Primary type specimens of sucking lice (Insecta: Phthiraptera: Anoplura) in the U.S. National Museum of Natural History, Smithsonian Institution

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Table of Contents

Abstract ................................................................. 1
Key words .................................................................... 2
Introduction ............................................................... 2
Annotated list of primary types in the USNM ..................... 4
USNM specimens that are stated to be primary types for unpublished taxa .................... 37
Acknowledgments ....................................................... 39
References .................................................................. 39

Abstract

An annotated list is presented of the 110 primary types (holotypes, lectotypes, syntypes, or newotypes) of sucking lice (Insecta: Phthiraptera: Anoplura) deposited in the U.S. National Museum of Natural History (USNM), Smithsonian Institution, as of May 2005. Annotations for each taxon are listed alphabetically by specific epithet, and are followed by the original specific epithet and (in parentheses) the current family designation. Next, the author, year of description, and original citation are provided. The primary type held in the USNM (with USNM type number, slide number and other relevant data, if these were assigned), original collection data, current taxonomic assignment (if different from the original designation), and additional taxonomic remarks, if relevant, are then given. Brief information on allotypes and paratypes are included if these are mounted on the same microscope slide as the primary type or if they are otherwise relevant. The types include those of the type species of seven genera (Abrocomaphthirus Durden & Webb, Atopophthirus Kim & Emerson, Haematopinoides Osborn, Latagophthirus Kim & Emerson, Pecaroecus Babcock &
Ewing, Phthiripediculus Ewing, and Sathra Johnson) one of which is the type genus of a family (Pecaroeicidae). Primary types for five species of Anoplura that have not yet been described, and for another four species that were described in an unpublished dissertation are also deposited in the USNM. Hosts and collection data for these nine specimens are briefly mentioned after the main list; however, species names are excluded because these names currently have no nomenclatural standing. A neotype specimen is designated for Haematopinus montanus Osborn, 1896, a taxon which is currently treated as a junior synonym of Linognathoides laeviusculus (Grube, 1851).

Key words: Phthiraptera, Anoplura, sucking lice, primary types, synonymies, nomenclature, U.S. National Museum of Natural History, Smithsonian Institution.

Introduction

In accordance with Recommendation 72F.4 of the International Code of Zoological Nomenclature published by the International Commission on Zoological Nomenclature (1999), we present an annotated list of the primary types of Anoplura (sucking lice) in the U.S. National Museum of Natural History (USNM), Smithsonian Institution, Washington DC. The USNM Anoplura types are currently housed in the Smithsonian Institution’s Museum Support Center in Suitland, Maryland, which is located about 8 miles (~11 km) from the main USNM building. The most recently published list of USNM primary types for a group of ectoparasitic insects was by Adams & Lewis (1995) for the Siphonaptera (fleas) and we have largely followed the format used in that publication with the principal exception that we have not included Appendices.

Previously considered to hold ordinal rank, the Anoplura is currently treated by most entomologists as a suborder of the order Phthiraptera which also includes the chewing lice (suborders Amblycera, Ischnocera and Rhynchophthirina) (Durdan 2002). To date, about 560 valid species of Anoplura have been described (Durdan & Musser 1994, Durdan unpublished). Sucking lice are exclusively hematophagous ectoparasites of eutherian (placental) mammals although none of the representatives of some eutherian mammal orders (Chiroptera, Xenarthra, Pholidota, Proboscidea, Cetacea, Sirenia,) are known to be parasitized by Anoplura, except (in rare cases) by “stragglers” (= accidental infestations) (Durdan 2002). In this list, we follow the anopluran taxonomy of Durdan & Musser (1994) which was based on that presented by Kim & Ludwig (1978). We follow the mammalian host taxonomy presented in the various chapters of Wilson & Reeder (1993).

The last compilation of anopluran type specimens in the USNM was by Johnson (1958) who provided a detailed listing of the 29 primary types for this group held in the USNM at that time. Since Johnson (1958) compiled her list, a fairly large number of additional primary types of Anoplura have been deposited in the USNM, many of them by Johnson herself between the years 1957 and 1972. As of May 2005, the number of anopluran species names for which primary types are deposited in the USNM stands at 110. However, another nine specimens that are stated to be primary types for unpublished (dis-
servation names or never documented in any literature) species are also deposited in the USNM. These specimens currently have no nomenclatural standing but we provide brief collection data for them at the end of the main list in order to aid any future researchers who may study the USNM primary type holdings of Anoplura. Significantly, included among the USNM Anoplura holdings are the primary types for the type species of seven genera (i.e., for Abrocomaphthirus Durden & Webb, 1999; Atopophthirus Kim & Emerson, 1977; Haematopinoides Osborn, 1891; Latagophthirus Kim & Emerson, 1974; Pecaroeus Babcock & Ewing, 1938; Phthirpedicus Ewing, 1923; and Sathrax Johnson, 1964), one of which is the type genus of a family (Pecaroeicidae Babcock & Ewing, 1938).

Primary types included in this listing are either holotypes, lectotypes (selected from cotypes/syntypes) or neotypes—see Adams & Lewis (1995) for a more detailed definition of these types and for secondary and tertiary types. Where appropriate, we also mention allotypes, particularly if these are mounted on the same slide as the holotype, and paratypes for nymphal stages if these were also described in the original publication. For most species listed, an allotype and one or more paratype specimens also accompany the primary types in the USNM collections.

For easy taxon location and indexing, we follow Adams & Lewis (1995) in listing specific epithets alphabetically in bold face. On the same line, the genus (also in bold face) and family names (in regular font and in parentheses) immediately follow these entries. For each species entry, all lines after the species, genus and family headings are indented following Adams & Lewis (1995). On a new line, after the bolded heading, “Description:” we then provide the name of the author and the citation for the original description including appropriate page and figure (or plate) numbers. Next, on a new line and after the bolded heading, “Primary Type in USNM:” we provide data on the primary type (and on the allotype and relevant paratypes, if appropriate), including the USNM number and slide label numbers, if present. Next, on a new line, we provide all available “Collection data:” including the host mammal Latin name, author, and (in parentheses) the host order, family and (where appropriate) subfamily following Wilson & Reeder (1993), collection location and date, and name of collector (“Coll:”). We provide the Latin name of the host mammal species as it was presented in the original description of the louse and, if this has since been revised, we then provide the current host Latin name or synonymy. In some cases, we have been able to supply additional collection data that were not included with the original description. For type locality data, the country of origin is provided in upper case font. If a country or region name has changed since the original description, the current locality names are then listed parenthetically.

For some taxon listings, we provide one or two additional boldfaced entries, Current Status and Remarks, respectively. The Current Status entry is only used if the status of the taxon has changed since the original description, i.e., if it has been synonymized or re-assigned to a different genus. The Remarks entry is used if any unusual or notable taxonomic situations are applicable to the listed taxon.
The references section at the end of the list of primary types does not include original citations for the primary types taxa listed because these citations are provided in full immediately after each taxon name.

Annotated List of Primary Types of Anoplura in the USNM

**abeli, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71384); also allotype female (holotype and allotype on same slide); slide no. V–4284.

**Collection data:** Ex male *Akodon bogotensis* Thomas (Rodentia: Muridae: Sigmodontinae) (field no. SVP 4284), VENEZUELA: Merida State, 5 km E and 6.5 km S of Tabay (Laguna Verde), elevation 3815 m, 20 March 1966, Coll: S. V. Peterson team (Smithsonian–U.S. Army Project).

**africanus, Proenderleinellus** (Family Polyplicidae)


**Primary Type in USNM:** Holotype male (USNM type no. 23760).

**Collection data:** Ex female *Thryonomys gregor pusillus*—currently treated as a junior synonym of *Thryonomys gregorianus* (Thomas) (Rodentia: Thryonomyidae) (USNM 184180), BRITISH EAST AFRICA (now KENYA): Majiya-Chumvi, date and collector not stated.

**Current status:** Junior synonym of *Proenderleinellus calva* (Waterston, 1917) —see Johnson (1958) and Durden & Musser (1994).

**aitkeni, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71389); also, allotype female (holotype and allotype on same slide); slide no. V–14322.

