gmelin, 1788) (= *Bubo virginianus*), host #Bish. 30658/Lot 41-10407/{USNM 65483}, (Aves, Strigiformes, Strigidae); USA: Tennessee, Nashville, 20.XII.1940, A.R. Laskey coll.

Remarks. Although the original publication says that the host is deposited at the USNM collection, it was not possible to find this specimen in the online database. Present status is *Kurodaia (Kurodaia) magna* Emerson, 1960 (Price et al., 2003:114).

Genus *Menacanthus* Neumann, 1912: 353

Menacanthus campephili Price & Emerson, 1975

Ann. Ent. Soc. Am., 68(5): 782.

Paratypes: 1♂1♀, FMNH-INS 28936; ex *Campephilus magellanicus* (King, 1828), host #187273/{USNM 511844}, (Aves, Piciformes, Picidae); ARGENTINA: Staten Island, {Tierra del Fuego}, Ba. Buen Suceso, 23.IV.1971, no coll.

Menacanthus quiscali Price, 1977

J. Med. Entomol., 14(2): 212.

Paratype: 1♀, FMNH-INS 28859; ex *Quiscalus quiscula* (Linnaeus, 1758), no host number, (Aves, Passeriformes, Icteridae); USA: Ohio, Columbus, 1947, no coll.

Menacanthus sturnellae Price, 1977

J. Med. Entomol., 14(2): 212.

Paratype: 1♀, FMNH-INS 28860; ex *Sturnella magna* (Linnaeus, 1758), no host number, (Aves, Passeriformes, Icteridae); USA: Georgia, Alapaha, 30.X.1935, H. Hixon coll.

Menacanthus werneri Emerson & Ward, 1958a

Fieldiana Zool., 42(4): 52.

Holotype: ♂, FMNH-INS 28518; ex *Polyplectron emphanum* Lesson, 1831 (= *Polyplectron napoleonis*), host #2417/{FMNH 416817}, (Aves, Galliformes, Phasianidae); PHILIPPINES: Palawan Isl., Iwahig, Penal Colony, 8.III.1947, {T. Oane & } H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 28524, same data as holotype, except host #2418.

Paratypes: 1♀, FMNH-INS 28516; 1♂, FMNH-INS 28519; 1♂, FMNH-INS 28523; 1♂, FMNH-INS 28525; 1♀, FMNH-INS 28526; 1♂, FMNH-INS 28527; 1♂, FMNH-INS 28532; 1♂, FMNH-INS 28533; 1♀, FMNH-INS 28535; 1♂, FMNH-INS 28536; 1♂, FMNH-INS 28537; 1♂, FMNH-INS 28538; 1♂, FMNH-INS 28539; 1♂, FMNH-INS 28540; 1♂, FMNH-INS 28541; 1♂, FMNH-INS 28544; same data as the holotype. 1♂, FMNH-INS 28520; 1♀, FMNH-INS 28521; 1♂, FMNH-INS 28522; same data as the holotype, except host #2418. 1♂, FMNH-INS 28517; same data as the holotype, except host #2381, 6.III.1947.

Genus *Myrsidea* Waterston, 1915: 12

Myrsidea batesi Price & Johnson, 2006a

Zootaxa, 1297: 52.

Holotype: ♀, FMNH-INS 28496; ex *Bernieria madagascariensis* (Gmelin, 1789), host #DEW 5572, (Aves, Passeriformes, Bernieridae); MADAGASCAR:

Fianarantsoa, Mt. Ambatobe, {23°30'S 47°2'E}, 13.XI.2001, D.E. Willard coll.

Remarks. On the slide FMNH-INS 28496 there are two nymphs that are not paratypes.

Myrsidea brasiliensis Valim & Weckstein, 2013

Folia Parasitol., 60(5): 386.

Paratype: 1♂, FMNH-INS 4378789; ex *Tangara chilensis* (Vigors, 1832), host #JAP 010/MPEG 63218, (Aves, Passeriformes, Thraupidae); BRAZIL: Amazonas, Município Japurá, Rio Mapari, 02°02'31.6"S 67°17'16.6"W, 10.VII.2007, J.D. Weckstein coll.

Myrsidea caciopoi Valim & Weckstein, 2013

Folia Parasitol., 60(5): 384.

Paratypes: 1♀, FMNH-INS 4378791; ex *Lanio fulvus* (Boddaert, 1783), host #JAP 780/MPEG 63215, (Aves, Passeriformes, Thraupidae); BRAZIL: Amazonas, Município Maraã, Lao Cumapi, 01°33'34.5"S 65°52'48.2"W, 31.VII.2007, J.D. Weckstein coll. 1♂, FMNH-INS 4378790, same data, except DNA voucher Mysp.Lafu.1.4.2011.7.

Myrsidea circumsternata Valim & Weckstein, 2013

Folia Parasitol., 60(5): 383.

Paratypes: 1♂, FMNH-INS 4378792; ex *Formicarius colma* Boddaert, 1783, host #JAP 385/MPEG 62957, (Aves, Passeriformes, Formicariidae); BRAZIL: Amazonas, Município Japurá, Rio Acanauí, 02°01'38.4"S 66°40'28.3"W, 20.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378793, same data, except DNA voucher Mysp.Foco.1.4.2011.3.

Myrsidea cnemotriccola Valim & Weckstein, 2013

Folia Parasitol., 60(5): 389.

Paratype: 1♂, FMNH-INS 4378782; ex *Cnemotriccus fuscatus* (Wied-Neuwied, 1831), host #JAP 226/MPEG 63051, (Aves, Passeriformes, Tyrannidae); BRAZIL: Amazonas, Município Japurá, Rio Mapari, 02°02'59.6"S 67°15'47.1"W, 15.VII.2007, J.D. Weckstein coll.

Myrsidea daleclaytoni Valim & Cicchino, 2015

Syst. Parasitol., 90:198.

Paratypes: 2♂2♀, FMNH-INS 29879; 2♂2♀, FMNH-INS 94049; ex *Cyanocorax* {v.} *violaceus* Du Bus de Gisignies, 1847, host #FMNH 324104, (Aves, Passeriformes, Corvidae); PERU: Dept. Madre de Dios, Hacienda Amazonia, near Atalaya, 23.XI.1985, {J. W. Fitzpatrick & } D.H. Clayton coll. same data.

Remarks. In the original publication the collection date is 13.IX.1985 (transcribing error). The correct collection date is 23.XI.1985.

Myrsidea faccioae Valim & Weckstein, 2013

Folia Parasitol., 60(5): 392.

Paratypes: 1♂, FMNH-INS 4378780; ex *Cyphorhinus arada* (Hermann, 1783), host #JAP 713/MPEG 63195, (Aves, Passeriformes, Troglodytidae); BRAZIL: Amazonas, Município Maraã, Lago Cumapi, 01°33'34.5"S 65°52'48.2"W, 30.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378781, same data, except DNA voucher Mysp.Cyar.1.4.2011.10.

Myrsidea goodmani Price & Johnson, 2006a

Zootaxa, 1297: 50.

Holotype: ♀, FMNH-INS 28492; ex *Phyllastrephus {m.} madagascariensis* Gmelin, 1789 (= *Bernieria m. madagascariensis*), host #SMG 12152/{FMNH 431197}, (Aves, Passeriformes, Bernieridae); MADAGASCAR: Antsiranana, {Parc National de Marojejy, 11.5 km. SE Doany, Bemanavy River, 810 m.}, 15.X.2001, S.M. Goodman coll.

Myrsidea isacantha Valim & Weckstein, 2013

Folia Parasitol., 60(5): 381.

Paratypes: 1♂, FMNH-INS 4378794; ex *Chamaeza nobilis* Gould, 1855, host #JAP 341/MPEG 63964, (Aves, Passeriformes, Formicariidae); BRAZIL: Amazonas, Município Japurá, Rio Acanauí, 02°01'38.4"S 66°40'28.3"W, 18.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378795, same data, except DNA voucher Mysp.Chno.1.4.2011.4.

Myrsidea lamprosaricola Valim & Weckstein, 2013

Folia Parasitol., 60(5): 394.

Paratypes: 1♂, FMNH-INS 4378779; ex *Lamprosar tanagrinus* (Spix, 1824), host #JAP 366/MPEG 63237, (Aves, Passeriformes, Icteridae); BRAZIL: Amazonas, Município Japurá, Rio Acanauí, 02°00'53.3"S 66°39'55.5"W, 20.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378778, same data, except DNA voucher Mysp.Lata.1.4.2011.5.

Myrsidea mcrackeni Price & Johnson, 2006a

Zootaxa, 1297: 52.

Holotype: ♀, FMNH-INS 28495; ex *Oxylabes madagascariensis* (Gmelin, 1789), host #SMG 12229/{FMNH 431261}, (Aves, Passeriformes, Bernieridae);

MADAGASCAR: Antsiranana, {Parc National de Marojejy, 13 km. SE Doany, 1175 m.}, 24.X.2001, S.M. Goodman coll.

Myrsidea melanocyanei Valim & Cicchino, 2015

Syst. Parasitol., 90:202.

Holotype: ♀, FMNH-INS #2960115/4378973; ex *Cyanocorax melanocyaneus chavezii* Miller & Griscom, 1925, host #FMNH 481759, (Aves, Passeriformes, Corvidae); NICARAGUA: Estelí, Finca Neblina del Bosque, Res. Nat. Miraflores-Moropotente, ca. 30 km. NNE Estelí, 13°14'47.2"S 86°15'8.06"W, 21.IV.2012, J.D. Weckstein coll.

Allotype: ♂, FMNH-INS #2960115/4378973, same data as the holotype

Paratypes: 2♂, FMNH-INS #2960116/4378974, same data as the holotype.

Remarks. The slide labels have transcribing errors: the louse name is *Myrsidea melanocyaneae* and the host name is *Cyanocorax melanocyanea* (Hartlaub, 1844).

Myrsidea rodriguesae Valim & Weckstein, 2013

Folia Parasitol., 60(5): 389.

Paratypes: 1♂, FMNH-INS 4378783; ex *Cnipodectes subbrunneus* (Sclater, 1860), host #JAP 632/MPEG 63037, (Aves, Passeriformes, Pipromorphidae); BRAZIL: Amazonas, Município Maraã, Lago Cumapi, 01°33'0.3"S 65°50'14.2"W, 29.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378784, same data, except DNA voucher Mysp.Cnsb.1.4.2011.13.

Myrsidea saviti Valim & Weckstein, 2013

Folia Parasitol., 60(5): 386.

Paratypes: 1♂, FMNH-INS 4378788; ex *Tangara schrankii* (Spix, 1825), host #JAP 378/MPEG 63222, (Aves, Passeriformes, Thraupidae); BRAZIL: Amazonas, Município Japurá, Rio Acanauí, 02°01'38.4"S 66°40'28.3"W, 20.VII.2007, J.D. Weckstein coll. 1♀, FMNH-INS 4378787, same data, except DNA voucher Mysp.Tasch.1.4.2011.9.

Myrsidea willardi Price & Johnson, 2006b

J. Kans. Entomol. Soc., 79(3): 269.

Holotype: ♀, FMNH-INS 28610; ex *Philepitta schlegeli* Schlegel, 1867, host #DEW 5358/{FMNH 431193}, (Aves, Passeriformes, Philepittidae); MADAGASCAR: Toliara, {Parc National de Bemaraha, S bank Manambolo River, 3.5 km. E Beko, 100 m.}, 3.XII.2001, D.E. Willard coll.

Paratypes: 1♂, FMNH-INS 28610; on the same slide as the

holotype. 1♂1♀, FMNH-INS 28608; same data as holotype except, host #DEW 5339/{FMNH 431192}, I.XII.2001.

Myrsidea yoshizawai Price & Johnson, 2006a

Zootaxa, 1297: 49.

Holotype: ♀, FMNH-INS 28493; ex *Phyllastrephus zosterops* {*andapae*} Salomonsen, 1934 (= *Xanthomixis zosterops andapae*), host #SMG-12196/{FMNH 431219}, (Aves, Passeriformes, Bernieridae); MADAGASCAR: Antsiranana, {Parc National de Marojejy, 11.5 km. SE Doany, Bemanavy River, 810 m.}, 19.X.2001, S.M. Goodman coll.

Paratype: 1♂, FMNH-INS 28493; on the same slide as the holotype.

Genus *Nosopon* Hopkins, 1950: 239

Nosopon atyeoi Price & Emerson, 1984a

J. Georgia Entomol. Soc., 19(2): 213.

Holotype: ♂, FMNH-INS 28456; ex *Necrosyrtes monachus pileatus* (Burchell, 1824), host #FMNH 85899, (Aves, Falconiformes, Accipitridae); BOTSWANA: Maun, {Ngamiland}, 3.VI.1930, {Roberts}, Vernay & Lang coll.

Paratypes: 1♂1♀, FMNH-INS 28449; same host taxon, host #UGA 12102/FMNH 112161; KENYA: Rift Valley Prov., Kapsabet, {Nandi}, 29.V.1898, F.J. Jackson coll.

Family Ricinidae Neumann, 1890

Genus *Ricinus* De Geer, 1778: 69

Ricinus vireoensis Nelson, 1972

Univ. Calif. Publ. Entomol., 68: 95.

Paratypes: 1♂1♀, FMNH-INS 28447; ex *Vireo griseus* (Boddaert, 1783), no host number, (Aves, Passeriformes, Vireonidae); USA: Florida, Leon County, spring 1962, {H.L. Stoddard coll.}. 1♂1♀, FMNH-INS 28861; same data, except: {28}.III.1960, {V. Nolan coll.}.

Genus *Trochiloeetes* Paine & Mann, 1913: 21

Trochiloeetes naevius Oniki & Emerson, 1982

Rev. Bras. Biol., 42(1): 85.

Paratype: 1♀, FMNH-INS 28453; ex *Ramphodon naevius* (Dumont, 1818), host #879, (Aves, Apodiformes, Trochilidae); BRAZIL: São Paulo, Sete Barras, {Reserva Estadual de Sete Barras}, 11.VII.1979, no coll.

Remarks. The probable collector of this sample is Yoshika Oniki who conducted field work at this site.

Family Trimenoponidae Neumann, 1890

Genus *Cummingsia* Ferris, 1922: 83

Cummingsia albuja Timm & Price, 1985

Proc. Biol. Soc. Wash., 98(2): 392.

Paratypes: 1♂1♀, FMNH-INS 28454; 1♂1♀, FMNH-INS 29004; ex *Caenolestes fuliginosus* (Tomes, 1863), host #749/{UMMZ 155693}, (Mammalia, Paucituberculata, Caenolestidae); ECUADOR: Napo {Province}, vic. of Papallacta {6.2 km. W Papallacta}, 11700 ft., {0°22'01.2"S 78°11'19.3"W}, 6.V.1980, R.S. Voss & V.J. Tipton coll.

