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# HOST AND DISTRIBUTION LISTS OF MITES (ACARI), PARASITIC AND PHORETIC, IN THE HAIR OR ON THE SKIN OF NORTH AMERICAN WILD MAMMALS NORTH OF MEXICO: RECORDS SINCE 1974

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HOST AND DISTRIBUTION LISTS OF MITES (ACARI),  
PARASITIC AND PHORETIC, IN THE HAIR OR ON THE SKIN OF  
NORTH AMERICAN WILD MAMMALS NORTH OF MEXICO:  
RECORDS SINCE 1974

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ABSTRACT.- Information concerning mites found in the hair of wild mammals of North America north of Mexico is summarized for records accumulated since a similar paper was published by Whitaker and Wilson in 1974. Chiggers, ticks and species that burrow into or under the skin are generally excluded although follicle-inhabiting mites are included. Included are lists a) of the mites organized taxonomically, b) hosts from which each species has been reported, and c) states and provinces citing references for each separate record.

## INTRODUCTION

Whitaker and Wilson (1974) published information on mites parasitic and phoretic in the hair or on the skin of wild mammals of North America north of Mexico, including lists of mites by host and by state or province. Kennedy and Newman (1986) published information on the parasites of vertebrates of Canada, including lists by parasite and by host. Since that time there have been numerous new records published, and a number of taxonomic changes of both mites and hosts have occurred.

This article summarizes published information on mites found in the hair or on the skin of North American wild mammals, on their hosts and their geographic distribution not included in Whitaker and Wilson (1974). The present list includes papers published after 1972, and also several papers inadvertently omitted from the 1974 paper, as follows: Allred (1970), Cameron (1938), Cross (1965), Dubinina (1964), Eads and Dalquest (1954), Fain (1967a, b), Fain and Johnston (1970), Gurney and Hussey (1967), Horsfall (1967), Hyland and Fain (1968), Johnson (1966), Konno (1957), Lang (1972), Linzey and Linzey (1968), Martin (1972), Rausch and Rausch (1968), Redington and Jachowski (1972), Sorenson (1962), Thies (1967) and Twinn (1935).

Internal parasites such as those found in the internal organs or nasal passages, or those that bury themselves in the skin (Demodicidae, Sarcoptidae, Psoroptidae) are excluded, although glycyphagid and chortoglyphid mites inhabiting follicles are included. Chiggers and ticks are excluded, as are parasites of domestic animals. Nest records of ectoparasitic species and species not regularly associated with mammals, such as free-living forms found occasionally in fur, are generally excluded. Hosts listed only to genus are included only if the mite was not recorded from a species in that genus. Hosts listed only by common name are omitted except when it is clear which species is involved or if it is the only record for a North American species of mite. A number of

new species of mites have been included that have been described since the 1974 article appeared. These may be determined by examining the authors and dates in the initial list.

The mite families are generally those recognized by Wooley (1988), but see also Evans (1992), Krantz (1978) and OConnor (1982). The only mite family included in the 1974 article, but not included here is the Labidophoridae. Species previously placed in the Labidophoridae are now included in the Glycyphagidae (subfamily Labidophorinae). Several families that were not included in the 1974 article are included here. The Ameroseiidae, Macrochelidae and Pygmephoridae contain species phoretic on mammals and are included in this paper. Likewise mites of the family Chortoglyphidae living in follicles were not included in the earlier paper, but are included in this paper. Formerly the family Cloacaridae included three Eurasian forms. Now a parasitic species in this family has been found in Oregon (Fain and Bochkov, 2001), therefore this family has been added to this report. No North American species were known from the families Atopomelidae, Echimyopodidae, and Rhinocoptidae at the time of publication of the previous paper, but species in these families have been recorded or described since. The genera *Olabidocarpus*, *Alabidocarpus* and *Schizocarpus* were included in the Listrophoridae in 1974 but are now referred to the family Chirodiscidae.

Taxonomy of the mammals generally follows Jones et al. (1997) and Wilson and Reeder (2005). Hall (1981) was useful for geographic information on the hosts. Some changes in mammal taxonomy should be noted. Long-eared bats previously in the genus *Plecotus* are now in the genus *Corynorhinus*. The North American pipistrells have been removed from the genus *Pipistrellus* and split into two new genera: western pipistrelle, *Parastrellus hesperus* and eastern pipistrelle *Perimyotis subflavus*. Chipmunks of the genus *Eutamias* are now all included in the genus *Tamias*. *Peromyscus floridanus* is now included in the genus *Podomys*. The species of woodrat in the

northeastern United States is now recognized as *Neotoma magister* rather than *N. floridana*. *Arvicola richardsoni* is now included in the genus *Microtus*. Voles previously in the genus *Lagurus* are now included in the genus *Lemmiscus* and those previously in the genus *Clethrionomys* are now in the genus *Myodes*. Species previously classed as *Perognathus*, *baileyi*, *californicus*, *fallax*, *formosus*, *hispidus*, *intermedius*, *nelsoni*, *penicillatus* and *spinatus* are now in the genus *Chaetodipus*.

Some general works should be mentioned. The book edited by Kim (1985), *Coevolution of parasitic arthropods on mammals*, includes chapters by F. J. Radovsky on mesostigmatid mites, by W. B. Nutting on prostigmatid mites and by A. Fain and K. E. Hyland on astigmatid mites. These are excellent sources of information about relationships of mammalian ectoparasitic mites.

Forrester (1992) has summarized information on parasites of Florida mammals. The American Society of Mammalogists has published three monographs with extensive chapters on parasites, one on *Peromyscus* with the chapter on parasites by Whitaker (1968), one on *Microtus* with the chapter by Timm (1985), and one on heteromyid rodents with the chapter by Whitaker et al. (1993).

Whitaker (1982, 1991) summarized information on ectoparasites of mammals of Indiana. Webb and Loomis (1977) authored a chapter on ectoparasites in a monograph on phyllostomid bats, and Yunker (1973) published an article on mites in a book on parasites of laboratory animals. Whitaker and Morales-Malacara (2005) summarized information on ectoparasites of mammals of Mexico.

#### THE FAMILIES OF MITES

The families of mites included in this work are indicated below. Changes in their taxonomic treatment are outlined when appropriate and some of the major literature published since the 1974 paper is mentioned. Some families have been added that were not included in 1974.

## AMEROSEIIDAE

A number of ameroseiid records had previously been reported from North American mammals as *Kleemannia* sp., but this family was not included in the 1974 paper. Elsen and Whitaker (1985) described and presented a key to the forms on mammals previously identified as *Kleemannia*. They described a new genus, *Sertitympanum*, with three species. The females are phoretic in fur. Mites in this genus are easily recognized in having a triple gear or cog-like configuration on the sternal shield.

*Sertitympanum contiguum* Elsen & Whitaker 1985- CA, OR, *Dipodomys elephantinus*, *D. ordii*, *D. venustus*.

*S. exarmatum* Elsen & Whitaker 1985- OR, WY.; *Dipodomys ordii*, *Lemmiscus curtatus*,

*Onychomys leucogaster*, *Perognathus parvus*, *Thomomys talpoides*.

*S. separationis* Elsen & Whitaker 1985- IN,OK,WY; *Onychomys leucogaster*, *Peromyscus maniculatus*, *Spermophilus tridecemlineatus*.

## ATOPOMELIDAE

This family is widespread in the New and Old World tropics (Fain, 1979b) but no species from the family had been reported from North America as of 1974. Three species of atopomelids in three genera are presently known in North America, *Myocastorobia myocastor* from the coypu and *Didelphilichus serrifer* from the opossum, previously unreported. *Chirodiscoides oryzomys* was reported from *Oryzomys palustris* as a listrophorid in the 1974 paper, but it is now placed in the Atopomelidae in the genus *Oryzomyisia*. There are no new reports of it since the 1974 paper. Atopomelids are listrophorid-like mites with legs I and II only slightly modified for clasping and they lack caruncles.

*Didelphilichus serrifer* Fain, 1970- FL, GA, IN, TN; *Didelphis virginiana*.

*Myocastorobia myocastor* Fain, 1970)- LA; *Myocastor coypus*.

#### CHEYLETIDAE

Some new cheyletid species but no new genera have been reported as mammal associates in this family since the 1974 article. Fain, Smiley and Gerson (1997) presented a new classification for the Cheyletidae including new taxa. Most cheyletids are free-living predators; those listed here are either parasitic or occasionally associated with mammals. Mites of this family generally have one or more dorsal shields and a strong peritreme which frames the gnathosoma. A large terminal claw, usually toothed, is on the palpal tibia, and two claws and an empodium are usually present on all legs.

*Cheletonella vespertilionis* Womersley, 1941 – IN; *Eptesicus fuscus*.

*Cheyletiella parasitivorax* (Megnin, 1878)- IN; *Sylvilagus floridanus*.

*Cheyletus cacahuamilpensis*(nr) Baker, 1949- OK; *Myotis velifer*.

*C. eruditus* (Schrank, 1781)- IN, NJ, TX; *Bassariscus astutus*, *Didelphis virginiana*, *Peromyscus leucopus*, *Rattus norvegicus*.

*C. linsdalei* Baker, 1949- OR; *Spermophilus beldingi*.

*C. malaccensis* Oudemans, 1903- IN; *Neotoma floridana*, *N. magister*.

*Eucheyletia bishoppi* Baker, 1949- IL, IN, MA, NH, OR; *Microtus pinetorum*, *Neotoma cinerea*, -

*Sorex fumeus*, *S. pacificus*, *S. trowbridgii*, *Spilogale putorius*, *Tamias striatus*.

*E. hardyi* Baker, 1949- TX; *Bassariscus astutus*.

#### CHIRODISCIDAE

This family was not included in the 1974 article. Chirodiscids are tiny tubular listrophorid-like mites with legs I and II highly modified for clasping hairs. Four of the North American chirodiscid genera, *Alabidocarpus*, *Dentocarpus*, *Olabidocarpus* and *Schizocarpus* were included

in the family Listrophoridae in the 1974 article. *Schizocarpus* includes the beaver fur mites and had been thought to comprise only one species, *S. mingaudi*, but Dubinina (1964) found the Eurasian beaver harbored numerous species, many of them confined to particular areas on the host. A number of additional species in this genus have now been described from the beaver in North America (Fain et al., 1984; Fain and Whitaker, 1988). A new species in a fifth North American genus, *Lutrilichus* Fain, has been described from *Mustela erminea* by Fain et al. (1974).

*Alabidocarpus calcaratus* Lawrence, 1952- CO, MI, NM, OR; *Myotis californicus*, *M. lucifugus*,  
*M. occuluts*, *M. volans*.

*A. nr. Eptesicus* – NM; *Myotis occultus*

*Dentocarpus macrotrichus* Dusbabek & Cruz, 1966- FL; *Tadarida brasiliensis*.

*Lutrilichus canadensis* Fain, Lukoschus, Kok & Clulow, 1974- ON; *Mustela erminea*.

*Olabidocarpus whitakeri* McDaniel & Coffman, 1970- IL, IN; *Myotis austroriparius*, *M. grisescens*, *M. septentrionalis*.

*Schizocarpus alaskensis* Fain & Whitaker 1988- AK, ME; *Castor canadensis*.

*S. centralis* Fain & Whitaker 1988- AK; *Castor canadensis*.

*S. contrarius* Fain & Whitaker 1988- AK, IN; *Castor canadensis*.

*S. distinctus* Fain & Whitaker 1988- AK, ME, MA; *Castor canadensis*.

*S. furcatus* Fain, Whitaker & Smith, 1984- AK, IN; *Castor canadensis*.

*S. indianensis* Fain, Whitaker & Smith, 1984- AK, IN, ME, MA; *Castor canadensis*, *Ondatra zibethicus*.

*S. inversus* Fain, Whitaker & Smith, 1984- AK, IN, ME, MA; *Castor canadensis*.

*S. mingaudi* Trouessart, 1896- AK, ID, IN, ME; *Castor canadensis*

*S. paramingaudi* Fain & Whitaker 1988- AK, IN, ME, MA, OR; *Castor canadensis*.



*S. postannulatus* Fain & Whitaker 1988- AK, IN, ME, MA; *Castor Canadensis*

*S. posticus* Fain & Whitaker 1988- AK, IN; *Castor canadensis*.

*S. protinus* Fain & Whitaker 1988- AK, ME; *Castor canadensis*.

*S. reductus* Fain & Whitaker 1988- AK, ME; *Castor canadensis*.

*S. spinifer* Fain, Whitaker & Smith, 1984- AK, IN, ME, MA; *Castor canadensis*.

*S. subvirgulatus* Fain, Whitaker & Smith, 1984- AK, IN, ME, MA; *Castor canadensis*.

*S. tetrapilis* Fain, Whitaker & Smith, 1984- AK, IN, ME; *Castor canadensis*.

*S. virgulatus* Fain, Whitaker & Smith, 1984- IN, MA; *Castor canadensis*.

#### CHORTOGLYPHIDAE

This family was not included in the 1974 article, but we have included it here because some species it contains are known to be follicle mites. These are tiny mites and may often be seen protruding from the tail follicles of the hosts. There are five species of North American chortoglyphid follicle mites.

*Aplodontopus latus* Fain, 1967- BC, OR; *Aplodontia rufa*.

*A. marmotophilus* Krantz, O'Conner, Foreyt and Fain, 2003 – WA, *Marmota flaviventris*.

*A. micronyx* Fain & Spicka, 1977- IN; *Spermophilus tridecemlineatus*.

*A. sciuricola* Hyland & Fain, 1968- IN, MA, MS, RI, TN; *Mustela frenata*, *Tamias striatus*.

*Chrotoglyphus arcuatus* Cudmore, 1986- IN; *Neotoma floridana*, *Zapus hudsonius*

#### CLOACARIDAE

Previously this family included 3 Eurasian forms and was not included in the 1974 article. Now a parasitic species of this family has been found in Oregon (Fain and Bochkov, 2001), therefore adding this family to this report.

*Epimyodex soricis* Fain and Bochkov, 2001 – OR; *Sorex trowbridgii*.

## DERMANYSSIDAE

There have been no taxonomic changes that affect North American members of this family since the 1974 article. Mites of the genus *Liponyssoides* are mammal parasites, but those of the genus *Dermanysus* are bird parasites that occasionally are found on mammals. Dermanyssids can be recognized from other mesostigmatid mites by the elongate distal segment and very tiny chelate portion of the chelicerae.

*Dermanyssus gallinae* (DeGeer, 1778)- ID; *Perognathus parvus*.

*D. gallinoides* Moss, 1966- OR; *Glaucomys sabrinus*.

*Liponyssoides sanguineus* (Hirst) – SC; *Mus musculus*.

## ECHIMYOPIDAE

The genus *Echimyopus* (Fain, 1967) had not been found in North America in 1974 thus was not included in the earlier article. *Echimyopus* when described was placed in the Glycyphagidae but has recently been placed in its own family, the Echimyopidae. Two species have been reported from North America, *E. dasypus* (from a nine-banded armadillo shipped to England from Florida), and *E. nyctomys*, from squirrels of the genus *Sciurus* from Indiana. However, the specimens identified as *E. nyctomys* have now been reidentified as *E. orphanus*.

*Echimyopus dasypus* Fain, Lukoschus, Louppen & Mendez, 1973- FL; *Dasypus novemcinctus*.

*E. orphanus* Fain & Phillips, 1977- IN; *Sciurus carolinensis*, *S. niger*.

## GLYCYPHAGIDAE

Labidophoridae was listed as a separate family in the 1974 article, but most of the mites in this group are now included in the subfamily Labidophorinae of the family Glycyphagidae. A few adult mites in this family are known from mammals, but most records of glycyphagids on mammals are of hypopi (generally inactive, phoretic deutonymphs). Adults are generally found in the nests

of the hosts. Many of the forms were originally described from hypopi, but comparison of adults of this group with those of other glycyphagids has provided convincing evidence that these mites belong in the Glycyphagidae, and comparison of the adults within the group has helped to place the described hypopi within their proper genera. Several of the species previously listed in the genus *Dermacarus* are now placed in the genus *Glycyphagus*. The species *hylandi* is now placed in the genus *Lepidoglyphus* (Zachvatkin, 1936). The genera *Dipodomyopus* (Fain and Lukoschus, 1978), *Metalabidophorus* (Fain, 1967) and *Microlabidopus* (Fain, 1967) were not cited in the 1974 article. *Dipodomyopus* had not been described, and no species of *Metalabidophorus* or *Microlabidopus* was yet known from North America. Important papers on taxonomy of this family are by Fain and Lukoschus (1974), and Fain (1986). *Marsupialichus brasiliensis* and *M. marsupialis* are recognized as separate species, but we suspect the two are the same. Most of the hypopi of this family lack mouthparts and possess a pair of prominent posterior clasping organs for clasping individual hairs.

*Dermacarus jonesi* Fain & Whitaker, 1976- BC, CA, WA; *Peromyscus maniculatus*, *Sorex sp.*

*D. reticulosus* Spicka & Gerrits, 1977- IN, OR; *Spermophilus beldingi*, *S. tridecemlineatus*.

*D. spermophilus* Fain & Whitaker, 1978- OR; *Neotoma cinerea*, *N. fuscipes*, *Spermophilus lateralis*, *S. townsendii*.

*D. tamiasciuri* Rupes, Yunker & Wilson, 1971-IN, OR, PA, PQ; *Glaucomyssabrinus*, *Tamiasciurus douglasii*, *T. hudsonicus*.

*Dipodomyopus tuttlei* Fain & Lukoschus, 1978- AZ; *Dipodomys sp.*

*Glycyphagus hypudaei* (Koch, 1841)- CO, IL, IN, KY, NWT, NB, NY, NC, NS, OR, PA, SD, SD/WY, TN, TX, WA, WY; *Arborimus albipes*, *A. longicaudus*, *Bassariscus astutus*, *Blarina brevicauda*, *Condylura cristata*, *Cryptotis parva*, *Dicrostonyx torquatus*,

*Lemmiscus curtatus*, *Microtus chrotorrhinus*, *M. montanus*, *M. ochrogaster*, *M. oregoni*, *M. pennsylvanicus*, *M. pinetorum*, *M. richardsoni*, *M. townsendii*, *Mus musculus*, *Mustela erminea*, *M. frenata*, *Myodes californicus*, *M. gapperi*, *Myotis occultus*, *Napaeozapus insignis*, *Neotoma floridana*, *N. magister*, *Ochrotomys nuttalli*, *Onychomys leucogaster*, *Peromyscus leucopus*, *P. maniculatus*, *Reithrodontomys megalotis*, *Scapanus townsendii*, *Sorex bendirii*, *S. cinereus*, *S. dispar* (nr.), *S. fumeus*, *S. gaspensis*, *S. longirostris*, *S. pacificus*, *S. palustris*, *S. trowbridgii*, *Synaptomys borealis*, *S. cooperi*, *Tamias minimus*, *Tamiasciurus douglasii*, *Thomomys mazama*, *Urocyon cinereoargenteus*, *Zapus princeps*, *Z. trinotatus*.

*G. hypudaei septentrionalis* Fain, 1969- PQ; *Myodes gapperi*, *Tamiasciurus hudsonicus*.

*G. microti* Spicka & OConnor 1980- NY; *Microtus pennsylvanicus*, *M. pinetorum*.

*G. newyorkensis* (Fain, 1969)- AK, AB, BC, CO, IN, MN, MT, NB, NC, ND, NS, OR, PE, PQ, UT, WA, WY; *Blarina brevicauda*, *Napaeozapus insignis*, *Tamiasciurus hudsonicus*, *Zapus hudsonius*, *Z. princeps*, *Z. trinotatus*.

*G. zapus* Fain, Spicka, Jones & Whitaker, 1985- IN; *Zapus hudsonius*.

*Labidophorus nearcticus* Fain & Whitaker, 1985- NH, NY, VT; *Parascalops breweri*.

*Lepidoglyphus hylandi* (Fain, 1969)- CT, IL, IN, MA, MS, NB, NH, NJ, NY, OR, PA, RI, TN, WI; *Lemmiscus curtatus*, *Microtus montanus*, *M. pinetorum*, *Mustela frenata*, *Myodes gapperi*, *Tamias striatus*.