**Collection data:** Ex *Akodon urichi* J. A. Allen & Chapman (Rodentia: Muridae: Sigmodontinae), VENEZUELA: Sucre State, 5 km S & 25 km E of Carupano, Manacul, elevation 425 m, 19 July 1967, Coll: S. V. Peterson team (Smithsonian–U.S. Army project).
**alaskensis, Polyplax** (Family Polypalacidae)


**Primary Type in USNM:** Holotype male (USNM type no. 40159).

**Collection data:** Ex *Microtus* sp. (Rodentia: Muridae: Arvicolinae), USA: Alaska, 17 May 1924, A. H. Twitchell.

**allactagae, Eulinognathus** (Family Polypalacidae)

**Description:** Johnson, P. T. (1957) Description of two new species of *Eulinognathus* Cummings, and redescription of *Eulinognathus aculeatus* (Neumann) (Anoplura). *Journal of the Egyptian Public Health Association*, 32(6), 278–280, figs. 3, 4, 9, 12, 14.

**Primary Type in USNM:** Holotype male (USNM type no. 63517); also, allotype female (holotype, allotype and 1 paratype female on same slide); slide no. 977.

**Collection data:** Ex *Allactaga mongolica longior*—currently treated as a junior synonym of *Allactaga sibirica* (Forster) (Rodentia: Dipodidae: Allactaginae) (USNM 155188), CHINA: Gansu Province, Ching-ning-chow, no other data.

**americanus, Eulinognathus** (Family Polypalacidae)


**Primary Type in USNM:** Holotype female (USNM type no. 23761); slide no. E–PA 98.

**Collection data:** Ex *Ctenomys brasiliensis* Blainville (Rodentia: Ctenomyidae) (USNM 1939/3252), PARAGUAY: Salade River, no other data.

**antennatus, Haematopinus** (Family Polypalacidae)

**Description:** Osborn, H. (1891) The Pediculi and Mallophaga affecting man and lower animals. *Bulletin of the United States Department of Agriculture, Bureau (Division) of Entomology (old series)*, 7(25), 25, fig.13.

**Primary type in USNM:** Lectotype female (USNM type no. 24136)—designated by Johnson (1958) and circled on slide with a diamond point pen; there are 3 female syntypes in a row on this slide and the middle specimen is the selected lectotype.

**Collection data:** Ex *Sciurus cinereus* var. *ludovicianus*—currently treated as a junior synonym of *Sciurus niger* L. (Rodentia: Sciuridae: Sciurinae), USA: Iowa, Ames, 1 May 1882, Coll: H. Osborn.

**Current status:** Junior synonym of *Neohaematopinus sciurinus* (Mjöberg, 1910); also a junior homonym of *Haematopinus antennatus* Piaget, 1880—see Johnson (1958) for additional details.
**arizonensis, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male (USNM type no. 65667); also, allotype female (holotype and allotype on same slide).

**Collection data:** Ex *Sigmodon* sp. (Rodentia: Muridae: Sigmodontinae), USA: Arizona, Pinal County, 2 March 1947, Coll: not stated.

**atelophilus, Pediculus (Parapediculus)** (Family Pediculidae)


**Primary type in USNM:** Holotype male (USNM type no. 28105).

**Collection data:** Ex female *Ateles geoffroyi* Kuhl—“gray form” (Primates: Cebidae: Atelinae) (field no. 1664) (USNM 15593), USA: District of Columbia, National Zoological Park (the host occurs naturally in the neotropics from southern Mexico to Panama), 11 Sep. 1909, Coll: not stated, presumably H. E. Ewing.

**Current status:** Tentatively designated as a junior synonym of *Pediculus mjöbergi* Ferris by Ferris (1951). However, Ferris (1951) and Durden & Musser (1994) emphasized that the anopluran lice of neotropical cebid monkeys require systematic reevaluation. Similarly, Kim & Emerson (1968) stated that, except for *Pediculus humanus* L., the validity of all *Pediculus* spp. should be critically re-evaluated.

**bolesi, Fahrenholzia** (Family Polyplacidae)


**Primary type in USNM:** Holotype male (USNM type no. 69803); also, allotype male.

**Collection data:** Ex *Perognathus merriami merriami* J. A. Allen (Rodentia: Heteromyidae: Perognathinae), USA: Texas, Kenedy County, 10 miles S of Riviera, 16 Mar. 1966, Coll: B. McDaniel.

**brachyuromyis, Polyplax** (Family Polyplacidae)

**Primary type in USNM:** Holotype female (USNM type no. 73009); also, allotype male (holotype and allotype on same slide); slide no. KIL–87.


calosciuri, *Neohaematopinus* (Family Polyplacidae)

**Description:** Johnson, P. T. (1959) The rodent-infesting Anoplura (sucking lice) of Thailand, with remarks on some related species. *Proceedings of the United States National Museum*, 110(3421), 581–583, figs. 27, 28, 34b, 35c, 42, 43.

**Primary Type in USNM:** Holotype male (USNM type no. 64458); also, allotype female (holotype and allotype on same slide); slide no. RE 4800.

**Collection data:** Ex *Calosciurus finlaysonii* (Horsfield) (Rodentia: Sciuridae: Sciurinae) (field no, RE–4800), THAILAND: Loei, Dan Sai, Kok Sathon, Phu Lom Lo Mt., elevation 8,000 ft., 26 Feb. 1955, Coll: R. E. Elbel.

calomyisci, *Polyplax* (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 71297), slide no. 249; also, allotype male, slide no. 258.

**Collection data:** Ex *Calomycus bailwardi* Thomas (Rodentia: Muridae: Calomyisciinae) (field no. RGT–249), IRAN: Fars Province, 1 km N of Persepolis, 26 Nov. 1963, Coll: R. G. Tuck.

caluri, *Polyplax* (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 64469); slide no. B–21958/HH9301–04.

**Collection data:** Ex *Seketamys calurus* (Thomas) (Rodentia: Muridae: Gerbillinae) (field no. HH 9301–04), EGYPT: Sinai Governorate, Wadi El Sheikh, near St. Catherine’s Monastery, elevation ~ 5,000 ft., 16 May 1953, Coll: H. Hoogstraal.

cannomydis, *Polyplax* (Family Polyplacidae)

Primary Type in USNM: Holotype male (USNM type no. 64463); also, allotype female (holotype and allotype on same slide); slide no. B–15199/Y–236.


capitaneus, Neohaematopinus (Family Polyplacidae)

Primary Type in USNM: Holotype male (USNM type no. 64460); also, allotype female (holotype and allotype on same slide); slide no. B–15199/RE953–59.


captiosa, Hoplopleura (Family Hoplopleuridae)

Primary type in USNM: Holotype female (USNM type no. 64466); also, allotype male (holotype and allotype on same slide); slide no. B–21989, NAMRU–3.


chapini, Pediculus (Parapediculus) (Family Pediculidae)

Primary type in USNM: Lectotype male (USNM type no. 28106)—selected by Johnson (1958) from two cotypes (= syntypes)—one male, one female—on type slide; the other female on the same slide becomes paralectotype.

Collection data: Ex Ateles ater—currently treated as a junior synonym of Ateles paniscus (L.) (Primates: Cebidae, Atelinae), USA: District of Columbia, National Zoological Park (the host occurs naturally in the neotropics north of the Amazon River), 1921, Coll: E. A. Chapin.

Current status: Tentatively designated as a junior synonym of Pediculus
mjöbergi by Ferris (1951). However, Ferris (1951) and Durden & Musser (1994)
emphasized that the anopluran lice of neotropical cebid monkeys require system-
atic reevaluation. Also, Kim & Emerson (1968, p. 690) stated, “At present,
descriptions and knowledge of all the known species of Pediculidae are insuffi-
cient to indicate their taxonomic status, except for Pediculus humanus...”

chrysoconi, Hoplopleura (Family Hoplopleuridae)
Description: Durden, L. A. (1990) The genus Hoplopleura (Anoplura: Hop-
lopleuridae) from murid rodents in Sulawesi, with descriptions of three new spe-
cies and notes on host relationships. Journal of Medical Entomology, 27(3), 270–
273, figs. 1–8.
Primary Type in USNM: Holotype female; also, allotype male.
Collection data: Ex adult female Bunomys chrysoconi (Hoffmann) (Rodentia: 
Muridae: Murinae) (field no. LAD 69), INDONESIA: Sulawesi Utara (= North 
Sulawesi/Celebes), Bolaang Mongondow Province, Dumoga Bone National Park 
(currently Bogani Nani Wartabone National Park) (123.53E, 0.34N), elevation ~
240 m, 26 Feb. 1985, Coll: L. A. Durden (collected during Project 
Wallace—Royal Entomological Society of London expedition to Sulawesi).