Remarks. Present status is *Cummingsia* (*Cummingsia*) *albuja* Timm & Price, 1985 (Price et al., 2003:275).

Cummingsia* (*Cummingsia*) *izori Timm & Price, 1988

J. Kans. Entomol. Soc., 61(1): 76.

Holotype: ♂, FMNH-INS 28498; ex *Marmosa noctivaga* Tschudi, 1844 (= *Marmosops noctivagus*), host #187/{FMNH 138850}, (Mammalia, Didelphimorphia, Didelphidae); PERU: Madre de Dios, Alto Rio Madre de Dios, ridge above Hacienda Amazonia, {12°58'S 71°09'W}, 825 m., 4.VIII.1985, R.J. Izor coll.

Paratypes: 1♀, FMNH-INS 28498; on same slide as the holotype. 2♀, FMNH-INS 29499; 1♀, FMNH-INS 28501; same data as the holotype.

Cummingsia perez Timm & Price, 1985

Proc. Biol. Soc. Wash., 98(2): 395.

Holotype: ♀, FMNH-INS 28452; ex *Caenolestes convelatus* Anthony, 1924, host #2273/{FMNH 124620}, (Mammalia, Paucituberculata, Caenolestidae); ECUADOR: Imbabura {Province}, 5 km. ESE of San Pablo del Lago, Hacienda La Vega, 2600 m., 11.IX.1983, R.M. Timm coll.

Paratype: 1♂, FMNH-INS 28452; same slide as holotype.

Remarks. There is a male identified as *Cummingsia* sp. on the same slide as the holotype and paratype, placed on the right side among the three specimens on the slide. The male paratype is in the center, between the female holotype and the specimen identified as *Cummingsia* sp. Present status is *Cummingsia* (*Cummingsia*) *perez* Timm & Price, 1985 (Price et al., 2003:276).

Suborder Ischnocera Kellogg, 1896

Family Philopteridae Burmeister, 1838

Genus *Alcedoffula* Clay & Meinertzhagen, 1939a: 161

Alcedoffula ceycis Tendeiro, 1967

Rev. Est. Gerais Univ. Mocambique, 4(4): 246.

Paratypes: 1♂1♀, FMNH-INS 28442; ex *Ceyx erithacus* (Linnaeus, 1758), host #M-02338, (Aves, Coraciiformes, Alcedinidae); MALAYA (=MALAYSIA): Meru, 5.II.1963, no coll. 1♂1♀, FMNH-INS 28778; same host taxon, host #M-01836, MALAYA (=MALAYSIA): Subang, 28.X.1962, no coll.

Genus *Austrogoniodes* Harrison, 1915: 398
***Austrogoniodes bifasciatus demersus* Kéler, 1952**

J. Entomol. Soc. South. Afr. 15(2): 233.

Paratypes: 13♂, FMNH-INS 28781; ex *Spheniscus demersus* (Linnaeus, 1758), host #279, (Aves, Sphenisciformes, Spheniscidae); SOUTH AFRICA: Dyer Island, 28.VII.1946, R.W. Rand coll.

Remarks. Present status is *Austrogoniodes demersus* Kéler, 1952 (Price et al., 2003:151).

Genus *Austrophilopterus* Ewing, 1929: 190
***Austrophilopterus thysi* Price & Weckstein, 2005**

Zootaxa 918: 15.

Holotype: ♂, FMNH-INS 28270; ex *Selenidera gouldii* (Natterer, 1837), host #JDW 222, (Aves, Piciformes, Ramphastidae); BRAZIL: Mato Grosso, W Bank of Rio Teles Pires, across from mouth of Rio Cristalino, 32 km. NE Alta Floresta, 09°38'01"S 55°56'21"W, 8.VII.1999, J.D. Weckstein coll.

Paratype: 1♀, FMNH-INS 28270, on the same slide as the holotype.

Genus *Bizarrifrons* Eichler, 1938: 226
***Bizarrifrons latifrons* Valim & Palma, 2012**

Zootaxa, 3273: 35.

Holotype: ♂, FMNH-INS 28989; ex *Psarocolius angustifrons alfredi* (Des Murs, 1856) (= *Ostinops angustifrons alfredi*), {host #FMNH 208370}, (Aves, Passeriformes, Icteridae); PERU: Cuzco, Marcapata, {Hda. Cadena, 1000 m.}, 22.V.1949, no coll.

Paratypes: 1♂, FMNH-INS 28986; 1♀, FMNH-INS 28987; same data as the holotype.

***Bizarrifrons quasisymmetricus* Valim & Palma, 2012**

Zootaxa, 3273: 45.

Holotype: ♂, FMNH-INS 28926; ex *Cacicus solitarius* (Vieillot, 1816), host #{SML}1211/{FMNH 324088}, (Aves, Passeriformes, Icteridae); PERU: Cuzco, 20 km. NW Pilcopata, 21.XII.1985, {S.M. Lanyon &} D.H. Clayton coll.

Paratypes: 1♂3♀, FMNH-INS 28926; same data as the holotype. 2♀ FMNH-INS 28924; same data as the holotype, except host #{SML}1212/{324089}, 02.XII.1985. 1♀ FMNH-INS 28925; same data, except host #{SML}1213/{324090}.

Remarks. The collection date on the holotype slide label is 21.XII.1985 (transcribing error). The correct collection date is 02.XII.1985.

***Bizarrifrons wecksteini* Valim & Palma, 2012**

Zootaxa, 3273: 37.

Paratypes: 1♂, FMNH-INS 29880, 1♂, FMNH-INS 29883 (DNA voucher Bisp.Psbi.8.25.2011.2); ex *Psarocolius b. bifasciatus* (Spix, 1824), host #PPBIO 120/MPEG 61970, (Aves, Passeriformes, Icteridae); BRAZIL: Pará, Portel, FLONA do Caxiuanã, Plot PPBIO, 01°57'S 51°36'W, 17.I.2007, J.D. Weckstein coll.

Genus *Brueelia* Kéler, 1936: 257
***Brueelia cicchinois* Valim & Weckstein, 2011**

Zookeys, 128: 6.

Paratypes: 2♂, FMNH-INS 28974–75, 1♀, FMNH-INS 28901 (DNA voucher Brsp.Trvi.1.4.2011.20); ex *Trogon viridis* Linnaeus, 1766, host #JAP 765/MPEG 62484, (Aves, Trogoniformes, Trogonidae); BRAZIL: Amazonas, Marañ, Lago Cumapi, 01°33'34.5"S 65°52'48.2"W, 31.VII.2007, J.D. Weckstein coll.

Remarks. This species is currently included in the genus *Guimaraesiella* Eichler, 1949 (Gustafsson & Bush, 2017:422).

***Brueelia elbeli* Ansari, 1957**

Biologia (Lahore) 3: 185.

Paratypes: 1♂1♀, FMNH-INS 28780; ex *Gracula religiosa intermedia* Hay, 1845, host #RE 901/RT-B17537, (Aves, Passeriformes, Sturnidae); THAILAND: Chaiphaphum, {Bhukao}, Phu Khieo (= Phu Khiao), Ban Kaeng, Ban Non Tao Lek, 14.XII.1952, R.E. Elbel coll.

Remarks. Species is a junior synonym of *Brueelia acutangulata* (Piaget, 1880) (Gustafsson & Bush, 2017:403).

Brueelia mpumalangensis
 Gustafsson, Chu, Bush & Zou, 2018

Acta Parasitol. 63(3): 552.

Paratype: 1♂, FMNH-INS 29054 (DNA voucher Brsp. Pani.2.9.2011.32); ex *Parus n. niger* Vieillot, 1818 (= *Melaniparus n. niger*), host #MLW 3645/FMNH 468312 (Aves, Passeriformes, Paridae); MALAWI: {Rumphii}, Khuta Maji, Vwaza Marsh, Vwaza Wildlife Reserve, 10°52'00.1"S 33°27'00.0"E, 1170m., 13.X.2009. J.D. Weckstein coll.

***Brueelia polyglotta* Williams, 1983**

Proc. Biol. Soc. Wash. 96(4): 602.

Paratypes: 1♂3♀, FMNH-INS 28460; ex *Mimus polyglottos* (Linnaeus, 1758), host #KOH-Bal.1932/

BPBM 18364, (Aves, Passeriformes, Mimidae); USA: Alabama, Fairhope, 12.IX.1930, W.M. Edwards coll.

Remarks. This species is a junior synonym of *Brueelia brunneinucha* Cicchino, 1983 (Cicchino, 1985:74).

***Brueelia sueta* Valim & Weckstein, 2011**

Zookeys, 128: 3.

Paratypes: 1♂ FMNH-INS 28968, 1♀, FMNH-INS 28902 (DNA voucher Brsp.Pha.1.4.2011.19); ex *Pharomachrus pavoninus* (Spix, 1824), host #JAP 766/MPEG 62493, (Aves, Trogoniformes, Trogonidae); BRAZIL: Amazonas, Marañ, Lago Cumapi, 01°33'34.5"S 65°52'48.2"W, 31.VII.2007, J.D. Weckstein coll.

Remarks. This species is currently included in the genus *Guimaraesiella* Eichler, 1949 (Gustafsson & Bush, 2017:427).

Genus *Bucrocophorus* Elbel, 1976: 313
***Bucrocophorus pachynemesis* (Giebel, 1876)**

Proc. Biol. Soc. Wash. 89(25): 316.

Neoparatypes: 2♂, FMNH-INS 28777; 2♂, FMNH-INS 28779; ex *Bycanistes bucinator sharpii* Elliot, 1873 (= *Bycanistes fistulator sharpii*), host #CNHM 210642, (Aves, Bucerotiformes, Bucerotidae); GABON: {Ngounie}, Mouila, Mt. Tandon (= Mt Tandou), 9.VI.1951, H.A. Beatty coll.

Remarks. Neoparatypes designated by Elbel (1976).

***Bucrocophorus watsoni* Elbel, 1976**

Proc. Biol. Soc. Wash. 89(25): 317.

Paratypes: 1♂, FMNH-INS 28952; 1♂, FMNH-INS 28953; ex *Bycanistes cylindricus albotibialis* (Cabanis & Reichenow, 1877), host #CNHM 189020, 189028, (Aves, Bucerotiformes, Bucerotidae); CAMEROON: Yaoundé, 29.X–5.XI.1948, A.I. Good coll. 1♂, FMNH-INS 28954, same host taxon, host #CNHM 194162, UGANDA: W. of Ruwenzois, Semliki, Bwamba Valley, 19.VII.1946, V.G.L. von Sömeren coll. 2♀, FMNH-INS 28955; same host taxon, host #CNHM 194164, UGANDA: {Bunyoro}, Between Hoima & Lake Albert, Gugomia forest (= Bugoma forest), 15.VII.1945, V.G.L. von Sömeren coll.

Genus *Buceroemersonia* Elbel, 1977: 798
***Buceroemersonia clarkei* Elbel, 1977a**

Proc. Biol. Soc. Wash. 90(4): 799.

Paratypes: 3♂2♀, FMNH-INS 28956; ex *Tockus hemprichii* (Ehrenberg, 1833), host #CNHM 82670, (Aves, Bucerotiformes, Bucerotidae); ETHIOPIA: {Shoa},

Mt. Albana (= Mt. Albano), {Tichu Village, 8000 ft.}, 25.XI.1926, L.A. Fuertes coll. for Daily News Abyssia Exped. 1♂2♀, FMNH-INS 28957; same host taxon, host #CNHM 194216, ETHIOPIA: {Sidamo}, Algehe, {6000 ft.}, 23.IX.1941, C.W. Benson coll.

Genus *Buceronirmus* Hopkins, 1941: 43
***Buceronirmus deignani* Elbel, 1977b**

Pac. Insects, 17(4): 413.

Paratype: 1♀, FMNH-INS 28958; ex *Aceros u. undulatus* Shaw, 1811 (= *Rhyticeros u. undulatus*), host #UMMZ 1040a, c, d, (Aves, Coraciiformes, Bucerotidae); MALAYA (= MALAYSIA): Malacca, {02°19'34.9"N 102°16'54.1"E, 10.VIII.1875, Beal & J.B. Steere coll.

Remarks. Slide clearly reads "Beal & J.B. Steere", but it could be a transcribing error for Joseph Beal Steere.

Genus *Carduiceps* Clay & Meinertzhagen, 1939b: 451
***Carduiceps lapponicus* Emerson, 1953**

Proc. Biol. Soc. Wash. 55(5): 209.

Paratype: 1♂, FMNH-INS 28620; ex *Limosa l. lapponica* (Linnaeus, 1758), no host number, (Aves, Charadriiformes, Scolopacidae); GERMANY: Mainz, .IX.1899, no coll.

Genus *Cotingacola* Carriker, 1956: 366
***Cotingacola engeli* Valim & Weckstein, 2012a**

Sys. Parasitol. 81(3): 162.

Paratypes: 1♂, FMNH-INS 28984, 1♀, FMNH-INS 28905 (DNA voucher Cosp.Phni.1.4.2011.2); ex *Phoenicircus nigricollis* Swainson, 1832, host #JAP 158/MPEG 63160, (Aves, Passeriformes, Cotingidae); BRAZIL: Amazonas, Município Japurá, Rio Mapari, 02°02'59.6"S 67°15'47.1"W, 14.VII.2007, J.D. Weckstein coll.

***Cotingacola fitzpatricki* Clayton & Price, 1998**

J. Med. Entomol. 35(5): 737.

Holotype: 1♂, FMNH-INS 28618; ex *Lipaugus subalaris* Sclater, 1861 (= *Snowornis subalaris*), {host #FMNH 322435}, (Aves, Passeriformes, Cotingidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palatua, 1030 m., 29.VIII.1985, {J. W. Fitzpatrick & } D.H. Clayton coll.

Paratypes: 2♀, FMNH-INS 28611; same data as the holotype except, 31.VIII.1985.

Remarks. On slide FMNH-INS 28618 there is one nymph that is not a paratype.

***Cotingacola lutzae* Valim & Weckstein, 2012a**

Sys. Parasitol. 81(3): 160.

Paratype: 1♀, FMNH-INS 28906 (DNA voucher Cosp. Lahy.1.4.2011.2); ex *Laniocera hypopyrra* (Vieillot, 1817), host #JAP 307/MPEG 63184, (Aves, Passeriformes, Cotingidae); BRAZIL: Amazonas, Município Japurá, Rio Mapari, 02°02'31.6"S 67°17'16.6"W, 17.VII.2007, J.D. Weckstein coll.

***Cotingacola stotzi* Clayton & Price, 1998**

J. Med. Entomol. 35(5): 736.

Holotype: ♂, FMNH-INS 28614; ex *Querula purpurata* (Statius Müller, 1776), {host #FMNH 322448}. (Aves, Passeriformes, Cotingidae); PERU: Madre de Dios, Cerro de Pantiacolla, {Above Rio Palotoa}, ~600 m., 17.XII.1985, D.H. Clayton coll.