*Marsupialichus brasiliensis* Fain, 1969- IN, TN; *Didelphis virginiana*, *Mustela vison*, *Ondatra zibethicus*, *Sylvilagus floridanus*.

*M. johnstoni* Fain, 1969- LA; *Dasypus novemcinctus*.

*M. marsupialis* Fain, de Cock & Lukoschus 1972- LA; *Didelphis virginiana*.

*Metalabidophorus liomys* Lukoschus, Duijghuijsen & Fain, 1977, TX; *Liomys irroratus*.

*Microlabidopus americanus* Fain, 1967- OR; *Aplodontia rufa*.

*Orycteroxenus canadensis* Fain, Kok, Lukoschus & Clulow, 1971- IN, NB; *Condylura cristata*,

*Microtus chrotorrhinus*, *Sorex hoyi*.

*O. soricis* (Oudemans, 1915)- IL, IN, KY, NB, NC, NY, OR, PA, PE, SC, TN (nr.), *Blarina*

*brevicauda*, *B. carolinensis*, *Condylura cristata*, *Cryptotis parva*, *Microtus chrotorrhinus*,

*M. ochrogaster*, *Mustela erminea*, *Sorex bendirii*, *S. cinereus*, *S. dispar*, *S. fumeus*, *S.*

*gaspensis*, *S. hoyi*, *S. longirostris*, *S. pacificus*, *S. palustris*, *S. trowbridgii*, *S. vagrans*

*yaquinae*, *Synaptomys borealis*, *Tamiasciurus hudsonicus*, *Zapus hudsonius*.

*Scalopacarus obesus* Fain & Whitaker, 1973- IN; *Scalopus aquaticus*, *Vulpes vulpes*.

*S. scapanus* Fain & Whitaker, 1981- WA; *Scapanus townsendii*.

*Xenoryctes latiporus* Fain & Whitaker, 1973- IN, MA, NB, NH, NY, NC, OR, PA, SC; *Blarina*

*brevicauda*, *B. carolinensis*, *Microtus chrotorrhinus*, *Mus musculus*, *Mustela frenata*,

*Myodes gapperi*, *Peromyscus leucopus*, *Scalopus aquaticus*, *Sorex cinereus*, *S. fumeus*, *S.*

*longirostris*, *Spermophilus tridecemlineatus*, *Spilogale putorius*, *Synaptomys cooperi*,

*Tamias striatus*, *Zapus hudsonius*.

*X. nudus* Fain & Whitaker, 1975- IN, NB, NY, NC, OR (nr.), PA; *Blarina brevicauda*, *Condylura -*

*cristata*, *Neotoma fuscipes* (nr.), *Sorex cinereus*, *S. fumeus*, *S. hoyi*, *S. longirostris*, *S.*

*palustris*.

*Zibethacarus ondatrae* (Rupes & Whitaker, 1968)- AK, IN, NS, OH, OR, WV- *Castor canadensis*,

*Didelphis virginiana*, *Microtus oregoni*, *Mustela frenata*, *M. nivalis*, *M. vison*, *Ondatra*

*zibethicus*, *Rattus norvegicus*.

#### LAELAPIDAE

There have been relatively few taxonomic changes in this large family since 1974. Mites that were previously assigned to the genus *Hirstionyssus* (Fonseca) are now referred to *Echinonyssus* (Hirst) (Tenorio and Radovsky, 1979). Herrin (1974) synonymized *E. latiscutatus* with the South American *E. butantanensis*, and Tenorio (1984) presented a list of the world species of *Echinonyssus*. Williams et al. (1978) presented much new information and described new species in the genus *Haemogamasus*. Laelapids have a jug-shaped epigynial plate and an elongate peritreme. Many of the species are parasitic. Many of the large active mites in the fur of North American mammals are laelapids.

*Alphalaelaps aplodontiae* (Jellison, 1945)- OR; *Aplodontia rufa*, *Sorex trowbridgii*, *S. vagrans*.

*Androlaelaps casalis* (Berlese, 1887)- AL, AR, FL, ID, IN, GA, MD, MA, NB, NC, OR, SC, TN;

*Blarina carolinensis*, *Didelphis virginiana*, *Microtus pennsylvanicus*, *Neotoma cinerea*,

*Neotoma floridana*, *Ochrotomys nuttalli*, *Perognathus parvus*, *Peromyscus leucopus*, *P.*

*maniculatus*, *Procyon lotor*, *Rattus norvegicus*, *Scapanus orarius*, *S. townsendii*, *Sciurus*

*carolinensis*, *S. niger*, *Sorex trowbridgii*, *Tadarida brasiliensis*, *Tamias striatus*,

*Tamiasciurus hudsonicus*.

*A. fahrenheitzi* (Berlese, 1911)- AL, AR, BC, CA, CO, FL, GA, ID, IL, IN, IA, KY, MD, MA, MI,

MN, MS, MT, NE, NB, NH, NJ, NM, NY, NF, NC, ND, NS, OH, OR, PA, PE, SC, SD,

SD/WY, TN, TX, UT, VT, VA, WA, WV, WI, WY; *Arborimus albipes*, *A. longicaudus*,

*Bassariscus astutus*, *Blarina brevicauda* *B. carolinensis*, *Chaetodipus hispidus*, *Condylura -*

*crystata*, *Corynorhinus townsendii*, *Cryptotis parva*, *Cynomys ludovicianus*, *Didelphis -*

*virginiana*, *Dipodomys elator*, *D. elephantinus*, *D. ordii*, *D. venustus*, *Geomys pinetis*,

*Glaucomys sabrinus*, *G. volans*, *Lemmiscus curtatus*, *Marmota monax*, *Mephitis mephitis*, -

*Microtus chrotorrhinus*, *M. longicaudus*, *M. montanus*, *M. ochrogaster*, *M. oregoni*, *M.*

*pennsylvanicus*, *M. pinetorum*, *M. richardsoni*, *M. townsendii*, *Mus musculus*, *Mustela -*  
*erminea*, *M. frenata*, *M. nivalis*, *M. vison*, *Myodes californicus*, *M. gapperi*, *Napaeozapus -*  
*insignis*, *Neofiber alleni*, *Neotoma cinerea*, *N. floridana*, *N. fuscipes*, *N. lepida*, *N. magister*,  
*N. micropus*, *Neurotrichus gibbsii*, *Ochrotomys nuttalli*, *Ondatra zibethicus*, *Onychomys -*  
*leucogaster*, *Oryzomys palustris*, *Parascalops breweri*, *Perognathus fasciatus*, *P. parvus*,  
*Peromyscus boylii*, *P. crinitus*, *P. gossypinus*, *P. leucopus*, *P. maniculatus*, *P. truei*,  
*Podomys floridanus*, *Procyon lotor*, *Rattus norvegicus*, *Reithrodontomys megalotis*, -  
*Scalopus aquaticus*, *Scapanus latimanus*, *S. orarius*, *S. townsendii*, *Sciurus carolinensis*, *S.*  
*niger*, *Sigmodon hispidus*, *Sorex bendirii*, *S. cinereus*, *S. fumeus*, *longirostris*, *S. pacificus*,  
*S. palustris*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*, *Spermophilus beecheyi*, *S.*  
*beldingi*, *S. brunneus*, *S. franklinii*, *S. lateralis*, *S. richardsoni*, *S. tereticaudus*, *S.*  
*townsendii*, *S. tridecemlineatus*, *S. washingtoni*, *Spilogale putorius*, *Sylvilagus floridanus*, *S.*  
*palustris*, *Synaptomys borealis*, *S. cooperi*, *Tamias amoenus*, *T. minimus*, *T. striatus*,  
*Tamiasciurus hudsonicus*, *Taxidea taxus*, *Thomomys talpoides*, *Urocyon cinereoargenteus*,  
*Zapus hudsonius*, *Z. princeps*, *Z. trinotatus*.

*A. geomys* (Strandtmann, 1949)- CA, IL, MO, MT, NM, OR; *Dipodomys ordii*, *Geomys bursarius*  
*illinoensis*, *G. bursarius missouriensis*, *Onychomys leucogaster*, *Thomomys bottae*, *T.*  
*bulbivorus*, *T. mazama*, *T. talpoides*.

*A. morlani* (Strandtmann, 1949)-IN; *Mus musculus*, *Rattus norvegicus*.

*Echinonyssus affinus* (Jameson, 1950)- OR; *Peromyscus maniculatus*.

*E. arcuatus* (Koch, 1839)- IL; *Cryptotis parva*, *Peromyscus leucopus*.

*E. bisetosus* Allred, 1957- ID; *Neotoma cinerea*.

- E. blarinae* (Herrin, 1970)- CA, GA, IN, MI, NB, NY, NS, OR, PA, SC, WA; *Blarina brevicauda*, *Blarina carolinensis*, *Microtus pennsylvanicus*(?), *Parascalops breweri*, *Scalopus aquaticus*, *Scapanus orarius*, *S. townsendii*, *Sorex fumeus*.
- E. breviseta* (Strandtmann & Morlan, 1953)- TX; *Bassariscus astutus*.
- E. butantanensis* (Fonseca, 1932)- IN, MA; *Mus musculus*, *Rattus norvegicus*, *Tamias striatus*.
- E. cynomys* (Radford, 1941)- OR; *Glaucmys sabrinus* (nr.), *Mustela frenata*.
- E. femoralis* (Allred, 1957)- CA, OR; *Thomomys bottae*, *T. bulbivorus*, *T. talpoides*.
- E. geomydis* (Keegan, 1946)- IL, IN, MO; *Geomys bursarius illinoensis*, *G. bursarius missouriensis*.
- E. hilli* (Jameson, 1950)- ID, NM, OR; *Dipodomys ordii*, *Onychomy leucogaster*, *Perognathus - parvus*, *Peromyscus maniculatus*, *Tamias minimus*.
- E. incomptis* (Eads & Hightower, 1952)- CA, ID, OR, TX; *Dipodomys elator*, *D. elephantinus*, *D. ordii*, *D. venustus*; *Perognathus parvus*, *Peromyscus maniculatus*, *Tamias minimus*.
- E. isabellinus* (Oudemans, 1913)- BC, ID, MA, MN, NS, NWT, NB, NY, OR, PE; *Blarina - brevicauda*, *Condylura cristata*, *Dicrostonyx torquatus*, *Lemmiscus curtatus*, *Microtus chrotorrhinus*, *M. montanus*, *M. pennsylvanicus*, *M. richardsoni*, *M. townsendii*, *Myodes californicus*, *M. gapperi*, *Napaeozapus insignis*, *Peromyscus maniculatus*, *Procyon lotor* (nr.), *Synaptomys cooperi*, *Tamias striatus*, *Zapus hudsonius*, *Z. trinotatus*.
- E. liomys* (Herrin & Yunker, 1973)- TX; *Liomys irroratus*.
- E. longichelae* (Allred & Beck, 1966)- ID, IL, IN, MO, NM, OR; *Dipodomys ordii*, *Geomys bursarius illinoensis*, *G. bursarius missouriensis*, *Glaucmys sabrinus*, *Mustela frenata*, *Onychomys leucogaster*, *Peromyscus maniculatus*, *Thomomys mazama*, *T. talpoides*.
- E. longichelae* (var.)- OR; *Thomomys mazama*, *T. talpoides*.



- E. neotomae* (Eads & Hightower, 1951)- ID, OR; *Neotoma cinerea*, *Tamias minimus*.
- E. obsoletus* (Jameson, 1950)- OR; *Microtus townsendii*, *Mustela erminea*, *M. frenata*, *M. vison*,  
*Myodes californicus*, *Neotoma cinerea*, *Peromyscus maniculatus*.
- E. obsoletus* (var.)- OR; *Peromyscus maniculatus*, *Scapanus orarius*, *Sorex bendirii*, *S. pacificus*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*.
- E. perognathi* (Herrin, 1970)- TX; *Chaetodipus hispidus*, *Liomys irroratus*.
- E. staffordi* (Strandtmann & Hunt, 1951)- IN, NJ, OR, TX; *Bassariscus astutus*, *Mephitis mephitis*,  
*Mustela frenata*, *Procyon lotor*, *Spilogale putorius*, *Taxidea taxus*.
- E. talpae* (Zemskaya, 1955)- IN, MN, NB, NC, NS, PA, PE; *Blarina brevicauda*, *Condylura cristata*, *Cryptotis parva*, *Sorex cinereus*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. longirostris*, *S. palustris*.
- E. thomomys* (Allred & Beck, 1966)- ID, ND, OR; *Microtus pennsylvanicus*, *Mustela frenata*, -  
*Onychomys leucogaster*, *Peromyscus maniculatus*, *Thomomys mazama*, *T. talpoides*, *T. townsendi*.
- E. triacanthus* (Jameson, 1950)- CA, ID, OR; *Dipodomys elephantinus*, *D. ordii*, *Neotoma cinerea*,  
*Perognathus parvus*, *Peromyscus maniculatus*, *Spermophilus townsendii*, *Tamias minimus*.
- E. utahensis* (Allred & Beck, 1966)- CA, CO, ID, IN, NC, OR, PA, WI; *Dipodomys ordii*,  
*Lemmiscus curtatus*, *Mustela erminea*, *Neotoma cinerea*, *N. floridana*, *N. magister*,  
*Ochotona princeps*, *Onychomys leucogaster*, *Perognathus parvus*, *Peromyscus leucopus*, *P. maniculatus*, *Spermophilus lateralis*, *S. townsendii*, *Tamias minimus*, *Thomomys talpoides*,  
*Vulpes vulpes*.
- Eubrachylaelaps circularis* (Ewing, 1933)- CA, ID, OR; *Dipodomys venustus*, *Peromyscus crinitus*, *P. maniculatus*, *P. truei*.

*E. crowei* Jameson, 1947- ID; *Dipodomys ordii*, *Onychomys leucogaster*, *Peromyscus maniculatus*.

*E. debilis* Jameson, 1950- CA, ID, OR; *Dipodomys ordii*, *Microtus montanus*, *M. townsendii*,

*Mustela erminea*, *Onychomys leucogaster*, *Perognathus parvus*, *Peromyscus crinitus*, *P.*

*maniculatus*, *Reithrodontomys megalotis*, *Sorex trowbridgii*.

*E. hollisteri* (Ewing, 1925)- OR; *Peromyscus crinitus*.

*Eulaelaps stabularis* (Koch, 1836)- GA, IL, IN, MA, MN, NB, NJ, NY, NC, NS, OR, PA, PE, SC,

SD, SD/WY, TN, WV, WI, *Arborimus albipes*, *Blarina brevicauda*, *B. carolinensis*,

*Condylura cristata*, *Didelphis virginiana*, *Marmota monax*, *Microtus chrotorrhinus*, *M.*

*longicaudus*, *M. montanus*, *M. ochrogaster*, *M. oregoni*, *M. pennsylvanicus*, *M. pinetorum*,

*M. townsendii*, *Mus musculus*, *Mustela erminea*, *Myodes californicus*, *M. gapperi*, *Neotoma*

*cinerea*, *N. floridana*, *N. fuscipes*, *N. magister*, *Ochrotomys nuttalli*, *Peromyscus*

*gossypinus*, *P. leucopus*, *P. maniculatus*, *Rattus norvegicus*, *Scalopus aquaticus*, *Scapanus*

*orarius*, *S. townsendii*, *Sigmodon hispidus*, *Sorex cinereus*, *S. trowbridgii*, *S. vagrans*,

*Spilogale putorius*, *Synaptomys cooperi*, *Tamias striatus*, *Tamiasciurus douglasii*.

*Gigantolaelaps mattogrossensis* (Fonseca) – TX; *Oryzomys palustris*, *Peromyscus leucopus*,

*Sigmodon hispidus*.

*Haemogamasus ambulans* (Thorell, 1872)- AK, BC, ID, IL, IN, ME, MD, MA, MN, NWT, NB,

NY, NC, ON, OR, PA, PE, SD, SD/WY, TN, VT, WY. *Arborimus albipes*, *Blarina*

*brevicauda*, *Condylura cristata*, *Dicrostonyx torquatus*, *Dipodomys ordii*, *Glaucomys*

*sabrinus*, *Lemmus trimucronatus*, *Microtus abbreviatus*, *M. chrotorrhinus*, *M. ochrogaster*,

*M. oeconomus*, *M. pennsylvanicus*, *M. pinetorum*, *Myodes gapperi*, *M. rutilus*, *Myotis*

*californicus*, *Napaeozapus insignis*, *Neotoma cinerea*, *Onychomys leucogaster*,

*Perognathus parvus*, *Peromyscus leucopus*, *P. maniculatus*, *Reithrodontomys megalotis*,

- Scalopus aquaticus*, *Scapanus orarius*, *Sorex cinereus*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. palustris*, *S. vagrans yaquinae*, *Synaptomys cooperi*, *Tamias minimus*, *T. striatus*,  
*Tamiasciurus hudsonicus*, *Thomomys talpoides*, *Zapus hudsonius*, *Z. trinotatus*.
- H. ghanii* Williams, 1978- AK; *Microtus miurus*, *M. oeconomus*, *Myodes rutilus*.
- H. harperi* Keegan, 1951- FL, GA, IL, IN, LA, MS, SC, TX; *Blarina brevicauda*, *Microtus - pinetorum*, *Scalopus aquaticus*.
- H. keegani* (Jameson, 1952)- CA, OR; *Scapanus latimanus*, *S. townsendii*.
- H. liponyssoides* Ewing, 1925- CA, FL, GA, IL, IN, MD, MI, MN, NB, NH, NY, NC, NS, OR, PA, SC, WA WV, WI; *Blarina brevicauda*, *B. carolinensis*, *Condylura cristata*, *Cryptotis parva*, *Microtus chrotorrhinus*, *M. ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *Mustela frenata*, *Myodes gapperi*, *Parascalops breweri*, *Peromyscus leucopus*, *Scalopus aquaticus*, *Scapanus latimanus*, *S. orarius*, *S. townsendii*, *Sigmodon hispidus*, *Sorex arcticus*, *S. cinereus*, *S. fumeus*, *S. gaspensis*, *S. longirostris*, *S. palustris*, *Synaptomys cooperi*, *Taxidea taxus*, *Zapus hudsonius*.
- H. liponyssoides hesperus* Radovsky 1960- CA; *Microtus californicus*, *Scapanus latimanus*.
- H. liponyssoides liponyssoides* Ewing, 1925- AL, DC, MA, NY, ON, PA, TN, VA; *Blarina brevicauda*, *Microtus pennsylvanicus*, *Parascalops breweri*, *Peromyscus gossypinus*, *P. leucopus*, *Rattus norvegicus*, *Sorex fumeus*.
- H. longitarsus* (Banks, 1910)- DC, DE, FL, GA, ID, IL, IN, MD, NH, NY, ND, ON, PA, VA, WV; *Blarina brevicauda*, *Microtus ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *Myodes - gapperi*, *Onychomys leucogaster*, *Peromyscus maniculatus*.
- H. nidi* Michael, 1892- OR; *Didelphis virginiana*

*H. occidentalis* (Keegan, 1951)- BC, CA, OR, WA; *Arborimus albipes*, *Microtus longicaudus*, *M. montanus*, *M. oregoni*, *M. richardsoni*, *M. townsendii*, *Mustela erminea*, *M. frenata*, *Myodes californicus*, *Neurotrichus gibbsii*, *Peromyscus crinitus*, *P. maniculatus*, *Scapanus orarius*, *S. townsendii*, *Sorex bendirii*, *S. pacificus*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*, *Spermophilus beecheyi*, *Zapus trinotatus*.

*H. onychomydis* (Ewing, 1933)- CO, DC, OR, UT; *Dipodomys ordii*, *Microtus montanus*, *M. pinetorum*, *Onychomys leucogaster*, *Perognathus parvus*, *Peromyscus maniculatus*, *Thomomys mazama*, *T. talpoides*, *T. townsendi*.

*H. pontiger* (Berlese, 1904)- GA, OR, TN; *Neotoma cinerea*, *Rattus norvegicus*, *Tamias striatus*.

