

Catalogue of known oribatid mite species (Acari Oribatida) from the Central American landbridge (First part)

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A comprehensive catalogue of the oribatid mites from the Central American landbridge is presented that includes all published records in addition to many new records by the author. A total of 543 species, belonging to 87 families, is recorded from Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica (including Cocos Island), and Panama. The catalogue contains all oribatid families, with the exception of the ptyctimous oribatid mites, whose catalogue will be published separately. Records are given for each species that include information on biotopes and microhabitats in the mentioned countries, references, synonymic names, taxonomic remarks, and the known distribution.

KEY WORDS: Acari, Oribatida, catalogue, Central America, Zoogeography, Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama.

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INTRODUCTION

The oribatid mite fauna of Central America is not at all well known. MAHUNKA (1982) states that “among the greatest gaps in information concerning distribution are Central America and the West Indies”. In the last years the research activities in this region have been intensified by several collecting efforts (e.g. the project ALAS — Arthropods of La Selva, Costa Rica: LONGINO 1994; intensive collectings of the author in the last 20 years in the region, see SCHATZ 1997, 2006; also collectings of J. Balogh, L. Beck, V. Behan-Pelletier, S. Mahunka, W. Niedbala, R. Schuster, L.S. Subías, and others). Nevertheless almost each sample adds additional species. A summary of the present state of knowledge for further studies seems indispensable.

This catalogue contains all published oribatid species records on the Central American landbridge from Guatemala and Belize to Panama, as well as new and unpublished records by the author. Records of these species are also included from other Neotropical countries along with their general zoogeographical distribution. Because of its large size, the catalogue will be published in two parts. The first part contains all families except the ptyctimous oribatid mites. A full accounting of that group (126 species from the Mesoplophoridae, Protoplophoridae, Phthiracaridae, Steganacaridae, Oribotritiidae, Euphthiracaridae) will comprise the catalogue's second part and will be published separately (SCHATZ & NIEDBALA in prep.).

Some authors (e.g. HALFFTER 1987) consider the Central American landbridge to extend from the Isthmus of Tehuantepec to the Panamanian border with Colombia (see SCHATZ 2006). This region includes the Mexican states of Chiapas, Tabasco, Campeche, Yucatán, and Quintana Roo. Several studies on oribatids were carried out in the Mexican portion of this area (e.g., Yucatán: PEARSE 1936, WHARTON 1938, NIEDBALA 2004; Quintana Roo: VÁZQUEZ 1999, VÁZQUEZ & PRIETO TRUEBA 2001; Chiapas: MAHUNKA 1983a, NORTON & POINAR 1993). In the present catalogue, records from those Mexican states are mentioned separately, but the total oribatid fauna of Mexico is not considered here. Recent catalogues with detailed distribution records in all Mexican states were published by PALACIOS-VARGAS (1994a), HOFFMANN & LÓPEZ-CAMPOS (2000), and PALACIOS-VARGAS & IGLESIAS (2004).

A precise habitat assignment according to the Holdridge life-zone system (HOLDRIDGE 1947, 1967; LEONARD 1987; ANONYMOUS 1996; GÓMEZ et al. 1997) was not always possible due to a lack of explicit collection site information. In such cases, a more simplified habitat designation was used as follows: *littoral zone* (halophyte reef community, coastal swamp and mangroves), *tropical dry forest*, *tropical moist forest* (subtropical and tropical moist forest including premontane moist forest), *lowland rain forest* (subtropical and tropical lowland wet forest incl. pre-montane rain and wet forest, Caribbean lowland rain forest sensu GÓMEZ et al. 1997), *lower montane rain forest* (subtropical and tropical lower montane rain and wet forest), *cloud forest* (tropical highland forest, montane rain forest s.l.), and *tropical subalpine rain páramo*. For the majority of species, where collections were made from leaf litter, this microhabitat is omitted for the sake of brevity. Other microhabitats (grass or fern litter, moss, lichens, epiphytes) are specifically noted if that information was available.