Paratype: 1♀, FMNH-INS 28619; same data as holotype.

Genus *Cuclotogaster* Carriker, 1936: 67***Cuclotogaster subinsolitus* Emerson & Elbel, 1957a**

Proc. Ent. Soc. Wash. 59(5): 235.

Paratypes: 2♀, FMNH-INS 28959; ex *Arborophila b. brunneopectus* (Blyth, 1855), host #RE 3462/B 22703, (Aves, Galliformes, Phasianidae); THAILAND: Loei, Phu Lom Lo Mountain, Kok Sathon, Dan Sai, 24.III.1954, R.E. Elbel & B. Lekagul coll.

Genus *Degeeriella* Neumann, 1906: 60***Degeeriella storeri* Elbel & Price, 1973**

Pac. Insects 15(1): 97.

Paratypes: 1♂, FMNH-INS 28782; 2♂, FMNH-INS 28794; ex *Accipiter trivirgatus indicus* (Hodgson, 1836), host #UMMZ 140467, (Aves, Accipitriformes, Accipitridae); INDIA: Assam, Khasia Hills, Cherra Punji, 4.VI.1952, W. Koelz coll. 1♂, FMNH-INS 28793; same data, except host #UMMZ 140466. 3♀, FMNH-INS 28784; same host taxon, host #CNHM 228605; INDIA: Assam, Khasia Hills, Bara Pani, 27.V.1949, W. Koelz coll. 2♂2♀, FMNH-INS 28798; same host taxon, host #CNHM 228602; INDIA: Assam, Khasia Hills, Nongpoh, 28.IV.1949, W. Koelz coll. 2♀, FMNH-INS 28799; same data, except host #CNHM 228604, 4.V.1949. 4♀, FMNH-INS 28796; same host taxon, host #UMMZ 140476; INDIA: Assam, Garo Hills, 24.I.1950, W. Koelz coll. 1♂2♀, FMNH-INS 28785; same host taxon, host #CNHM 80530; THAILAND: Ubon, 22.XI.1928, C.J. Aagaard coll. 1♀, FMNH-INS 28789; same host taxon, host #UMMZ B7710; MALAYSIA: Malacca, {02°19'34.9"N 102°16'54.1"E, 10.VIII.}.1875,

J.B. Steere coll. 1♀, FMNH-INS 28791; same host taxon, host #CNHM 89898; LAOS: Bantion, French Indo-China, 15.XII.1931, J. Delacour coll.

Remarks. Some specimens in the FMNH insect collection are labeled as "paratypes" but were explicitly cited in the original publication as "other specimens" (Elbel & Price, 1973: 97). Thus, the specimens listed below and listed as "other specimens" by Elbel & Price, (1973) are not types at all. 1♀, FMNH-INS 28795; ex *Accipiter trivirgatus indicus*, host #CNHM 184618, (Aves, Accipitriformes, Accipitridae); PHILIPPINES: Palawan, Iwahig, Penal Colony, 5.III.1947, A.P. Castro coll. 1♂, FMNH-INS 28783, 1♂, FMNH-INS 28787, 1♀, FMNH-INS 28788, 1♀, FMNH-INS 28790, 1♀, FMNH-INS 28797; ex *Accipiter trivirgatus palawanus* Mayr, 1949, host #3166/CNHM 184620, (Aves, Accipitriformes, Accipitridae); PHILIPPINES: Culion, Calamianes (= Calamian Islands), San Pedro, 1.IV.1947, H. Hoogstraal coll. 2♀, FMNH-INS 28786; same data, except M. Celestino coll. 2♀, FMNH-INS 28800; ex *Accipiter trivirgatus peninsulæ* Koelz, 1949, host #CNHM 153625, (Aves, Accipitriformes, Accipitridae); INDIA: Bombay, Castle Rock, Kanara, 13.II.1941, R.L. Fleming coll.

***Degeeriella traylori* Elbel & Price, 1973**

Pac. Insects 15(1): 99.

Paratypes: 2♀, FMNH-INS 28792; ex *Spizaetus cirrhatus limnaeetus* Gmelin, 1788 (= *Nisaetus cirrhatus*), host #USNM 159402, (Aves, Accipitriformes, Accipitridae); THAILAND: Trang, Lay Song Hong, 7.IX.1896, W.L. Abbott coll.

Genus *Echinophiloferus* Ewing, 1927: 92***Echinophiloferus clayae* Guimarães, 1980**

Pap. Avulsos Zool., 33(6): 140.

Paratypes: 1♀, FMNH-INS 28962; ex *Prioniturus discurus waterstradii* Salomonsen 1953 (= *Prioniturus discurus*), host #809, (Aves, Psittaciformes, Psittaculidae); PHILIPPINES: Davao, Mindanao, E. Slope Mt. McKinley, 11.IX.1946, M. Celestino coll. 1♂2♀, FMNH-INS 28960; 3♂1♀, FMNH-INS 28961; same data, except host #804, 9.VIII.1946, H. Hoogstraal coll. 1♀, FMNH-INS 28963, ex *Prioniturus discurus platenæ* Blasius, 1888 (= *Prioniturus platenæ*), host #3077/CNHM 184636, (Aves, Psittaciformes, Psittaculidae); PHILIPPINES: Culion, Calamianes (= Calamian Islands), San Pedro, 21.III.1947, H. Hoogstraal coll.

Remarks. The slide FMNH-INS 28963 is marked as a paratype, but it is not included in the original publication as a paratype, thus, it is not a paratype.

Genus *Emersoniella* Tendeiro, 1965: 69
Emersoniella halcyonis Tendeiro, 1965

Rev. Est. Gerais Univ. Mocambique, 2(5): 75.

Paratype: 1♂, FMNH-INS 28441; ex *Halcyon hombroni* Bonaparte, 1850 (= *Actenoides hombroni*), {host #BPBM 182285}, (Aves, Coraciiformes, Alcedinidae); PHILIPPINES: Masawan, Mutya, 28.XII.1961, {D.S.} Rabor & {R.B.} Gonzales coll.

Remarks. In the original publication the collection date is in error as 20.XII.1961.

Emersoniella regis Emerson & Price, 1978

Pac. Insects, 19(1–2): 106.

Paratypes: 1♂1♀, FMNH-INS 28948; ex *Clytoceyx rex* (Sharpe, 1880), host #BBM-NG 101670, (Aves, Coraciiformes, Alcedinidae); NEW GUINEA: E Sepik Dist., {4.8 km. WSW Dagua Rd (as measured from 8 km. turning point from} Wewak), {~20 m.}, 23.X.1972, {A.B. Mirza} coll.

Genus *Formicaphagus* Carriker, 1957: 411
Formicaphagus arnoldi Price & Clayton, 1997

J. Kans. Entomol. Soc., 69(4): 352.

Holotype: ♂, FMNH-INS 28613; ex *Conopophaga ardesiaca* d'Orbigny & Lafresnaye, 1837, no host number, (Aves, Passeriformes, Conopophagidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palatua, 1350 m., 2.IX.1985, D.H. Clayton coll.

Paratypes: 2♂4♀, FMNH-INS 28613; on the same slide as the holotype. 2♂3♀, FMNH-INS 28616; 5♀, FMNH-INS 28617; same data as the holotype, except 24.VIII.1985. 1♂5♀, FMNH-INS 28612; same data as the holotype, except host #DHC 85-398, 1300 m., 5.IX.1985. 3♀, FMNH-INS 28615; same data as the holotype, except host #DHC 85-328/{FMNH 322384}, 31.VIII.1985.

Remarks. The male holotype is on the same slide than six paratypes (FMNH-INS 28613; 2♂4♀), the male in the middle is the holotype.

Formicaphagus donpetersi Price & Clayton, 1997

J. Kans. Entomol. Soc., 69(4): 353.

Holotype: ♀, FMNH-INS 28504; ex *Conopophaga peruviana* Des Murs, 1856, {host #FMNH 322355}, (Aves, Passeriformes, Conopophagidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palatua, 820 m., 13.XI.1985, {B.L. Clauson &} D.H. Clayton coll.

Paratype: 1♂, FMNH-INS 28609; same data as holotype.

Remarks. On the slide FMNH-INS 28504 there are four nymphs that are not paratypes.

Genus *Fulicoffula* Clay & Meinertzhagen, 1938a: 279
Fulicoffula personata Emerson & Price, 1967a

Entomol. News, 78(6): 163.

Paratypes: 1♂1♀, FMNH-INS 28621; ex *Heliopais personata* Gray, 1849 (= *Heliopais personatus*), host #MAPS 2391/{USNM 509509}, (Aves, Gruiformes, Heliornithidae); THAILAND: Trat, {1/2 km. NW} Ban Saen Tung, 22.IV.1966, {B. King} coll.

Genus *Goniodes* Nitzsch, 1818: 293
Goniodes sinensis Emerson & Stojanovich, 1964

Entomol. News, 75(10): 256.

Paratypes: 1♂1♀, FMNH-INS 28622; ex *Syrmaticus mikado* (Ogilvie-Grant, 1906), host #PF 12432, (Aves, Galliformes, Phasianidae); FORMOSA (= TAIWAN): Wu-Sheh, 31.X.1961, no coll.

Remarks. *Goniodes* sometimes is placed in the family Gonioididae (Kéler, 1939; Eichler, 1963; Smith, 2000). This family is not formally recognized by the world checklists (Hopkins & Clay, 1952; Price et al., 2003).

Genus *Heptapsogaster* Carriker, 1936: 115
Heptapsogaster boraquira Clay, 1943

Field Mus. Nat. Hist., Zool. ser., 24(33): 378.

Paratypes: 1♂1♀, FMNH-INS 28545; 1♂2♀, FMNH-INS 28546; ex *Nothura boraquira* (Spix, 1825), host #12667, (Aves, Tinamiformes, Tinamidae); BOLIVIA: no other data.

Remarks. The host number (12667) is the same host individual that is associated with neotypic material of *Heptapsogaster dilatatus* (Rudow, 1870) and *Strongylocotes tinnami* (Rudow, 1870), and the types of *Heptapsogaster boultoni* Clay, 1943 in the Meinertzhagen collection deposited at the Natural History Museum of London (Hindle, 1967). *Heptapsogaster* sometimes is placed in the family Heptapsogasteridae (Carriker, 1936; Eichler, 1963; Smith, 2000; Kuabara & Valim, 2017). This family is not formally recognized by the world checklists (Hopkins & Clay, 1952; Price et al., 2003).

Heptapsogaster boultoni Clay, 1943

Field Mus. Nat. Hist., Zool. ser., 24(33): 380.

Paratypes: 2♂3♀, FMNH-INS 28547; ex *Nothura boraquira* (Spix, 1825), host #12667, (Aves, Tinamiformes, Tinamidae); BOLIVIA: no other data.

Heptapsogaster dilatatus (Rudow, 1870)

Field Mus. Nat. Hist., Zool. ser., 24(33): 376.

Neoparatype: 1♂, FMNH-INS 28856; ex *Nothura boraquira* (Spix, 1825), host #4735, (Aves, Tinamiformes, Tinamidae); BRAZIL: no other data.

Remarks. Neoparatypes designated by Clay (1943).

Genus *Lipeurus* Nitzsch, 1818: 292***Lipeurus deignani*** Emerson & Elbel, 1957a

Proc. Ent. Soc. Wash., 59(5): 237.

Paratypes: 1♀, FMNH-INS 28623; 1♂, FMNH-INS 28628; 1♀, FMNH-INS 28631; ex *Lophura diardi* (Bonaparte, 1856), host #RE 3385/TR-B-22681/{USNM 452042}, (Aves, Galliformes, Phasianidae); THAILAND: Sakon Nakhon, Khok Phu, Ban Sang Kho 2, Subvillage 7, 3.II.1954, {R. Elbel & B. Lekhakun coll.}. 2♂2♀, FMNH-INS 28632; same host taxon, host #RE 3463/TR-B-22704/{USNM 452041}; THAILAND: Loei, Dan Sai, Kok Sathon, Phu Lom Lo Mountain, 24.III.1954, {R. Elbel coll.}.

Lipeurus lewisi Elbel & Price, 1970

J. Kans. Entomol. Soc., 43(2): 238.

Holotype: ♂, FMNH-INS 28985; ex *Caloperdix o. oculate* Temminck, 1815 (= *Caloperdix o. oculus*), host #709/{FMNH 400709}, (Aves, Galliformes, Phasianidae); LOWER BURMA (= MYANMAR): Upper Tavoy river, 1.II.1918, J.C. Hopwood coll.

Paratype: 1♀, FMNH-INS 28985; on the same slide as the holotype.

Genus *Megapodiella* Emerson & Price, 1972: 77***Megapodiella parkeri*** Price & Emerson, 1984b

Fla. Entomol., 67(1): 161.

Paratype: 1♀, FMNH-INS 28450; ex *Leipoa ocellata* Gould, 1840, host #B 8348, (Aves, Galliformes, Megapodiidae); AUSTRALIA: Murray Scrubs, early 1900's, no coll.

Genus *Mulcticola* Clay & Meinertzhagen, 1938a: 279***Mulcticola deignani*** Emerson & Elbel, 1957b

Can. Entomol., 89(9): 420.

Paratypes: 1♂, FMNH-INS 28626; 1♂, FMNH-INS 28633; ex *Caprimulgus macrurus bimaculatus* Peale, 1848, host #RE 2483/B 21047 (Traub No.), (Aves, Caprimulgiformes, Caprimulgidae); THAILAND: Kanphaeng Phet, Khlong Khlung, 24.IV.1953, {R.E.} Elbel & {H.G.} Deignan coll.

Genus *Neopsittaconirmus* Conci, 1942a: 37***Neopsittaconirmus hoogstraali*** Guimarães, 1974a

Arq. Zool., 25(3): 148.

Holotype: ♂, FMNH-INS 28642; ex *Tanygnathus lucionensis paraguayensis* Hachisuka, 1930, host #3080/CNHM 184645, (Aves, Psittaciformes, Psittacidae); PHILIPPINES: San Pedro, Culion, Calamianes (= Calamian Islands), 27.III.1947, H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 28642; on same slide as holotype.

Paratypes: 2♂, FMNH-INS 28646; same data as the holotype. 1♂1♀, FMNH-INS 28640; 1♂1♀, FMNH-INS 28643; 3♀, FMNH-INS 28650; same data as the holotype, except host #3079/CNHM 184645. 1♂2♀, FMNH-INS 28638; same host taxon, host #2421; PHILIPPINES: Palawan Isl., Puerto Princesa, {Caniganar}, 9.III.1947, F.G. Werner coll. 3♂, FMNH-INS 28641; 1♂, FMNH-INS 28651; same data, except host #2422. 1♂, FMNH-INS 28654; same data, except host #2424, H. Hoogstraal & F.G. Werner coll. 1♂, FMNH-INS 28655; ex *Centropus bengalensis javanensis* (Dumont, 1818), host #2617/CNHM 184659, (Aves, Cuculiformes, Cuculidae); PHILIPPINES: Palawan Isl., Puerto Princesa, 9.IV.1947, H. Hoogstraal coll. 2♂, FMNH-INS 28648; 2♂1♀, FMNH-INS 28649; same data, except no host name, host #2618.