*H. reidi* (Ewing, 1925)- BC, CA, IL, IN, MD, MN, NV, NB, NJ, NY, OH, OR, PA, UT, VA, WA, WI; *Aplodontia rufa*, *Arborimus longicaudus*, *Didelphis virginiana*, *Dipodomys ordii*, *Geomys bursarius illinoensis*, *Glaucomys sabrinus*, *G. volans*, *Lemmys curtatus*, *Microtus californicus*, *M. longicaudus*, *M. montanus*, *M. richardsoni*, *M. townsendii*, *Mustela erminea*, *M. frenata*, *Myodes californicus*, *M. gapperi*, *Neotoma cinerea*, *N. fuscipes*, *Parascalops breweri*, *Peromyscus boylii*, *P. maniculatus*, *Scapanus orarius*, *S. townsendii*, *Sciurus carolinensis*, *S. niger*, *Sorex bendirii*, *S. palustris*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*, *Spilogale putorius*, *Tamiasciurus douglasii*, *T. hudsonicus*, *Taxidea taxus*, *Thomomys mazama*, *T. talpoides*, *Zapus hudsonius*, *Z. princeps*, *Z. trinotatus*

*H. thomomysi* Williams, 1978- CA, OR, UT; *Myodes gapperi*, *Thomomys mazama*, *T. talpoides*.

*Hypoaspis leviculus* (Eads, 1951)- ID, IN; *Dipodomys ordii*, *Neotoma floridana*, *N. magister*, *Onychomys leucogaster*, *Peromyscus maniculatus*, *Procyon lotor*, *Tamias minimus*.

*H. lubrica* Voigts & Oudemans, 1904- ID, IN, OR; *Neotoma cinerea*, *N. floridana*, *N. fuscipes*, *N. magister*, *Perognathus parvus*, *Rattus norvegicus*.

*H. miles* (Berlese, 1892)- IN, NH, OR; *Microtus townsendii*, *Parascalops breweri*, *Sorex cinereus*,  
*S. longirostris*.

*Ischyropoda armatus* Keegan, 1951- CA, ID, OR; *Dipodomys ordii*, *D. venustus*, *Lepus californicus*, *Microtus montanus*, *Onychomys leucogaster*, *Perognathus parvus*,  
*Peromyscus maniculatus*, *Sorex merriami*, *Thomomys talpoides*.

*I. furmani* Keegan, 1956- ID, OR; *Dipodomys ordii*, *Onychomys leucogaster*, *Perognathus parvus*,  
*Peromyscus maniculatus*.

*Laelaps alaskensis* Grant, 1947- IN, MD, MN, MS, NWT, NB, NH, NY, NC, OR, PA, TN, WI;  
*Blarina brevicauda*, *Dicrostonyx torquatus*, *Microtus chrotorrhinus*, *M. montanus*, *M. ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *M. richardsoni*, *Mustela nivalis*, *Myodes gapperi*, *Ochrotomys nuttalli*, *Parascalops breweri*, *Peromyscus leucopus*, *P. maniculatus*,  
*Sorex dispar*, *S. pacificus*, *S. vagrans*, *Spermophilus franklinii*, *Synaptomys borealis*, *S. cooperi*, *Thomomys mazama*.

*L. clethrionomydis* Lange, 1955- AK; *Microtus abbreviatus*.

*L. echidnina* Berlese, 1887- LA, MS, NJ, NC; *Didelphis virginiana*, *Rattus norvegicus*, *Rattus norvegicus/R.rattus*, *Sigmodon hispidus*.

*L. evansi* Tipton, 1960- FL; *Neofiber alleni*.

*L. kochi* Oudemans, 1936- AK, IL, IN, KY, MB, MD, MA, MN, MT, NB, BY, NC, NS, OR, PA, PE, SD, SD/WY, TN, WY, WV, WI; *Blarina brevicauda*, *Corynorhinus townsendii*,  
*Microtus abbreviatus*, *M. chrotorrhinus*, *M. longicaudus*, *M. montanus*, *M. ochrogaster*, *M. oregoni*, *M. pennsylvanicus*, *M. pennsylvanicus breweri*, *M. pinetorum*, *M. townsendii*,  
*Mustela vison*, *Napaeozapus insignis*, *Neurotrichus gibbsii*, *Peromyscus leucopus*, *P. maniculatus*, *Synaptomys cooperi*, *Tamias striatus*.

*L. multispinosa* (Banks, 1910)- AK, IN, NF, NS, OH, OR, WV, WI; *Didelphis virginiana*, *Mustela erminea*, *M. frenata*, *M. vison*, *Ondatra zibethicus*, *Procyon lotor*.

*L. nuttalli* Hirst, 1915- LA, NJ; *Rattus norvegicus*/*R. rattus*, *Sciurus carolinensis*, *S. niger*.

*L. stupkai* Linzey & Crossley, 1971- NC; *Synaptomys cooperi*.

*Myonyssus jamesoni* Ewing & Baker, 1947- IN, MN, NB, NY, NC, WV; *Blarina brevicauda*, *Cryptotis parva*, *Sorex fumeus*, *S. palustris*.

*Patrinyssus hubbardi* (Jameson, 1949)- OR; *Aplodontia rufa*.

#### LISTROPHORIDAE

*Alabidocarpus*, *Labidocarpus* and *Schizocarpus* have been moved from the family Listrophoridae to the family Chirodiscidae, and the genera *Lutracarus* Fain and Yunker, 1980 and *Quasilistrophorus* Fain, Whitaker and Lukoschus, 1978, have been described since the 1974 paper. The genera *Olistrophorus* McDaniel and Whitaker, 1972 and *Asiochirus* Fain and Hyland, 1972 were described almost simultaneously and were considered synonyms, with *Asiochirus* having precedence. *Olistrophorus blarinae* McDaniel and Whitaker 1972 became *Asiochirus blarina* Fain and Hyland, 1972 and *O. cryptotae* McDaniel and Whitaker, 1972 became *A. cryptotae*. More recently, however, *Olistrophorus* was resurrected to replace *Asiochirus* for the new world mites on *Blarina* and *Cryptotis* (Fain, 1981) and *Asiochirus* was retained for old world forms. The species originally listed as *Listrophorus bakeri* Radford and *L. grassii* Radford, 1954 have been transferred to the genus *Prolistrophorus*. Fain and Lukoschus (1984) published an article on it with a key to species. Fain (1978a) summarized information on *Lynxacarus*, and Fain, et. al, (1978), and Fain and Whitaker (1987), brought together information on the genus *Geomylichus*. Members of this family are usually small elongate mites sometimes occurring in great numbers in the fur of mammals. The palpa and/or legs I-II are often highly modified for grasping hairs.

- Aplodontochirus borealis* Fain & Hyland, 1972- OR, WA; *Aplodontia rufa*.
- Geomylichus brevispinosus* Fain, Whitaker, Schwan & Lukoschus, 1978- TX; *Chaetodipus -  
penicillatus*.
- G. californicus* Fain, Whitaker & Thomas, 1988- CA; *Dipodomys californicus*, *D. elephantinus*, *D.  
heermani*, *D. venustus*.
- G. deserti* Fain & Whitaker, 1987- NV; *Dipodomys deserti*.
- G. dipodomius* (Radford, 1953)- NM, TX, UT; *Dipodomys elator*, *D. microps*, *D. ordii*, *D.  
spectabilis*.
- G. floridanus* (Radford, 1949)- CA, FL, GA, IL, IN, MN, MO, SD, TX; *Geomys bursarius*, *G.  
bursarius illinoensis*, *G. bursarius missouriensis*, *G. personatus*, *G. pinetis*, *Thomomys  
umbrinus*.
- G. formosus* Fain & Whitaker, 1987- UT; *Chaetodipus formosus*.
- G. inaequalis* Fain, Whitaker, Schwan & Lukoschus, 1978- CA, TX; *Chaetodipus hispidus*,  
*Perognathus* sp.
- G. intercalatus* Fain, Whitaker, and Thomas, 1991 – TX; *Dipodomys compactus*
- G. microdipodops* Fain & Whitaker, 1987- NV, UT; *Microdipodops megacephala*.
- G. multistriatus* Fain, Whitaker and Thomas, 1988- AZ, CA, NV, TX; *Chaetodipus penicillatus*,  
*Dipodomys merriami*, *D. nitratoides*, *Microdipodops megacephalus*.
- G. perognathi* Fain & Whitaker, 1980- MT, NV, OR, UT; *Perognathus fasciatus*, *P. longimembris*,  
*P. parvus*.
- G. postscutatus* Fain, 1976- NB; *Dipodomys* sp.
- G. quasinudus* Fain, Whitaker, and Thomas, 1991 – CA; *Dipodomys ingens*

*G. texanus* Fain, Whitaker, Schwan & Lukoschus, 1978- AZ, CA, NV, NM, OR, TX; *Chaetodipus penicillatus*, *Dipodomys elephantinus*, *D. merriami*, *D. ordii*, *D. venustus*.

*G. thomomys* Fain, Whitaker, Schwan & Lukoschus, 1978- AZ, CA; *Thomomys bottae*, *T. umbrinus*.

*G. utahensis* Fain & Whitaker, 1987- NV, UT; *Dipodomys microps*.

*Leporacarus gibbus* (Pagenstecher, 1861)- GA, LA; "Rabbit."

*L. sylvilagi* Fain, Whitaker & Lukoschus, 1981 - OR; *Sylvilagus bachmani*.

*Listrophorus americanus* Radford, 1944- AK, IN, MD, NY, OH, OR, RI, WV; *Ondatra zibethicus*.

*L. caudatus* Fain, Whitaker & Smith, 1984- FL; *Neofiber alleni*.

*L. dozieri* Radford, 1944- AK, OH, IN, MD, NY, OR, RI; *Didelphis virginiana*, *Ondatra zibethicus*.

*L. faini* Dubinina, 1972- AK, IN, NY, OH, OR, RI; *Ondatra zibethicus*.

*L. kingstownensis* Fain & Highland, 1973- NY, RI; *Ondatra zibethicus*.

*L. laynei* Fain, Whitaker & Smith, 1984- FL; *Neofiber alleni*.

*L. mexicanus* Fain, 1970- IL, IN, KY, MD, NB, NC, NS, OR, PA, PE, PQ, WV, WY; *Antrozous pallidus*, *Lemmiscus curtatus*, *Microtus chrotorrhinus*, *M. montanus*, *M. ochrogaster*, *M. oregoni*, *M. pennsylvanicus*, *M. richardsoni*, *M. townsendii*, *Mus musculus*, *Mustela nivalis*, *Myodes californicus*, *M. gapperi*, *Napaeozapus insignis*, *Peromyscus leucopus*, *Scapanus townsendii*, *Sorex bendirii*, *Synaptomys cooperi*, *Zapus hudsonius*, *Z. princeps*.

*L. mexicanus squamiferus* Fain & Hyland, 1972- AK, NWT, MA, NJ, NY, PA, RI, TN, VA;

*Microtus chrotorrhinus*, *M. pennsylvanicus*, *Myodes gapperi*, *Peromyscus leucopus*, *Sorex dispar*, *Synaptomys cooperi*.

*L. neotomae* Fain & Hyland, 1973- FL, GA, SC, TX; *Neotoma floridana*, *N. micropus*.



- L. ondatrae* Fain, Kok & Lukoschus, 1970- IN, NY, OR, RI; *Ondatra zibethicus*.
- L. phenacomys* Fain & Hyland, 1972- NWT, MB; *Phenacomys intermedius*.
- L. pitymys* Fain & Hyland, 1972 - NY, RI; *Blarina brevicauda*, *Microtus pennsylvanicus*, *M. pinetorum*.
- L. synaptomys* Fain, Whitaker, McDaniel & Lukoschus, 1974- IN, NB, PA; *Synaptomys borealis*, *S. cooperi*.
- L. validus* Banks, 1910- IN, NY, ON, OR, RI, SC; *Ondatra zibethicus*.
- Lutracarus canadensis* Fain & Yunker, 1980- AK; *Lutra canadensis*.
- Lynxacarus morlani* Radford, 1951- FL, GA; *Felis concolor*, *Lynx rufus*
- L. mustelae* (Megnin, 1885)- AK, IN, NY, ON, OR; *Lutra canadensis*, *Mustela erminea*, *M. frenata*.
- L. nearcticus* Fain & Hyland, 1973 - IN, MN, OR, PA; *Mustela frenata*, *M. vison*, *Tamias striatus*.
- L. visoni* Fain and Bochkov, 2002 – FL; *Mustela vison*.
- Olistrophorus blarina* (Fain & Hyland, 1972)- IN, NC, PA, RI, SC, TX; *Blarina brevicauda*, *B. carolinensis*.
- O. cryptotae* McDaniel & Whitaker, 1972- GA, TX; *Cryptotis parva*.
- Oryzomysia oryzomys* (Radford, 1954)- GA; *Oryzomys palustris*
- Prolistrophorus bakeri* (Radford, 1949)- FL, GA, SC, TX; *Oryzomys palustris*, *Sigmodon hispidus*.
- P. birkenholzi* Fain, Whitaker & Smith, 1984- FL; *Neofiber alleni*.
- P. grassii* (Radford, 1954)- AL, FL, GA, IN, IA, WV; *Oryzomys palustris*, *Synaptomys cooperi*.
- P. sparsilineatus* (Fain, 1970)- AL, GA; *Peromyscus gossypinus*.
- Quasilistrophorus microticulus* Fain, Whitaker & Lukoschus, 1978- CA, IN, OR; *Arborimus albipes*, *P. longicaudus*, *Synaptomys cooperi*.

## MACROCHELIDAE

Macrochelids were not included in the 1974 article but many species are phoretic in the fur of mammals. Krantz and Whitaker (1988), summarized information on the macrochelids known from North American mammals. Macrochelids are relatively large mites in which the females have large anal plates usually contiguous with the epigynial plates.

*Macrocheles adenostictus* Krantz and Whitaker, 1988 – CA, OR; *Neotoma fuscipes*

*M. dolichosternus* Krantz & Whitaker, 1988- TX; *Geomys bursarius*.

*M. insignitus* Berlese, 1918- IN; *Peromyscus maniculatus*.

*M. mammifer* Berlese, 1918- FL, IN; *Neofiber alleni*, *Rattus norvegicus*.

*M. maseri* Krantz & Whitaker, 1988- OR; *Dipodomys ordii*, *Spermophilus townsendii*, *S. washingtoni*.

*M. matrius* (Hull, 1925)- MT; *Mustela* sp.

*M. merdarius* (Berlese, 1889)- IN; *Rattus norvegicus*.

*M. mesothonius* Krantz & Whitaker, 1988- IA, ID, IN, MT, SD; *Didelphis virginiana*, *Marmota monax*, *Rattus norvegicus*, *Spermophilus elegans*, *S. franklinii*, *S. richardsoni*, *S. tridecemlineatus*, *Zapus hudsonius*.

*M. muscaedomesticae* (Scopoli, 1772)- IN, NC; *Peromyscus leucopus*, *Sciurus carolinensis*, *Sigmodon hispidus*.

*Macrocheles* N (Yoder, in MS)- MD, MI, PE; *Tamias striatus*, *Tamiasciurus hudsonicus*, *Zapus hudsonius*.

*M. ontariensis* Norton, 1973- IN; *Scalopus aquaticus*.

*M. penicilliger* (Berlese, 1904)- NY; *Sorex fumeus*.

*M. polypunctatus* Krantz & Whitaker 1988- OR; *Scapanus townsendii*, *Thomomys talpoides*.

*M. polystichus* Krantz & Whitaker, 1988- OR; *Thomomys talpoides*.

*M. praedafimetorum* Richards & Richards, 1977- BC, CA, OR; *Aplodontia rufa*, *Arborimus albipes*, *Microtus longicaudus*, *Peromyscus maniculatus*, *Sorex pacificus*, *Zapus trinotatus*.

*M. rodriguezii* Oliver & Krantz, 1963- IN, TX; *Cryptotis parva*, *Rattus norvegicus*.

*M. spickai* Krantz & Whitaker, 1988- IL, MN, MO; *Geomys bursarius*.

*M. subbadius* (Berlese, 1904)- NC; *Peromyscus leucopus*.

#### MACRONYSSIDAE

There have been no taxonomic changes or new genera or species described from North American mammals since the 1974 article. Of interest, is a new genus and species in this family, *Coprolactistus whitakeri* described by Radovsky and Krantz (1998). It was apparently the first record of a free-living mite to have evolved from a parasitic form (Radovsky et al. 1997).

However, it turns out (Radovsky and Krantz, 2003) that this species had been described earlier as *Mitonyssoides stercoralis* Yunker, Lukoschus and Giesen, 1990. It is currently known only from guano but likely will be found in the fur of a bat eventually. Macronyssids are related to laelapids but usually can be distinguished by a pronounced ridge or spur on the palpal trochanter.

*Chiroptonyssus haematophagus* Fonseca, 1948- CO, NM, TX; *Eumops perotis*, *Myotis occultus*, *Tadarida femorosacca*.

*C. robustipes* (Ewing, 1925)- AL, CA, FL, NM, TX, TX/NM; *Eptesicus fuscus*, *Mormoops megalophylla*, *Myotis californicus*, *M. occultus*, *M. velifer*, *Tadarida macrotis*, *Tadarida brasiliensis*.

*C. venezolanus* (Vitzthum, 1932)- TX; *Nyctinomops femorosaccus*, *Parastrellus hesperus*, *Tadarida femorosacca*, *T. macrotis* (nr.).

*Cryptonyssus desultorius* Radovsky, 1966- AZ, NM, OR, TX, WA; *Eptesicus fuscus*, *Euderma maculatum*, *Myotis californicus*, *M. lucifugus*, *M. occultus*, *M. velifer*, *M. volans*, *M. yumanensis*, *Parastrellus hesperus*, *P. suflavus*.

*C. flexus* Radovsky, 1967- MI, MN and/or ND; *Lasionycteris noctivagans*, *Myotis lucifugus*.

*Macronyssus crosbyi* (Ewing & Stover, 1915)- CO, IL, IN, MI, MN, MN/ND, ND, NM, NS, OH, OK, OR, PE, SD, TX; *Corynorhinus townsendii*, *Eptesicus fuscus*, *Myodes gapperi*, *Myotis austroriparius*, *M. californicus*, *M. evotis*, *M. septentrionalis*, *M. lucifugus*, *M. occultus*, *M. sodalis*, *M. velifer*, *M. volans*, *M. yumanensis*, *Perimyotis subflavus*.

*M. cycloaspis* – TX; *Corynorhinus townsendii* (nr.).

*M. jonesi* White, 1966- IL, IN; *Myotis austroriparius*, *M. grisescens*.

*M. longisetosus* (Furman, 1950)- OR, SD, TX; *Corynorhinus townsendii*.

*M. macrodactylus* Radovsky & Beck, 1971- IN, OR; *Lasionycteris noctivagans*.

*M. unidens* Radovsky, 1967- AZ, ID, OK, SD; *Corynorhinus townsendii*, *Lasionycteris noctivagans*, *Leptonycteris sanborni*, *Myotis velifer*, *Perimyotis subflavus*.

*Ornithonyssus bacoti* (Hirst, 1913) - CA, FL, GA, ID, IL, IN, KY, LA, MD, MS, NJ, NC, ND, OR, SC, SD, SD/WY, TN, TX, WV; *Castor canadensis*, *Didelphis virginiana*, *Dipodomys ordii*, *Microtus ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *Mus musculus*, *Neotoma floridana*, *N. magister*, *N. micropus*, *Onychomys leucogaster*, *O. torridus*, *Oryzomys palustris*, *Peromyscus crinitus*, *P. gossypinus*, *P. leucopus*, *P. maniculatus*, *Procyon lotor*, *Rattus norvegicus*, *R. rattus*, *Reithrodontomys megalotis*, *Scalopus aquaticus*, *Sciurus carolinensis*, *Sigmodon hispidus*, *Sorex fumeus*, *S. longirostris*, *Spermophilus beecheyi*, *Sylvilagus floridanus*, *Synaptomys cooperi*, *Urocyon cinereoargenteus*, *Zapus hudsonius*, *Z. princeps*.