cognatus, Neohaematopinus (Family Polycladidae)
Description: Johnson, P. T. (1959) The rodent-infesting Anoplura (sucking lice)
of Thailand, with remarks on some related species. Proceedings of the United 
States National Museum, 110(3421), 583–585, figs. 34a, 35d, 39, 44.
Primary Type in USNM: Holotype male (USNM type no. 64459); also, allotype 
female (holotype and allotype on same slide); slide no. RE-4765.
Collection data: Ex Menetes berdmorei (Blyth) (Rodentia: Sciuridae: Sciurinae) 
(field no. RE–4765), THAILAND: Loei, Dan Sai, Kok Sathon, Phu Lom Lo Mt., 

columbianus, Haematopinus (Family Polycladidae)
Description: Osborn, H. (1900) Description of a new species of Haematopinus. 
Canadian Entomologist, 32(7), 215–216, no figs.
Primary type in USNM: Lectotype female (USNM type no. 5178); slide no. 
8526 (80/13); lectotype selected by Johnson (1958) and circled with a diamond 
point pen.
Collection data: Ex Spermophilus columbianus (Ord) (Rodentia: Sciuridae: Sci-
Current status: Junior synonym of Linognathoides laeviusculus (Grube). Recogn-
ized as either Linognathoides columbianus (Osborn), Polyclax columbianus 
(Osborn) or Neohaematopinus laeviusculus (Osborn) by various authors; treated

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as a junior synonym of *Neohaematopinus laevisculus* (Grube) by Ferris (1923); treated as a junior synonym of *Linognathoides laevisculus* (Grube) by Kim & Adler (1982).

**contigua, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71386); also, allotype female (holotype and allotype on same slide); slide no. V-3040.

**Collection data:** Ex *Holochilus brasiliensis* (Desmarest) (Rodentia: Muridae: Sigmodontinae) (field no. SVP 3040), VENEZUELA: Trujillo Province, 30 km NW of Valera (near El Dividive), elevation 90 m, 2 Oct. 1965, Coll: S. V. Peterson team (Smithsonian–U.S. Army project).

**corrugatus, Enderleinellus** (Family Enderleinellidae)


**Primary Type in USNM:** Holotype male (USNM type no. 64456); slide no. B–9896/RE–355.


**cynopithec, Pedicinus (Parapedicinus)** (Family Pedicinidae)


**Primary Type in USNM:** Holotype male (USNM type no. 73051); also, 2 female paratypes and 1 nymph on same slide as holotype.

**Collection data:** Ex male *Macaca hecki*—currently treated as a subspecies of *Macaca tonkeana* (Meyer) (Primates: Cercopithecidae: Cercopithecinae), USA: District of Columbia, Washington DC, National Zoological Park, (the type host occurs naturally in Sulawesi—also known as Celebes - INDONESIA), 4 Feb. 1938, Coll: H. E. Ewing.

**dentaticornis, Polyplax** (Family Polyplacidae)

Primary type in USNM: Holotype male (USNM type no. 44905); also, 3rd instar nymph on same slide.

Collection data: Ex Cricetulus andersoni—currently treated as a junior synonym of Cricetulus longicaudatus (Milne-Edwards) (Rodentia: Muridae: Cricetinae) (USNM 172610), CHINA: Shansi (currently Shaanxi), Province, date & collector not stated.

Remarks: This taxon is only known from the holotype and 3rd stage nymph. Johnson (1958) stated that, because of the poor condition of these specimens and the resemblance of the holotype to Polypedale serrata (Burmeister), the validity of this taxon must remain in doubt.

diaphora, Hoplopleura (Family Hoplopleuridae)


Primary Type in USNM: Holotype female (USNM type no. 72311); slide no. R–44621.


difficilis, Hoplopleura (Family Hoplopleuridae)


Primary type in USNM: Holotype female (USNM type no. 68167); also, allootype male (holotype and allootype on same slide).


dissicula, Hoplopleura (Family Hoplopleuridae)


Primary Type in USNM: Holotype female (USNM type no. 72310); also, allootype male (holotype and allotype on same slide); slide no. RT–8334.

**distorta, Hoplopleura** (Family Hoplopleuridae)

**Description:** Ferris, G. F. (1921) Contributions toward a monograph of the sucking lice. Stanford University Publications, University Series, Biological Sciences, 2(2), 115, figs. 72C, 72H.

**Primary type in USNM:** Holotype male; also, allotype female (holotype, allotype, and additional female specimen on same slide); slide no. “Ferris Col. 440.”

**Collection data:** Stated to be ex Rhinosciurus sp. (see Remarks) (Rodentia: Sciuridae: Sciurinae) (USNM 199559), CHINA: Hsing-lung-shan, 65 miles NE of Peking (currently, Beijinger), no other data.

**Remarks:** Hopkins (1949) and Ferris (1951) both stated that the type host was originally misidentified and was actually Tamiops swinhoei (Milne-Edwards) (Rodentia: Sciuridae: Sciurinae).

**dolichura, Polyplax** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 72322); also, allotype male (holotype and allotype on same slide); slide no. “Lot 60–13778.”

**Collection data:** Stated to be ex Acomys albigena (see Remarks)—currently treated as a junior synonym of Acomys cahirinus (Desmarest) (Rodentia: Muridae: Murinae), SUDAN: Blue Nile Province, Yabous, 22 Apr. 1960, Coll: H. Hoogstraal, D. Heyneman & S. Gaber.

**Remarks:** Because the purported type host, A. cahirinus, does not occur in the type locality, Durden & Musser (1994) stated that the true type host must have been Acomys cineraceus Fitzinger & Heuglin (Rodentia: Muridae: Murinae) which does occur in that locality.

**durus, Sathrax** (Family Polyplacidae)


**Primary Type in USNM:** Holotype male (USNM type no. 72321); also, allotype female (holotype and allotype on same slide); slide no. R–47287.


**Remarks:** The species is the type species for the monotypic genus Sathrax.
ehrlichi, *Fahrenholzia* (Family Polyplacidae)


**Primary type in USNM:** Holotype male; also, allotype female (holotype, allotype, and one paratype female on same slide—the allotype is the female with all legs present); slide no “Ferris 920.”

**Collection data:** *Ex Liomyx irratus canus* Merriam (Rodentia: Heteromyidae: Heteromyinae) (USNM 91883), MEXICO: Zacatecas State, Valparaíso, no other data.

**Remarks:** The type specimens were originally included with types of *Fahrenholzia microcephala* Ferris.

ebeli, *Neohaematopinus* (Family Polyplacidae)


**Primary Type in USNM:** Holotype male (USNM type no. 64462); also, allotype female (holotype and allotype on same slide); slide no. RE–4977.


eemersoni, *Atopophthirus* (Family Enderleinellidae)


**Primary type in USNM:** Holotype female; also, allotype male; slide no. (for both) R.89782

**Collection data:** *Ex Petaurista elegans* (Müller) (Rodentia: Sciuridae: Petauristinae) (field no. R.89782), WEST MALAYSIA: Johore, Mersing, 19 Apr. 1971, Coll: not stated.

**Remarks:** This is the type species of the monotypic genus *Atopophthirus*. The 2nd instar nymph was also described in the original paper and 1 paratype of this stage is also deposited in the USNM.

erismata, *Hoplopleura* (Family Hoplopleuridae)

**Description:** Ferris, G. F. (1921) Contributions toward a monograph of the sucking lice. *Stanford University Publications, University Series, Biological Sciences*,
2(2), 113–115, figs. 72B,E,F.

**Primary type in USNM:** Holotype male; also, allotype female (holotype and
allotype on same slide); slide no. “Ferris Col. 457.”

**Collection data:** Ex *Sciurus ferrugineus cinnamomeus*—currently treated as a
junior synonym of *Callosciurus finlaysonii* (Horsfield) (Rodentia: Sciuridae: Sci-
urinae) (USNM 201408), South East SIAM (currently, THAILAND): no other
data.

_eropepli, Eremothrus* (Family Polyplacidae)

**Description:** Ewing, H. E. (1935) The taxonomy of the anopluran genera *Poly-

**Primary type in USNM:** Lectotype male (USNM type no. 44906) – selected by
Johnson (1958) from 4 cotypes (= syntypes)—2 males, 2 females (all on the same
slide) as the male specimen 2nd from the right and circled on the back of the slide.