Neopsittaconirmus wardi Guimarães, 1974a

Arq. Zool., 25(3): 151.

Holotype: ♂, FMNH-INS 28637; ex *Prioniturus discurus platenae* Blasius, 1888, host #3077/CNHM 184636, (Aves, Psittaciformes, Psittaculidae); PHILIPPINES: San Pedro, Culion, Calamianes (= Calamian Islands), 27.III.1947, H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 28637; on same slide as holotype.

Paratypes: 1♂2♀, FMNH-INS 28657; same data as the holotype.

Neopsittaconirmus lybartota difficilis Guimarães, 1974a

Arq. Zool., 25(3): 141.

Paratypes: 1♂1♀, FMNH-INS 28639; ex *Psittacula alexandri fasciata* (Statius Müller, 1776), host #RE 4665/RT 1331205/{USNM 452464}, (Aves, Psittaciformes, Psittaculidae); THAILAND: Loei, Dan Sai, Kok Sathon, Phu Lomho Mt., 16.II.1955, R.E. Elbel coll. 1♂1♀, FMNH-INS 28645; same data, except 19.II.1955. 3♀, FMNH-INS 28647; same host taxon, host #RE 3300/B 22655/{USNM 452267}; THAILAND: Loei, Wang Saphung, Si Than, 12.I.1954, R.E. Elbel & B. Lekagul (= B. Lekhakun) coll.

Remarks. Present status is *Neopsittaconirmus difficilis* Guimarães, 1974 (Price et al., 2003:200).

Genus *Oxylipeurus* Mjöberg, 1910a: 91
Oxylipeurus annamensis Emerson & Elbel, 1957a

Proc. Ent. Soc. Wash., 59(5): 238.

Paratypes: 1♀, FMNH-INS 28624; ex *Lophura diardi* (Bonaparte, 1856), host #RE 3160/{USNM 452043}, (Aves, Galliformes, Phasianidae); THAILAND: Loei, Sieo, Khao Sawan Mountain, 25.XI.1953, R.E. Elbel {& B. Lekhakun} coll. 1♀, FMNH-INS 28625; 1♂, FMNH-INS 28630; same data, except host #RE 3160/TR-B 22600. 1♂, FMNH-INS 28629; 1♀, FMNH-INS 28634; same host taxon, host #RE 3385/TR-B 22681/{USNM 452042}; THAILAND: Sakon Nakhon, Khok Phu, Ban Sang Kho 2 (subvill. no.), 3.II.1954, R.E. Elbel {& B. Lekhakun} coll.
Remarks. Present status is *Reticulipeurus annamensis* (Emerson & Elbel, 1957) (Gustafsson et al., 2020:214).

Genus *Oxylipeurus hoogstraali*
 Emerson & Ward, 1958a (Fig. 3 herein)

Fieldiana, Zool., 42(4): 57.

Holotype: ♂, FMNH-INS 28530; ex *Polyplectron emphanum* Lesson, 1831 (= *Polyplectron napoleonis*), host #2417/{FMNH 416817}, (Aves, Galliformes, Phasianidae); PHILIPPINES: Palawan Isl., Iwahig, Penal Colony, 8.III.1947, H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 28528; same data as the holotype, except host #2418.

Paratypes: 1♂, FMNH-INS 28515; 1♀, FMNH-INS 28529; 1♀, FMNH-INS 28534; 1♀, FMNH-INS 28543; same data as the holotype. 1♀, FMNH-INS 28531; same data as the allotype. 1♂, FMNH-INS 28542; same data, except host #2381, PHILIPPINES: Lapulapu, Palawan Isl., Iwahig, Penal Colony, 6.III.1947.

Remarks. Present status is *Megalipeurus hoogstraali* (Emerson & Ward, 1958) (Gustafsson et al., 2020:227).

Genus *Oxylipeurus songprakobi* Elbel & Price, 1970

J. Kans. Entomol. Soc., 43(2): 241.

Holotype: ♂, FMNH-INS 28627; ex *Caloperdix o. oculate* Temminck, 1815 (= *Caloperdix o. oculate*), host #Conover 709/{FMNH 400709}, (Aves, Galliformes, Phasianidae); BURMA (= MYANMAR): Upper Tavoy river, 1.II.1918, J.C. Hopwood coll.

Paratype: 1♀, FMNH-INS 28627; on same slide as the holotype.

Remarks. Present status is *Megalipeurus songprakobi* (Elbel & Price, 1970) (Gustafsson et al., 2020:227).

Genus *Palmaellus* Valim & Weckstein, 2012b: 729
Palmaellus inexpectatus Valim & Weckstein, 2012b

J. Parasitol., 98(4): 729.

Paratype: 1♀, FMNH-INS 29890 (DNA voucher Gennov. Psvi.1.3.2011.8); ex *Psophia dextralis* Conover, 1934, host #PPBIO 107/MPEG 61659, (Aves, Gruiformes, Psophiidae); BRAZIL: Pará, Portel, FLONA do Caxiuanã, Plot PPBIO, 01°57'S 51°36'W, 17.I.2007, J.D. Weckstein coll.

Genus *Pectinopygus* Mjöberg, 1910a: 95
Pectinopygus tordoffi Elbel & Emerson, 1956

Entomol. News, 67(7): 173.

Paratype: 1♂, FMNH-INS 28635; ex *Pelecanus erythrorhynchos* Gmelin, 1789, {host #UMMZ 152718}, (Aves, Pelecaniformes, Pelecanidae); USA: Kansas, Lawrence, {16}.X.1954, H.B. Tordoff coll.

Genus *Physconelloides* Ewing, 1927: 94
Physconelloides passerinae Emerson, 1957

J. Kans. Entomol. Soc., 30(2): 37.

Paratypes: 1♀, FMNH-INS 28950; ex *Columbigallina passerina insularis* Ridgway, 1888 (= *Columbina passerina insularis*), host #KOH-Bal.1931/BPBM 15293, (Aves, Columbiformes, Columbidae); CUBA: Guantanamo, 16.VIII.1930, H.S. Peters coll. 1♂1♀, FMNH-INS 28951; same host taxon, host #KOH-Bal.1931/BPBM 15390, CAYMAN Isl.: Cayman Brac., 11.IX.1930, H.S. Peters coll.

Remarks. *Physconelloides passerinae* is a junior synonym of *Physconelloides eurysema* (Carriker, 1903) (Price et al., 1999). *Physconelloides* sometimes is placed in the family Gonioididae (Kéler, 1939; Eichler, 1963; Smith, 2000). This family is not formally recognized by the world checklists (Hopkins & Clay, 1952; Price et al., 2003).

Genus *Physconelloides spenceri* Emerson & Ward, 1958b

J. Kans. Entomol. Soc., 31(3): 239.

Paratypes: 1♂1♀, FMNH-INS 28853; ex *Columba f. fasciata* Say, 1822 (= *Patagioenas f. fasciata*), host #RW 1734, (Aves, Columbiformes, Columbidae); CANADA: British Columbia, Vancouver, 6.X.1952, G.J. Spencer coll. 2♂, FMNH-INS 28854; same data, except host #RW 1770. 1♀, FMNH-INS 28855; 1♂1♀, FMNH-INS 28949; same host taxon, host #RW 1735; CANADA: Vancouver, British Columbia, Tofino, 26.VIII.1926, G.J. Spencer coll.

Remarks. #RW is the preparation number of Ronald Ward. No other number associated with the host was found.

Genus *Picicola* Clay & Meinertzhagen, 1938b: 74
Picicola faucetti Price & Weckstein, 2006

Zootaxa, 1367: 45.

Holotype: ♂, FMNH-INS 28004; ex *Chelidoptera tenebrosa* (Pallas, 1782), host #KBO 65/LSUMNS-B 42473, (Aves, Galbuliformes, Bucconidae); PERU: Loreto, 7 km. SW Jeberos, 05°18'48"S 76°16'32"W, 13.VI.2001, K. Balta coll.

Paratype: 1♀, FMNH-INS 28004; on the same slide as the holotype.

Picicola naokii Price & Weckstein, 2006

Zootaxa, 1367: 42.

Holotype: ♂, FMNH-INS 28002; ex *Bucco capensis* Linnaeus, 1766, host #TV 173/LSUMNS-B 40484, (Aves, Galbuliformes, Bucconidae); PERU: Loreto, ca. 86 km. SE Juanjui on E bank upper Rio Pauya, 07°35'40"S 75°54'58"W, 23.VII.2000, T. Valqui coll.

Paratype: 1♀, FMNH-INS 28002; on the same slide as the holotype.

Picicola oneilli Price & Weckstein, 2006

Zootaxa, 1367: 45.

Holotype: ♂, FMNH-INS 28000 {(DNA voucher 1.13.2003.19)}; ex *Notharchus macrorhynchos* (Gmelin, 1788), host #JPO 8121/LSUMNS-B 40859, (Aves, Galbuliformes, Bucconidae); PERU: Loreto, 86 km. SE Juanjui on upper Rio Pauya, 07°35'10"S 75°56'01"W, 8.VIII.2000, J.P. O'Neill coll.

Picicola osheai Price & Weckstein, 2006

Zootaxa, 1367: 43.

Holotype: ♀, FMNH-INS 28001; ex *Malacoptila fusca* (Gmelin, 1788), host #BJO 1000, (Aves, Galbuliformes, Bucconidae); SURINAME: District Sipaliwini, Lely Gebergte, 630m, 04°16.459'N 54°44.323'W, 8.VI.2003, B.J. O'Shea coll.

Paratype: 1♂, FMNH-INS 28001; on the same slide as the holotype.

Picicola valquii Price & Weckstein, 2006

Zootaxa, 1367: 42.

Holotype: ♂, FMNH-INS 28003; ex *Notharchus tectus* (Boddaert, 1783), host #TV 308, (Aves, Galbuliformes, Bucconidae); PERU: Loreto, 7 km. SW Jeberos 05°18'48"S 76°16'32"W, 6.VI.2001, T. Valqui coll.

Paratype: 1♀, FMNH-INS 28003; on the same slide as holotype.

Remarks. In the original publication the west coordinate is incorrectly given as 76°56'01"W.

Genus *Psittoeccus* Conci, 1942a: 40

Psittoeccus hoogstraali Guimarães, 1974b

Pap. Avulsos Zool., 28(9): 171.

Holotype: ♂, FMNH-INS 28644; ex *Kakatoe haematurophygia* Müller, 1776 (= *Cacatua haematurophygia*), host #3072-3/CNHM 184634, (Aves, Psittaciformes, Psittacidae); PHILIPPINES: San Pedro, Culion, Calamianes (= Calamian Islands), 27.III.1947, H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 28644; on the same slide as the holotype.

Paratypes: 2♂2♀, FMNH-INS 28653; same data as the holotype. 1♂, FMNH-INS 28656; same host taxon, host #2635/CNHM 184635; PHILIPPINES: Palawan Isl., Canigaran, Puerto Princesa, 12.IV.1947, H. Hoogstraal coll.

Remarks. Although the locality for the paratype FMNH-INS 28656 was not mentioned by Guimarães (1974b), the number of paratype specimens cited by that author fits with those found in the collection of the FMNH. Thus, we believe there is no reason to doubt the validity of the specimens on this slide as paratypes.

Genus *Rallicola* Johnston & Harrison, 1911: 324

Rallicola hambleri Price & Clayton, 1994

J. Med. Entomol., 31(5): 655.

Holotype: ♂, FMNH-INS 28505; ex *Syndactyla rufosuperciliata* (Lafresnaye, 1832), host #{FMNH 321559}, (Aves, Passeriformes, Furnariidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palotoa, 1,030m, 3.IX.1985, {B.L. Clauson &} D.H. Clayton coll.

Paratype: 1♀, FMNH-INS 28505; on the same slide as the holotype.

Rallicola harveyi Price & Clayton, 1993

J. Med. Entomol., 30(1): 41.

Holotype: ♂, FMNH-INS 28489; ex *Deconychura longicauda* (Pelzeln, 1868), host #DW 3181/{FMNH 321187}, (Aves, Passeriformes, Dendrocolaptidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palotoa, 1030 m., 29.VIII.1985, {D.E. Willard &} D.H. Clayton coll.

Paratype: 1♀, FMNH-INS 28489; on the same slide as the holotype.

Rallicola keymerae Price & Clayton, 1993

J. Med. Entomol., 30(1): 40.

Holotype: ♂, FMNH-INS 28497; ex *Dendrocolaptes picumnus* Lichtenstein, 1820, no host number, (Aves, Passeriformes, Dendrocolaptidae); PERU: Madre de Dios, Cerro de Pantiacolla, 680 m., 11.XI.1985, D.H. Clayton coll.

Paratypes: 1♂2♀, FMNH-INS 28497; on the same slide as the holotype.

Remarks. The male holotype is on the same slide as the three paratypes (FMNH-INS 28497), the male on the left is the holotype.

Rallicola leae Price & Clayton, 1994

J. Med. Entomol., 31(5): 654.

Holotype: ♂, FMNH-INS 28503; ex *Thripadectes melanorhynchus* (Tschudi, 1844), {host #FMNH 321612}, (Aves, Passeriformes, Furnariidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palotoa, 1030 m., 1.IX.1985, {B.L. Clauson &} D.H. Clayton coll.

Paratypes: 4♀, FMNH-INS 28503; on the same slide as the holotype.

Rallicola mooreae Price & Clayton, 1994

J. Med. Entomol., 31(5): 653.

Holotype: ♂, FMNH-INS 28502; ex *Premnoplex brunnescens* (Sclater, 1856), host #FMNH 321512}, (Aves, Passeriformes, Furnariidae); PERU: Madre de Dios, Cerro de Pantiacolla, above Rio Palotoa, 1030 m., 24.VIII.1985, D.H. Clayton coll.

Paratypes: 1♀, FMNH-INS 28503; on the same slide as the holotype. 5♂2♀, FMNH-INS 28507; same data as holotype, except host #85-263/{FMNH 321510}, 26.VIII.1985.

Rallicola palmai Price & Clayton, 1993

J. Med. Entomol., 30(1): 44.

Holotype: ♂, FMNH-INS 28490; ex *Campylorhamphus trochilirostris* (Lichtenstein, 1820), host #DHC 85-216/{FMNH 321454}, (Aves, Passeriformes, Dendrocolaptidae); PERU: Madre de Dios, Cerro de Pantiacolla, 20.VIII.1985, D.H. Clayton coll.