*O. sylviarum* (Canestrini & Fanzago, 1877)- IN, PQ, VA; *Dicrostonyx hudsonius*, *Didelphis virginiana*, *Mus musculus*, *Rattus norvegicus*, *Scalopus aquaticus*.

*O. wernecki* (Fonseca, 1935)- GA, IN, NJ, TN, WV; *Didelphis virginiana*, *Procyon lotor*.

*Steatonyssus antrozoi* Radovsky & Furman, 1963- OR, TX; *Antrozous pallidus*, *Myotis yumanensis*.

*Steatonyssus ceratognathus* (Ewing, 1923)- AL, FL, IN; *Eptesicus fuscus*, *Nycticeius humeralis*, *Tadarida brasiliensis*.

*S. emarginatus* Radovsky & Furman, 1963- AZ, OR, TX, TX/NM; *Pasrastrellus hesperus*, *P. subflavus*.

*S. furmani* Tipton & Boese, 1958- IN, NC, OR, TX; *Lasiurus borealis*, *L. cinereus*.

*S. occidentalis* (Ewing, 1933)- AL, AZ, GA, IN, MI, OR, PA, TX, TX/NM; *Eptesicus fuscus*, *Myotis sodalis*, *M. velifer*, *Perimyotis subflavus*, *Tadarida brasiliensis*, *Tadarida macrotis*.

#### MYOBIIDAE

Myobiid mites are exclusively parasites of mammals. The first pair of legs I are modified for clasping hairs, the chelicerae are minute and stylelike, and the palpi are simple and minute. The only myobiid genus not included in the 1974 article and added here was *Phyllostomyobia* Fain, 1973, but there have been several comprehensive papers on portions of this family; Fain and Whitaker (1976) on *Acanthopthirius*, Lukoschus, Giesen, Whitaker and Cudmore (1988) and Lukoschus, Jeucken, and Whitaker (1988) on *Protomyobia*, Dusbabek (1973) on *Pteracarus*, and Fain and Lukoschus (1977) on *Radfordia*. In addition, Fain and Lukoschus (1976) summarized information on myobiids of insectivores.

*Acanthopthirius caudata* Fain & Whitaker, 1976 – IN, ON, TX; *Eptesicus fuscus*, *Myotis lucifugus*, *M. velifer*.

- A. caudata eptesicus* Fain & Whitaker, 1976- IN, OR, TX; *Eptesicus fuscus*.
- A. gracilis* Fain & Whitaker, 1976- IL, IN, OR (nr.); *Myotis septentrionalis*, *M. volans* (nr.).
- A. lasiurus* Fain & Whitaker, 1976- IN; *Lasiurus borealis*, *L. cinereus*.
- A. lucifugus* Fain & Whitaker, 1976- CO, IN, NM; *Myotis lucifugus*, *M. occultus*, *M. sodalis*.
- A. nycticeius* Fain & Whitaker, 1987- IN; *Nycticeius humeralis*.
- A. oregonensis* Fain & Whitaker, 1978- OR; *Parastrellus hesperus*.
- A. steatocaudatus* Uchikawa & Baker 1993- CA; IL; *Lasionycteris noctivagans*.
- Amorphacarus hengererorum* Jameson, 1948- IN, KY, NB, NY, NC, OR, PA, TN; *Blarina - brevicauda*, *Peromyscus maniculatus*, *Sorex cinereus*, *S. dispar*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. longirostris*, *S. pacificus*, *S. palustris*, *S. vagrans*, *S. vagrans yaquinae*.
- A. soricis* Fain & Whitaker, 1978- CA, OR; *Sorex bendirii*
- Archemyobia inexpectatus* Jameson, 1955- IN, NJ, TN, WV; *Didelphis virginiana*.
- Blarinobia cryptotis* McDaniel, 1967 – IN; *Cryptotis parva*.
- B. simplex* (Ewing, 1938)- IL, IN, NB, PA, SC, WV; *Blarina brevicauda*, *B. carolinensis*, *Cryptotis parva*.
- Eadiea brevihamata* (Haller, 1882)- OR; *Neurotrichus gibbsii*.
- E. condylurae* Jameson, 1949- IN, NB; *Condylura cristata*.
- E. neurotrichus* Lukoschus, Klompen & Whitaker, 1980- BC, OR, WA; *Neurotrichus gibbsii*.
- E. scapanus* Fain & Whitaker, 1975- OR; *Scapanus townsendii*.
- Eutalpacarus peltatus* Jameson, 1949- OR; *Neurotrichus gibbsii*.
- Ewingana doreyae* Dusbabek, 1968- TX; *Tadarida macrotis*.
- E. inaequalis* (Ewing, 1936)- FL; *Tadarida brasiliensis*.
- E. longa* (Ewing, 1938)- AL, FL, TX; *Eptesicus fuscus*, *Tadarida brasiliensis*.

- Myobia musculi* Schrank, 1781- IN, SC, SD, WV; *Mus musculus*, *Peromyscus maniculatus*.
- Phyllostomyobia leptonycteris* Fain, 1973- TX; *Leptonycteris nivalis*.
- Protomyobia americana* McDaniel, 1967- IN, NB, NY, PA, TX; *Blarina brevicauda*, *Cryptotis parva*, *Sorex cinereus*, *S. hoyi*.
- P. atophyracis* Lukoschus, Giesen, Whitaker, & Cudmore, 1988- CA, OR; *Sorex bendirii*.
- P. blarinae* Lukoschus, Jeucken & Whitaker, 1988- IN, MB, NB, NY, ON, SC; *Blarina brevicauda*, *B. carolinensis*
- P. brevisetosa* Jameson, 1948- IN, NB, NY, NC, OR, PA; *Microtus pennsylvanicus*, *Myodes californicus*, *Scapanus townsendii*, *Sorex bendirii*, *S. fumeus*, *S. pacificus*, *S. palustris*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*.
- P. claparedei* (Poppe, 1896)- IL, IN, NB, NC, WV; *Blarina brevicauda*, *Cryptotis parva*, *Peromyscus maniculatus*, *Sorex cinereus*, *S. palustris*.
- P. indianensis* Fain, Whitaker & French, 1982- IN; *Sorex longirostris*.
- P. oregonensis* Lukoschus, Giesen, Whitaker & Cudmore, 1988- BC, OR, WA; *Sorex vagrans*.
- P. quasionoi* Lukoschus, Giesen, Whitaker & Cudmore, 1988- CA, OR; *Sorex trowbridgii*.
- Pteracarus aculeus* Dusbabek & Lukoschus, 1973- CA, OR; *Eptesicus fuscus*.
- P. chalinolobus* Womersley, 1941(nr.)- CA; *Myotis evotis*.
- P. completus* Dusbabek & Wilson, 1973- IN; *Eptesicus fuscus*.
- P. completus vrazi* Dusbabek & Wilson, 1973- KY; *Lasiurus borealis*, *L. cinereus*.
- P. elegans* Dusbabek & Wilson, 1973- CA, NV; *Corynorhinus rafinesquii*, *C. townsendii*.
- P. minutus* – NM; *Myotis occultus* (nr.).
- P. minutus daubentonii* (nr.) Dusbabek, 1973- OR; *Myotis volans*.
- P. minutus occidentalis* Dusbabek & Wilson, 1973- GA, IN, KY; *Perimyotis subflavus*.

- P. robustus* Dusbabek & Wilson, 1973- CA; *Antrozous pallidus*.
- Radfordia affinis* (Poppe, 1896)- IN, SC; *Mus musculus*, *Peromyscus maniculatus*.
- R. arborimus* Fain & Whitaker, 1975- OR; *Arborimus longicaudus*.
- R. arctica* Fain & Lukoschus, 1977- GR, LB; *Dicrostonyx greenlandicus*.
- R. bachai* Howell & Elzinga, 1962- ID; *Dipodomys ordii*.
- R. ensifera* (Poppe, 1896)- IN, NJ, NC; *Rattus norvegicus*.
- R. ewingi* (Fox 1937)- BC, CO, NB, OR, PE, UT; *Napaeozapus insignis*, *Zapus hudsonius*, *Z. princeps*, *Z. trinotatus*.
- R. hamiltoni* Jameson & Whitaker, 1975- TX; *Baiomys taylori*.
- R. hylandi* Fain & Lukoschus, 1977- IL, IN, LB, MI, NB, NY, ON, OR, PA, PQ, RI, TX; *Microtus chrotorrhinus*, *M. mexicanus*, *M. ochrogaster*, *M. oregoni*, *M. pennsylvanicus*, *M. pinetorum*, *Myodes gapperi*, *Peromyscus leucopus*, *Synaptomys borealis*, *S. cooperi*.
- R. lemnina* (Koch, 1841)- AK, AB, IL, IN, KY, NB, NY, PA, PQ (nr.), WV; *Microtus ochrogaster*, *M. oeconomus*, *M. pennsylvanicus* (nr.), *Myodes gapperi*, *M. rutilus*, *Synaptomys cooperi*.
- R. macdonaldi* Gill & Strandtmann, 1977- NWT; *Dicrostonyx torquatus*.
- R. neotomae* Jameson & Whitaker, 1975- CA, OR; *Neotoma cinerea*, *N. fuscipes*.
- R. palustris* Fain & Lukoschus, 1977- FL, GA, SC; *Oryzomys palustris*.
- R. sigmodontis* Radford, 1951- FL, GA; *Sigmodon hispidus*.
- R. subuliger* Ewing, 1938- IL, IN, KY, NB, NC, OR, PA, WV; *Mus musculus*, *Onychomys leucogaster*, *Peromyscus leucopus*, *P. maniculatus*, *Reithrodontomys megalotis*.
- R. zibethicalis* (Radford, 1936)- AK, IN, OR; *Ondatra zibethicus*.

## MYOCOPTIDAE



Myocoptids are tiny mites with legs III and IV highly modified for clasping hairs. One old world genus, *Gliricoptes* Lawrence, 1956, has been found in North America since the 1974 article (Fain and Whitaker, 1974).

*Gliricoptes glirinus* (Canestrini, 1895) (nr.) – PQ; *Napaeozapus insignis*, *Tamiasciurus hudsonicus*.  
*G. zapus* Fain & Whitaker, 1974- BC, NB, UT, WA; *Napaeozapus insignis*, *Zapus princeps*, *Z. trinotatus*.

*M. canadensis* Radford, 1955- NWT; *Dicrostonyx torquatus*, *Microtus chrotorrhinus*.

*M. japonensis* Radford, 1955- IL, IN, NB, NY, NC, OR, PA; *Microtus chrotorrhinus*, *M.*

*ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *M. richardsoni*, *Mustela nivalis*, *Myodes californicus*, *M. gapperi*, *Peromyscus leucopus*, *P. maniculatus*, *Synaptomys cooperi*.

*M. musculus* (Koch, 1844)- IL, IN, NY, NC, OR, PA, PQ (nr.), SC, SD/WY, TN, WV; *Microtus chrotorrhinus*, *M. ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *Mus musculus*,  
*Ochrotomys nuttalli*, *Onychomys leucogaster*, *Peromyscus leucopus*, *P. maniculatus* (nr.).

*M. neotomae* Fain, Lukoschus, Cudmore & Whitaker, 1984- GA, IN, OR; *Neotoma cinerea*, *N. floridana*, *N. fuscipes*, *N. magister*.

*M. ondatrae* Lukoschus & Rouwet, 1968- AK, IN, PQ (nr)- AK, IN; *Myodes gapperi* (nr.), *Ondatra zibethicus*.

*M. pitymys* Fain and Bochkov, 2004 – IL; *Microtus pinetorum*.

*M. squamosus* Fain, Munting & Lukoschus, 1969- NB; *Microtus chrotorrhinus*, *M. pennsylvanicus*,  
*Myodes gapperi*.

*Sciurocoptes tamias* Fain & Hyland, 1970- PA; *Tamias striatus*, *Tamiasciurus hudsonicus*.

*Trichoecius gettingeri* Fain, Lukoschus, Cudmore & Whitaker, 1984- PA; *Peromyscus leucopus*.

*T. tenax* (Michael, 1889)- IN, NB, PA, WV; *Microtus chrotorrhinus*, *M. ochrogaster*, *M. pennsylvanicus*, *M. pinetorum*, *Myodes gapperi*.

#### PYGMEPHORIDAE

This family was not included in the 1974 article. At that time little information existed on pygmephorids present in the fur of North American mammals. However, several articles have since appeared detailing information on three species of *Bakerdania*, one species of *Pseudopygmephorus*, and nearly 30 species of *Pygmephorus* on North American mammals, with at least the genus *Pygmephorus* being phoretic. Many new species have been described, and several species have been synonymized (Mahunka 1973, 1974, 1975; Smiley and Whitaker 1979, 1984; Rack, 1975, Dastych and Rack, 1991, 1992; Dastych et al., 1991, 1992). Those in the genus *Pygmephorus* are generally females and have an enlarged first pair of legs for clasping hairs. *Bakerdania* occurs much less frequently than *Pygmephorus* on mammals. It is similar to *Pygmephorus* but the first pair of legs is not hypertrophied. Cross (1965) included the genus *Pygmephorus* in his treatise on the family Pyemotidae. He examined at least five species from small mammals from the eastern United States, but his only specific report was of *Pygmephorus* sp. nr. *spinus* from Indiana, which he figured. *Pygmephorus* is common on many small mammals, but especially on insectivores and small burrowing rodents such as the woodland vole, *Microtus pinetorum*. Pygmephorids are thought to feed on fungi in the soil or nests of mammals. Gurney and Hussey (1967) and Kosir (1975) have reared *Bakerdania* (*Pseudopygmephorus*) *quadratus*. Males of *Pygmephorus* have seldom been found and the male of only one, *P. sylvilagi*, has been described from a mammal (Kaliszewski and Rack, 1985). Numerous recent synonymies in this group are cited in the index.

*Bakerdania equisetosa* Cross, 1970- IN; *Reithrodontomys megalotis*.

- B. jonesi* Mahunka, 1975- AB, CA, IL, WA; *Microtus pinetorum*, *Neurotrichus gibbsii*, *Sorex palustris*.
- B. plurisetosa* Mahunka, 1975- IL, IN, NY, SC, TN, VT; *Microtus chrotorrhinus*, *M. pinetorum*, *Parascalops breweri*, *Scalopus aquaticus*, *Sorex cinereus*, *S. dispar*, *S. fumeus*.
- Pseudopygmephorus quadratus* (Ewing, 1917)- IL; *Microtus pinetorum*.
- Pygmephorus arcuatus* Dastych & Rack, 1991- AK; *Peromyscus sitkensis*.
- P. brevipes* Savulkina, 1976- OR; *Scapanus orarius*.
- P. californicus* Smiley & Whitaker, 1979- CA, OR; *Sorex trowbridgii*.
- P. designatus* Mahunka, 1973- IL, IN, IA, NY, NC, OR, VA; *Blarina brevicauda*, *B. carolinensis*, *Cryptotis parva*, *Didelphis virginiana*, *Geomys bursarius*, *G. bursarius illinoensis*, *Mephitis mephitis*, *Microtus pinetorum*, *Mustela frenata*, *Myodes californicus*, *Parascalops breweri*, *Peromyscus leucopus*, *Procyon lotor*, *Rattus norvegicus*, *Scalopus aquaticus*, *Scapanus orarius*, *Sorex cinereus*, *S. fumeus*, *S. monticolus*, *S. trowbridgii*, *Spermophilus tridecemlineatus*, *Spilogale putorius*, *Sylvilagus floridanus*.
- P. erlangensis* Krczal, 1959- IN, IA, NB, NY, OR, PA, SC, VT; *Blarina brevicauda*, *B. carolinensis*, *Neurotrichus gibbsii*, *Parascalops breweri*, *Procyon lotor*, *Rattus norvegicus*, *Sorex cinereus*.
- P. faini* Smiley & Whitaker, 1979- IN, MN, VA; *Blarina brevicauda*, *Condylura cristata*, *Sorex fumeus*.
- P. forcipatus* Willman, 1952- OR; *Neurotrichus gibbsii*
- P. hastatus* Mahunka, 1973- IL, IN, MA, NY, VA; *Blarina brevicauda*, *Condylura cristata*, *Microtus pinetorum*, *Parascalops breweri*, *Scalopus aquaticus*, *Sorex fumeus*, *Tamias striatus*.

- P. horridus* Mahunka, 1973- AK, AL, AB, BC, CA, GA, IL, IN, MN, NB, NY, NC, ON, OR, PA, PQ, SC, VA, WA; *Blarina brevicauda*, *B. carolinensis*, *Condylura cristata*, *Microtus chrotorrhinus*, *M. longicaudus*, *M. pinetorum*, *Myodes gapperi*, *M. rutilus*, *Napaeozapus insignis*, *Neurotrichus gibbsii*, *Parascalops breweri*, *Peromyscus gossypinus*, *P. leucopus*, *P. sitkensis*, *Scalopus aquaticus*, *Scapanus orarius*, *Sorex bendirii*, *S. cinereus*, *S. dispar*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. longirostris*, *S. monticolus*, *S. pacificus*, *S. palustris*, *S. trowbridgii*, *S. vagrans*, *S. vagrans yaquinae*, *Synaptomys borealis*, *S. cooperi*.
- P. idea* Smiley & Whitaker, 1979- IA, MT, OH; *Blarina brevicauda*, *Procyon lotor*.
- P. iglehartae* Smiley & Whitaker, 1984- MA; *Blarina brevicauda*.
- P. islandicus* Sellnick, 1940- NB, NY; *Blarina brevicauda*, *Sorex cinereus*, *S. gaspensis*.
- P. lukoschusi* Smiley & Whitaker, 1984- NB; *Sorex fumeus*.
- P. lutterloughae* Smiley & Whitaker, 1979- IN, NB, NY, OR; *Blarina brevicauda*, *Condylura - cristata*, *Parascalops breweri*, *Scapanus townsendii*, *Sorex fumeus*.
- P. mahunkai* Smiley & Whitaker, 1979- IN, NS, OR, PE; *Myotis lucifugus*, *Napaeozapus insignis*, *Rattus norvegicus*, *Scalopus aquaticus*, *Scapanus orarius*, *S. townsendii*, *Sorex pacificus*, *Zapus hudsonius*.
- P. moreohorridus* Mahunka, 1975- IN, MA, NB, NY, SC; *Blarina brevicauda*, *B. carolinensis*, *Condylura cristata*, *Microtus pennsylvanicus*, *Sorex cinereus*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. palustris*.
- P. plurispinosus* Mahunka, 1975- AK, IL, IA, MO, OR, WA; *Aplodontia rufa*, *Blarina brevicauda*, *Geomys bursarius*, *Myodes rutilus*, *Neurotrichus gibbsii*, *Sorex cinereus*, *S. monticolus*, *S. pacificus*, *S. trowbridgii*, *S. vagrans*.
- P. proctorae* Smiley & Whitaker, 1984- IN, NH, NY; *Parascalops breweri*, *Sorex hoyi*.