**Collection data:** Ex pelt (USNM 219711) of young adult female *Eropeplus canus*
Miller & Hollister (Rodentia: Muridae: Murinae), INDONESIA: Sulawesi Tengah
(= Central Sulawesi/Celebes), Rano Rano (120.28E, 1.30S), elevation 1,800 m, in

**Current status:** *Polyplax eropepli* (Ewing).

**Remarks:** Durden (1987) redescribed this species and provided collection data
and figures for diagnostic characters that were not shown in the original descrip-
tion.

_exima, Hoplopleura* (Family Hoplopleuridae)

**Description:** Johnson, P. T. (1972) Sucking lice of Venezuelan rodents, with
remarks on related species. *Brigham Young University Science Bulletin, Biolo-
gical Series*, 17(5), 27–30, figs. 96–100.

**Primary Type in USNM:** Holotype male (USNM type no. 73201); slide no. V–
21973.

**Collection data:** Ex *Anotomys trichotis*—currently treated as *Chibchanomys tri-
chotis* (Thomas) (Rodentia: Muridae: Sigmodontinae) (field no. SVP 21973),
VENEZUELA: Tachira Province, 35 km S & 22 km W of San Cristobal (Buena
Vista), elevation 2,400 m, 24 March 1968, Coll: S. V. Peterson team (Smithso-
nian–U.S. Army project).

_expressa, Polyplax* (Family Polyplacidae)

**Description:** Johnson, P. T. (1964) The hoplopleurid lice of the Indo-Malayan
subregion (Anoplura: Hoplopleuridae). *Miscellaneous Publications of the Ento-
molological Society of America*, 4(3), 84, figs. 76–81.
Primary Type in USNM: Holotype male (USNM type no. 72323); also, allotype female (holotype and allotype on same slide); slide no. RT B–6002.

fairchildi, Fahrenholzia (Family Polyplacidae)
Primary type in USNM: Holotype male (USNM type no. 72320); also, allotype female (holotype and allotype on same slide).

ferrisi, Prolinognathus (Family Linognathidae)
Primary type in USNM: Holotype female; slide label “Ferris Col. 474” and designated as holotype for this taxon by Johnson (1958).
Collection data: Ex Procavia brucei rudolfi—currently treated as a junior synonym of Heterohyrax brucei (Gray) (USNM 184247) (Hyracoidea: Procaviidae), BRITISH EAST AFRICA (currently, KENYA): Marsabit Road, no other data.
Remarks: Johnson (1958) stated that Fahrenholz (1939) did not examine specimens when he described P. ferrisi. Instead, he used figures of Prolinognathus leptoccephalus from Ferris (1932).

ferrisi emphereia, Hoplopleura (Family Hoplopleuridae)
Primary type in USNM: Holotype male (USNM type no. 68166); also, allotype male (holotype and allotype on same slide); slide no. 6214.
Current status: Hoplopleura emphereia Kim—elevated to species rank by Johnson (1972).
**gorillae, Phthirus** (Family Phthiridae)


**Primary type in USNM:** Lectotype 1st instar nymph (USNM 40161)—selected by Johnson (1958).

**Collection data:** Ex young male *Gorilla beringei*—currently treated as a junior synonym of *Gorilla gorilla* (Savage & Wyman) (USNM 238884) (Primates: Hominiidae), eastern BELGIAN CONGO (currently, DEMOCRATIC REPUBLIC OF THE CONGO): 1923, Coll: B. Burbridge.

**Current status:** *Phthirus gorillae* Ewing.

**Remarks:** Ferris (1951) and Kim and Ludwig (1978) explained why the names *Phthirus* and Phthiridae should be used in place of *Phthirus* and Phthiridae, respectively. Kim and Emerson (1968) described the female of *P. gorillae*.

**guatemalensis, Polyplax** (Family Polyplacidae)


**Primary type in USNM:** Holotype male; also, allotype female (holotype and allotype on same slide); slide no. MANCA 449.

**Collection data:** Ex male *Peromyscus grandidis* Goodwin (Rodentia: Muridae: Sigmodontinae) (field no. MANCA 449) (Carnegie Museum of Natural History cat. no. CM113426), GUATEMALA: Zacapa, Rio Hondo, 6 km NNW of San Lorenzo, Sierra de las Minas, Reserva de Biosfera (in primary montane cloud forest), elevation 2,200 m, 9 Apr. 1998, Coll: R. P. Eckerlin.

**hamadyras cercopithecus, Pedicinus** (Family Pedicinidae)


**Primary type in USNM:** Holotype male (USNM type no. 73052).

**Collection data:** Ex *Cercopithecus pygerythrus*—currently treated as a junior synonym of *Chlorocebus aethiops* (L.) (Primates: Cercopithecidae: Cercopithecinae), 3 Nov. 1926, “Smithsonian Chrysler African Expedition,” no other data.

**handleyi, Hoplopleura** (Family Hoplopleuridae)

**Description:** Johnson, P. T. (1972) Sucking lice of Venezuelan rodents, with remarks on related species. *Brigham Young University Science Bulletin, Biologi*
val Series, 17(5), 25–27, figs. 83–89.

**Primary Type in USNM:** Holotype male (USNM type no. 71385).

**Collection data:** Ex Neacomys tenuipes Thomas (Rodentia: Muridae: Sigmodontinae) (field no. SVP 91), VENEZUELA: Distrito Federal, 3 km N of Caracas, Los Venados, elevation 1,465 m, 22 July 1965, Coll: S. V. Peterson & M. D. Tuttle (Smithsonian—U.S. Army Project).

**hertigi, Fahrenholzia** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM 72318); slide no. 4037.


**hesperius, Eulinognathus** (Family Polyplacidae)

**Description:** Johnson, P. T. (1957) Description of two new species of *Eulinognathus* Cummings, and redescription of *Eulinognathus aculeatus* (Neumann) (Anoplura). *Journal of the Egyptian Public Health Association*, 32(6), 280–282, figs. 5, 6, 8, 10, 15.

**Primary type in USNM:** Holotype male (USNM type no. 63516); also, allotype female (holotype and allotype on same slide); slide no. NAMRU-3/B–21953/HH–9139.

**Collection data:** Ex Allactaga tetradsactyla (Lichtenstein) (Rodentia: Dipodidae: Allactagininae) (field no. HH–9139), EGYPT: Western Desert Governorate, Burg el Arab, Mariut, 4 May 1953, Coll: H. Hoogstraal.

**hesperomydis, Haematopinus** (Family Hoplopleuridae)

**Description:** Osborn, H. (1891) The Pediculi and Mallophaga affecting man and lower animals. *Bulletin of the United States Department of Agriculture, Bureau (Division) of Entomology (old series)*, 7(25), 26, fig. 14.

**Primary type in USNM:** Lectotype male designated from syntype series (3 males, 1 female all on same slide) by Johnson (1958).

**Collection data:** Ex “white-footed mouse”—*Peromyscus leucopus* (Rafinesque) (Rodentia: Muridae: Sigmodontinae), USA: Iowa, Ames, 1885, Coll: H. Osborn.

**Current status:** *Hoplopleura hesperomydis* (Osborn).

**hoogstraali, Polyplax** (Family Polyplacidae)

**Description:** Johnson, P. T. (1960) The Anoplura of African rodents and insecti-

**Primary type in USNM:** Holotype male (USNM type no. 64471); also, allotype female (holotype and allotype on same slide); slide no. RT B–21927/HH–7976–78.

**Collection data:** Ex *Acomys russatus* Wagner (Rodentia: Muridae: Murinae) (field no. HH–7976–78), EGYPT: Sinai Governorate, St. Catherine’s Monastery, 5,000 ft., 16 Nov. 1952, Coll: H. Hoogstraal.

**hoplai, Abrocomaphthirus** (Family Polyplacidae)


**Primary type in USNM:** Holotype male (USNM type no. 105727); also, allotype female.

**Collection data:** Ex female *Abrocoma bennetti* Waterhouse (Rodentia: Abrocomidae) (field no. REM 1229), CHILE: Santiago Province, Trappist Monastery, 2.5 km NE of Cerro Manquehue (33.20S, 33.30W), elevation 900 m, 1 Aug. 1975, Coll: R. E. Martin.

**Current status:** Junior synonym of *Abrocomaphthirus chilensis* (Gomez), i.e., the genus name is retained but the species was described previously by Gomez (1998) as *Eulinognathus chilensis*—see Durden & Gomez (2000) for additional details.