Paratypes: 2♀, FMNH-INS 28490; on the same slide as the holotype. 2♂5♀, FMNH-INS 28491; same data as holotype, except host #DHC 85-217/{FMNH 321455}. 2♂4♀, FMNH-INS 28500; same data as holotype, except {host #BLC 336/FMNH 321460}, 680 m., 9.XI.1985. 6♂6♀, FMNH-INS 28494; same host taxon, no host number, PERU: Cuzco, 20 km. NW Pilcopata, near Rio Tono, 820 m., 30.XI.1985, D.H. Clayton coll.

Rallicola tompkinsi Price & Clayton, 1994

J. Med. Entomol., 31(5): 654.

Holotype: ♂, FMNH-INS 28506; ex *Sclerurus caudacutus* (Vieillot, 1816), {host #FMNH 321719}, (Aves, Passeriformes, Scleruridae); PERU: Madre de Dios, Cerro de Pantiacolla, 680 m., 10.XI.1985, {D.F. Stotz &} D.H. Clayton coll.

Paratype: 1♀, FMNH-INS 28506; on the same slide as the holotype.

Remarks. On the slide FMNH-INS 28506 there are two nymphs that are not paratypes.

Genus *Rhynonirmus* Thompson, 1935: 281*Rhynonirmus kingi* Emerson & Price, 1968a

Proc. Ent. Soc. Wash., 70(2): 184.

Paratypes: 1♂1♀, FMNH-INS 28443; 1♂1♀, FMNH-INS 28652; ex *Carpococcyx renauldi* Oustalet, 1896, host #MAPS 2362/{USNM 534601}, (Aves, Cuculiformes, Cuculidae); THAILAND: Chanthaburi, Khao Soi Dao Tai, 24.III.1966, no coll.

Genus *Saemundssonina* Timmermann, 1935: 100*Saemundssonina tringae sibiriae* Martens, 1974

Mitt. Hamburg. Zool. Mus. Inst., 70: 146.

Paratype: 1♀, FMNH-INS 28658; ex *Calidris tenuirostris* (Horsfield, 1821), no host number, (Aves, Charadriiformes, Scolopacidae); KOREA: Kyonggi-do, Sosa Pu-ri, {37°29'N 126°47'E}, 13.IX.1961, C. Fennell coll.

Remarks. Synonym of *Saemundssonina* (*Saemundssonina*) *tringae* (Fabricius, 1780) (Price et al., 2003:238).

Genus *Strigiphilus* Mjöberg, 1910a: 132*Strigiphilus acadicus* Emerson & Price, 1973

Proc. Ent. Soc. Wash., 75(1): 45.

Paratypes: 1♂1♀, FMNH-INS 28666; ex *Aegolius acadicus* (Gmelin, 1788), no host number, (Aves, Strigiformes, Strigidae); CANADA: Ontario, York Co., Toronto Island, 18.VII.1971, J.G. Woods coll.

Strigiphilus ketupae Emerson & Elbel, 1957c

Proc. Biol. Soc. Wash., 70: 196.

Paratypes: 1♂1♀, FMNH-INS 28659; ex *Ketupa zeylonensis leschenaultii* (Temminck, 1820), host #RE 2075/RT-B 17692 (Traub no.)/{USNM 450017}, (Aves, Strigiformes, Strigidae); THAILAND: Prachuap Khiri Khan, Huai Yang, 26.XII.1952, R.E. Elbel & H.G. Deignan coll. 1♂1♀, FMNH-INS 28661; same host taxon, host

#RE 3082/RT-B 22570/{USNM 452025}; THAILAND: Khon Kaen, Chumphae, Non Han, Ban Na Nong Thum, 27.X.1953, R.E. Elbel {& B. Lekhakun} coll.

Strigiphilus macrogenitalis Emerson & Elbel, 1957c

Proc. Biol. Soc. Wash., 70: 197.

Paratypes: 3♀, FMNH-INS 28660; ex *Glaucidium cuculoides bruegeli* (Parrot, 1908), host #RE 330/RT-B 9886 (Traub no.)/{USNM 451886}, (Aves, Strigiformes, Strigidae); THAILAND: Chaiphaphum, Phukhieo, Ban Kaeng, Ban Lat, 5.I.1952, R.E. Elbel {& Y. Gaddi} coll. 1♂1♀, FMNH-INS 28662; same host taxon, host #RE 2211/RT-B 17735/{USNM 450027}; THAILAND: Lampang, Pang La, 31.I.1953, R.E. Elbel & H.G. Deigman coll. 1♂1♀, FMNH-INS 28663; same host taxon, host #RE 1535/RT-B 17061 (Traub no.)/{USNM 450030}; THAILAND: Kanchanaburi, Tha Khanum, Hin Laem, 19.XI.1952, R.E. Elbel coll. 1♂1♀, FMNH-INS 28664; same host taxon, host #RE 3806/RT-B 30907/{USNM 452509}; THAILAND: Sakon Nakhon, Phu Phan Mountain, 27.VI.1954, R.E. Elbel coll. 2♂, FMNH-INS 28665; same host taxon, host #RE 3129/RT-B 22588/{USNM 452074}; THAILAND: Khon Kaen, Chumphae, Non Han, Ban Na Nong Thum, 5.XI.1953, R.E. Elbel {& B. Lekhakun} coll.

Genus *Strongylocotes* Taschenberg, 1882: 54
Strongylocotes tinnami (Rudow, 1870)

Field Mus. Nat. Hist., Zool. ser., 24(33): 382.

Neoparatypes: 1♂1♀, FMNH-INS 28667; ex *Nothura boraquira* (Spix, 1825), host #12667, (Aves, Tinamiformes, Tinamidae); BOLIVIA: no other data.

Remarks. Neoparatypes designated by Clay (1943). *Strongylocotes* sometimes is placed in the family Heptapsogasteridae (Carriker, 1936; Eichler, 1963; Smith, 2000; Kuabara & Valim, 2017). This family is not formally recognized by the world checklists (Hopkins & Clay, 1952; Price et al., 2003).

Family Trichodectidae Kellogg, 1896

Genus *Bovicola* Ewing, 1929: 123
Bovicola orientalis Emerson & Price, 1982

Pac. Insects, 24(2): 186.

Paratypes: 1♂1♀, FMNH-INS 28451; 1♂1♀, FMNH-INS 28459; ex *Capricornis crispus swinhoi* (Gray, 1862), host #PF 8561, (Mammalia, Artiodactyla, Bovidae); FORMOSA (= TAIWAN): I-Lan, {23°36'00.1"N 120°39'15.0"E}, 3.XI.1960, no coll. 1♂1♀, FMNH-INS 28457; same host taxon, no host number, TAIWAN, Puli, 2.I.1964, no coll.

Genus *Eutrichophilus* Mjöberg, 1910a: 71
Eutrichophilus duellmani Timm & Price, 1994

Fieldiana, Zool., 76: 14.

Paratypes: 1♂2♀, FMNH-INS 28876; ex *Coendou b. bicolor* (Tschudi, 1844), host #1/{KU 144560}, (Mammalia, Rodentia, Erethizontidae); PERU: Madre de Dios, 15 km. NE Puerto Maldonado, Res. Cozco Amazonico {12°33'S 69°03'W, 200 m.}, 19.I.1990, E.D. Hooper coll.

Remarks. In the original publication and the KU database, the locality for this host is 14 km. E of Reserva Cuzco Amazonico, 12°36'00.0"S 69°03'16.2"W.

Eutrichophilus emersoni Timm & Price, 1994

Fieldiana, Zool., 76: 16.

Holotype: ♂, FMNH-INS 28878; ex *Coendou villosus* Cuvier, 1823 (= *Sphiggurus villosus*), no host number, (Mammalia, Rodentia, Erethizontidae); BRAZIL: Santa Catarina, Nova Teutônia, 6.VI.1941, {F. Plaumann coll.}.

Paratypes: 1♀, FMNH-INS 28865; 2♀, FMNH-INS 28866; 2♀, FMNH-INS 28867; 1♀, FMNH-INS 28868; 1♀, FMNH-INS 28869; 2♂, FMNH-INS 28870; 2♀, FMNH-INS 28872; 2♂, FMNH-INS 28873; 2♂, FMNH-INS 28874; 2♀, FMNH-INS 28875; 2♂, FMNH-INS 28877; same data as the holotype.

Eutrichophilus minor Mjöberg, 1910a

Ark. f. Zool. 6(13): 77.

Paralectotypes: 1♂1♀, FMNH-INS 28871; ex *Cercolabes prehensilis* (Linnaeus, 1758) (= *Coendou spinosus*), no host number, (Mammalia, Rodentia, Erethizontidae); BRAZIL: Rio Grande do Sul, Colonia de Santa Cruz, 10.VII.1899, F. Stieglmayr coll.

Remarks. Mjöberg (1910a:75) identified host as *Cercolabes prehensilis* in his original description, but on the slide label the host name is "Quendu-Stachelschwein." Timm and Price (1994:15) designated paralectotypes and discussed the confusion surrounding Mjöberg's (1910a) original identification of the host.

Genus *Felicola* Ewing, 1929: 122
Felicola rahmi Emerson & Stojanovich, 1966

J. Kans. Entomol. Soc., 39(2): 313.

Paratype: 1♀, FMNH-INS 28513; ex *Atilax paludinosus* (Cuvier, 1829), host #L 11090, (Mammalia, Carnivora, Herpestidae); CONGO: Tshibati, {Leopoldville}, 13.X.1962, {U. Rahm coll.}.

Remarks. Present status is *Felicola (Felicola) rahmi* Emerson & Stojanovich, 1966 (Price et al., 2003:258).

Felicola sudamericanus Emerson & Price, 1983

Proc. Entomol. Soc. Wash., 85(1): 5.

Holotype: ♂, FMNH-INS 28455; ex *Felis tigrina pardinoides* (Gray, 1867), host #KVS 23397/{AMNH 181497}, (Mammalia, Carnivora, Felidae); COLOMBIA: Cavca (= Cauca), {Totoró}, Malvasi (= Malvasa), {3500m}, 7.XII.1958, no coll.

Allotype: ♀, FMNH-INS 28455; on same slide as holotype.

Paratypes: 1♂2♀, FMNH-INS 28448; 1♂1♀, FMNH-INS 28458; same data as the holotype.

Remarks. Presently *Felicola* (*Loricicola*) *sudamericanus* Emerson & Price, 1983 (Price et al., 2003:258).

Genus *Geomydoecus* Ewing, 1929: 193*Geomydoecus alcorni* Price & Emerson, 1971

J. Med. Entomol., 8(3): 254.

Paratypes: 1♂1♀, FMNH-INS 28740; ex *Pappogeomys alcorni* Russell, 1957, host #KU 39806, (Mammalia, Rodentia, Geomyidae); MEXICO: Jalisco, 4 mi. W Mazamitla, {19°54'56.0"N 103°04'39.5"W}, 18.X.1950, no coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *alcorni* Price & Emerson, 1971 (Price et al., 2003:259).

Geomydoecus betleyae Hellenthal & Price, 1989a

Ann. Entomol. Soc. Am., 82(3): 293.

Paratypes: 2♀, FMNH-INS 28773; ex *Thomomys m. mazama* Merriam, 1897, host #{MVZ}UC 122580, (Mammalia, Rodentia, Geomyidae); USA: California, 1.5 mi. W NW Mt. Shasta PO, Siskiyou Co., {41°18'51.1"N 122°19'58.4"W}, 13.VI.1958, S.B. Benson coll.

Remarks. On the FMNH-INS 28773 slide there are three nymphs that are not paratypes. Present status is *Geomydoecus* (*Thaelerius*) *betleyae* Hellenthal & Price, 1989a (Price et al., 2003:259).

Geomydoecus biagiaae Hellenthal & Price, 1989a

Ann. Entomol. Soc. Am., 82(3): 292.

Paratypes: 3♀, FMNH-INS 28772; ex *Thomomys talpoides columbianus* Bailey, 1914, host #KU 52934, (Mammalia, Rodentia, Geomyidae); USA: Washington, Walla Walla Co., {0.75 mi. NW of College Place, 46°03'25.6"N 118°23'53.7"W}, 11.XI.1940, E. Winter coll.

Remarks. On the FMNH-INS 28772 slide there are three nymphs that are not paratypes. Present status is *Geomydoecus* (*Thaelerius*) *biagiaae* Hellenthal & Price, 1989a (Price et al., 2003:259).

Geomydoecus bulleri intermedius

Price & Hellenthal, 1989a

Ann. Entomol. Soc. Am., 82(3): 282.

Paratypes: 2♂2♀, FMNH-INS 28762; ex *Pappogeomys bulleri* (Thomas, 1892), host #LSU{MZ} 11113, (Mammalia, Rodentia, Geomyidae); MEXICO: Colima, 1 km. SE Manzanillo, Cuyutlan, Hwy Jct, 17.XII.1965, C. Gonzales coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *bulleri intermedius* Price & Hellenthal, 1989a (Price et al., 2003:260).

Geomydoecus chiapensis Price & Emerson, 1971

J. Med. Entomol., 8(3): 251.

Holotype: ♂, FMNH-INS 28937; ex *Heterogeomys hispidus chiapensis* (Nelson & Goldman, 1929), host #RW 1085/CNHM 73335, (Mammalia, Rodentia, Geomyidae); GUATEMALA: Dept. Escuintla, 11 mi. SW Escuintla, Finca San Victor, 700 ft., 1.II.1952, L. de La Torre coll.

Allotype: ♀, FMNH-INS 28938; same data as holotype.

Paratypes: 1♂1♀, FMNH-INS 28737; same data as the holotype.

Remarks. Type host is *Orthogeomys hispidus* in original description. Present status is *Geomydoecus* (*Geomydoecus*) *chiapensis* Price & Emerson, 1971 (Price et al., 2003:261).

Geomydoecus coronadoi saccharalis

Price & Hellenthal, 1989b

J. Med. Entomol., 26(5): 394.

Paratypes: 3♂1♀, FMNH-INS 28760; ex *Pappogeomys merriami saccharalis* (Nelson & Goldman, 1934), host #KU 62516, (Mammalia, Rodentia, Geomyidae); MEXICO: Puebla, {2 mi. S of Atlixco, 18°52'39.0"N 98°26'15.0"W}, 9.VIII.1954, R.W. Dickerman coll.

Remarks. There are 1♂3♀13N of *Geomydoecus mexicanus* (non-types) on the same slide. Present status is *Geomydoecus* (*Geomydoecus*) *coronadoi saccharalis* Price & Hellenthal, 1989b (Price et al., 2003:261).

Geomydoecus coronadoi submerriami

Price & Hellenthal, 1989b

J. Med. Entomol., 26(5): 393.

Paratypes: 3♂1♀, FMNH-INS 28764; ex *Pappogeomys m. merriami* (Thomas, 1894), host #KU 61661, (Mammalia, Rodentia, Geomyidae); MEXICO: {1 mi. SSW of} Rio Frio, {19°20'20"N 98°40'32"W}, 15.VIII.1954, J.R. Alcorn coll.