- P. rackae* Smiley & Whitaker, 1979- IN, IA, MA, MN, MO, NY, OR; *Blarina brevicauda*, *Geomys bursarius*, *Microtus ochrogaster*, *Parascalops breweri*, *Scalopus aquaticus*, *Scapanus orarius*, *Sorex fumeus*.
- P. russellae* Smiley & Whitaker, 1984- NB; *Blarina brevicauda*.
- P. scalopi* Mahunka, 1973- IL, IN, IA, MO, NC, OR; *Blarina brevicauda*, *Geomys bursarius*, *G. bursarius illinoensis*, *G. bursarius missouriensis*, *Microtus pinetorum*, *Rattus norvegicus*, *Scalopus aquaticus*, *Sorex cinereus*, *S. longirostris*, *S. vagrans*, *Synaptomys cooperi*.
- P. sellnicki* Krczal, 1958- IL, MA; *Cryptotis parva*, *Microtus ochrogaster*, *Peromyscus leucopus*, *Tamias striatus*.
- P. spickai* Mahunka, 1974- IL, IN, SD; *Geomys bursarius*, *G. bursarius illinoensis*, *Mustela nigripes*, *Neotoma floridana*, *N. magister*, *Synaptomys cooperi*.
- P. spinosus* Kramer, 1877- AL, AK, IN, IA, MB, MA, MN, NC, NJ, NY, OR, SC, VA; *Blarina brevicauda*, *B. carolinensis*, *Condylura cristata*, *Cryptotis parva*, *Parascalops breweri*, *Peromyscus leucopus*, *P. maniculatus*, *Procyon lotor*, *Scalopus aquaticus*, *Scapanus orarius*, *Sorex fumeus*, *S. hoyi*, *S. longirostris*, *S. vagrans*.
- P. stammeri* Krczal, 1959- AK, IN, IA, MA, MN, NH, NY, SC, VT; *Blarina brevicauda*, *B. carolinensis*, *Myodes rutilus*, *Parascalops breweri*, *Peromyscus sitkensis*, *Sorex cinereus*, *S. fumeus*, *S. longirostris*, *Tamias striatus*.
- P. trisetosus* Dastych & Rack, 1991- AK; *Sorex vagrans*.
- P. whartoni* Smiley & Whitaker, 1979- IN, NY, OR, SC; *Blarina carolinensis*, *Parascalops breweri*, *Scalopus aquaticus*, *S. trowbridgii*.
- P. whitakeri* Mahunka, 1973- AB, AK, BC, CA, IL, IN, IA, KS, MA, MN, MO, NB, NH, NY, OR, PA, SC, VT, VA; *Blarina brevicauda*, *B. carolinensis*, *Condylura cristata*, *Cryptotis parva*,

*Geomys bursarius*, *G. bursarius illinoensis*, *G. bursarius missouriensis*, *Microtus ochrogaster*, *M. pinetorum*, *Mus musculus*, *Mustela erminea*, *Neotoma cinerea*, *N. fuscipes*, *Neurotrichus gibbsii*, *Parascalops breweri*, *Peromyscus leucopus*, *Peromyscus maniculatus*, *Procyon lotor*, *Rattus norvegicus*, *Scalopus aquaticus*, *Scapanus orarius*, *Sorex bendirii*, *S. cinereus*, *S. dispar*, *S. fumeus*, *S. gaspensis*, *S. hoyi*, *S. monticolus*, *S. pacificus*, *S. palustris*, *S. trowbridgii*, *S. vagrans*, *Spermophilus tridecemlineatus*.

*P. wilsoni* Smiley and Whitaker, 1984- MA; *Blarina brevicauda*.

*P. n. sp. #1* Cudmore et al., 1987 – OR; *Sorex monticolus*.

*P. n. sp. #2* Cudmore et al., 1987 – OR; *Sorex trowbridgii*.

*P. n. sp. #3* Cudmore et al., 1987 – OR; *Scapanus orarius*, *Sorex monticolus*, *Mustela erminea*.

#### RHYNCOPTIDAE

Two species of rhyncoptid mites have been reported from the hair and skin of carnivores. Fain and Johnston (1970) described a new genus, *Ursicoptes*, from a black bear, *Ursus americanus*, from a zoo in Manhattan, Kansas, and a second species was described by Fain and Wilson (1979) from the raccoon, *Procyon lotor*. Rhyncoptids are small elongate mites with only a dorsal podonotal shield, legs I and II are well separated from legs III and IV and bear several well developed processes. These species were originally described in the family Audycoptidae. That family was placed in synonymy with Rhyncoptidae by Klompen (1993).

*Ursicoptes americanus* Fain & Johnson, 1970- ID, KS (zoo); *Ursus americanus*.

*U. procyoni* Fain & Wilson, 1979- IA; *Procyon lotor*.

#### ROSENSTEINIIDAE

Only *Nycteriglyphus* was included in the 1974 article, but the genus *Chiroptoglyphus* has since been described by O'Connor and Reisen (1978), *Nycteriglyphites* was described by Fain et

al. (1982) and *Mydopholeus* sp. was recorded in the United States for the first time by Durden et al. (1992).

*Chiroptoglyphus americanus* OConnor & Reisen, 1978- OK, PA, TX; *Corynorhinus rafinesquii*,  
*Myotis lucifugus*, *M. velifer*.

*Mydopholeus* sp. AL; *Eptesicus fuscus*.

*Nycteriglyphus fuscus* Dood & Rocket, 1985- OH; *Eptesicus fuscus*.

*N. texanus* OConnor, Whitaker & Easterla, 1977- TX; *Corynorhinus townsendii*, *Leptonycteris nivalis*, *Myotis velifer*, *M. yumanensis*, *Tadarida brasiliensis*.

*Nycteriglyphites pennsylvanicus* Fain, Lukoschus & Whitaker, 1982- AL; *Eptesicus fuscus*.

#### SPINTURNICIDAE

Spinturnicids are parasites of bats. They have prominent legs, a stout body and are somewhat spiderlike in appearance. The tritosternum is often reduced, and the peritreme is often ventral posteriorly. No new species have been described nor have any taxonomic changes occurred since the 1974 article.

*Periglischrus vargasi* Hoffman, 1944- TX; *Leptonycteris nivalis*.

*Spinturnix americanus* (Banks, 1902)- IL, IN, MN/ND, MI, MN, NM, OH, OK, OR, PE, SD, TX;

*Antrozous pallidus*, *Eptesicus fuscus*, *Myotis evotis*, *M. grisescens*, *M. lucifugus*, *M.*

*occultus*, *M. septentrionalis*, *M. thysanodes*, *M. velifer*, *M. volans*, *M. yumanensis*.

*S. bakeri* Rudnick, 1960- IN, MI, OR, SD, TX; *Eptesicus fuscus*, *Myotis volans*.

*S. banksi* Rudnick, 1960- IL, MO; *Myotis grisescens*.

*S. carloshoffmanni* Hoffmann, 1944 – TX; *Myotis velifer*.

*S. globosus* (Rudnick, 1960)- AB, IL, IN, MO, OH, OK, OR; *Myotis grisescens*, *M. lucifugus*, *M. sodalis* *M. velifer*, *M. volans*.

*S. orri* Rudnick, 1960- OR, TX; *Antrozous pallidus*.

## HOST DISTRIBUTION

The various North American wild mammals from which mites have been reported are listed alphabetically below, with the mite species listed for each. Numbers refer to references.

"Rabbit"

Listrophoridae: *Leporacarus gibbus* 62

*Ammospermophilus leucurus*

Laelapidae: *Echinonyssus incomptus* 126, *E. tricanthus* 128

*Antrozous pallidus*

Listrophoridae: *Listrophorus mexicanus* 283

Macronyssidae: *Steatonyssus antrozoii* 27, 202, 254, 283

Myobiidae: *Pteracarus robustus* 40

Spinturnicidae: *Spinturnix americanus* 254, 283; *S. orri* 202, 254, 283

*Aplodontia rufa*

Chortoglyphidae: *Aplodontopus latus* 272

Glycyphagidae: *Microlabidopus americanus* 272

Laelapidae: *Alphalaelaps aplodontiae* 272; *Haemogamasus reidi* 272; *Patrinyssus hubbardi*

272

Listrophoridae: *Aplodontochirus borealis* 61, 272

Macrochelidae: *Macrocheles praedafimetorum* 147

Pygmephoridae: *Pygmephorus plurispinosa* 22

*Arboremus albipes*



Glycyphagidae: *Glycyphagus hypudaei* 267

Laelapidae: *Androlaelaps fahrenheitzi* 267, *Eulaelaps stabularis* 267; *Haemogamasus ambulans* 267; *H. occidentalis* 267

Listrophoridae: *Quasilistrophorus microticolus* 92

Macrochelidae: *Macrocheles praedafimetorum* 147

*A. longicaudus*

Glycyphagidae: *Glycyphagus hylandi* 267

Laelapidae: *Androlaelaps fahrenheitzi* 267; *Haemogamasus reidi* 285

Listrophoridae: *Quasilistrophorus microticolus* 92

Myobiidae: *Radfordia arborimus* 80, 267

*Baiomys taylori*

Myobiidae: *Radfordia hamiltoni* 127

*Bassariscus astutus*

Cheyletidae: *Cheyletus eruditus* 18; *Eucheyletia hardyi* 18

Glycyphagidae: *Glycyphagus hypudaei* 18

Laelapidae: *Androlaelaps fahrenheitzi* 18; *Echinonyssus breviseta* 18; *E. staffordi* 18

*Blarina brevicauda*

Glycyphagidae: *Glycyphagus hypudaei* 197, 208, 265; *G. newyorkensis* 264; *Orycteroxenus soricis* 208, 257, 264, 265; *Xenoryctes latiporus* 257, 264, 265; *X. nudus* 264, 265

Laelapidae: *Androlaelaps fahrenheitzi* 135, 197, 235, 257, 265; *Echinonyssus blarinae* 208, 257, 265; *E. isabellinus* 257, 291 (nr.); *E. talpae* 257, 291; *Eulaelaps stabularis* 135, 235, 257, 265, 291; *Haemogamasus ambulans* 235, 257, 265, 285, 291; *H. liponyssoides* 135, 208, 235, 257, 265, 291; *H. liponyssoides liponyssoides* 285; *H.*

*longitarsus* 135, 265; *Laelaps alaskensis* 235; *L. kochi* 249; *Myonyssus jamesoni*  
135, 197, 235, 249, 264

Listrophoridae: *Listrophorus pitymys* 62; *Olistrophorus blarina* 54, 61, 62, 167, 172, 173,  
208, 264, 265

Myobiidae: *Amorphacarus hengererorum* 257; *Blarinobia simplex* 135, 249, 257, 265;

*Protomyobia americana* 249, 265; *P. blarinae* 158, 251, 257; *P. claparedei* 135, 264

Pygmephoridae: *Pygmephorus designatus* 21, 22, 212, 249; *P. erlangensis* 212, 249, 257,

260, 265; *P. faini* 212; *P. hastatus* 22, 160, 212; *P. horridus* 160, 162, 188, 212,

257, 260, 265; *P. idei* 21; *P. igleharta* 213; *P. islandicus* 257, 260; *P. lutterloughae*

257, 260; *P. moreohorridus* 22, 257, 260; *P. plurispinosus* 21, 22; *P. rackae* 21, 22,

212; *P. russellae* 213; *P. scalopi* 21, 22, 160, 212; *P. spinosus* 14, 21, 22, 162, 188,

212, 249; *P. stammeri* 21, 22, 212, 249; *P. whitakeri* 21, 22, 162, 212, 257, 260,

265; *P. wilsoni* 213

### *B. carolinensis*

Glycyphagidae: *Oryctoxenus soricis* 262; *Xenoryctes latiporus* 262

Laelapidae: *Androlaelaps casalis* 262; *A. fahrenheitzi* 12, 262, 286; *Echinonyssus blarinae*  
124, 262; *Eulaelaps stabularis* 262; *Haemogamasus liponyssus* 262, 286

Listrophoridae: *Olistrophorus blarina* 262

Myobiidae: *Blarinobia simplex* 262; *Protomyobia blarinae* 262

Pygmephoridae: *Bakerdania plurisetosa* 262; *P. erlangensis* 262; *P. horridus* 262; *P.*

*moreohorridus* 262; *P. spinosus* 188, 262; *P. stammeri* 262; *P. whartoni* 262; *P.*

*whitakeri* 262

### *Blarina hylophaga*

Glycyphagidae: *Glycyphagus hypudaei* 203; *Oryctoxenus soricis* 203

Laelapidae: *Androlaelaps fahrenheitzi* 203; *Echinonyssus blarinae* 203; *Eulaelaps stabularis* 203; *Haemogamasus liponyssoides* 203

Listrophoridae: *Geomylichus texana* 203; *Olistrophorus blarina* 203

Myobiidae: *Blarinobia simplex* 203; *Protomyobia blarinae* 203

Myocoptidae: *Mycoptes musculus* 203

Pygmephoridae: *Pygmephorus whitakeri* 203

### *Castor canadensis*

Chirodiscidae: *Schizocarpus alaskensis* 90, 256; *S. centralis* 90; *S. contrarius* 90, 251; *S. distinctus* 90, 256; *S. furcatus* 90, 96, 251, 276; *S. indianensis* 96, 173, 251, 256, 276; *S. inversus* 90, 96, 251, 256, 276; *S. mingaudi* 96, 101, 249, 256, 276; *S. paramingaudi* 90, 251, 256; *S. postannulatus* 90, 251, 256; *S. posticus* 90, 251, 256; *S. protinus* 90, 256; *S. reductus* 90, 256; *S. spinifer* 90, 96, 251, 256, 276; *S. subvirgulatus* 90, 96, 251, 256, 276; *S. tetrapilis* 90, 96, 251, 256, 276; *S. virgulatus* 96, 251, 256, 276

Glycyphagidae: *Zibethacarus ondatrae* 276

Laelapidae: *Androlaelaps fahrenheitzi* 173

Macronyssidae: *Ornithonyssus bacoti* 172

### *Chaetodipus formosus*

Listrophoridae: *Geomylichus formosus* 88

### *C. hispidus*

Laelapidae: *Androlaelaps fahrenheitzi* 232; *Echinonyssus perognathi* 232

Listrophoridae: *Geomylichus inaequalis* 95, 232

*C. penicillatus*

Listrophoridae: *Geomylichus brevispinosus* 95; *G. multistriatus* 97; *G. texanus* 95

*Condylura cristata*

Glycyphagidae: *Glycyphagus hypudaei* 257; *Orycteroxenus canadensis* 172, 257; *O. soricis* 257; *Xenoryctes nudus* 257

Laelapidae: *Androlaelaps fahrenheitzi* 172, 235, 257, 292; *Echinonyssus isabellinus* 257, 291 (nr.); *E. talpae* 172, 235; *Eulaelaps stabularis* 172, 235, 257; *Haemogamasus ambulans* 172, 235, 257; *H. liponyssoides* 172, 257, 291

Myobiidae: *Eadiea condylurae* 172, 257

Pygmephoridae: *Pygmephorus faini* 212; *P. hastatus* 22; *P. horridus* 162, 212, 257, 260; *P. lutterloughae* 257, 260; *P. moreohorridus* 162, 172, 257, 260; *P. spinosus* 160, 162, 212 (nr.); *P. whitakeri* 212

*Corynorhinus rafinesquii*

Macronyssidae: *Macronyssus crosbyi* 197

Rosensteiniidae: *Chiroptoglyphus americanus* 179

*C. townsendii*

Laelapidae: *Androlaelaps fahrenheitzi* 1

Macronyssidae: *Macronyssus crosbyi* 198; *M. nr cyclaspis* 202; *M. longisetosus* 238, 254, 283; *M. unidens* 1, 198, 238

Myobiidae: *Pteracarus elegans* 40

Rosensteiniidae: *Nycteriglyphus texanus* 180, 254

*Cratogeomys castanpos clarkia*

Laelapidae: *Androlaelaps geomys* 284

*C. castanpos perplanus*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

*Cryptotis parva*

Glycyphagidae: *Glycyphagus hypudaei* 6; *Orycteroxenus soricis* 6

Laelapidae: *Androlaelaps fahrenheitzi* 6; *Echinonyssus arcuatus* 6; *E. talpae* 249;

*Haemogamasus liponyssoides* 249; *Myonyssus jamesoni* 249

Listrophoridae: *Olistrophorus cryptotae* 54, 62, 167

Macrochelidae: *Macrocheles rodriguezi* 147

Myobiidae: *Blarinobia cryptotis* 249; *B. simplex* 6; *Protomyobia americana* 158; *P.*

*claparedei* 6

Pygmephoridae: *Pygmephorus designatus* 160, 162, 212; *P. sellnicki* 6; *P. spinosus* 160; *P.*

*whitakeri* 188, 212

*Cynomys ludovicianus*

Laelapidae: *Androlaelaps fahrenheitzi* 139, 238

*Dasypus novemcinctus*

Echimyopidae: *Echimyopus dasypus* 5

Glycyphagidae: *Marsupialichus johnstoni* 183

*Dicrostonyx greenlandicus*

Myobiidae: *Radfordia arctica* 67

*D. hudsonicus*

Macronyssidae: *Ornithonyssus sylviarum* 10

*D. torquatus*

Glycyphagidae: *Glycyphagus hypudaei* 107

Laelapidae: *Echinonyssus isabellinus* 107; *Haemogamasus ambulans* 107; *Laelaps alaskensis* 107

Myobiidae: *Radfordia macdonaldi* 107

Myocoptidae: *Myocoptes japonensis canadensis* 107

*Didelphis virginiana*

Atopomelidae: *Didelphilichus serrifer* 36, 38, 55, 186, 263

Cheyletidae: *Cheyletus eruditus* 114

Glycyphagidae: *Glycyphagus hypudaei* 173, *Marsupialichus brasiliensis* 38, 197, 263; *M. marsupialichus* 183; *Zibethacarus ondatrae* 263

Laelapidae: *Androlaelaps casalis* 263; *A. fahrenheitzi* 3, 115, 122, 210, 263; *Eulaelaps stabularis* 114, 122; *Haemogamasus nidi* 122; *H. reidi* 263; *Laelaps echidnina* 114; *L. multispinosa* 263

Listrophoridae: *Listrophorus dozieri* 173, 197, 263

Macrochelidae: *Macrocheles mesochthonius* 148, 251

Macronyssidae: *Ornithonyssus bacoti* 36, 173, 114, 263; *O. sylviarum* 263; *O. wernecki* 38, 114, 135, 173, 186, 197, 263, 286

Myobiidae: *Archemyobia inexpectatus* 38, 114, 135, 263

Pygmephoridae: *Pygmephorus designatus* 21

*Dipodomys californicus*

Listrophoridae: *Geomylichus californicus* 97

*D. compactus*

Listrophoridae: *Geomylichus intercalatus* 97, 98

*D. deserti*

Listrophoridae: *Geomylichus deserti* 88

*D. elator*

Laelapidae: *Androlaelaps fahrenheitzi* 232; *Echinonyssus incomptis* 232

Listrophoridae: *Geomylichus dipodomius* 97, 232

*D. elephantinus*

Amerosiidae: *Sertitympanum contiguum* 230

Laelapidae: *Androlaelaps fahrenheitzi* 230; *Echinonyssus incomptis* 230; *E. triacanthis* 230

Listrophoridae: *Geomylichus californicus* 97, 230; *G. texanus* 97, 230

*D. heermani*

Listrophoridae: *Geomylichus californicus* 97, 98

*D. ingens*

Listrophoridae: *Geomylichus quasinudus* 98

*D. merriami*

Listrophoridae: *Geomylichus multistriatus* 97; *G. texanus* 95

*D. microps*

Listrophoridae: *Geomylichus utahensis* 88

*D. nitratoides*

Listrophoridae: *Geomylichus multistriatus* 97

*D. ordii*

Ameroseiidae: *Sertitympanum contiguum* 44; *S. exarmatum* 44

Laelapidae: *Androlaelaps fahrenheitzi* 1, 164; *A. geomys* 185; *Echinonyssus hilli* 164, 185; *E. incomptus* 1, 164; *E. longichelae* 1, 185; *E. triacanthus* 1, 164; *E. utahensis* 1,

164; *Eubrachylaelaps crowei* 1; *E. debilis* 1; *Haemogamasus ambulans* 1; *H. onychomydis* 164; *H. reidi* 164; *Hypoaspis leviculus* 1; *Ischyropoda armatus* 1, 164; *I. furmani* 1, 164

Listrophoridae: *Geomylichus texanus* 95, 164

Macrochelidae: *Macrocheles maseri* 148

Macronyssidae: *Ornithonyssus bacoti* 1

Myobiidae: *Radfordia bachai* 1

*D. spectabilis*

Listrophoridae: *Geomylichus dipodomius* 88, 95

*D. venustus*

Amerosiidae: *Sertitympanum contiguum* 230

Laelapidae: *Androlaelaps fahrenheitzi* 230; *Echinonyssus incomptis* 230; *Eubrachylaelaps circularis* 230; *Ischyropoda armatus* 230

Listrophoridae: *Geomylichus californicus* 97, 230; *G. texanus* 97, 230

*Dipodomys* sp.