**Remarks:** This is the type species for the genus *Abrocomaphthirus* Durden & Webb.

**hybomyis, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype female (USNM type no. 72304); slide no. JCG–323.

**Collection data:** Ex *Hybomyis trivirgatus* (Temminck) (Rodentia: Muridae: Murinae), NIGERIA: Federal District, University of Lagos, 2 Nov. 1966, Coll: not stated (presumably, J. C. Geest) (U.S. Army—Smithsonian African Mammal Project).

**indiscreta, Hoplopleura** (Family Hoplopleuridae)

**Description:** Johnson, P. T. (1972) Sucking lice of Venezuelan rodents, with remarks on related species. *Brigham Young University Science Bulletin, Biological Series*, 17(5), 22–24, figs. 70–75.
**Primary Type in USNM:** Holotype male (USNM type no. 71388); also, allotype female (holotype and allotype on same slide); slide no. 4442.

**Collection data:** Ex *Thomasomys lugens*—currently treated as *Aepeomys lugens* (Thomas) (Rodentia: Muridae: Sigmodontinae) (field no. SVP 4442), VENEZUELA: Merida Province, 5 km E & 1 km S of Tabay (near Middle Refugia), elevation 2710 m, 15 April 1966, Coll: S. V. Peterson (U.S. Army–Smithsonian African Mammal project).

*inexpectans, Hoplopleura* (Family Hoplopleuridae)


**Primary type in USNM:** Holotype female (USNM type no. 64465); also, allotype male (holotype and allotype on same slide); slide no. HH 10741.

**Collection data:** Ex *Rattus (Praomys) taitae*—murines of this group from the type locality are currently treated as *Praomys delectorum* (Thomas)—see Durden & Musser (1994)—(Rodentia: Muridae: Murinae) (field no. HH–10741), KENYA: Kikuyu, Mugaga North, elevation 7,200 ft., 25 Jun. 1956, Coll: H. Hoogstraal.

*inusitata, Hoplopleura* (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71382); slide no. V–35380; also, allotype female.

**Collection data:** Ex *Echimys semivillosus* (I. Geoffroy) (Rodentia: Echimyidae) (field no. SVP 35380), VENEZUELA: Lara Province, 10 km N of El Tocuyo, elevation 518 m, 22 July 1968, Coll: M. D. Tuttle team.

*ismailiae, Hoplopleura* (Family Hoplopleuridae)


**Primary type in USNM:** Holotype female (USNM type no. 72308); also, allotype male (holotype and allotype on same slide); slide no. “Lot 60–13778/like HH 13097–13101.”

janzeni, Hoplopleura (Family Hoplopleuridae)


Primary type in USNM: Holotype female (USNM type no. 105742).


javalii, Pecaroecus (Family Pecaroecidae)


Primary type in USNM: Lectotype male (USNM type no. 52758)—selected by Johnson (1958) from the original type series consisting of males, females, nymphs and eggs. The slide bearing the lectotype and labeled as such by Johnson, also bears the left label, “Peccary, Juno, Texas, 1–29–1932, Bishopp No. 14093,” and the right label, “Pecaroecus javalii Babc. & E., Type No. 52758 U.S.N.M., Long-nosed Peccary-louse, O.G. Babcock coll.”


Remarks: This is the type species for the monotypic genus Pecaroecus, which itself is the type genus for the monotypic family Pecaroecidae which was erected by Kim and Ludwig (1978).

johnsonae, Hoplopleura (Family Hoplopleuridae)


Primary type in USNM: Holotype 2nd instar nymph (paratype nymph on same slide); slide no. B–9905/Re 392.


kaiseri, Polyplax (Family Polyplacidae)

Primary type in USNM: Holotype female (USNM type no. 64472); also, allotype male (holotype and allotype on same slide); slide no. HH 11616–24.


kinabalensis, Neohaematopinus (Family Polypalacidae)


Primary Type in USNM: Holotype male (USNM type nos. 64461 & 72314—2 USNM type nos. were assigned; listed as USNM type-catalog No. 64386 in original publication); slide no. “RT B–9089, SUB. DJ 6595/U.S. Army, British Colonial Research Unit;” also, allotype female.

Collection data: Ex Hylometes sagitta harrisoni—currently treated as a junior synonym of Hylometes lepidus (Horsfield) (Rodentia: Sciuridae: Petauristinae) (field no. B–9089, also reported as RT–B–9089), BRITISH NORTH BORNEO (currently MALAYSIA: Sabah), Mount (= Gunung) Kinabalu, Tenompak, elevation 5,000 ft., 31 June 1952, Coll: R. Traub.

kitti, Hoplopleura (Family Hoplopleuridae)

Description: Kim, K. C. (1968) Two new species of the sucking lice (Hoplopleuridae, Anoplura) from Rattus (Muridae, Rodentia) in Thailand. Parasitology, 58, 701–704, figs. 1–9.

Primary type in USNM: Holotype female (USNM type no. 72307); also, allotype male; slides labeled “U.S. Army–SMRL.”


longiceps, Scipio (Family Polypalacidae)


Primary type in USNM: Holotype male (USNM type no. 49919); also, allotype female.

Collection data: Ex female Thryonomys gregor pusillus—currently treated as a junior synonym of Thryonomys gregorianus (Thomas) (Rodentia: Thryonomyidae) (USNM 184180), BRITISH EAST AFRICA (currently, KENYA): Maji-ya-Chumvi, this locality is in SE Kenya according to Johnson (1958), no other data.
Current status: Junior synonym of Scipio aulacodi (Neumann, 1911)—synonymy by Johnson (1958) and followed by Durden & Musser (1994); Ferris (1951) also stated that S. longiceps Ewing is probably a synonym of S. aulacodi (Neumann).

marouaensis, Prolinognathus (Family Linognathidae)
Primary type in USNM: Holotype female (USNM type no. 105344); also, allotype male (additional female paratype on same slide as allotype).
Collection data: Ex Procavia capensis (Pallas) (Hyracoidea: Procaviidae), northern CAMEROON: Maroua (Sahelian region of Cameroon), date not listed, Coll: J. Mouchet.
Remarks: The 2nd and 3rd instar nymphs were also described in the original paper and paratypes of these stages are also deposited in the USNM.

mathesoni, Neohaematopinus (Family Polyplacidae)
Primary type in USNM: Holotype female (USNM type no. 57685).
Current status: Junior synonym of Linognathoides marmotae (Ferris); synonymy by Johnson (1958); generic reassignment by Kim & Adler (1982).
Remarks: The collection date on the slide is 11 Aug. 1938 and therefore differs (by one day) from that reported in the publication.

mendezi, Hoplopleura (Family Hoplopleuridae)
Primary type in USNM: Holotype male (USNM type no. 72306); also, allotype female; slide no. (for both) RML 40451.
**montanus, Haematopinus** (Family Polyplacidae)

**Description:** Osborn, H. (1896) Insects affecting domestic animals: an account of the species of importance in North America, with mention of related forms occurring on other animals. *Bulletin of the United States Department of Agriculture, Bureau (Division) of Entomology* (new series), 5, 184, fig. 107.

**Primary type in USNM:** Neotype male—here designated as the male specimen on the left of the type slide (2 males & 2 females on same slide). Johnson (1958) discussed the USNM specimens belonging to this taxon and concluded that no type material existed at that time. Kim et al (1986, p. 173) stated that, “the neotype of *Linognathus*” [sic.] “*montanus* (Osborn),” is “in the National Museum of Natural History Collection, Washington, D.C.,” but did not state which specimen had been designated or by whom. Because we cannot find any further references to this neotype specimen, we have selected the best preserved male specimen on the type slide designated by Johnson (1958) as the neotype.

**Collection data:** Ex “spotted grey squirrel” (Rodentia: Sciuridae: Sciurinae), USA: Colorado, near Fort Collins, 11 Sep. 1892, Coll: Stannard (on slide), Baker (in original description).

**Current status:** Junior synonym of *Linognathoides laeviusculus* (Grube). Transferred to *Linognathoides* Cummings by Kellogg & Ferris (1915); recognized as either *Linognathoides montanus* (Osborn), *Polyplax montanus* (Osborn) or *Neohaematopinus laeviusculus* (Osborn) by various authors; treated as a junior synonym of *Neohaematopinus laeviusculus* (Grube) by Ferris (1923); treated as a junior synonym of *Linognathoides laeviusculus* (Grube) by Kim & Adler (1982).

**musseri, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male; also, allotype female and paratype 1st, 2nd and 3rd instar nymphs (all described in original publication).