Remarks. There are 8♂14♀ of *Geomydoecus traube* (non-types) on the same slide. Present status is *Geomydoecus*

(*Geomydoecus coronadoi submerriami* Price & Hellenthal, 1989b (Price et al., 2003:261).

***Geomydoecus costaricensis* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 251.

Paratypes: 1♂1♀, FMNH-INS 28715; ex *Orthogeomys heterodus cartagoensis* (Goodwin, 1943), host #KU 60663, (Mammalia, Rodentia, Geomyidae); COSTA RICA: San Jose, {Volcan Irazu, Rancho Redondo, 09°59'03.1"N 83°51'44.1"W}, 2.VI.1954, no coll.

Remarks. In the original publication the host is *Macrogeomys heterodus cartagoensis*. Present status is *Geomydoecus (Geomydoecus) costaricensis* Price & Emerson, 1971 (Price et al., 2003:261).

***Geomydoecus craigi* Hellenthal & Price, 1989a**

Ann. Entomol. Soc. Am., 82(3): 291.

Paratypes: 3♂4♀, FMNH-INS 28775; ex *Thomomys talpoides kaibabensis* Goldman, 1938, host #NMSU 9772, (Mammalia, Rodentia, Geomyidae); USA: Utah, W end Navajo Lake, T38N R9W sec 11, Kane Co., 9050 ft., 26.VI.1970, C. Thaeler coll.

Remarks. On the slide FMNH-INS 28775 there are three nymphs that are not paratypes. Present status is *Geomydoecus (Thaelerius) craigi* Hellenthal & Price, 1989a (Price et al., 2003:262).

***Geomydoecus duchesnensis* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 243.

Paratypes: 1♀, FMNH-INS 28739; 1♀, FMNH-INS 28741; 1♀ FMNH-INS 28743; 1♀ FMNH-INS 28744; 1♀, FMNH-INS 28745; 1♀, FMNH-INS 28747; 1♀, FMNH-INS 28748; 1♀, FMNH-INS 28749; 1♀, FMNH-INS 28750; 1♀, FMNH-INS 28751; 1♀, FMNH-INS 28752; 1♀, FMNH-INS 28753; 1♀, FMNH-INS 28754; ex *Thomomys talpoides* Richardson, 1828, host #4138/RW 2326, (Mammalia, Rodentia, Geomyidae); USA: Utah, Duchesne Co., Strawberry River, 18.VI.1957, D.M. Allred coll.

Remarks. Present status is *Geomydoecus (Thaelerius) duchesnensis* Price & Emerson, 1971 (Price et al., 2003:262).

***Geomydoecus ewingi* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 238.

Paratype: 1♀, FMNH-INS 28755; ex *Geomys bursarius* (Shaw, 1800), no host number, (Mammalia, Rodentia, Geomyidae); USA: Oklahoma, Stillwater, 3.II.1938, K.C. Emerson coll.

Remarks. Present status is *Geomydoecus (Geomydoecus) ewingi* Price & Emerson, 1971 (Price et al., 2003:262).

***Geomydoecus fuchsi* Hellenthal & Price, 1989a**

Ann. Entomol. Soc. Am., 82(3): 295.

Paratypes: 3♂1♀, FMNH-INS 28774; ex *Thomomys talpoides fuscus* Merriam, 1891, host #NMSU 9242 (Mammalia, Rodentia, Geomyidae); USA: Indiana, 1.5 mi. W 0.8 mi S. Victor T3N R45E sec 16, Teton Co., 6,050' height, 7.VI.1968, C. Thaeler coll.

Remarks. On the slide FMNH-INS 28774 there are twelve nymphs that are not paratypes. Present status is *Geomydoecus (Thaelerius) fuchsi* Hellenthal & Price, 1989a (Price et al., 2003:262).

***Geomydoecus fulvescens* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 256.

Paratypes: 1♂1♀, FMNH-INS 28736; ex *Pappageomys merriami fulvescens* (Merriam, 1895) (= *Cratogeomys merriami fulvescens*), host #KU 19351, (Mammalia, Rodentia, Geomyidae); MEXICO: Veracruz, {3 km. of} Limón, {19°30'07.0"N 97°22'40.0"W}, 19.XI.1946, no coll.

Remarks. Present status is *Geomydoecus (Geomydoecus) fulvescens* Price & Emerson, 1971 (Price et al., 2003:261).

***Geomydoecus geomydis subgeomydis*
Price & Emerson, 1971**

J. Med. Entomol., 8(3): 236.

Paratypes: 1♂, FMNH-INS 28707; 1♀, FMNH-INS 28716; 1♀, FMNH-INS 28718; 1♀, FMNH-INS 28721; 1♂, FMNH-INS 28722; ex *Geomys bursarius* (Shaw, 1800), host #6/RW 2320, (Mammalia, Rodentia, Geomyidae); USA: Texas, Walker Co., 2 mi. NE Huntsville, 12.V.1957, R.D. Hudgins coll. 1♂, FMNH-INS 28709; 1♀, FMNH-INS 28717; same data, except host #7/RW 2321.

Remarks. Present status is *Geomydoecus (Geomydoecus) subgeomydis* Price & Emerson, 1971 (Price et al., 2003:266).

***Geomydoecus illinoensis* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 238.

Paratypes: 1♂1♀, FMNH-INS 28514; ex *Geomys bursarius illinoensis* Komarek & Spencer, 1931, host #RW 2038/{CHAS 4888}, (Mammalia, Rodentia, Geomyidae); USA: Illinois, Hopkins Park, 15.IV.1935, A.J. Franzen col, Museum Field Trip. 8♀, FMNH-INS 28735; same host taxon, host #RW 2040/{FMNH 57224}; USA: Illinois, Custer Park, 17.III.1953, A.J. Franzen coll.

7♂3♀, FMNH-INS 28733; same host taxon, host #RW 2041, USA: Illinois, Kankakee Co., Pembroke Towns, 26.V.1936, C.C. Sanborn & K.P. Schmidt coll. 2♂5♀, FMNH-INS 28738; same host taxon, host #RW 2039, USA: Illinois, Benfield, 12.VI.1941, R.L. Wenzel coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *illinoensis* Price & Emerson, 1971 (Price et al., 2003:263).

Geomydoecus jonesi Price & Emerson, 1971

J. Med. Entomol., 8(3): 249.

Paratype: 1♀, FMNH-INS 28706; ex *Orthogeomys grandis felipensis* Nelson & Goldman, 1930, host #KU 62522, (Mammalia, Rodentia, Geomyidae); MEXICO: 1 mi. SSW Tilapa Pueblo, {18°34'49.4"N 98°33'35.1"W}, 13.VIII.1954, no coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *jonesi* Price & Emerson, 1971 (Price et al., 2003:263).

Geomydoecus mcgregori Price & Emerson, 1971

J. Med. Entomol., 8(3): 253.

Paratype: 1♀, FMNH-INS 28746; ex *Pappogeomys fumosus* Merriam, 1892 (= *Cratogeomys fumosus*), host #KU 39819, (Mammalia, Rodentia, Geomyidae); MEXICO: {4 mi. SW of}, Colima, {19°12'06.9"N 103°46'18.2"W}, 25.XI.1950, J.R. Alcorn coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *mcgregori* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus merriami Price & Emerson, 1971

J. Med. Entomol., 8(3): 255.

Paratypes: 1♂1♀, FMNH-INS 28708; ex *Pappogeomys m. merriami* (Thomas, 1894), host #B 64691, (Mammalia, Rodentia, Geomyidae); MEXICO: Nevado de Toluca, {Raices}, 22.III.1963, no coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *merriami* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus mexicanus Price & Emerson, 1971

J. Med. Entomol., 8(3): 256.

Paratypes: 1♂1♀, FMNH-INS 28698; ex *Pappogeomys merriami saccharalis* (Nelson & Goldman, 1934), host #KU 62518, (Mammalia, Rodentia, Geomyidae); MEXICO: Puebla, {2 mi. S of} Atlixco, {18°52'39.0"N 98°26'15.0"W}, 9.VIII.1954, {R.W. Dickerman coll.}.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *mexicanus* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus neocopei Price & Emerson, 1971

J. Med. Entomol., 8(3): 248.

Paratypes: 1♂1♀ FMNH-INS 28703; ex *Thomomys umbrinus tolucae* Nelson & Goldman, 1934, host #B 64564, (Mammalia, Rodentia, Geomyidae); MEXICO: Nevado de Tolukjca, 4 mi. S Raices, 14.III.1963, no coll.

Remarks. Presently as *Thomomydoecus* (*Thomomydoecus*) *neocopei* (Price & Emerson, 1971) (Price et al., 2003:273).

Geomydoecus neotruncatus Hellenthal & Price, 1988

Proc. Entomol. Soc. Wash., 91(1): 4.

Paratypes: 1♂, FMNH-INS 28768; 1♀, FMNH-INS 28776; ex *Geomys personatus minor* Davis, 1940 (= *Geomys personatus streckeri*), host #KU 52245, (Mammalia, Rodentia, Geomyidae); USA: Texas, Zavala Co., 14 mi. W Crystal City {28°41'27.0"N 100°03'20.1"W}, 10.II.1953, G.H. Heinrich coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *neotruncatus* Hellenthal & Price, 1988 (Price et al., 2003:264).

Geomydoecus oklahomensis Price & Emerson, 1971

J. Med. Entomol., 8(3): 242.

Paratypes: 8♂2♀, FMNH-INS 28674; 6♂4♀, FMNH-INS 28675; 4♂6♀, FMNH-INS 28683; ex *Geomys bursarius* (Shaw, 1800), host #RW 2096, (Mammalia, Rodentia, Geomyidae); USA: Oklahoma, Cleveland Co., .XII.1956, C.E. Hopla coll.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *oklahomensis* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus oregonus idahoensis

Price & Emerson, 1971

J. Med. Entomol., 8(3): 245.

Paratypes: 3♂5♀, FMNH-INS 28723; 5♂3♀, FMNH-INS 28728; 4♂4♀, FMNH-INS 28730; 3♂5♀, FMNH-INS 28731; 3♂5♀, FMNH-INS 28732; ex *Thomomys t. townsendii* (Bachman, 1839), host #RW 2013/SCW {= CRCM} 53-332, (Mammalia, Rodentia, Geomyidae); USA: Idaho, Ada Co., Boise, 27.XII.1953, G.M. Gardner coll. 1♂4♀, FMNH-INS 28724; 1♂6♀ FMNH-INS 28725; same data, except host #RW 2012/SCW {= CRCM} 53-333, 31.XII.1953. 6♂2♀, FMNH-INS 28727; 1♂2♀, FMNH-INS 28729; 5♂2♀, FMNH-INS 28734; same data, except host #RW 2015/SCW {= CRCM} 54102, 12.V.1954. 5♂2♀, FMNH-INS 28726; same data, except host #RW 2014/SCW {= CRCM} 54101.

Remarks. On the FMNH-INS 28725 slide there is one nymph that is not a paratype. Present status is *Geomydoecus* (*Geomydoecus*) *idahoensis* Price & Emerson, 1971 (Price et al., 2003:263).

Geomydoecus oregonus oregonus

Price & Emerson, 1971

J. Med. Entomol., 8(3): 243.

Paratypes: 5♂, FMNH-INS 28684; ex *Thomomys bulbivorus* (Richardson, 1829), host #RW 2010/SCW {= CRCM} 53-8, (Mammalia, Rodentia, Geomyidae); USA: Oregon, Benton Co., 3 mi. N Corvallis, 15.IV.1952, D. Crane coll. 1♂1♀, FMNH-INS 28687; same host taxon, host #KU 94625, USA: Oregon, Benton Co., {Granger, 44°36'59.0"N 123°12'58.0"W}, 15.II.1963, {G.L. Hickman} coll. 1♂, FMNH-INS 28697; 3♂1♀, FMNH-INS 28701; same host taxon, host #RW 2007/SCW {= CRCM} 53-7, USA: Oregon, Benton Co., Corvallis, 10.VI.1951, G. Staley coll. 2♂, FMNH-INS 28685; 8♂1♀, FMNH-INS 28691; same host taxon, host #SCW 1011/RW 2009, USA: Oregon, Washington Co., Hillsboro, 1.IV.1929, P.G. Putnam coll. 2♂1♀, FMNH-INS 28686; same data, except host #RW 2008/SCW {= CRCM} 575. 2♀, FMNH-INS 28689; same data, except host #RW 2008/SCW 579, G.M. Gardner coll. 1♀, FMNH-INS 28700; same data, except host #RW 2011/SCW {= CRCM} 1010, 22.X.1929.

Remarks. There are three nymphs on the FMNH-INS 28684 slide, one nymph on the FMNH-INS 28685 slide, five nymphs on the FMNH-INS 28686 slide, two nymphs on the FMNH-INS 28689 slide, one nymph on the FMNH-INS 28700 slide, and three nymphs on the FMNH-INS 28701 slide; none of these nymphs are paratypes. Present status is *Geomydoecus* (*Geomydoecus*) *oregonus* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus panamensis Price & Emerson, 1971

J. Med. Entomol., 8(3): 251.

Paratypes: 1♂1♀, FMNH-INS 28705; 1♂, FMNH-INS 28711; 1♂, FMNH-INS 28713; 1♀, FMNH-INS 28714; 1♀, FMNH-INS 28720; ex *Macrogeomys cavator* Bangs, 1902 (= *Orthogeomys* (*Macrogeomys*) *cavator*), host #5801/{USNM 314318}, (Mammalia, Rodentia, Geomyidae); PANAMA: Chiriqui, Cerro Punta, {Casa Pitty - New Colony}, 28.I.1960, {C.M. Keenan coll.}

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *panamensis panamensis* Price & Emerson, 1971 (Price et al., 2003:264).

Geomydoecus perotensis perotensis

Price & Emerson, 1971

J. Med. Entomol., 8(3): 256.

Paratypes: 1♂1♀, FMNH-INS 28719; ex *Pappogeomys merriami estor* Merriam, 1895 (= *Cratogeomys merriami estor*), host #KU 19338, (Mammalia, Rodentia, Geomyidae); MEXICO: Veracruz, {3 km. E of} Las Vigas, {19°38'06"N 97°04'05"W}, 4.XI.1946, {W.W. Dalquest coll.}

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *perotensis perotensis* Price & Emerson, 1971 (Price et al., 2003:265).

Geomydoecus polydentatus Price & Emerson, 1971

J. Med. Entomol., 8(3): 255.

Paratypes: 1♀, FMNH-INS 28690; ex *Pappogeomys zinseri* Goldman, 1939 (= *Cratogeomys zinseri*), host #KU 103348, (Mammalia, Rodentia, Geomyidae); MEXICO: Jalisco, Lagos de Moreno, {21°21'21.0"N 101°55'60.0"W}, 15.X.1965, no coll. 1♂, FMNH-INS 28692; same data, except host #KU 103347.