Glycyphagidae: *Dipodomyopus tuttlei* 68

Listrophoridae: *Geomylichus postscutatus* 50

*Eptesicus fuscus*

Cheyletidae: *Cheletonella vespertilionis* 249

Chirodiscidae: *Alabidocarpus eptesicus* 201

Macronyssidae: *Chiroptonyssus robustipes* 33; *Cryptonyssus desultorius* 201, 202, 283;

*Macronyssus crosbyi* 25, 201, 283; *Steatonyssus ceratognathus* 33, 201; *S. occidentalis* 24, 25, 27, 33, 170, 201, 218, 249, 254, 283, 286



Myobiidae: *Acanthopthirius caudatus eptesicus* 81, 201, 283; *A. caudatus* 254; *Pteracarus aculeus* 40, 201, 283; *P. completus* 172

Rosensteiniidae: *Nycteriglyphus fuscus* 26; *Nycteriglyphitis pennsylvanicus* 33

Spinturnicidae: *Spinturnix americanus* 283; *S. bakeri* 24, 25, 201, 238, 249, 254, 283

*Euderma maculatum*

Macronyssidae: *Cryptonyssus desultorius* 193

*Eumops perotis*

Macronyssidae: *Chiroptonyssus haematophagus* 254

*Felis concolor*

Listrophoridae: *Lynxacarus morlani* 102

*Geomys arenarius arenarius*

Laelapidae: *Echinonyssus femoralis* 284

*G. attwateri*

Laelapidae: *Androlaelaps geomys* 284

Listrophoridae: *Geomylichus floridanus* 284

*G. breviceps sagittalis*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

Listrophoridae: *Geomylichus floridanus* 284

*G. bursarius*

Laelapidae: *Echinonyssus geomydis* 249, 284; *E. longichelae* 249

Listrophoridae: *Geomylichus floridanus* 13

Macrochelidae: *Macrocheles dolichosternus* 148; *M.spickai* 148

Pygmephoridae: *Pygmephorus designatus* 161, 212; *P. plurispinosus* 212; *P. rackae* 212; *P. scalopi* 161, 162, 212, 213; *P. spickai* 161, 212; *P. whitakeri* 161, 212

*G. bursarius illinoensis*

Laelapidae: *Androlaelaps geomys* 222; *Echinonyssus geomydis* 222; *E. longichelae* 222;  
*Haemogamasus reidi* 222

Listrophoridae: *Geomylichus floridanus* 222

Pygmephoridae: *Pygmephorus designatus* 222; *P. scalopi* 222; *P. spickai* 222, *P. whitakeri*  
222

*G. bursarius missouriensis*

Laelapidae: *Androlaelaps geomys* 222; *Echinonyssus geomydis* 222; *E. longichelae* 222

Listrophoridae: *Geomylichus floridanus* 222

Pygmephoridae: *Pygmephorus scalopi* 222; *P. whitakeri* 222

*G. knoxjonesi*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

Listrophoridae: *Geomylichus floridanus* 284

*G. personatus*

Listrophoridae: *Geomylichus floridanus* 13

*G. personatus megapotamus*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

*G. personatus streckeri*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

*G. pinetis*

Laelapidae: *Androlaelaps fahrenheitzi* 102

Listrophoridae: *Geomylichus floridanus* 62

*G. texensis bakeri*

Laelapidae: *Androlaelaps geomys* 284; *Echinonyssus geomydis* 284

Listrophoridae: *Geomylichus floridanus* 284

*G. texensis llanensis*

Laelapidae: *Androlaelaps geomys* 284

Listrophoridae: *Geomylichus floridanus* 284

*G. texensis texensis*

Listrophoridae: *Geomylichus floridanus* 284

*Glaucomyx sabrinus*

Dermanyssidae: *Dermanyssus gallinoides* 266

Glycyphagidae: *Dermacarus tamiasciuri* 266

Laelapidae: *Androlaelaps fahrenheitzi* 266; *Echinonyssus cynomys* 266 (nr.); *E. longichelae* 266; *Haemogamasus ambulans* 235; *H. reidi* 266

*G. volans*

Laelapidae: *Androlaelaps casalis* 187; *A. fahrenheitzi* 187, 216; *Haemogamasus ambulans* 187; *H. reidi* 114, 172, 285, 216

*Lasionycteris noctivagans*

Macronyssidae: *Cryptonyssus flexus* 25; *Macronyssus macrodactylus* 201, 249, 283; *M. unidens* 238

Myobiidae: *Acanthophthirius steatocaudatus* 201, 240

*Lasiurus borealis*

Macronyssidae: *Steatonyssus ceratognathus* 201; *S. furmani* 201, 218, 249, 264; *S. occidentalis* 218

Myobiidae: *Acanthophthirius lasiurus* 51, 81, 201; *Pteracarus completus vrazi* 40

*L. cinereus*

Macronyssidae: *Steatonyssus furmani* 202, 254, 283;

Myobiidae: *Acanthophthirius lasiurus* 81; *Pteracarus completus* 249

*Lemmiscus curtatus*

Ameroseiidae: *Sertitympanum exarmatum* 44

Glycyphagidae: *Glycyphagus hypudaei* 267; *Lepidoglyphus hylandi* 267

Laelapidae: *Androlaelaps fahrenheitsi* 267; *Echinonyssus isabellinus* 267; *H. utahensis* 267;

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Laelapidae: *Androlaelaps fahrenheitzi* 149, 172; *Laelaps alaskensis* 172

Macrochelidae: *Macrocheles mesochthonius* 148, 251

*S. lateralis*

Glycyphagidae: *Dermacarus spermophilus* 84, 269

Laelapidae: *Androlaelaps fahrenheitzi* 128, 269; *Echinonyssus utahensis* 41; *Hypoaspis*

*leviculus* 128

*S. richardsonii*

Macrochelidae: *Macrocheles mesochthonius* 148

*S. tereticaudus*

Laelapidae: *Androlaelaps fahrenheitzi* 151

*S. townsendii*

Glycyphagidae: *Dermacarus spermophilus* 269

Laelapidae: *Androlaelaps fahrenheitzi* 1, 128, 269 ; *Echinonyssus triacanthus* 1; *E. utahensis* 1

Macrochelidae: *Macrocheles maseri* 148

*S. tridecemlineatus*

Ameroseiidae: *Sertitympanum separationis* 44, 251

Chortoglyphidae: *Aplodontopus micronyx* 75, 221

Glycyphagidae: *Dermacarus reticulosus* 223; *Xenoryctes latiporus* 249

Laelapidae: *Androlaelaps fahrenheitzi* 140, 168

Macrochelidae: *Macrocheles mesochthonius* 148, 251

Pygmephoridae: *Pygmephorus designatus* 21; *P. whitakeri* 22

*S. variegatus*

Laelapidae: *Androlaelaps fahrenheitzi* 128, 205

*S. washingtoni*

Laelapidae: *Androlaelaps fahrenheitzi* 269

Macrochelidae: *Macrocheles maseri* 148

*Spilogale putorius*

Cheyletidae: *Eucheyletia bishoppi* 269

Glycyphagidae: *Xenoryctes latiporus* 269

Laelapidae: *Androlaelaps fahrenheitzi* 269; *Echinonyssus staffordi* 269; *Eulaelaps stabularis* 269; *Haemogamasus reidi* 269

Pygmephoridae: *Pygmephorus designatus* 269

*Sylvilagus bachmani*

Listrophoridae: *Leporacarus sylvilagi* 72, 93

*S. floridanus*

Cheyletidae: *Cheyletiella parasitivorax* 243

Glycyphagidae: *Marsupialichus brasiliensis* 243

Laelapidae: *Androlaelaps fahrenheitzi* 114, 115, 243

Macronyssidae: *Ornithonyssus bacoti* 243

Pygmephoridae: *Pygmephorus designatus* 160, 212, 243; *P. whitakeri* 136

*S. palustris*

Laelapidae: *Androlaelaps fahrenheitzi* 286

*Synaptomys borealis*

Glycyphagidae: *Glycyphagus hypudaei* 257; *Orycteroxenus soricis* 257

Laelapidae: *Androlaelaps fahrenheitzi* 257; *Laelaps alaskensis* 257;

Listrophoridae: *Listrophorus synaptomys* 257

Myobiidae: *Radfordia hylandi* 257

Pygmephoridae: *Pygmephorus horridus* 257

*S. cooperi*

Glycyphagidae: *Glycyphagus hypudaei* 208, 242, 257, 265; *Xenoryctes latiporus* 208, 242

Laelapidae: *Androlaelaps fahrenheitzi* 153, 208, 242, 257, 265; *Echinonyssus isabellinus*

235, 257; *Eulaelaps stabularis* 208, 257; *Haemogamasus ambulans* 235, 257; *H.*

*liponyssoides* 242, 257; *Laelaps alaskensis* 208, 235, 242, 257, 265; *L. kochi* 208,

242, 257; *L. stupkai* 153, 154, 155, 197

Listrophoridae: *Listrophorus mexicanus* 257; *L. synaptomys* 94, 208, 242, 257, 265;

*Prolistrophorus grassii* 69, 251; *Quasilistrophorus microticulus* 92

Macronyssidae: *Ornithonyssus bacoti* 242

Myobiidae: *Radfordia hylandi* 208, 257; *R. lemnina* 242, 251

Myocoptidae: *Myocoptes japonensis* 208, 242, 265

Pygmephoridae: *Pygmephorus horridus* 257, 260; *P. scalopi* 208, 242; *P. spickai* 242, 249

*Tadarida brasiliensis*

Chirodiscidae: *Dentocarpus macrotrichus* 103

Laelapidae: *Androlaelaps casalis* 33

Macronyssidae: *Chiroptonyssus robustipes* 27, 33, 103, 137, 202, 218, 219, 254;

*Steatognathus ceratognathus* 33, 219; *Steatonyssus occidentalis* 33, 254

Myobiidae: *Ewingana inaequalis* 103; *E. longa* 33, 103, 202

Rosensteiniidae: *Nycteriglyphus texanus* 180 (on body of bat)

*T. femorosacca*

Macronyssidae: *Chiroptonyssus haematophagus* 254; *C. venezolanus* 254

*T. macrotis*

Macronyssidae: *Chiroptonyssus robustipes* 254; *C. venezolanus* 254 (nr.); *Steatonyssus*

*occidentalis* 254

Myobiidae: *Ewingana doreyae* 254, 255

*Tamias amoenus*

Laelapidae: *Androlaelaps fahrenheitzi* 269

*T. minimus*

Glycyphagidae: *Glycyphagus hypudaei* 166, 238

Laelapidae: *Androlaelaps fahrenheitzi* 1, 235; *Echinonyssus hilli* 1; *E. incomptus* 1; *E. neotomae* 1; *E. triacanthus* 1; *E. utahensis* 1; *Haemogamasus ambulans* 1; *Hypoaspis leviculus* 1

*T. striatus*

Cheyletidae: *Eucheyletia bishoppi* 182, 274

Chortoglyphidae: *Aplodontopus sciuricola* 29, 30, 109, 125, 182, 226, 274

Glycyphagidae: *Lepidoglyphus hylandi* 3, 29, 30, 76, 84, 109, 114, 182, 208, 257, 265, 274; *Xenoryctes latiporus* 182, 274

Laelapidae: *Androlaelaps casalis* 29, 30, 173, 182, 274; *A. fahrenheitzi* 2, 3, 109, 182, 208, 235, 274; *Echinonyssus butantanensis* 182; *E. isabellinus* 182; *Eulaelaps stabularis* 3, 29, 30, 182; *Haemogamasus ambulans* 29, 274; *H. pontiger* 29, 30; *Laelaps kochi* 235, 265

Listrophoridae: *Lynxacarus nearcticus* 62

Macrochelidae: *Macrocheles* N. 148

Myocoptidae: *Sciurocoptes tamias* 265

Pygmephoridae: *Pygmephorus designatus* 208; *P. hastatus* 162, 274; *P. sellnicki* 182; *P. stammeri* 162, 182, 249, 274

*Tamiasciurus douglasii*

Glycyphagidae: *Dermacarus tamiasciuri* 184; *Glycyphagus hypudaei* 184

Laelapidae: *Eulaelaps stabularis* 269; *Haemogamasus reidi* 269

*T. hudsonicus*

Glycyphagidae: *Dermacarus tamiasciuri* 111, 265, 274; *Glycyphagus hypudaei septentrionalis* 111; *G. newyorkensis* 111; *Orycteroxenus soricis* 274

Laelapidae: *Androlaelaps casalis* 274; *A. fahrenheiti* 235, 274; *Haemogamasus ambulans* 235, 274, 285; *H. reidi* 235, 265, 274, 285

Macrochelidae: *Macrocheles* N. 148

Myocoptidae: *Gliricoptes glirinus* 111 (nr.); *Sciurocoptes tamias* 265

*Taxidea taxus*

Laelapidae: *Androlaelaps fahrenheiti* 261; *Echinonyssus staffordi* 261; *Haemogamasus liponyssoides* 261; *H. reidi* 261

*Thomomys bottae*

Laelapidae: *Androlaelaps geomys* 209; *Echinonyssus femoralis* 209

Listrophoridae: *Geomylichus thomomys* 95

*T. bulbivorus*

Laelapidae: *Androlaelaps geomys* 270; *Echinonyssus femoralis* 270

*T. mazama*

Glycyphagidae: *Glycyphagus hypudaei* 270

Laelapidae: *Androlaelaps geomys* 270; *Echinonyssus longichelae* 270; *E. longichelae* variant 1, 270; *E. thomomys* 270; *Haemogamasus onychomydis* 270; *H. reidi* 270; *H. thomomysi* 270; *Laelaps alaskensis* 270

*T. talpoides*

Ameroseiidae: *Sertitympanum exarmatum* 44

Laelapidae: *Androlaelaps fahrenheiti* 1, 150; *A. geomys* 150; *Echinonyssus femoralis* 270; *E. longichelae* 1, 270; *E. longichelae* (var. 1) 270; *E. thomomys* 1, 270; *E. utahensis* 270; *Haemogamasus ambulans* 1; *H. onychomydis* 270, 285; *H. reidi* 270; *H. thomomysis* 270; *Ischyropoda armatus* 1

Macrochelidae: *Macrocheles polypunctatus* 148; *M. polystichus* 148

*T. townsendi*

Laelapidae: *Echinonyssus thomomys* 270; *Haemogamasus onychomydis* 270

*T. umbrinus*

Listrophoridae: *Geomylichus floridanus* 13; *G. thomomys* 95

*Urocyon cinereoargenteus*

Glycyphagidae: *Glycyphagus hypudaei* 261

Laelapidae: *Androlaelaps fahrenheitzi* 261

Macronyssidae: *Ornithonyssus bacoti* 261

*Ursus americanus*

Rhyncoptidae: *Ursicoptes americanus* 64, 295

*Vulpes vulpes*

Glycyphagidae: *Scalopacarus obesus* 261

Laelapidae: *Echinonyssus utahensis* 261

*Zapus hudsonius*

Glycyphagidae: *Glycyphagus newyorkensis* 77, 131, 208, 248, 257, 264; *G. zapus* 77, 251;

*Orycteroxenus soricis* 131; *Xenoryctes latiporus* 257

Laelapidae: *Androlaelaps fahrenheitzi* 131, 133, 235, 248; *Echinonyssus isabellinus* 131;

*Haemogamasus ambulans* 131, 257; *H. liponyssoides* 235; *H. reidi* 248

Listrophoridae: *Listrophorus mexicanus* 131

Macrochelidae: *Macrocheles* N 148; *M. mesochthonius* 148, 251



Macronyssidae: *Ornithonyssus bacoti* 249

Myobiidae: *Radfordia ewingi* 131, 248

Pygmephoridae: *Pygmephorus mahunkai* 131; *P. spinosus* 208

*Z. princeps*

Glycyphagidae: *Glycyphagus hypudaei* 248; *G. newyorkensis* 248

Laelapidae: *Androlaelaps fahrenheitzi* 248; *Haemogamasus reidi* 248;

Listrophoridae: *Listrophorus mexicanus* 248

Macronyssidae: *Ornithonyssus bacoti* 248

Myobiidae: *Radfordia ewingi* 248

Myocoptidae: *Gliricoptes zapus* 248

*Z. trinotatus*

Glycyphagidae: *Glycyphagus hypudaei* 248; *G. newyorkensis* 248, 269

Laelapidae: *Androlaelaps fahrenheitzi* 248, 269; *Echinonyssus isabellinus* 248;

*Haemogamasus ambulans* 248; *H. occidentalis* 269; *H. reidi* 248, 269

Macrochelidae: *Macrocheles praedafimotorum* 148

Myobiidae: *Radfordia ewingi* 248

Myocoptidae: *Gliricoptes zapus* 78, 248

## GEOGRAPHIC DISTRIBUTION OF MITES OF NORTH AMERICAN MAMMALS

The states of the United States and the provinces of Canada are listed alphabetically below, together with the mites of mammals reported from each. Numbers refer to references.

## ALABAMA (AL)

Laelapidae: *Androlaelaps casalis* 33; *Haemogamasus liponyssoides liponyssoides* 285

Listrophoridae: *Prolistrophorus grassii* 69; *P. sparsilineatus* 62

Macronyssidae: *Chirotonyssus robustipes* 33; *Steatonyssus ceratognathus* 33; *S. occidentalis* 33

Myobiidae: *Ewinga longa* 33

Pygmephoridae: *Pygmephorus horridus* 212; *P. spinosus* 22

Rosensteiniidae: *Mydopholeus* sp. 33; *Nycteriglyphites pennsylvanicus* 33

## ALASKA (AK)

Chirodiscidae: *Schizocarpus alaskensis* 90; *S. centralis* 90; *S. contrarius* 90; *S. distinctus* 90; *S. furcatus* 90; *S. indianensis* 250; *S. inversus* 90; *S. paramingaudi* 90; *S. postannulatus* 90; *S. posticus* 90; *S. protinus* 90; *S. reductus* 90; *S. spinifer* 90; *S. subvirgulatus* 90; *S. tetrapilis* 90

Glycyphagidae: *Glycyphagus newyorkensis* 248; *Zibethacarus ondatrae* 250

Laelapidae: *Androlaelaps fahrenheitzi* 116; *Haemogamasus ambulans* 194, 285; *H. ghanii* 285; *Laelaps clethrionomydis* 194; *L. kochi* 194, 239; *L. multispinosa* 250

Listrophoridae: *Listrophorus americanus* 250; *L. dozieri* 250; *L. faini* 250; *L. mexicanus squamiferus* 62; *Lutracarus canadensis* 100; *Lynxacarus mustelae* 100

Myobiidae: *Radfordia lemnina* 67, 144; *R. zibethicalis* 250

Myocoptidae: *Myocoptes ondatrae* 250

Pygmephoridae: *Pygmephorus arcuatus* 19,21; *P. horridus* 21; *P. plurispinosus* 21, 22(nr.);  
*P. spinosus* 21; *P. stammeri* 21; *P. trisetosus* 19, 21; *P. whitakeri* 21

## ALBERTA (AB)

Glycyphagidae: *Glycyphagus newyorkensis* 248

Myobiidae: *Radfordia lemnina* 67

Pygmephoridae: *Bakerdania jonesi* 162; *Pygmephorus horridus* 162; *P. whitakeri* 162

Spinturnicidae: *Spinturnix globosus* 214

## ARIZONA (AZ)

Glycyphagidae: *Dipodomys tuttlei* 68

Laelapidae: *Androlaelaps fahrenheitzi* 151;

Listrophoridae: *Geomylichus multistriatus* 97; *G. texanus* 95; *G. thomomys* 95

Macronyssidae: *Cryptonyssus desultorius* 117; *Steatonyssus emarginatus* 117; *S. occidentalis* 117