**Collection data:** Ex male *Maxomys musschenbroekii* (Jentink) (Rodentia: Muridae: Murinae) (field no. LAD 39), INDONESIA: Sulawesi Utara (= North Sulawesi/Celebes), Bolaang Mongondow Province, Gunung (=Mount) Moajat, near Danau (=Lake) Moajat (124.29E, 0.45N), elevation ~1,150-1,300 m, 17 Feb. 1985, Coll: L. A. Durden (collected during Project Wallace—Royal Entomological Society of London expedition to Sulawesi).

**myomyis, Hoplopleura** (Family Hoplopleuridae)

**Description:** Kim, K. C. & Emerson, K. C. (1973) Anoplura of tropical west

**Primary type in USNM:** Holotype female (USNM type no. 72302); also, allotype male; slide no. (for both) JCG–1343.

**Collection data:** Ex *Myomys daltoni* (Thomas) (Rodentia: Muridae: Murinae) (field no. JCG 1343), NIGERIA: Northern Region, Panisau, 22 Jan. 1967; Coll: not stated (presumably, J. C. Geest) (U.S. Army—Smithsonian African Mammal Project).

**nasuta, Ancistroplax** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype female (USNM type no. 72312); slide no. RT B–19638.

**Collection data:** Ex “ground shrew” (Insectivora: Soricidae) (field no. B–19638, also reported as RT B–19638), NORTH BORNEO (currently, MALAYSIA: Sabah Province), Trus Madi, Pampang, Ulu Kaingaran, 21 July 1953, Coll: R. Audy, et al.

**nasikae, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype female (USNM type no. 71310, slide no. L–12142); also, allotype male (slide no. L–12429).


**nesotragi, Linognathus** (Family Linognathidae)

**Description:** van der Merwe, S. (1968) Two new *Linognathus* species from Mozambique. *Novos Taxa Entomológicos (Suplemento à Revista Entomologia de Moçambique)*, 55(1), 5, fig. 4.

**Primary type in USNM:** Holotype male (USNM type no. 72313); also, female specimen (stated to be paratype in original paper) on same slide as holotype.

**Collection data:** Ex *Neotragus moschatus* (von Dueben) (Artiodactyla: Bovidae: Antilopinae), MOZAMBIQUE: Tete District, Changara, 5 Nov. 1964, Coll: not stated.
nigrantis, Haematopinicus (Family Haematopinidae)


Primary type in USNM: Holotype female (USNM type no. 72297); also, allotype male (holotype and allotype on same slide); slide labeled “Vial 23.”

Collection data: Ex Cervus nigricans Brooke—currently treated as a junior synonym of Cervus mariannus Desmarest (Artiodactyla: Cervidae), PHILIPPINES: Luzon, Mountain Province, Bontoc, 5 Sep. 1966, Coll: not stated.

orinoco, Hoplopleura (Family Hoplopleuridae)


Primary Type in USNM: Holotype male (USNM type no.71383); also, 1 male paratype on same slide as holotype; slide no. V–16830.

Collection data: Ex female Mesomys hispidus (Desmarest) (Rodentia: Echimyidae: Eumysopinae) (field no. SVP 16830), VENEZUELA: T. F. Amazonas Province, about 84 km SSE of Esmarelida (locality listed in paper), about 68 km SE of Esmarelida, 10 km up Rio Mavara from mountain (locality listed on slide), elevation 138 m, 16 Mar. 1967, Coll: M. D. Tuttle team (Smithsonian—U.S. Army project).

Remarks: Despite the slight discrepancy in the type locality listed in the publication and on the slide, the two sites are geographically very close.

oryzomydis, Hoplopleura (Family Hoplopleuridae)


Primary type in USNM: Holotype female (USNM type no. 60412); also, allotype male, slide no. (for both) SG–78.

Collection data: Ex Oryzomys palustris palustris (Harlan) (Rodentia: Muridae: Sigmodontinae), USA: Georgia, Chatham County, Oatland Island (Savannah), 26 Feb. 1948, Coll: U.S. Public Health Service personnel.

oxyrhyynchus hystrellae, Polyplax (Family Polyplacidae)

Description: Fahrenholz, H. (1938) Die Anoplurengattung Polyplax. Zeitschrift für Parasitenkunde, 10(2), 275–276, fig. 23m.

Primary type in USNM: Holotype male (originally labeled as “Type”); slide no. “Ferris Col. 460.”
Collection data: Ex Acomys hystrella—currently treated as a junior synonym of Acomys cinereus Fitzynger & Heuglin (Rodentia: Muridae: Murinae) (USNM 165216), UGANDA: Nimule, no other data.

Current status: Junior synonym of Polyplax oxyrhyncha Cummings—see Durden & Musser (1994).

pallidus, Neohaematopinus (Family Polyplacidae)
Primary Type in USNM: Holotype male (USNM type no. 72315); also, allotype female (holotype and allotype on same slide); slide no. B 17657/RE–2032.

panamensis, Linognathus (Family Linognathidae)
Primary type in USNM: Lectotype female (USNM type no. 40160)—designated (and circled on slide) by Johnson (1958) from 6 females all on the same type slide deposited by Ewing.
Remarks: This taxon has had a unique history. Ferris (1932) treated it as a junior synonym of Solenopotis binipilosus (Fahrenholz). Johnson (1958) recognized it as a distinct species: Solenopotis panamensis (Ewing). However, Kim & Weisser (1974) reinstated the original designation – Linognathus panamensis Ewing. Kim & Weisser (1974) also redescribed the female of L. panamensis and provided diagnostic illustrations.

pansus, Neohaematopinus (Family Polyplacidae)
Primary Type in USNM: Holotype female (USNM type no. 72316); slide no. B–19016.


*paradoxa, Polypalx* (Family Polyplacidae)


Primary Type in USNM: Holotype female (USNM type no. 64468); slide no. B–22322/NAMRU–3.


*parataterae, Polypalx* (Family Polyplacidae)


Primary type in USNM: Holotype male (USNM type no. 73044); also, allotype female; slide no. (for both) JWL–1409.


*patiki, Neoahematopinus* (Family Polyplacidae)


Primary type in USNM: Lectotype female (USNM type no. 57686); also, 1 additional female specimen on same slide; lectotype designated and circled with a diamond point pen by Johnson (1958) as the specimen nearest the right-hand label.


Current status: Junior synonym of *Linognathoides laevisculus* (Grube); synonymy by Johnson (1958); generic reassignment by Kim & Adler (1982).
pricei, *Polyplax* (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 72324); also, allotype male (holotype and allotype on same slide); slide no. SMRL–6515


**propithecii, Phthirpediculus** (Family Polyplacidae)

**Description:** Ewing, H. E. (1923) New genera and species of sucking lice. *Journal of the Washington Academy of Science, 13*(8), 149, no figs.

**Primary type in USNM:** Lectotype male (USNM type no. 23762)—designated by Johnson (1958) from 3 syntypes (1 male, 2 females) all on the same slide.

**Collection data:** Ex female *Propithecus edwardsi*—currently treated as a junior synonym of *Propithecus diadema* Bennett (Primates: Indridae) (USNM 63352), MADAGASCAR (eastern): Ambodiasy, no other data.

**Remarks:** This is the type species for the genus *Phthirpediculus.*

**pseudohumanus, Pediculus (Parapediculus)** (Family Pediculidae)


**Primary type in USNM:** Lectotype female (USNM type no. 51451)—designated by Johnson (1958); 3 other (syntype) females on same slide; lectotype is the specimen on the furthest right and is circled with a diamond point pen.


**Current status:** Designated as a junior synonym of *Pediculus humanus* L. by Ferris (1951) and Durden and Musser (1994). However, Ferris (1951, p. 275) stated that *P. pseudohumanus* “may possibly be worthy of recognition” (as a distinct species). Durden & Musser (1994) emphasized that the anopluran lice of neotropical cebid monkeys require systematic reevaluation. Also, Kim & Emerson (1968, p. 690) stated, “At present descriptions and knowledge of all the known species of Pediculidae are insufficient to indicate their taxonomic status, except for *Pediculus humanus*...” Other than collections from humans, most valid records of *P. pseudohumanus* are from captive primates (in zoological gardens, menageries, etc.) which suggests that these infestations could have been acquired from
humans, i.e., that they are *P. humanus*. This taxon clearly requires further investigation.

**rauschi, Latagophthirus** (Family Echinophthiriidae)


**Primary type in USNM:** Holotype female (USNM type no. 73014); also, allotype male; slide no. (for both) “Rausch 39741.”