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *polydentatus polydentatus* Price & Emerson, 1971 (Price et al., 2003:265).

Geomydoecus polydentatus angustirostris

Price & Hellenthal, 1989b

J. Med. Entomol., 26(5): 396.

Paratypes: 2♀, FMNH-INS 28761; ex *Pappogeomys tylorhinus angustirostris* Merriam, 1903, host #B 94047/TK 13020, (Mammalia, Rodentia, Geomyidae); MEXICO: Jalisco, 4 mi. W Mazamitla, 6600 ft., 5.III.1978, S.L. Williams coll.

Remarks. On the same slide there are 7♂9♀ of *Geomydoecus* (*Geomydoecus*) *megregori*. Present status is *Geomydoecus* (*Geomydoecus*) *polydentatus angustirostris* Price & Hellenthal, 1989b (Price et al., 2003:265).

Geomydoecus quadridentatus Price & Emerson, 1971

J. Med. Entomol., 8(3): 240.

Paratypes: 1♂1♀, FMNH-INS 28704; ex *Geomys a. arenarius* Merriam, 1895, host #KU 84441, (Mammalia, Rodentia, Geomyidae); USA: Texas, El Paso Co., {5 mi. S, 8 mi. E of City Hall, 31°41'09.4"N 106°21'15.7"W}, 26.VII.1960, {M.R. Lee coll.}

Remarks. Present status is *Geomydoecus* (*Geomydoecus*) *quadridentatus* Price & Emerson, 1971 (Price et al., 2003:265).

***Geomydoecus thaeleri* Hellenthal & Price, 1989a**

Ann. Entomol. Soc. Am., 82(3): 293.

Paratypes: 6♂5♀, FMNH-INS 28763; ex *Thomomys mazama glacialis* Dalquest & Scheffer, 1942, host #NMSU 9807, (Mammalia, Rodentia, Geomyidae); USA: Washington, T17N R2E Sec 3, 1.2 mi. S. 0.1 mi. W Roy Pierce Co., 350 ft., 25.III.1975, C. Thaeler coll.

Remarks. On the FMNH-INS 28763 slide there are seven nymphs that are not paratypes. Present status is *Geomydoecus (Thaalerius) thaeleri* Hellenthal & Price, 1989a (Price et al., 2003:266).

***Geomydoecus traubi* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 257.

Paratypes: 1♂1♀, FMNH-INS 28712; ex *Pappogeomys m. merriami* (Thomas, 1894), host #B 64793, (Mammalia, Rodentia, Geomyidae); MEXICO: La Piedra, Lagunas de Zempoala, 26.III.1963, no coll.

Remarks. Present status is *Geomydoecus (Geomydoecus) traubi* Price & Emerson, 1971 (Price et al., 2003:267).

***Geomydoecus trichopi* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 253.

Paratypes: 1♂1♀, FMNH-INS 28710; ex *Zygogeomys trichopus* Merriam, 1895, host #3840/Lot 56-8149/{KU 62520}, (Mammalia, Rodentia, Geomyidae); MEXICO: Michoacan, Sierra Potamba, 9100 ft., {19°44'20.0"N 102°22'18.0"W}, 29.VI.1954, R.W. Dickerman coll.

Remarks. Present status is *Geomydoecus (Geomydoecus) trichopi* Price & Emerson, 1971 (Price et al., 2003:267).

***Geomydoecus umbrini* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 240.

Paratypes: 1♂1♀, FMNH-INS 28702; ex *Thomomys umbrinus parviceps* Nelson & Goldman, 1934, host #97132, (Mammalia, Rodentia, Geomyidae); MEXICO: Sinaloa, 2 mi. E Aguacaliente, 800 ft., 1.V.1965, no coll.

Remarks. Present status is *Geomydoecus (Geomydoecus) umbrini* Price & Emerson, 1971 (Price et al., 2003:267).

***Geomydoecus wardi* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 248.

Paratypes: 1♀, FMNH-INS 28668; 1♀, FMNH-INS 28669; 1♀, FMNH-INS 28672; 1♀, FMNH-INS 28695; 1♀, FMNH-INS 28696; ex *Thomomys talpoides macrotis* Miller, 1930, host #RW 2380/DMNS 4434, (Mammalia, Rodentia, Geomyidae); USA: Colorado, Douglas Co.,

Cherry CK., D'Arcy Ranch, 10.IV.1932, R.L. Landdberg coll. 1♀, FMNH-INS 28670; 1♀, FMNH-INS 28671; 1♀, FMNH-INS 28673; 1♀, FMNH-INS 28676; 1♀, FMNH-INS 28678; 1♀, FMNH-INS 28680; 1♀, FMNH-INS 28681; 1♀, FMNH-INS 28688; 1♀, FMNH-INS 28699; same data, except host #RW 2381/DMNS 4433. 1♀, FMNH-INS 28682; 1♀, FMNH-INS 28693; same data, except host #RW 2374/DMNS 4431. 2♀, FMNH-INS 28677; same data, except host #RW 2376/DMNS 4428, 27.XII.1931. 1♀, FMNH-INS 28679; same data, except host #RW 2379/DMNS 4423, 04.IV.1931. 1♀, FMNH-INS 28694; same data, except host #RW 2377/DMNS 4429, 27.XI.1931.

Remarks. This species is now known as *Thomomydoecus (Jamespattonius) wardi* after Price & Emerson (1972:464) transferred it from *Geomydoecus* to *Thomomydoecus*, and Hellenthal & Price (1994:451) included it in the subgenus *Jamespattonius*.

***Geomydoecus wernecki* Price & Emerson, 1971**

J. Med. Entomol., 8(3): 253.

Paratype: 1♂, FMNH-INS 28742; ex *Pappogeomys zinseri* Goldman, 1939 (= *Cratogeomys zinseri*), host #KU 103348, (Mammalia, Rodentia, Geomyidae); MEXICO: Jalisco, Lagos de Moreno, {21°21'21.0"N 101°55'60.0"W}, 15.X.1965, {P.L. Clifton coll.}

Remarks. Present status is *Geomydoecus (Geomydoecus) wernecki wernecki* Price & Emerson, 1971 (Price et al., 2003:268).

Genus *Neotrichodectes* Ewing, 1929: 194***Neotrichodectes (Conepaticola) semistriatus***

Emerson & Price, 1975

Brigham Young Univ. Sci. bull. Biol. ser., 20(3): 41.

Paratypes: 1♀, FMNH-INS 28849; ex *Conepatus semistriatus* (Boddaert, 1785), host #44251, (Mammalia, Carnivora, Mephitidae); VENEZUELA: Falcon, Capitárida, 40 m., 27.VI.1968, Tuttle team coll. 1♂, FMNH-INS 28452, same data, except host #44285/{USNM 443293}, 30.VI.1968.

Genus *Parafelicola* Werneck, 1948: 226

(= *Paradoxuroecus* Conci, 1942b)

***Parafelicola africanus* Emerson & Price, 1966**

Proc. Biol. Soc. Wash., 79: 233.

Paratypes: 1♂, FMNH-INS 28846; ex *Genetta genetta senegalensis* Fischer, 1829, host #HH 10024/B 30316, (Mammalia, Carnivora, Viverridae); EGYPT: Gebel Elba, 11.III.1954, H. Hoogstraal & M. Kaiser coll.

Remarks. *Parafelicola* is a junior synonym of

Paradoxuroecus Conci, 1942b (Lyal, 1985:318) and *Paradoxuroecus* is a subgenus of *Felicola* Ewing, 1929 (Price et al., 2003). Present status is *Felicola* (*Paradoxuroecus*) *africanus* (Emerson & Price, 1966) (Price et al., 2003:257).

Parafelicola neoafricanus Emerson & Price, 1968b

Proc. Biol. Soc. Wash., 81: 109.

Paratype: 1♀, FMNH-INS 28847; ex *Genetta tigrina* Schreber, 1778, host #HJH 1019, (Mammalia, Carnivora, Viverridae); MOZAMBIQUE: Tete {District}, Changara, 4.XI.1964, {H.J. Herbet coll.}.

Remarks. *Parafelicola* is a junior synonym of *Paradoxuroecus* Conci, 1942b (Lyal, 1985:318) and *Paradoxuroecus* is a subgenus of *Felicola* Ewing, 1929 (Price et al., 2003). Present status is *Felicola* (*Paradoxuroecus*) *neoafricanus* (Emerson & Price, 1968) (Price et al., 2003:258).

Genus *Procavicola* Bedford, 1932a: 711
Procavicola* (*Meganarionoides*) *muesebecki
Emerson & Price, 1969

Proc. Ent. Soc. Wash., 71(3): 336.

Paratypes: 1♂1♀, FMNH-INS 28845; ex *Dendrohyrax dorsalis* (Fraser, 1854), host #HJH 1717/{USNM 377549}, (Mammalia, Hyracoidea, Procaviidae); NIGERIA: Midwest Region, {30 mi. W} Benin City, 1.I.1966, {H.J. Herbert coll.}.

Remarks. This species is now known as *Procaviphilus* (*Meganarionoides*) *muesebecki* because *Meganarionoides* is a subgenus of *Procaviphilus* Bedford, 1932a (Lyal, 1985:246).

Genus *Suricatoecus* Bedford, 1932b: 354
Suricatoecus congoensis Emerson & Price, 1967b

J. Kans. Entomol. Soc., 40(4): 608.

Paratypes: 1♂1♀, FMNH-INS 28446; ex *Crossarchus alexandri* Thomas & Wroughton, 1907, no host number, (Mammalia, Carnivora, Herpestidae); CONGO: Niamiringi, 18.II.1963, U. Rahm coll.

Remarks. This species is now known as *Felicola* (*Felicola*) *congoensis*. *Suricatoecus* is considered a subgenus of *Felicola* Ewing, 1929 (Lyal, 1985:246). This species was transferred to *Felicola* by Lyal (1985:310).

Genus *Thomomydoecus* Price & Emerson, 1972: 464
Thomomydoecus arleneae Hellenthal & Price, 1989b

J. Kans. Entomol. Soc., 62(2): 250.

Paratypes: 1♂1♀, FMNH-INS 28766; ex *Thomomys talpoides taylori* Hooper, 1940, host #NMSU 11511,

(Mammalia, Rodentia, Geomyidae); USA: New Mexico, Naschitti, San Juan Co., 8950 ft., T21N R19W SW14, 0.6°S 09.3°W, 6.X.1968, C. Thaeler coll.

Remarks. On the FMNH-INS 28766 slide there are two nymphs that are not paratypes. Present status is *Thomomydoecus* (*Jamespattonius*) *arleneae* Hellenthal & Price, 1989b (Price et al., 2003:272).

Thomomydoecus barbarae Hellenthal & Price, 1989b

J. Kans. Entomol. Soc., 62(2): 248.

Paratypes: 3♂1♀, FMNH-INS 28767; ex *Thomomys talpoides attenuatus* Hall & Montague, 1951, host #KU 32543, (Mammalia, Rodentia, Geomyidae); USA: Wyoming, Converse Co., 21 mi. S 24 mi. W of Douglas, {42°27'19.8"N 105°51'12.6"W}, 7400 ft., 15.VI.1949, R.H. Baker coll.

Remarks. Present status is *Thomomydoecus* (*Jamespattonius*) *barbarae* Hellenthal & Price, 1989b (Price et al., 2003:272).

Genus *Trichodectes* Nitzsch, 1818: 294
Trichodectes kuntzi Emerson, 1964

Proc. Biol. Soc. Wash., 77: 196.

Paratypes: 1♂, FMNH-INS 28880; ex *Melogale moschata* {*subaurantica*} (Gray, 1831), host #PF 8536/{USNM 330689}, (Mammalia, Carnivora, Mustelidae); FORMOSA (= TAIWAN): {T'Ai-Pei}, Wu-Lai, {Us Namru 2}, 24.X.1960, {C. Cheng} coll. 1♀ FMNH-INS 28881; same data, except host #PF 10118/{USNM 330701}, 3.I.1961.

Suborder Rhynchophthirina Ferris, 1931
Family Haematomyzidae Enderlein, 1904
Genus *Haematomyzus* Piaget, 1869: 249

Haematomyzus hopkinsi Clay, 1963 (Figs. 4–5 herein)

Proc. Zool. Soc. Lond., 141: 155.

Holotype: ♂, FMNH-INS 28801; ex *Phacochoerus aethiopicus* (Pallas, 1766), no host number, (Mammalia, Artiodactyla, Suidae); KENYA: Meru {District}, 6.VIII.1956, M. Kaiser coll.

Allotype: ♀, FMNH-INS 28805; same data as the holotype.
Paratypes: 1♀, FMNH-INS 28756; 1♂1♀, FMNH-INS 28757; 1♂1♀, FMNH-INS 28758; 1♂, FMNH-INS 28759; 1♂, FMNH-INS 28802; 1♀, FMNH-INS 28803; 1♀, FMNH-INS 28804; same data as the holotype.

Suborder Anoplura Leach, 1815
Family Polyplacidae Leach, 1817
Genus *Eulinognathus* Cummings, 1916: 90

Eulinognathus hesperius Johnson, 1957

J. Egypt Publ. Health Assoc., 32(6): 280.

Paratypes: 1♂1♀, FMNH-INS 28806; ex *Allactaga (Scarturus) tetradactyla* (Lichtenstein, 1823), host #B 21948/HH 9131/{USNM 317086}, (Mammalia, Rodentia, Dipodidae); EGYPT: Burg el Arab, Mariut, {El Hettiya Valley}, W. Desert Gov., 21.IV.1953, H. Hoogstraal coll.

Genus *Fahrenholzia* Kellogg & Ferris, 1915: 32

Fahrenholzia fairchildi Johnson, 1962

Ann. Entomol. Soc. Am., 55(4): 419.