HISTORY

The history of investigations on oribatid mites in Central America goes back to over a century when Otto STOLL (1891) described the first oribatid species from the Central American landbridge. GRANDJEAN (1930, 1931, 1932, 1934, 1950, 1960, 1962) described nine oribatid species from Panama and 21 additional species from Mexico, Colombia, Martinique, Venezuela, among those some species with a wide distribution in the region. WILLMANN (1930) found 45 oribatid species from samples in Guatemala, among those also two of STOLL's species. He described six new species from that material, the others were never published. WOOLLEY (1961, 1966a, 1966b) described several species discovered in the slide series from the U.S. National Museum. These species were introduced to the United States on plant material from different Central American countries, mostly without detailed site records, and found in Miami and Nogales. Also HAMMER (1969) discovered numerous introduced

oribatid species from Central America in U.S. plant quarantine stations, mostly imported with live orchids and bromeliads or fruit (since most of these species are registered as “sp.” or “spp.” they are not considered in the present calculations).

In the following years several species descriptions of oribatid mites from the Central American landbridge were published (BECK 1964; PIFFL 1972; MAHUNKA 1980, 1982, 1983b; NIEDBALA 1982, 1985, 1986, 1988, 1991, 2003, 2004; WOAS 1986; BALOGH 1994, 1997; SCHATZ 1994a, 1994b, 2003; NIEDBALA & SCHATZ 1996; BEHAN-PELLETIER 1997, 1998; PALACIOS-VARGAS & RIOS 1998; BALOGH & BALOGH 2002; BEHAN-PELLETIER & EAMER 2003). BALOGH & BALOGH (1988, 1990) gave an overview (and a key) of the known oribatid species of the Neotropical region and listed 51 species of the Central American landbridge which is about a 6th of the presently known species.

At present, 498 species have been recorded and published from the landbridge, including 300 described and 198 “unnamed” species (mentioned as “sp.”, “cf.”, or “sp. nr.”). A total of 134 oribatid species were originally described from the Central American landbridge. The number of presently known species in Central America, including Mexico, is 978. With the addition of the Antilles, the total for the entire region stands at 1238 oribatid species (Table 1).

CATALOGUE

Family Ctenacaridae

Ctenacarus araneolus (Grandjean 1932)

Panama — new records: Madden Dam: deciduous dry forest; Isla Taboga, deciduous dry forest (H. Schatz coll.).

Other: Mexico (Yucatán, Quintana Roo), Lesser Antilles, Venezuela, Brazil, Galapagos Islands, Nearctic, Palaearctic (Morocco, Algeria: orig. descr. sub *Palaeacarus araneola*), Ethiopian, Eastern Oriental, Australia, Pacific.

Ctenacaridae sp.

Nicaragua: without detailed site record (MAES et al. 1989: 44).

Family Mesoplophoridae (second part)

Family Hypochthoniidae

Eohypochthonius gracilis (Jacot 1931)

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90). New records: Barro Colorado Island; tropical moist forest (M. Kaspari, H. Schatz coll.); Costa

Table 1.

Known species numbers of Oribatida (Acari) in different Central American countries (Ptyctimous mites included, records from U.S. plant quarantine stations (HAMMER 1969) not included).