**Collection data:** Ex *Lutra canadensis pacifica* Rhoads—currently treated as *Lontra canadensis pacifica* Grinnell (Carnivora: Mustelidae: Lutrinae), USA: Oregon, Coos County, 1.6 km NE of Broadbent (T 29 S, R 12 W, cent. Sec. 28), elevation 15 m, 20 Jul. 1971, Coll: C. Maser & J. E. Tabor.

**Remarks:** This is the type species for the monotypic genus *Latagophthirus*.

**rimae, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71390); also, allotype female and paratypes of 2\(^{st}\) and 3\(^{rd}\) instar nymphs (holotype and allotype on same slide); slide no. V–4190.

**Collection data:** Ex male *Oryzomys minutus*—currently treated as *Microryzomys minutus* (Tomes) (Rodentia: Muridae: Sigmodontinae) (field no. SVP 4190), VENEZUELA: Merida Province, 5 km S & 7 km E of Tabay (near La Coromoto), elevation 3375 m, 17 March 1966, Coll: S. V. Peterson team (Smithsonian–U.S. Army project).

**Remarks:** In addition to the male and female, Johnson (1972) described the 2\(^{nd}\) and 3\(^{rd}\) instar nymphs of this species; paratypes of both of these stages are also deposited in the USNM.

**robustus, Neohaematopinus** (Family Polyplacidae)


**Primary Type in USNM:** Holotype male (USNM type no. 72317); also, allotype female (holotype and allotype on same slide); slide no. B–46779.

**scotinomydis, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male (USNM type no. 72305); also, allotype female (holotype and allotype on same slide); slide no. PMMC 10275.

**Collection data:** Ex *Scotinomyys xerampelinus* (Bangs) (Rodentia: Muridae: Sigmodontinae) (field no. PMMC 10275), PANAMA: Chiriqui Province, Boquete Trail, 3 miles (5 km) W of Cerro Punta, elevation 7,700 ft. (2,700 m), 9 Mar. 1962, Coll: not stated.

**sembeli, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male; also, allotype female (1 male paratype on same slide as holotype).

**Collection data:** Ex *Maxomys hellwaldii* (Jentink) (Rodentia: Muridae: Murinae) (field no. LAD 68), INDONESIA: Sulawesi Utara (= North Sulawesi/Celebes), Bolaang Mongondow Province, Dumoga Bone National Park (currently Bogani Nani Wartabone National Park) (123.53E, 0.34N), elevation ~230 m, 22 Feb. 1985, Coll: L. A. Durden (collected during Project Wallace—Royal Entomological Society of London expedition to Sulawesi).

**setoni, Haemodipsus** (Family Polypcladidae)


**Primary type in USNM:** Lectotype female (USNM type no. 23768)—designated by Johnson 1958; also, paralecotype male. Other specimens (2 females, 3 nymphs) that were designated as types (cotypes/syntypes) by Ewing are also deposited in the USNM.

**Collection data:** Ex *Lepus californicus melanotis* Mearns (Lagomorpha: Leporidae) (USNM 123846), USA: Kansas, near Wichita, date not stated, Coll: E. T. Seton.

**setzeri, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male (USNM type no. 64464); also, allotype
female (holotype and allotype on same slide); slide no. HH 1136/NAMRU–3.

**Collection data:** Ex *Rattus (Grammomys) dolichurus oblitus*—determined by Durden & Musser (1994) to be the murine that is currently recognized as *Grammomys macmillani* (Wroughton) (Rodentia: Muridae: Muriniae) (field no. HH 11036), TANGANYIKA (currently, TANZANIA): Arusha District, Tengeru, elevation 4,100 ft., 22 July 1956, Coll: H. Hoogstraal & G. M. Kohls.

**sicata, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype female (USNM type no. 72309); also, allotype male (holotype and allotype on same slide); slide no. RT B–20700.

**Collection data:** Ex *Rattus cremoriventer*—currently treated as *Niviventer cremoriventer* (Miller) (Rodentia: Muridae: Muriniae) (field no. B–20700; also stated to be RT B–20700), NORTH BORNEO (currently MALAYSIA: Sabah), Mt. (Gunung) Kinabalu, Tenompak, 25 Aug. 1953, Coll: B. Walton.

**simiae, Pediculus (Paenipediculus)** (Family Pediculidae)


**Primary type in USNM:** Holotype female (USNM type no. 44327).

**Collection data:** Ex “Pan sp.”—almost certainly *Pan troglodytes* (Blumenbach) (Primates: Hominidae), UNITED KINGDOM: Greater London, London Zoological Gardens (the host is native to sub-Saharan Africa), 1932, Coll: A. E. Hamerton.

**Current status:** Junior synonym of *Pediculus schaeffi* Fahrenholz, 1910—see Johnson (1958), Kim & Emerson (1968) and Durden & Musser (1994).

**Remarks:** This is the type species for the subgenus *Paenipediculus*.

**sommeri, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male (USNM type no. 105751); also, allotype female.

**Collection data:** Ex male *Sommeromys macrorhinus* Musser & Durden (Rodentia: Muridae: Muriniae) (field no. NAMRU–23 S.S. 65) (AMNH 226956), INDO- NESIA: Sulawesi Tengah (= Central Sulawesi/Celebes), Gunung Tokala (02.13S,
120.04E) in tropical upper montane rain forest, elevation 2,400 m, 2 Aug. 1973, Coll: D. F. van Peenan & members of the NAMRU–2 survey team.

**spilosoma, Neohaematopinus** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 65666); also, allotype male.

**Collection data:** Ex *Citellus spilosoma*—currently treated as *Spermophilus spilosoma* Bennett (Rodentia: Sciuridae: Sciurinae), USA: New Mexico, Bernalillo County, 1959, Coll: C. C. Hoff.

**splendida, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype female (USNM type no.71381); also, allotype male (holotype and allotype on same slide); slide no. V–12599.

**Collection data:** Ex *Proechimys guyannensis*—currently treated as a junior synonym of *Proechimys cayennensis* Desmarest (Rodentia: Echimyidae: Eumysopinae) (field no. SVP 12599), VENEZUELA: Bolivar Province, 146 km S & 7 km E of Ciudad Bolivar, elevation 306 m, 5 April 1967, Coll: S. V. Peterson team (Smithsonian–U.S. Army project).

**Current status:** *Pterophthirus splendidida* (Johnson)—see Kim & Ludwig (1978) and Durden & Musser (1994).

**squamosus, Haematopinoideus** (Family Hoplopleuridae)

**Description:** Osborn, H. (1891) The Pediculi and Mallophaga affecting man and lower animals. *Bulletin of the United States Department of Agriculture, Bureau (Division) of Entomology (old series)*, 7(25), 28–29, fig. 16.

**Primary type in USNM:** Lectotype female (USNM type no. 24137)—designated by Johnson (1958) as the specimen on the right; also, another female is on the same slide.

**Collection data:** Ex *Geomys bursarius* (Shaw) (Rodentia: Geomyidae)—this could have been a misidentification because *H. squamosus* is an ectoparasite of North American moles (Insectivora: Talpidae: Talpinae), USA: Iowa, Ames, no date on slide, Coll: H. Osborn.

**Remarks:** This is the type species for the monotypic genus *Haematopinoideus*. 
**suturalis, Haematopinus** (Family Enderleinellidae)

**Description:** Osborn, H. (1891) The Pediculi and Mallophaga affecting man and lower animals. *Bulletin of the United States Department of Agriculture, Bureau (Division) of Entomology (old series)*, 7(25), 27, fig. 15.

**Primary type in USNM:** Lectotype male (USNM type no. 24136)—designated by Johnson (1958) who provides a detailed account of the type series and their slide labels.

**Collection data:** Type slide series labeled, “Plentiful on *Spermophilus franklini* and *S. 13-lineatus*.” currently *Spermophilus franklinii* (Sabine) and *Spermophilus tridecemlineatus* (Mitchill) (both Rodentia: Sciuridae: Sciurinae), lectotype ex *S. tridecemlineatus*, USA: Iowa, Ames, 24 Apr. 1884, Coll: H. Osborn.

**Current status:** *Enderleinellus suturalis* (Osborn)—generic reassignment by Kellogg & Ferris (1915).

**tamiasciuri, Enderleinellus** (Family Enderleinellidae)


**Primary type in USNM:** Holotype female (USNM type no. 72298); also, allotype male (holotype, allotype, 1 paratype 2nd instar nymph and 1 paratype 3rd instar nymph, all on same slide); slide no. “Lot 46–4505.”