Paratypes: 1♂1♀, FMNH-INS 28808; 1♂1♀, FMNH-INS 28809; 1♂, FMNH-INS 28810; 1♂, FMNH-INS 29906; 1♂, FMNH-INS 29913; 1♂, FMNH-INS 29917; ex *Liomys s. salvini* (Thomas, 1893), host #LT 1029/UMMZ 99369, (Mammalia, Rodentia, Heteromyidae); GUATEMALA: Santa Rosa, Finca El Progreso, 4500 ft., {14°13'00.0"N 90°25'60.0"W}, 25.VII.1951, L. de La Torre coll. 1♂ FMNH-INS 29910; 1♂1♀, FMNH-INS 29916; 1♂1♀, FMNH-INS 29920; same data, except host #LT 1030/UMMZ 99370. 1♂1♀, FMNH-INS 28807; 1♂1♀, FMNH-INS 29907; 1♂1♀, FMNH-INS 29908; 1♂1♀, FMNH-INS 29912; 1♂1♀, FMNH-INS 29914; 1♂1♀, FMNH-INS 29919; ex *Liomys {salvini salvini}* (Thomas, 1893), host #LT 1478-83/CNHM 73584-89, (Mammalia, Rodentia, Heteromyidae); GUATEMALA: Jutiapa, 3 mi. W of Jutiapa, 3200 ft., {14°16'60.0"N 89°56'41.1"W}, 13.VI.1952, L. de La Torre coll. 1♀, FMNH-INS 29909, same host taxon, host #LT 1468-9/CNHM 73581-82; GUATEMALA: Jutiapa, 7 mi. S. Asuncion Mita, Hacienda Mongoy, {14°15'N 89°43'W}, 10.VI.1952, L. de La Torre coll. 1♀, FMNH-INS 29915; 1♀, FMNH-INS 29918; same host taxon host #LT 1236/CNHM 73572, GUATEMALA: Jutiapa, 4 1/2 mi. W. Jutiapa, Amayito, {14°16'00.0"N 90°01'01.6"W}, 26.III.1952, L. de La Torre coll. 1♀, FMNH-INS 29911; same host taxon, host #LT 1536/CNHM 73595; GUATEMALA: Escuintla, S.W. of Escuintla, Finca Santa Cristina, 330 ft., {14°09'N 90°58'W}, 9.VII.1952, L. de La Torre coll.

Genus *Polyplax* Enderlein, 1904: 142

Polyplax brachyruromyis Kim & Emerson, 1974

J. Med. Entomol., 11(1): 107.

Paratypes: 1♂1♀, FMNH-INS 28837; ex *Brachyruromys betsileoensis* (Bartlett, 1879), host #KIL 89/{USNM 328812}, (Mammalia, Rodentia, Nesomyidae); MADAGASCAR: Tamatave {Province} (= Toamasina), {9 km. N of} Didy {Ambohijanahary}, 2.X.1962, K. Lange coll.

Polyplax bullimae Johnson, 1958 (Fig. 6 herein)

Bul. Broo. Entomol. Soc., 53(3): 76.

Holotype: ♂, FMNH-INS 29921; ex *Bullimus bagobus* Mearns, 1905, host #Field 636/CNHM 56201, (Mammalia, Rodentia, Muridae); PHILIPPINES: Mindanao, Davao, East slope Mt. McKinley, 5400 ft., {07°06'N 125°18'E}, 20.VIII.1946, H. Hoogstraal coll.

Allotype: ♀, FMNH-INS 29924; same data as the holotype, except host #Field 635/CNHM 56200, 5500 ft., 19.VIII.1946.

Paratypes: 1♂, FMNH-INS 29922; 1♂, FMNH-INS 29923; same data as the holotype. 1♀, FMNH-INS 29925; same data as the allotype.

Polyplax hoogstraali Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 83.

Paratypes: 1♂1♀, FMNH-INS 28833; ex *Acomys russatus* (Wagner, 1840), host #RT-B 21930/HH 7994-99/{FMNH 80542-43, 80546}, (Mammalia, Rodentia, Muridae); EGYPT: Sinai {Governorate}, St. Catherine's Monastery, 5000 ft., {28°31'N 33°57'E}, 16.XI.1952, H. Hoogstraal coll.

Polyplax hopkinsi Paterson & Thompson, 1953

Parasitol., 43(3-4): 203.

Paratype: 1♂, FMNH-INS 28836; ex *Desmodillus auricularis* (Smith, 1834), no host number, (Mammalia, Rodentia, Muridae); NAMIBIA: {South-West Africa}, Luderitz-Aus Road, 15.III.1950, no coll.

Polyplax kaiseri Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 93.

Paratypes: 1♀, FMNH-INS 28814; 2♀, FMNH-INS 28815; 1♂1♀, FMNH-INS 28816; 2♀, FMNH-INS 28818; 2♀, FMNH-INS 28819; 2♀, FMNH-INS 28820; 2♀, FMNH-INS 28822; 2♀, FMNH-INS 28824; 2♀, FMNH-INS 28826; 2♀, FMNH-INS 28827; 2♀, FMNH-INS 28829; 1♀, FMNH-INS 28832; 1♀, FMNH-INS 28834; 1♀, FMNH-INS 28835; ex *Gerbillus (G.) gerbillus* (Olivier, 1801), host #E 48, (Mammalia, Rodentia, Muridae); EGYPT: Cairo {Governorate}, 8 mi. E of Heliopolis, 17.XI.1946, P.Q. Tomich coll. 1♂1♀, FMNH-INS 28817; 1♀, FMNH-INS 28823; same data, except {host #USNM 282488}, 20.XI.1946. 1♀, FMNH-INS 28830; same data, except host #E 56. 1♀, FMNH-INS 28821; 1♀, FMNH-INS 28825; 1♀, FMNH-INS 28828; 1♀, FMNH-INS 28831; same host taxon, host #E 80; EGYPT: Cairo {Governorate}, near

Suez Rd., 5 mi. E of Heliopolis, 29.XI.1946, P.Q. Tomich coll. 1♀, FMNH-INS 29926; 1♀, FMNH-INS 29927; 1♀, FMNH-INS 29939; 1♀, FMNH-INS 29940; same data, except host #E 111, 19.XII.1946. 1♀, FMNH-INS 29928; 1♀, FMNH-INS 29929; 2♀, FMNH-INS 29930; 1♀, FMNH-INS 29931; 1♀, FMNH-INS 29932; 1♀, FMNH-INS 29933; 2♀, FMNH-INS 29935; 2♀, FMNH-INS 29936; 2♀, FMNH-INS 29937; 2♀, FMNH-INS 29941; 1♀, FMNH-INS 29942; same data, except host #E 67, no date. 1♀, FMNH-INS 29934; same host taxon, host #E 232, EGYPT: Suez Canal, 3 mi. N.W. of Fayid, 9.III.1948, P.Q. Tomich coll. 1♀, FMNH-INS 29938; same data, except host #E 245, 10.III.1947.

Polyplax paradoxa Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 72.

Paratype: 1♀, FMNH-INS 29943; ex *Meriones* {*crassus pallidus*} Bonhote, 1912, host #B 22176/HH 9918-20/ NAMRU 3/{FMNH 82386-88}, (Mammalia, Rodentia, Muridae); EGYPT: East Desert {Governorate}, Bir. Abra, {23°25'N 34°48'E}, 22.II.1954, H. Hoogstraal coll.

Polyplax parataterae Kim & Emerson, 1973

Rev. Zool. Bot. Afr., 87(3): 444.

Paratypes: 1♂1♀, FMNH-INS 28838; ex *Tatera kempi* Wroughton, 1906 (= *Gerbilliscus kempi*), host #JCG 1769, (Mammalia, Rodentia, Muridae); NIGERIA: North Region, Kudu, 5.III.1967, no coll.

Polyplax smallwoodae Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 88.

Holotype: ♂, FMNH-INS 28811; ex *Lophuromys* {*sikapusi*} (Temminck, 1853), host #GH 8754/Cat.No. 83836/FMNH 83836, (Mammalia, Rodentia, Muridae); ANGOLA: {Huambo}, Mt. Moco, {12°28'00.0"S 15°10'60.0"E}, 24.IX.1954, G. Heinrich col, Conover Angola Exped.

Allotype: ♀, FMNH-INS 28811; on the same slide as the holotype.

Paratypes: 1♀, FMNH-INS 28812; same data as for the holotype. 1♀, FMNH-INS 28813; same host taxon, host #GH 8660/Cat.No. 83826/{FMNH 83826}; ANGOLA: {Huambo}, Mt. Soque, {42 km. WSW of Luimbale, 12°23'43.1"S 14°57'36.1"E}, 26.VIII.1954, G. Heinrich col, Conover Angola Exped.

Polyplax vacillata Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 76.

Paratype: 1♀, FMNH-INS 29944; ex *Psammomys obesus* Cretzschmar, 1828, host #B 22321/NAMRU-3, (Mammalia, Rodentia, Muridae); EGYPT: West Desert {Governorate}, 26 mi. W. Sidi Barrani, 21.IV.1954, H. Hoogstraal coll.

Family Hoplopleuridae Ewing, 1929

Genus *Hoplopleura* Enderlein, 1904: 221

Hoplopleura captiosa Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 23.

Paratypes: 1♀, FMNH-INS 28839; ex *Mus* (*M.*) *musculus* Linnaeus, 1758, host #B 21984/NAMRU 3, (Mammalia, Rodentia, Muridae); EGYPT: Giza {Province}, Abu Rawash, Imbaba, 15.XII.1953, H. Hoogstraal coll. 1♂1♀, FMNH-INS 28840; same host taxon, host #B 21989/ NAMRU 3; EGYPT: W. Desert {Governorate}, Royal Shoot Club, 3 mi. N of Faiyum, 4.I.1954, H. Hoogstraal coll.

Hoplopleura inexpectans Johnson, 1960

U.S.D.A. Tech. Bull., 1211: 20.

Paratype: 1♀, FMNH-INS 28862; ex *Rattus* (*Praomys*) *taitae* Heller, 1912 (= *Praomys taitae*), host #HH 10763-66, (Mammalia, Rodentia, Muridae); KENYA: Kikuyu, Muguga North, 7200 ft., 26.VI.1956, H. Hoogstraal coll.

Hoplopleura rimae Johnson, 1972

Brigham Young Univ. Sci. bull. Biol. ser., 17(5): 17.

Paratypes: 1♂1♀, FMNH-INS 28863; ex *Oryzomys minutus* Tomes, 1860 (= *Microrozomys minutus*), host #V 4162, (Mammalia, Rodentia, Muridae); VENEZUELA: Merida, 5 km. S, 7 km. E Tabay (near La Coromoto), 3,375 m., 16.III.1966, H. Peterson coll.

Family Pediciniidae Enderlein, 1904

Genus *Pedicinus* Gervais, 1844: 301

Pedicinus miopitheci Kuhn & Ludwig, 1970

Senck. Biol., 51: 205–208.

Paratype: 1♀, FMNH-INS 28864; ex *Miopithecus talapoin* (Schreber, 1774), host #PMP 2051, (Mammalia, Primates, Cercopithecidae); EQUATORIAL GUINEA: Bata, Rio Muni, 22.IV.1968, no coll.

ACKNOWLEDGEMENTS

We would like to thank Margaret Thayer, Alfred Newton, James H. Boone, Daniel Summers, Petra Sierwald, and Corrie Moreau for granting access to the louse collection when JDW and MPV were at the Field Museum. We are grateful to Ricardo L. Palma (Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand) for his thorough review of the manuscript, to the second anonymous reviewer, and to the journal editor, Mark H. Sabaj for the detailed reading and suggestions. This work was supported in part by CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil) through a postdoctoral fellowship 200453/2010-6 to MPV and by NSF DBI-1901935/DEB-1855812 to JDW.

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Fig. 2. Holotype of *Chapinia blakei* Elbel, 1967, illustrating representative of the suborder Amblycera.

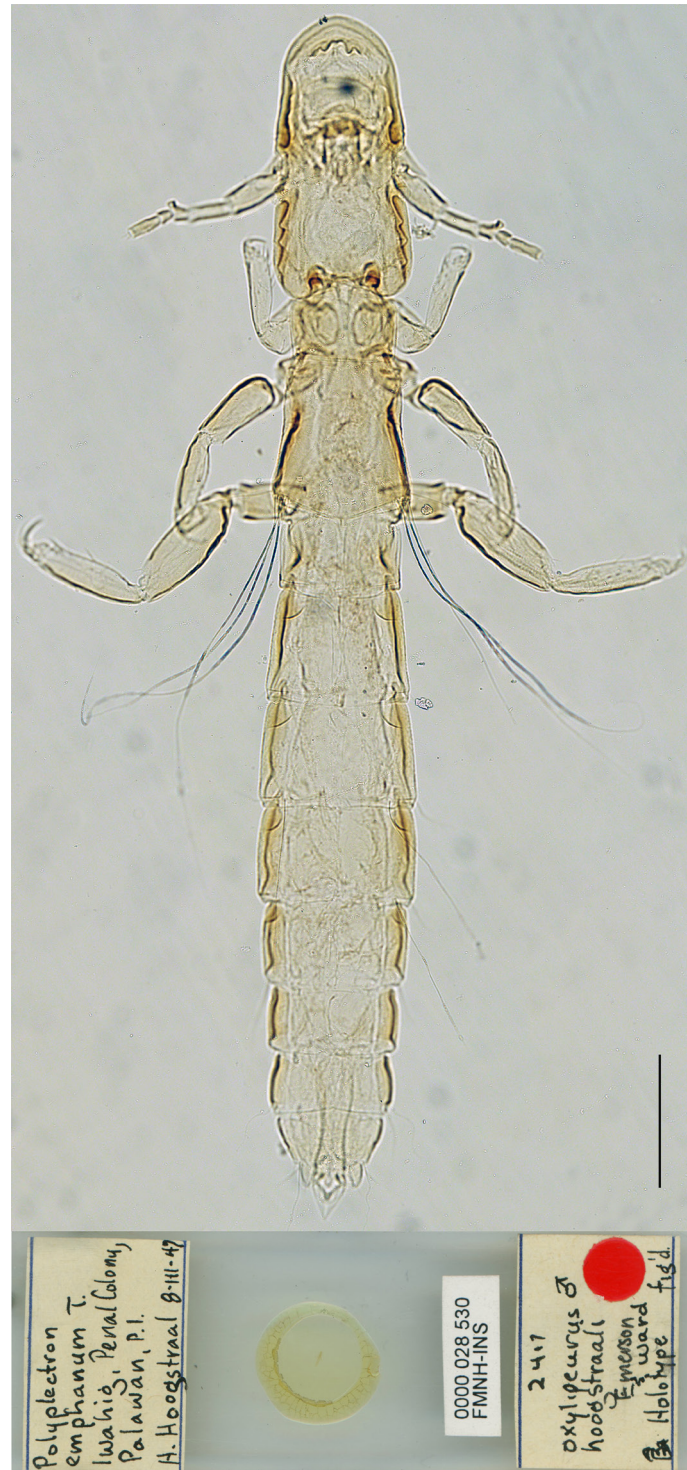


Fig. 3. Holotype of *Oxylipeurus hoogstraali* Emerson & Ward, 1958, illustrating representative of the suborder Ischnocera.



Fig. 4. Holotype of *Haematomyzus hopkinsi*, Clay, 1963, illustrating representative of the suborder Rhynchophthirina. The specimen is damaged due to a crack on the top slide, allowing air to enter.



Fig. 5. Allotype of *Haematomyzus hopkinsi*, Clay, 1963, illustrating representative of the suborder Rhynchophthirina.



Fig. 6. Holotype of *Polyplox bullimae* Johnson, 1958, illustrating representative of the suborder Anoplura. Note the pinkish color of the specimen due to staining.