| Country | Named spp. | Unnamed spp. (sp., cf., nr.) | Total (published) | (orig. descr.) | ("endemic") |
|---|--------------------------|---------------------------------|----------------------|---------------------|-------------|
| Belize | 26 [+13] | 0 | 26 | (6) | (1) |
| Guatemala | 66 [+4] | 0 | 66 | (35) | (14) |
| El Salvador | 19 | 1 | 20 | (10) | (8) |
| Honduras | 15 | 0 | 15 | (5) | (1) |
| Nicaragua | 1 | 20 | 21 | (1) | (0) |
| Costa Rica (- Cocos Island) | 144 [+6] | 62 | 206 | (60) | (23) |
| Costa Rica (+ Cocos Island) | 153 [+14] | 63 | 216 | (63) | (26) |
| Panama | 177 [+47] | 144 | 321 | (17) | (6 [+1]) |
| Central American landbridge (- Mexico, - Cocos Island) | 300 [+35] | 198 | 498 | (134) | (86 [+1]) |
| Mexico | 280 ^{1,2} [+3] | 271 | 551 ¹ | (101 ¹) | |
| Central America (+ Mexico) | 509 ^{1,2} [+23] | 469 | 978 ¹ | (235 ¹) | |
| Cuba | 193 | 32 | 225 | (131) | |
| Jamaica | 28 | 0 | 28 | (7) | |
| Haiti | 0 | 0 | 0 | (0) | |
| Rep. Dominicana | 21 | 0 | 21 | (10) | |
| Puerto Rico | 14 | 5 | 19 | (1) | |
| Lesser Antilles | 168 | 4 | 172 | (83) | |
| Antilles | 346 | 41 | 387 | (232) | |
| Central America (+ Mexico, + Antilles) | 733 ^{1,2} [+11] | 505 | 1238 ¹ | (467 ¹) | |
| Florida | 129 | 17 | 146 | (56) | |
| Bermuda | 20 [+8] | 0 | 20 | (6) | |
| Cocos Island | 12 [+14] | 1 | 13 | (3) | |
| Galapagos Islands | 128 [+3] | 76 | 204 | (17) | |
| Venezuela | 105 | 86 | 191 | (28) | |
| Colombia | 40 | 0 | 40 | (29) | |
| Guyana | 5 | 1 | 6 | (1) | |
| Surinam | 14 [+1] | 0 | 14 | (1) | |
| French Guyana | 0 | 0 | 0 | 0 | |

¹ Incl. 8 fossil records, ² incl. 18 doubtful records [+ additional unpublished records in parentheses].

Abajo: between Piña and Achiote, tropical wet forest, in epiphytic bromelia; Prov. Darién: Punta Patiño, tropical dry forest (H. Schatz coll.).

Other: Cuba, Trinidad, Galapagos Islands, Peru, Brazil, Nearctic (Texas: orig. descr. sub *Hypochthonius*), Eastern Palaearctic, Oriental, Pacific.

Malacoangelia remigera Berlese 1913

Panama: without detailed site record (BALOGH & BALOGH 1988: 40; VÁZQUEZ 1999: 38). New record: Pipeline Road, tropical moist forest (H. Schatz coll.).

Other: Cuba, Lesser Antilles, Peru, Brazil, Galapagos Islands, Japan, Ethiopian, Oriental (Java: orig. descr.), Pacific; circumtropical (BALOGH & BALOGH 1988: 40, 2002: 54).

Family Protoplophoridae (second part)

Family Sphaerochthoniidae

Sphaerochthonius fungifer Mahunka 1983

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b: 711; BALOGH & BALOGH 1988: 41, 2002: 53; VÁZQUEZ 1999: 43).

Other: Mexico (Quintana Roo).

Sphaerochthonius splendidus (Berlese 1904)

Belize — new record: Light House Reef: Long Cay, in leaf litter (H. Schatz coll.).

Panama — new records: Prov. Chiriquí: near Caldera, premontane wet forest; Península Soná: Punta Catalina, tropical moist forest; Prov. Panama: near Bayano Dam, tropical moist forest; Prov. Darién: Punta Patiño, premontane moist forest (H. Schatz coll.).

Other: Mexico (Quintana Roo: H. Schatz coll.), New Mexico, Galapagos Islands, Palaearctic (Italy: orig. descr. sub *Hypochthonius*), Ethiopian, Oriental (China), Australia, Pacific.

Sphaerochthonius windsori Schatz 2003

Panama: Madden Dam: deciduous dry forest; Isla Taboga, deciduous dry forest (orig. descr.; SCHATZ 2003: 118).

Sphaerochthonius sp.

Nicaragua: León: in soil and dead leaves, in epiphytes (MAES et al. 1989: 46).

Family Cosmochthoniidae

Cosmochthonius sp.

Nicaragua: León: in epiphytic *Tillandsia* (MAES et al. 1989: 44).

Family Haplochthoniidae

Haplochthonius sp.

Nicaragua: León: in epiphytes (MAES et al. 1989: 45).

Family Brachychthoniidae

Brachychthonius sp.

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Liochthonius saltaensis (Hammer 1958)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2800-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (Quintana Roo), Argentina (orig. descr. sub *Brachychthonius*), New Zealand.

Sellnickochthonius elsosneadensis (Hammer 1958)

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Argentina (orig. descr. sub *Brachychthonius*), Japan, Oriental (China), Australia.