Spinturnicidae: *Spinturnix americanus* 206; *S. carloshoffmani* 206

## ARKANSAS (AR)

Laelapidae: *Androlaelaps casalis* 199

## BRITISH COLUMBIA (BC)

Chortoglyphidae: *Aplodontopus latus* 46

Glycyphagidae: *Dermacarus jonesi* 82; *Glycyphagus newyorkensis* 248

Laelapidae: *Androlaelaps fahrenheitzi* 248; *Echinonyssus isabellinus* 248; *Haemogamasus ambulans* 248, 285; *H. occidentalis* 285; *H. reidi* 248

Macrochelidae: *Macrocheles praedafimitorum* 148

Myobiidae: *Eadiea neurotrichus* 159; *Protomyobia oregonensis* 156; *Radfordia ewingi* 248

Myocoptidae: *Gliricoptes zapus* 78, 248

Pygmephoridae: *Pygmephorus horridus* 212; *P. whitakeri* 212

## CALIFORNIA (CA)

Ameroseiidae: *Sertitympanum contiguum* 230

Glycyphagidae: *Dermacarus jonesi* 82

Laelapidae: *Androlaelaps fahrenheitzi* 109, 230, 292; *A. fenilis* 108; *A. geomys* 209;

*Echinonyssus blarinae* 292; *E. femoralis* 209; *E. incomptis* 158; *E. triacanthis* 158;

*E. utahensis* 108; *Eubrachylaelaps circularis* 230; *E. debilis* 108; *Haemogamasus*

*keegani* 292; *H. liponyssoides* 292; *H. liponyssoides hesperus* 285; *H. occidentalis*

285; *H. reidi* 285; *H. thomomysi* 285; *Ischyropoda armatus* 230

Listrophoridae: *Geomylichus californicus* 97, 98; 230; *G. floridanus* 13; *G. inaequalis* 88;

*G. intercalatus* 98; *G. multistriatus* 97; *G. quasinudus* 98; *G. texanus* 97, 230; *G.*

*thomomys* 95; *Quasilistrophorus microticulus* 92

Macrochelidae: *Macrocheles praedafimetorum* 148

Macronyssidae: *Chiroptonyssus robustipes* 137; *Macronyssus crosbyi* 206; *Ornithonyssus*

*bacoti* 8, 169, 171

Myobiidae: *Acanthophthirius steatocaudatus* 240; *Amorphacarus soricis* 83; *Protomyobia*

*atophyracis* 156; *P. quasionoi* 156; *Pteracarus aculeus* 40; *P. chalinolobus* 8 (nr.),

206; *P. elegans* 40; *P. robustus* 40; *Pteracarus* sp. C. 40; *Radfordia neotomae* 127

Pygmephoridae: *Bakerdania jonesi* 162; *Pygmephorus californicus* 212; *P. horridus* 212; *P.*

*whitakeri* 162, 212

## COLORADO (CO)

Glycyphagidae: *Glycyphagus hypudaei* 241; *G. newyorkensis* 248

Laelapidae: *Androlaelaps fahrenheitsi* 248; *Echinonyssus utahensis* 41; *Haemogamasus onychomydis* 285

Listrophoridae: *Alabidocarpus calcaratus* 241

Macronyssidae: *Chiroptonyssus haematophagus* 241; *Macronyssus crosbyi* 241

Myobiidae: *Acanthophthirius lucifugus* 241; *Radfordia ewingi* 248

#### CONNECTICUT (CT)

Glycyphagidae: *Lepidoglyphus hylandi* 182

Macronyssidae: *Ornithonyssus wernecki* 37

#### DELAWARE (DE)

Laelapidae: *Haemogamasus longitarsus* 285

#### DISTRICT OF COLUMBIA (DC)

Laelapidae: *Haemogamasus liponyssoides liponyssoides* 285; *H. longitarsus* 285; *H. onychomydis* 285

#### FLORIDA (FL)

Atopomelidae: *Didelphilichus serrifer* 36

Chirodiscidae: *Dentocarpus macrotrichus* 103

Echimyopodidae: *Echimyopus dasypus* 5

Laelapidae: *Androlaelaps casalis* 102, 288; *A. fahrenheitsi* 35, 36, 102, 215, 288;

*Haemogamasus harperi* 102, 285; *H. liponyssoides* 35; *H. longitarsus* 285; *Laelaps evansi* 215

Listrophoridae: *Geomylichus floridanus* 62; *Listrophorus caudatus* 74, 215; *L. laynei* 74,

215; *L. neotomae* 62; *Lynxacarus morlani* 102; *L. visoni* 59; *Prolistrophorus bakeri* 36, 62; *P. birkenholzi* 74, 215; *P. grassii* 69

Macrochelidae: *Macrocheles mammifer* 102, 148

Macronyssidae: *Chirotonyssus robustipes* 103; *Ornithonyssus bacoti* 35, 36; *Steatonyssus ceratognathus* 102

Myobiidae: *Ewingana inaequalis* 103; *E. longa* 103; *Radfordia palustris* 67; *R. sigmodontis* 36

## GEORGIA (GA)

Atopomelidae: *Didelphilichus serrifer* 186

Cheyletidae: *Cheyletus eruditus* 34

Glycyphagidae: *Glycyphagus hypudaei* 173

Laelapidae: *Androlaelaps casalis* 32, 34, 187, 286; *A. fahrenheitzi* 32, 34, 124, 187, 286; *Echinonyssus blarinae* 124; *Eulaelaps stabularis* 32, 34, 286; *Haemogamasus ambulans* 187; *H. harperi* 285, 286; *H. liponyssoides* 286; *H. longitarsus* 124; *H. pontiger* 285; *H. reidii* 34

Listrophoridae: *Geomylichus floridanus* 62; *Leporacarus gibbus* 62; *Olistrophorus cryptotae* 54, 62; *Oryzomyia oryzomys* 46; *Prolistrophorus bakeri* 62, 124; *P. grassii* 69; *P. sparsilineatus* 62

Macronyssidae: *Chirotonyssus robustipes* 219; *Ornithonyssus bacoti* 32, 124, 186, 286; *O. wernecki* 186, 286; *Steatonyssus ceratognathus* 219; *S. occidentalis* 286

Myobiidae: *Pteracarus minutus occidentalis* 40; *Radfordia palustris* 55, 67; *R. sigmodontis* 124

Myocoptidae: *Myocoptes neotomae* 32

Pygmephoridae: *Pygmephorus horridus* 188, 212

## GREENLAND (GR)

Myobiidae: *Radfordia arctica* 67

IDAHO (ID)

Chirodiscidae: *Schizocarpus mingaudi* 101

Dermanyssidae: *Dermanyssus gallinae* 1

Laelapidae: *Androlaelaps casalis* 1; *A. fahrenheitzi* 1, 168; *Echinonyssus bisetosus* 1; *E. hilli* 1; *E. incomptus* 1; *E. isabellinus* 1; *E. longichelae* 1; *E. neotomae* 1; *E. thomomys* 1; *E. triacanthus* 1; *E. utahensis* 1; *Eubrachylaelaps circularis* 1; *E. crowei* 1; *E. debilis* 1; *Haemogamasus ambulans* 1; *H. longitarsus* 1; *Hypoaspis leviculus* 1; *H. lubrica* 1; *Ischyropoda armatus* 1; *I. furmani* 1

Macrochelidae: *Macrocheles mesochthonius* 148

Macronyssidae: *Macronyssus unidens* 1; *Ornithonyssus bacoti* 1

Myobiidae: *Radfordia bachai* 1

Rhyncoptidae: *Ursicoptes americanus* 295

ILLINOIS (IL)

Cheyletidae: *Eucheyletia bishoppi* 181

Chirodiscidae: *Olabidocarpus whitakeri* 281

Glycyphagidae: *Glycyphagus hypudaei* 6, 181; *Lepidoglyphus hylandi* 181; *Orycteroxenus soricis* 6

Laelapidae: *Androlaelaps fahrenheitzi* 6, 181; *A. geomys* 222; *Echinonyssus arcuatus* 6; *E. geomydis* 222; *E. longichelae* 222; *Eulaelaps stabularis* 181; *Haemogamasus ambulans* 181, 285; *H. harperi* 181; *H. liponyssoides* 181; *H. longitarsus* 181; *H. reidi* 222; *Laelaps kochi* 6, 181

Listrophoridae: *Geomylichus floridanus* 222; *Listrophorus mexicanus* 6

Macrochelidae: *Macrocheles spickai* 148

Macronyssidae: *Macronyssus crosbyi* 281; *M. jonesi* 281; *Ornithonyssus bacoti* 181

Myobiidae: *Acanthophthirius gracilis* 281; *A. steatocaudatus* 240; *Blarinobia simplex* 6;  
*Protomyobia claparedei* 6; *Radfordia hylandi* 181; *R. lemnina* 6; *R. subuliger* 6

Myocoptidae: *Myocoptes japonensis* 6, 181; *M. musculus* 6; *M. pitymys* 60

Pygmephoridae: *Bakerdania jonesi* 181; *B. plurisetosa* 181; *Pseudopygmephorus quadratus*  
181; *Pygmephorus designatus* 161, 181, 212, 222; *P. hastatus* 181, 212; *P. horridus*  
212; *P. plurispinosus* 212; *P. scalopi* 161, 181, 212, 213, 222; *P. sellnicki* 6; *P.*  
*spickai* 161, 212, 222; *P. whitakeri* 162, 181, 212, 222

Spinturnicidae: *Spinturnix americanus* 281; *S. banksi* 281; *S. globosus* 281

#### INDIANA (IN)

Ameroseiidae: *Sertitypanum separationis* 44, 251

Atopomelidae: *Didelphilichus serrifer* 55, 263

Cheyletidae: *Cheyletiella parasitivorax* 243; *C. vespertilionis* 249; *Cheyletus eruditus* 247;  
*C. malaccensis* 16, 251; *Eucheyletia bishoppi* 252, 274

Chirodiscidae: *Alabidocarpus eptesicus* 201; *Olabidocarpus whitakeri* 201, 249;

*Schizocarpus contrarius* 90, 251; *S. furcatus* 96, 251, 276; *S. indianensis* 96, 251,  
276; *S. inversus* 96, 251, 276; *S. mingaudi* 96, 249, 276; *S. paramingaudi* 90, 251;  
*S. postannulatus* 90, 251; *S. posticus* 90, 251; *S. spinifer* 96, 251, 276; *S.*  
*subvirgulatus* 90, 96, 251, 276; *S. tetrapilis* 90, 96, 251, 276; *S. virgulatus* 96, 251,  
276

Chortoglyphidae: *Aplodontopus micronyx* 75, 221; *A. sciuricola* 261, 274

Echimyopodidae: *Echimyopus orphanus* 249, 278



Glycyphagidae: *Dermacarus reticulosus* 223; *D. tamiasciuri* 274; *Glycyphagus hypudaei*

16, 105, 172, 208, 242, 249, 252, 261; *G. newyorkensis* 77, 208; *G. zapus* 77, 251;

*Lepidoglyphus hylandi* 84, 208, 261, 274; *Marsupialichus brasiliensis* 7, 243, 261,

263; *Orycteroxenus canadensis* 172; *O. soricis* 105, 172, 208, 252, 274;

*Scalopacarus obesus* 208, 261, 275; *Xenoryctes latiporus* 105, 208, 242, 249, 252,

261, 274, 275; *X. nudus* 105, 251, 253; *Zibethacarus ondatrae* 7, 247, 261, 263, 276

Laelapidae: *Androlaelaps casalis* 247, 261, 263, 274, 278; *A. fahrenheitzi* 7, 16, 105, 133,

172, 201, 208, 220, 242, 243, 247, 252, 261, 263, 274, 275, 278; *A. morlani* 247,

249; *Echinonyssus blarinae* 208, 252, 275; *E. butantanensis* 247, 249; *E. geomydis*

249; *E. longichelae* 249; *E. staffordi* 261; *E. talpae* 105, 172, 249, 252; *E. utahensis*

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*Acanthopthirius**arcuatus* Dastych & Rack, 1991; *Pygmeporus**aculeus* Dusbabek & Lukoschus, 1973; *Pteracarus**affinis* (Jameson, 1950): *Echinonyssus**affinis* (Poppe), 1896; *Radfordia**Alabidocarpus**alaskensis* Ewing, 1925; *Haemogamasus ambulans**alaskensis* Fain & Whitaker, 1988; *Schizocarpus**alaskensis* Grant, 1947; *Laelaps**Alphalaelaps**ambulans* Thorell, 1872; *Haemogamasus**americana* McDaniel, 1967; *Protomyobia**americana*, *Protomyobia* from *Blarina* = *P. blarinae* Lukoschus, et al. 1988*americanus* (Banks, 1902); *Spinturnix**americanus* Fain, 1967; *Microlabidopus**americanus* Fain & Johnson, 1970; *Ursicoptes**americanus* OConnor & Reisen, 1978; *Chiroptoglyphus**americanus* Radford, 1944; *Listrophorus*

## Ameroseiidae

*Amorphacarus**Androlaelaps**antrozoi* Radovsky & Furman, 1963; *Steatonyssus*



*aplodontiae* (Jellison, 1945); *Alphalaelaps*

*Aplodontochirus*

*Aplodontopus*

*arborimus*, Fain & Whitaker, 1975; *Radfordia*

*Archemyobia*

*arctica*, Fain & Lukoschus, 1977; *Radfordia*

*arcuatus* (Koch 1839); *Echinonyssus*

*armatus* Keegan, 1951; *Ischyropoda*

*Asiochirus* = *Olistrophorus*

*atophyracis* Lukoschus, Giesen, Whitaker, & Cudmore, 1988; *Protomyobia*

Atopomelidae

Audycoptidae = Rhyncoptidae

*bachai* Howell & Elzinga 1962; *Radfordia*

*bacoti* (Hirst, 1913); *Ornithonyssus*

*bakeri*, (Radford, 1949); *Prolistrophorus*

*bakeri*, Rudnick, 1960; *Spinturnix*

*Bakerdania*

*banksi* Rudnick, 1960; *Spinturnix*

*Bdellonyssus* = *Ornithonyssus*

*birkenholzi* Fain, Whitaker, & Smith, 1984; *Prolistrophorus*

*bisetosus* Allred, 1957; *Echinonyssus*

*bishoppi* Baker, 1949; *Eucheyletia*

*blarina* (Fain & Hyland, 1972); *Olistrophorus*

*blarinae* (Herrin, 1970); *Echinonyssus*  
*blarinae* Lukoschus, Jeucken & Whitaker, 1988; *Protomyobia*  
*blarinae* McDaniel & Whitaker, 1972; *Olistrophorus blarinae*  
*Blarinobia*  
*borealis* Fain & Hyland, 1972; *Aplodontochirus*;  
*brasiliensis* Fain, 1969; *Marsupialichus*  
*brevicaudae* Smiley & Whitaker 1979; *Pygmephorus* = *Pygmephorus stammeri* Krczal, 1959  
*brevihamata* (Haller, 1882); *Eadiea*  
*brevipes* Savulkina, 1976, *Pygmephorus*  
*brevisetata* (Strandtmann & Morlan), 1953; *Echinonyssus*  
*brevisetosa* Jameson, 1948; *Protomyobia*  
*brevispinosus* Fain, Whitaker, Schwan & Lukoschus, 1978; *Geomylichus*  
*butantanensis* (Fonseca, 1932); *Echinonyssus*  
*cacahuamilpensis* Baker, 1949 (nr.); *Cheyletus*  
*calcaratus* Lawrence, 1952; *Alabidocarpus*  
*californicus* Fain, Whitaker, & Thomas, 1988; *Geomylichus*  
*californicus* Smiley & Whitaker, 1979; *Pygmephorus*  
*canadensis* Fain, Kok, Lukoschus & Clulow, 1971; *Orycteroxenus*  
*canadensis* Fain, Lukoschus, Kok & Clulow, 1974; *Lutrilichus*  
*canadensis* Fain & Yunker, 1980; *Lutracarus*  
*canadensis* Radford, 1955; *Myocoptes*  
*carloshoffmanni* Hoffmann, 1944; *Spinturnix*  
*casalis* (Berlese, 1887); *Androlaelaps*

*caudata* (Banks, 1910); *Acanthopthirus*

*caudata eptesicus* Fain & Whitaker, 1976; *Acanthopthirus*

*caudatus* Fain, Whitaker & Smith 1984; *Listrophorus*

*centralis* Fain & Whitaker, 1988; *Schizocarpus*

*ceratognathus* (Ewing, 1923); *Steatonyssus*

*chalinolobus* (Womersley, 1941) = *Pteracarus elegans* from *Corynorhinus* and *P. aculeus* from

*Eptesicus*.

*chalinolobus* Womersley, 1941 (nr.); *Pteracarus*

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*Cheyletiella*

Cheyletiellidae = Cheyletidae

*Cheyletus*

Chirodiscidae

*Chiroptoglyphus*

*Chiroptonyssus*

Chortoglyphidae

*circularis* (Ewing), 1933; *Eubrachylaelaps*

*claparedei* (Poppe, 1896); *Protomyobia*

*clethrionomydis* Lange, 1955; *Laelaps*

*completus* Dusbabek & Wilson, 1973; *Pteracarus*

*completus vrazi* Dusbabek & Wilson, 1973; *Pteracarus*

*condylurae* Jameson, 1949; *Eadiea*

*contiguum* Elsen & Whitaker, 1985; *Sertitympanum*

*contrarius* Fain & Whitaker, 1988; *Schizocarpus*

*Coprolactistus*

*crosbyi* (Ewing & Stover, 1915); *Macronyssus*

*crowei* Jameson, 1947; *Eubrachylaelaps*

*Cryptonyssus*

*cryptotae* (McDaniel & Whitaker, 1972); *Olistrophorus*

*cynomys* (Radford, 1941), *Echinonyssus*

*dasyopus* Fain, Lukoschus, Louppen & Mendez, 1973; *Echimyopus*

*debilis* Jameson, 1950; *Eubrachylaelaps*

*Dentocarpus*

*Dermacarus*

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*Dermanyssus*

*deserti* Fain & Whitaker, 1987; *Geomylichus*

*designatus* Mahunka, 1973; *Pygmephorus*

*desultorius* Radovsky, 1966; *Cryptonyssus*

*Didelphilichus*

*dipodomius* (Radford, 1953); *Geomylichus*

*Dipodomyopus*

*distinctus*, Fain & Whitaker, 1988; *Schizocarpus*

*dolichosternus*, Krantz & Whitaker, 1988; *Macrocheles*

*doreyae* Dusbabek, 1968; *Ewingana*

*dozieri* Radford, 1944; *Listrophorus*

*Eadiea*

*echidnina* Berlese, 1887; *Laelaps*

*Echimyopidae*

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*Echinonyssus*

*elegans* Dusbabek & Wilson, 1973; *Pteracarus*

*emarginatus* Radovsky & Furman, 1963; *Steatonyssus*

*ensifera* (Poppe, 1896); *Radfordia*

*Epimyodex*

*equisetosa* Cross, 1970; *Bakerdania*

*equitrichosus* Mahunka, 1975 = *Pygmephorus designatus*

*erlangensis* Krczal, 1959; *Pygmephorus*

*eruditus* (Schrank, 1781); *Cheyletus*

*Eubrachylaelaps*

*Eucheyletia*

*Eudusbabeckia* n. sp. Whitaker & Easterla 1975 = *Ewingana (Doreyana) doreyae*

*Eulaelaps*

*Eutalpacarus*

*evansi* Tipton, 1960; *Laelaps*

*Ewingana*

*ewingi* (Fox, 1937); *Radfordia*

*exarmatum* Elsen & Whitaker, 1985; *Sertitympanum*

*fahrenheitzi* (Berlese, 1911); *Androlaelaps*

*faini* Dubinina, 1972; *Listrophorus*

*faini* Smiley & Whitaker, 1979; *Pygmephorus*

*femuralis* (Allred 1957); *Echinonyssus*

*flexus* Radovsky, 1967; *Cryptonyssus*

*floridanus* (Radford, 1949); *Geomylichus*

*forcipatus* Willman, 1952; *Pygmephorus*

*formosus* Fain & Whitaker, 1987; *Geomylichus*

*furcatus* Fain, Whitaker, & Smith, 1984; *Schizocarpus*

*furmani* Keegan, 1956; *Ischyropoda*

*furmani* Tipton & Boese, 1958; *Steatonyssus*

*fuscus* Dood & Rocket, 1985; *Nycteriglyphus*

*gallinae* (De Geer, 1778); *Dermanyssus*

*gallinoides* Moss, 1966; *Dermanyssus*

*geomydis* Coffman & McDaniel, 1975; *Geomylichus* = *Geomylichus floridanus*

*geomydis* (Keegan, 1946); *Echinonyssus*

*Geomylichus*

*Geomylichus* sp. Whitaker & Maser, = *Geomylichus perognathi* Fain & Whitaker, 1980