**Collection data:** Ex *Tamiasciurus hudsonicus* (Erkelen) (Rodentia: Sciuridae: Sciurinae) (Lot 46–4505; # 900), USA: Pennsylvania, Wayne County, 17 July 1945, Coll: F. Harper.

**Remarks:** The 2nd and 3rd instar nymphal stages were also described in the original paper and 1 paratype of each of these stages is also deposited in the USNM.

**tarsomydis, Polyplax** (Family Polyplacidae)


**Primary type in USNM:** Holotype male (USNM type no. 44904).

**Collection data:** Ex *Tarsomys apoensis* Mearns (Rodentia: Muridae: Murinae), PHILIPPINES: Mindanao, no other data.

**texana, Fahrenholzia** (Family Polyplacidae)

**Primary type in USNM:** Holotype female (USNM type no. 72319); also, allotype male.


**thurmanae, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype female (USNM type no. 64457); slide no. RE-5416; also, allotype male, slide no. RE–5412 (listed as RE–5512 in original publication).


**tiponi, Hoplopleura** (Family Hoplopleuridae)


**Primary Type in USNM:** Holotype male (USNM type no. 71387); also, allotype female (holotype and allotype on same slide); slide no. V–4050.

**Collection data:** Ex *Thomasomys laniger* (Thomas) (Rodentia: Muridae: Sigmodontinae) (field no. SVP 4050), VENEZUELA: Merida Province, 4 km S & 6.5 km E of Tabay (La Coromoto), elevation 3,170 m, 12 March 1966, Coll: S. V. Peterson, Parrish & V. J. Tipton (Smithsonian–U.S. Army project).

**traubi, Hoplopleura** (Family Hoplopleuridae)


**Primary type in USNM:** Holotype male; also, allotype male; slide no. (for both) B–95384.

**Collection data:** Ex *Maxomys wattsii* Musser (Rodentia: Muridae: Murinae), INDONESIA: Sulawesi Tengah (Central Sulawesi/Celebes), Tambusisi Damar, on slopes of Gunung (Mount) Tambusisi, Morowali (1.38S, 121.23E), elevation 4,500 ft., 8 Mar. 1980, Coll: C. H. S. Watts.
**traubi, Neohaematopinus** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 57684).

**Collection data:** Ex *Citellus adocetus*—currently treated as *Spermophilus adocetus* (Merriam) (Rodentia: Sciuridae: Sciurinae), MEXICO: Michoacan State, Apatzingan, 21 Aug. 1941, Coll: R. Traub.

**Current status:** *Linognathoides traubi* (Rubin)—see Kim & Adler (1982) and Durden & Musser (1994).

**Remarks:** The published collection date of 3 Aug. 1941 disagrees slightly with the collection date designated on the slide label (Johnson 1958).

**vacillata, Polyplax** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 64470); also, allotype male (paratype male on same slide as holotype; paratype female on same slide as allotype); slide no. (for both slides) B–22321/NAMRU–3.

**Collection data:** Ex *Psammomys obesus obesus* Cretzschmar (Rodentia: Muridae: Gerbillinae), EGYPT: Western Desert Governorate, 26 miles W of Sidi Barrani, 21 Apr. 1954, Coll: H. Hoogstraal.

**verruculosus, Lemurphitus** (Family Polyplacidae)


**Primary type in USNM:** Holotype female (USNM type no. 64237); slide labeled “from skin/Collr. Field no. 4524.”

**Collection data:** Ex formalin-preserved mouse lemur—must have been either *Cheirogaleus* sp. or *Microcebus* sp. (Primates: Cheirogaleidae: Cheirogaleinae)—see Durden & Musser (1994) (field no. 4524), MADAGASCAR: Tuléar Province, Fort Dauphin District, Bemangidy, 1948, Coll: H. Hoogstraal & R. Alison.

**Current status:** *Lemurpediculus verruculosus* (Ward)—generic reassignment by Paulian (1958), and accepted by Kim & Ludwig (1978) and Durden & Musser (1994).

**wallacei, Polyplax** (Family Polyplacidae)


Primary type in USNM: Holotype female; also, allotype male which was described by Durden & Musser (1992).

Collection data: Ex adult female Bunomys chrysocomus (Hoffmann) (Rodentia: Muridae: Murinidae) (field no. LAD 69), INDONESIA: Sulawesi Utara (= North Sulawesi/Celebes), Bolaang Mongondow Province, Dumoga Bone National Park (currently, Bogani Nani Wartabone National Park) (123.53E, 0.34N), elevation ~230 m, 26 Feb. 1985, Coll: L. A. Durden (collected during Project Wallace—Royal Entomological Society of London expedition to Sulawesi).

weisseri, Linognathus (Family Linognathidae)


Primary type in USNM: Holotype male (USNM accession no. TM 2031126); also, allotype female.


Remarks: The first instar nymph was also described in the original paper and a paratype of this stage is also deposited in the USNM. Weisser (1975) described this louse as Linognathus melampi in his dissertation. However, that name was not published and is unavailable according to articles 8 and 9 of the International Code of Zoological Nomenclature published by the International Commission on Zoological Nomenclature (1999). The unavailable (“manuscript”) name Linognathus melampi Weisser, 1975 therefore becomes a junior synonym of L. weisseri.

zelotomysidis, Hoplopleura (Family Hoplopleuridae)


Primary type in USNM: Holotype female (USNM type no. 64467); also, allotype male (holotype and allotype on same slide); slide labeled “Ferris col. 1039.”

Collection data: Ex Zelotomys tildegardeae (Thomas) (Rodentia: Muridae: Murinidae) (F. C. M. no. 16955), BRITISH EAST AFRICA (currently, KENYA): Mt. Rukenya, no date or collector name on slide.
USNM specimens that are stated to be primary types for unpublished taxa

Because descriptions of these lice have not been published, the names for these taxa are currently considered unavailable according to articles 8 and 9 of the International Code of Zoological Nomenclature published by the International Commission on Zoological Nomenclature (1999). Specific epithets are not provided here for these taxa because they currently have no nomenclatural standing. Publishing the names would create *nomina nuda*. However, these species could be formally described in the future which would serve to validate the names. On request, the senior author can provide the names to interested researchers.

**Hoplopleura sp. 1** (Family Hoplopleuridae)

**Primary Type in USNM:** Holotype male (USNM type no. 73012); also, allotype female (holotype and allotype on same slide); slide no. J–122.

**Collection data:** Ex *Rattus rattus diardii*—currently treated as a junior synonym of *Rattus tanezumi* Temminck (Rodentia: Muridae: Murinae), INDONESIA: Central Java (Jawa Tengah), Bojelali region, Plalangan, 1 May 1968, Coll: not stated.

**Hoplopleura sp. 2** (Family Hoplopleuridae)

**Primary type in USNM:** Holotype female (slide no. X1E 14, KT–1346); also, allotype male (slide no. X1E 21, KT–1353).

**Collection data:** Ex *Rattus* sp. (Rodentia: Muridae: Murinae), THAILAND, Chiang Mai Province, Doi Inthanon, 1 Feb. 1971, Coll: not stated.

**Hoplopleura sp. 3** (Family Hoplopleuridae)

**Primary type in USNM:** Holotype female (USNM type no. 73013); also, allotype male (holotype and allotype on same slide); slide no. JTM–6861.


**Hoplopleura sp. 4** (Family Hoplopleuridae)

**Primary type in USNM:** Holotype female; also, allotype male (holotype and allotype on same slide); slide no. 86088.


**Hoplopleura sp. 5** (Family Hoplopleuridae)

**Primary type in USNM:** Holotype female; also, allotype male (holotype and allotype on same slide); slide no. JTM–6779.

Linognathus sp. 1 (Family Linognathidae)
Primary type in USNM: Holotype female (USNM type no. 73850); slide no. “F.L.W. 2821, Remontado por F. L. Werneck, L 093;” also, allotype male, slide no. “F.L.W. 2822, Rws. L 093.”

Linognathus sp. 2 (Family Linognathidae)
Primary type in USNM: Holotype female (USNM type no. 73849); also, allotype male; slide no. (for both) L182.

Linognathus sp. 3 (Family Linognathidae)
Primary type in USNM: Holotype female (USNM type no. 73851); also, 1 nymph on same slide as holotype; slide no. HH–11298/NAMRU–3/Rev. L220.

Linognathus sp. 4 (Family Linognathidae)
Primary type in USNM: Holotype female (USNM type no. 73852); also, allotype male (holotype and allotype on same slide).

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References