Sellnickochthonius immaculatus (Forsslund 1942)

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Mexico, Galapagos Islands, Nearctic, Palaeartic (Sweden: orig. descr. sub *Brachychochthonius*).

***Sellnickochthonius* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).

Family Gehypochthoniidae

***Gehypochthonius rhadamanthus* Jacot 1936**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).
Other: Nearctic (North Carolina: orig. descr.), Palearctic, Australia.

Family Phthiracaridae (second part)

Family Steganacaridae (second part)

Family Oribotritiidae (second part)

Family Euphthiracaridae (second part)

Family Lohmanniidae

***Annectacarus mucronatus* Grandjean 1950**

Belize: Light House Reef: Half Moon Cay, in leaf litter (SCHATZ 1994b: 268).

Costa Rica: Prov. Cartago: Turrialba, at Rio Reventazón, lowland rain forest (SCHATZ 1994b: 268).

Panama: near Colón: decayed roots under a palm (orig. descr.; GRANDJEAN 1950: 131; BALOGH & BALOGH 2002: 74); Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 90).

Other: Lesser Antilles, Venezuela (orig. descr.), Paraguay, Galapagos Islands, Western Oriental.

***Euryacarus petalus* Woolley 1966**

Guatemala: without detailed site record (in soil with cuttings, at Nogales [Arizona?], orig. descr.; WOOLLEY 1966a: 334; BALOGH & BALOGH 1988: 57; 2002: 73).

***Euryacarus pilosus* Mahunka 1982**

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (orig. descr.; MAHUNKA 1982: 188; BALOGH & BALOGH 1988: 57, 2002: 73).

Haplacarus javensis Hammer 1980

- Belize: Light House Reef: Half Moon Cay, in leaf litter (SCHATZ 1994b: 271).
 Costa Rica, Cocos Island — new record: premontane rain forest (H. Schatz coll.).
 Other: Lesser Antilles, Galapagos Islands, Oriental (Java: orig. descr.).

Javacarus porosus Hammer 1979

- Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).
 Other: Lesser Antilles, Oriental (Java: orig. descr.).

Lohmannia jornoti Mahunka 1985

- Belize: Light House Reef: Half Moon Cay, in leaf litter (SCHATZ 1994b: 276).
 Other: Cuba, Lesser Antilles (Guadeloupe: orig. descr.), Galapagos Islands, Bermuda (R. Schuster coll.).

Lohmannia lanceolata Grandjean 1950

- Costa Rica: Península de Osa: Parque Nacional Corcovado near La Sirena, lowland rain forest (SCHATZ 1994b: 277).
 Panama: near Colón: in decayed roots under a palm (orig. descr.; GRANDJEAN 1950: 119; BALOGH & BALOGH 1988: 53); Cordillera de Talamanca: V. Barú, summit, 3300 m, subalpine páramo, in leaf litter and moss (SCHATZ 2006).
 Other: Mexico (Quintana Roo), Cuba, Peru, Oriental.

Lohmannia sp.

- Panama: Cordillera de Talamanca: V. Barú, 3300 m, subalpine páramo (SCHATZ 2006 sub *Lohmannia* cf. *lanceolata*).

Lohmannia spp.

- El Salvador: without detailed site record (soil, U.S. plant quarantine station, HAMMER 1969: 67).
 Panama: without detailed site record (soil at base of buttress tree; soil on roots of palm seedlings, U.S. plant quarantine station, HAMMER 1969: 67).

Meristacarus longisetosus Mahunka 1978

- Belize: Maya Mountains: near Blue Hole, tropical moist forest; Maya Mountains, Cockscomb Basin Reserve, tropical moist forest; Altun Ha, tropical wet forest (SCHATZ 1994b: 278).
 Guatemala: Rio Dulce: Golfete, Manatee Biotope Chocon Machacas, in man-

grove leaf litter; at River Los Altares near Livingston, lowland rain forest (SCHATZ 1994b: 278).

Costa Rica: Prov. Heredia, Prov. Heredia: La Selva, lowland rain forest; Prov. Cartago: Turrialba, near C.A.T.I.E., 560 m, lowland rain forest; Turrialba, at Rio Reventazón, lowland rain forest; Prov. Limón, near Portete, at border of rain forest near shore line; Península de Osa: Parque Nacional Corcovado near La Sirena, lowland rain forest (SCHATZ 1994b: 278).