*geomys* (Strandtmann, 1949); *Androlaelaps*

*gettingeri* Fain, Lukoschus, Cudmore & Whitaker, 1984; *Trichoecius*;

*ghanii* Williams, 1978; *Haemogamasus*

*gibbus* (Pagenstacher, 1861); *Leporacarus*

*glasgowi* Ewing, 1925 = *Androlaelaps fahrenheitzi*

*Gliricoptes*

*glirinus* (nr.) Canestrini, 1895; *Gliricoptes*

*globosus* (Rudnick, 1960); *Spinturnix*

Glycyphagidae

*Glycyphagus*

*gracilis* Fain & Whitaker, 1976; *Acanthophthirius*

*grassii* (Radford, 1954); *Prolistrophorus*

*haematophagus* Fonseca, 1948; *Chiroptonyssus*

*Haemogamasus*

*Haemogamasus* sp. A Durden 1983 = *Haemogamasus ambulans*

*hamiltoni* Jameson & Whitaker, 1975; *Radfordia*

*hamiltoni* Smiley & Whitaker, 1979 = *Pygmephorus spinosus*

*hardyi* Baker, 1949; *Eucheyletia*

*harperi* Keegan, 1951; *Haemogamasus*

*hastatus* Mahunka, 1973; *Pygmephorus*

*hengererorum* Jameson, 1948; *Amorphacarus*

*hilli* (Jameson, 1950); *Echinonyssus*

*Hirstionyssus* = *Echinonyssus*

*hollisteri* (Ewing, 1925); *Eubrachylaelaps*

*horridus* Mahunka, 1973; *Pygmephorus*

*hubbardi* (Jameson, 1949); *Patrinyssus*

*hylandi* (Fain, 1969); *Lepidoglyphus*

*hylandi* Fain & Lukoschus, 1977, *Radfordia*

*Hypoaspis**hypudaei* (Koch, 1841); *Glycyphagus**hypudaei septentrionalis* Fain, 1969; *Glycyphagus**idea* Smiley & Whitaker, 1979; *Pygmephorus**iglehartae* Smiley & Whitaker, 1984; *Pygmephorus**inaequalis* (Ewing, 1936); *Ewingana**inaequalis* Fain, Whitaker, Schwan & Lukoschus, 1978; *Geomylichus**incomptis* (Eads & Hightower, 1952); *Echinonyssus**indianensis* Fain, Whitaker, & French, 1982; *Protomyobia**indianensis* Fain, Whitaker, & Smith, 1984; *Schizocarpus**inexpectatus* Jameson, 1955; *Archemyobia**insignitus* Berlese, 1918; *Macrocheles**inversus* Fain, Whitaker & Smith, 1984; *Schizocarpus**isabellinus* (Oudemans, 1913); *Echinonyssus**Ischyropoda**islandicus* Sellnick, 1940; *Pygmephorus**japonensis* Radford, 1955; *Myocoptes**japonensis canadensis* Radford, 1955; = *Myocoptes canadensis**japonensis japonensis* Radford, 1955; *Myocoptes**jamesoni* Ewing & Baker, 1947; *Myonyssus**johnstoni* Fain, 1969; *Marsupialichus**johnstoni* Smiley & Whitaker, 1979 = *P. erlangensis**jonesi* Fain & Whitaker, 1976; *Dermacarus*



*jonesi* Mahunka, 1975; *Bakerdania*

*jonesi* White, 1966; *Macronyssus*

*keegani* Jameson, 1952; *Haemogamasus*

*kingstownensis* Fain & Hyland, 1973; *Listrophorus*

*Klemania* sp. Whitaker & Maser, 1979 = *Sertitympanum exarmatum*

*kochi* Oudemans, 1936; *Laelaps*

*Labidocarpidae* = *Chirodiscidae*

*Labidophoridae* = *Glycyphagidae*

*Labidophorus*

Laelapidae

*Laelaps*

*lasiurus* Fain & Whitaker, 1976; *Acanthopthirus*

*latiporus* Fain & Whitaker, 1973; *Xenoryctes*

*laticutatus* (de Meillon & Lavoipierre, 1944) = *Echinonyssus butantanensis*

*latus* Fain, 1967; *Aplodontopus*

*laynei* Fain, Whitaker, & Smith, 1984; *Listrophorus*

*lemnina* Koch, 1841; *Radfordia*

*Lepidoglyphus*

*Leporacarus*

*leptonycteris* Fain, 1973; *Phyllostomyobia*

*leuckarti* Pagenstecher, 1861 = *Listrophorus mexicanus*

*leviculus* (Eads, 1951); *Hypoaspis*

*linsdalei* Baker, 1949; *Cheyletus*

*liomys* (Herrin & Yunker, 1973); *Echinonyssus*

*liomys* Lukoschus, Duijguisen & Fain, 1977; *Metalabidophorus*

*liponyssoides* Ewing, 1925; *Haemogamasus*

*liponyssoides hesperus* Radovsky, 1960; *Haemogamasus*

*liponyssoides liponyssoides* Ewing, 1925; *Haemogamasus*

*listrophorid* gen. & sp. Whitaker & Maser, 1979 = *Quasilistrophorus microticolus*

Listrophoridae

*Listrophorus*

*longa* (Ewing, 1938); *Ewingana*

*longichelae* (Allred & Beck, 1966); *Echinonyssus*

*longichelae* variant #1; *Echinonyssus*

*longisetosus* (Furman, 1950); *Macronyssus*

*longitarsus* (Banks 1910); *Haemogamasus*

*lubrica* Oudemans & Voigts, 1904; *Hypoaspis*

*lucifugus* Fain & Whitaker, 1976; *Acanthophthirius*

*lukoschusi* Smiley & Whitaker, 1984; *Pygmephorus*

*Lutracarus*

*Lutrilichus*

*lutterloughae* Smiley & Whitaker, 1979; *Pygmephorus*

*Lynxacarus*

*macdonaldi* Gill & Strandtmann, 1977; *Radfordia*

*Macrocheles*

*Macrocheles N* (Yoder, in Krantz & Whitaker, 1988, not published)

## Macrochelidae

*macrodactylus* Radovsky & Beck, 1971; *Macronyssus*

## Macronyssidae

*Macronyssus*

*macrotrichus* Dusbabek & Cruz, 1966; *Dentocarpus*

*mahunkai* Smiley & Whitaker 1979; *Pygmephorus*

*magnisetosus* Rack 1975 = *Pygmephorus horridus*

*malaccensis* Oudemans, 1903; *Cheyletus*

*mammifer* Berlese, 1918; *Macrocheles*

*marmotophilus* Krantz, O'Conner, Foreyt, & Fain, 2003; *Aplodontopus*

*Marsupialichus*

*marsupialichus* Fain, DeCock & Lukoschus, 1972; *Marsupialichus*

*maseri* Krantz & Whitaker, 1988; *Macrocheles*

*matrius* (Hull, 1925); *Macrocheles*

*merdarius* (Berlese, 1889); *Macrocheles*

*mesochthonius* Krantz & Whitaker, 1988; *Macrocheles*

*Metalabidophorus*

*mexicanus* Fain 1970; *Listrophorus*

*mexicanus squamiferus* Fain & Hyland, 1972; *Listrophorus*

*microdipodops* Fain & Whitaker, 1987; *Geomylichus*

*Microlabidopus*

*micronyx* Fain & Spicka, 1977; *Aplodontopus*

*microti* Ewing, 1933 = *Laelaps kochi*

*microti* Spicka & OConnor, 1980; *Glycyphagus*  
*microticolus* Fain, Whitaker, & Lukoschus, 1978; *Quasilistrophorus*  
*miles* (Berlese 1892); *Hypoaspis*  
*mingaudi* Trouessart, 1896; *Schizocarpus*  
*minutus daubentoni* (nr.) Dusbabek, 1973; *Pteracarus*  
*minutus occidentalis* Dusbabek & Wilson, 1973; *Pteracarus*  
*moreohorridus* Mahunka, 1975; *Pygmephorus*  
*morlani* Radford, 1951; *Lynxacarus*  
*morlani* (Strandtmann, 1949); *Androlaelaps*  
*multispinosa* (Banks, 1910); *Laelaps*  
*multistriatus* Fain, Whitaker & Thomas, 1988; *Geomylichus*  
*muscaedomesticae* (Scopoli, 1772); *Macrocheles*  
*musculi* Schrank, 1781; *Myobia*  
*musculus* (Koch, 1844); *Myocoptes*  
*mustelae* (Megnin, 1885); *Lynxacarus*  
*mustelae* Rack, 1975 = *Pygmephorus spickai*  
*Mydopholeus* sp.  
*Myobia*  
Myobiidae  
*Myocoptes*  
Myocoptidae  
*Myonyssus*  
*nearcticus* Fain & Hyland 1973; *Lynxacarus*

*nearcticus* Fain & Whitaker, 1985; *Labidophorus*  
*neotomae* (Eads & Hightower, 1951); *Echinonyssus*  
*neotomae* Fain & Hyland, 1973; *Listrophorus*  
*neotomae* Fain, Lukoschus, Cudmore & Whitaker, 1984; *Mycopetes*  
*neotomae* Jameson & Whitaker, 1975; *Radfordia*  
*neurotrichus* Lukoschus, Klompen & Whitaker, 1980; *Eadiea*  
*newyorkensis* (Fain, 1969); *Glycyphagus*  
*nidi* Michael, 1892; *Haemogamasus*  
*nidicolus* (North American records only); = *Pygmephorus islandicus*  
*nidiformes* Tipton & Saunders, 1971; = *Haemogamasus reidii*  
*nudus* Fain & Whitaker, 1975; *Xenoryctes*  
*nuttalli* Hirst, 1915; *Laelaps*  
*Nycteriglyphites*  
*Nycteriglyphus*  
*Nycteriglyphus* sp. A Reisen, Kennedy & Reisen, 1976 = *Chiroptoglyphus americanus*  
*Nycteriglyphus* sp. Whitaker & Easterla, 1975 = *Nycteriglyphus texanus*  
*nycticeius* Fain & Whitaker, 1987; *Acanthophthirius*  
*nyctomys* Whitaker, Spicka & Schmeltz, 1975 = *Echimyopus orphanus*  
*obesus* Fain & Whitaker, 1973; *Scalopacarus*  
*obsoletus* (Jameson, 1950); *Echinonyssus*  
*obsoletus* (var.); *Echinonyssus*  
*occidentalis* (Ewing, 1933); *Steatonyssus*  
*occidentalis* (Keegan, 1951); *Haemogamasus*

*Olabidocarpus*

*Olistrophorus*

*ondatrae* Fain, Kok & Lukoschus, 1970; *Listrophorus*

*ondatrae* Lukoschus & Rouet, 1968; *Myocoptes*

*ondatrae* (Rupes & Whitaker, 1968); *Zibethacarus*

*ontariensis* Norton, 1973; *Macrocheles*

*onychomydis* (Ewing, 1933); *Haemogamasus*

*oregonensis* Fain & Whitaker, 1978; *Acanthophthirius*

*oregonensis* Lukoschus, Giesen, Whitaker, & Cudmore, 1988; *Protomyobia*

*Ornithonyssus*

*orphanus* Fain & Phillips, 1977; *Echimyopus*

*orri* Rudnick, 1960; *Spinturnix*

*Orycteroxenus*

*oryzomys* (Radford, 1954); *Oryzomysia*

*Oryzomysia*

*palustris* Fain & Lukoschus, 1977; *Radfordia*

*paramingaudi* Fain & Whitaker, 1988; *Schizocarpus*

*parasitivorax* (Megnin, 1878); *Cheyletiella*

*Patrinyssus*

*peltatus* Jameson, 1949; *Eutalpacarus*

*penicilliger* (Berlese, 1904); *Macrocheles*

*pennsylvanicus* Fain, Lukoschus & Whitaker, 1982; *Nycteriglyphus*

*Periglischrus*

*perognathi* Fain & Whitaker, 1980; *Geomylichus*.

*perognathi* (Herrin, 1970); *Echinonyssus*

*phenacomys* Fain & Hyland, 1972; *Listrophorus*

*Phyllostomyobia*

*pitymys* Fain & Bochkov, 2004; *Myocoptes*

*pitymys* Fain & Hyland, 1972; *Listrophorus*

*plurisetosa* Mahunka, 1975; *Bakerdania*

*plurispinosus* Mahunka, 1975; *Pygmephorus*

*polypunctatus* Krantz & Whitaker, 1988; *Macrocheles*

*polystichus* Krantz & Whitaker, 1988; *Macrocheles*

*pontiger* (Berlese, 1904); *Haemogamasus*

*postannulatus* Fain & Whitaker, 1988; *Schizocarpus*

*posticus* Fain & Whitaker, 1988; *Schizocarpus*

*postscutatus* Fain, 1976; *Geomylichus*

*praedafimetorum* Richards & Richards, 1977; *Macrocheles*

*proctorae* Smiley & Whitaker 1984; *Pygmephorus*

*procyoni* Fain & Wilson, 1979; *Ursicoptes*

*Prolistrophorus*

*protinus* Fain & Whitaker, 1988; *Schizocarpus*

*Protomyobia*

*Pseudopygmephorus*

*Pteracarus*

*Pteracarus* sp. C Dusbabek & Wilson, 1973; *Pteracarus*

## Pygmephoridae

*Pygmephorus*

*Pygmephorus* sp. Manischewitz, 1966 = *Pygmephorus* Mahunka, 1973

*quadratus* (Ewing, 1917); *Pseudopygmephorus*

*Quasilistrophorus*

*quasionoi* Lukoschus, Giesen, Whitaker & Cudmore, 1988; *Protomyobia*

*rackae* Smiley & Whitaker, (1979); *Pygmephorus*

*Radfordia**Raillietia*

*reductus* Fain & Whitaker, 1988; *Schizocarpus*

*reidi* (Ewing, 1925); *Haemogamasus*

*reticulosus* Spicka & Gerrits, 1977; *Dermacarus*

## Rhyncoptidae

*robustipes* (Ewing, 1925); *Chiroptonyssus*

*robustus* Dusbabek & Wilson, 1973; *Pteracarus*

*rodriguezii* Oliver & Krantz, 1963; *Macrocheles*

*russellae* Smiley & Whitaker, 1984; *Pygmephorus*

*Scalopacarus*

*scalopi* Mahunka, 1973; *Pygmephorus*

*scapanus* Fain & Whitaker, 1975; *Eadiea*

*scapanus* Fain & Whitaker, 1981; *Scalopacarus*

*Schizocarpus*

*sciuricola* Hyand & Fain, 1968; *Aplodontopus*,



*Sciurocoptes**sellnicki* Krczal, 1958; *Pygmephorus**separationis* Elsen & Whitaker 1985; *Sertitympanum**serrifer* Fain, 1970; *Didelphilichus**Sertitympanum**sigmodontis* Radford, 1951, *Radfordia**simplex* (Ewing, 1938); *Blarinobia**soricis* Fain & Bochkov, 2001; *Epimyodex**soricis* (Oudemans, 1915); *Orycteroxenus**soricis* (nr.) Oudemans, 1915; *Orycteroxenus**soricis* Fain & Whitaker, 1978; *Amorphacarus**sparilineatus* (Fain, 1970); *Prolistrophorus**spermophilus*; Fain & Whitaker 1978; *Dermacarus**spickae* Krantz & Whitaker 1988; *Macrocheles**spickai* Mahunka, 1974; *Pygmephorus**spinifer* Fain, Whitaker & Smith, 1984; *Schizocarpus**spinus* Kramer, 1877; *Pygmephorus**spinus* (nr.) Cross, 1965 = *Pygmephorus designatus*

## Spinturnicidae

*Spinturnix**squamosus* Fain, Munting & Lukoschus, 1969; *Myocoptes**stabularis* (Koch, 1836); *Eulaelaps**staffordi* (Strandtmann & Hunt, 1951); *Echinonyssus*

*stammeri* Krczal, 1959; *Pygmephorus*  
*steatoaudatus* Uchikawa & Baker, 1993; *Acanthopthirus*  
*Steatonyssus*  
*stupkai* Linzey & Crossley, 1971; *Laelaps*  
*subbadius* (Berlese 1904); *Macrocheles*  
*subuliger* Ewing, 1938; *Radfordia*  
*subvirgulatus* Fain, Whitaker & Smith, 1984; *Schizocarpus*  
*sylviarum* (Canestrini & Fanzago), 1877; *Ornithonyssus*  
*sylvilagi* Fain, Whitaker & Lukoschus 1981; *Leporacarus*  
*sylvilagi* Kaliszewski & Rack, 1985 = *Pygmephorus whitakeri*  
*synaptomys* Fain, Whitaker, McDaniel & Lukoschus, 1974; *Listrophorus*  
*talpae* (Zemskaya, 1955); *Echinonyssus*  
*tamias* Fain and Hyland, 1970; *Sciurocoptes*  
*tamiasciuri* (Rupes, Yunker & Wilson, 1971); *Dermacarus*  
*tamiasi* Mahunka 1975; = *Pygmephorus stammeri*  
*tenax* Michael, 1889; *Trichoecius*  
*tetrapilis* Fain, Whitaker & Smith, 1984; *Schizocarpus*  
*texanus* Oconnor, Whitaker & Easterla, 1977; *Nycteriglyphus*  
*texensis* Fain, Whitaker, Schwann & Lukoschus, 1978; *Geomylichus*  
*thomomys* (Allred & Beck, 1966); *Echinonyssus*  
*thomomys* Fain, Whitaker, Schwan & Lukoschus, 1978; *Geomylichus*  
*thomomysi* Willams, 1978; *Haemogamasus*  
*triacanthus* (Jameson, 1950); *Echinonyssus*

*Trichoecius**Trichoecius* sp. Whitaker & Lukoschus = *T. gettingeri**trisetosus* Dastych & Rack, 1991; *Pygmephorus**tuttlei* Fain & Lukoschus, 1978 *Dipodomyopus**unidens* Radovsky, 1967; *Macronyssus**Ursicoptes**utahensis* (Allred & Beck, 1966); *Echinonyssus**utahensis* Fain & Whitaker, 1987; *Geomylichus**utmarae* Smiley & Whitaker, 1984; = *Pygmephorus scalopi**validus* Banks, 1910; *Listrophorus**vargasi* Hoffman, 1944; *Periglischrus**venezolanus* (Vitzthum, 1932); *Chiroptonyssus**virgulatus* Fain, Whitaker & Smith, 1984; *Schizocarpus**visoni* Fain and Bochkov, 2002; *Lynxacarus**wernecki* (Fonseca, 1935); *Ornithonyssus**whartoni* Smiley & Whitaker, 1979; *Pygmephorus**whitakeri* Mahunka, 1973; *Pygmephorus**whitakeri* McDaniel & Coffman, 1970; *Olabidocarpus**whitakeri* Radovsky and Krantz, 1998; *Coprolactistus* = *Mitonyssoides stercoralis* Yunker,

Lukochus, &amp; Giesen, 1990

*wilsoni* Smiley & Whitaker, 1984; *Pygmephorus**wrenschae* Smiley & Whitaker, 1979; = *Pygmephorus erlangensis**Xenoryctes*

*zapus* Fain, Spicka, Jones & Whitaker, 1985; *Glycyphagus*

*zapus* Fain & Whitaker, 1974; *Gliricoptes*

*Zibethacarus*

*zibethicalis* Radford, 1936; *Radfordia*

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#### ADDENDUM

We would appreciate receiving citations for published or future papers not included in this article that contain pertinent information on the ectoparasitic mites of North American mammals. Such information will be added periodically in this space.

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