Central America: without detailed site record (BALOGH & BALOGH 2002: 69).

Other: Rep. Dominicana (orig. descr.), Puerto Rico, Lesser Antilles.

Meristacarus porcula Grandjean 1934

Guatemala: Pacific coast at Likin near Iztapa, in mangrove leaf litter (SCHATZ 1994b: 279).

Costa Rica — Cocos Island: premontane rain forest, in leaf litter and moss (SCHATZ 1994b: 279).

Panama: near Colón: in bark and rotten wood of a tree trunk (GRANDJEAN 1934: 35; BALOGH & BALOGH 1988: 56); Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).

Central America: without detailed site record (BALOGH & BALOGH 2002: 69).

Other: Lesser Antilles (Martinique: orig. descr.), Peru, Brazil, Galapagos Islands, Ethiopian, Eastern Oriental.

Mixacarus brevipes (Banks 1947)

Costa Rica: Prov. Cartago: Turrialba, near C.A.T.I.E., 560 m, lowland rain forest; Turrialba, rain forest at Rio Siquirres; Península de Osa: Parque Nacional Corcovado near La Sirena, lowland rain forest (SCHATZ 1994b: 279).

Other: Nearctic (North Carolina: orig. descr. sub *Lohmannia*).

Mixacarus neotropicus Balogh 1962

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).

Other: Surinam, Peru (orig. descr.), Brazil.

Nesiacarus granulatus Hammer 1972

Belize: Light House Reef: Half Moon Cay, in leaf litter; Maya Mountains: near Blue Hole, tropical moist forest (SCHATZ 1994b: 280).

Guatemala: Petén: Tikal, lowland rain forest (SCHATZ 1994b: 280).

Central America: without detailed site record (BALOGH & BALOGH 2002: 68).

Other: Bermuda (R. Schuster coll.), Japan, Pacific (Tahiti: orig. descr.).

Torpacarus callipygus Mahunka 1983

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b:

713; BALOGH & BALOGH 1988: 58, 2002: 71; VÁZQUEZ 1999: 57).
Other: Mexico (Quintana Roo).

Torpacarus izabalensis Schatz 1994

Belize — new record: near Belmopan, tropical moist forest (H. Schatz coll.).
Guatemala: at River Los Altares near Livingston, lowland rain forest; Rio Dulce: Golfete, Manatee Biotope Chocon Machacas, lowland rain forest; Rio Dulce, Torno de la Virgen, lowland rain forest (orig. descr.; SCHATZ 1994a: 168; BALOGH & BALOGH 2002: 70).

Torpacarus omittens ssp. *omittens* Grandjean 1950

Belize: Light House Reef: Half Moon Cay, in leaf litter (SCHATZ 1994a: 171).
Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).
Other: Mexico, Cuba, Lesser Antilles, Venezuela (orig. descr.), Peru, Argentina, Bermuda (R. Schuster coll.), West Africa.

Family Perlohmanniidae

Perlohmannia sp.

Nicaragua: León: in dead leaves (MAES et al. 1989: 46).

Family Epilohmanniidae

Epilohmannia cultrata Woolley 1966

Guatemala: without detailed site record (in soil with cuttings, at Nogales [Arizona?], orig. descr.; WOOLLEY 1966a: 335; BALOGH & BALOGH 1988: 79: *E. cultrata* [sic!]; BALOGH & BALOGH 2002: 55).

Epilohmannia minuta Berlese 1920

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 90 sub *Epilohmannia pallida* Wallwork 1977 [considered as synonym of *E. minuta* according to NORTON & KETHLEY 1989]).
Other: Nearctic (Missouri: orig. descr.), Ethiopian, Western Oriental.

***Epilohmannia pallida* ssp. *pacifica* Aoki 1965**

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (MAHUNKA 1982: 181).

Other: Galapagos Islands, Palaearctic, Oriental, Pacific (Laysan I.: orig. descr.).

***Epilohmannia xena* Mahunka 1983**

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b: 713; BALOGH & BALOGH 1988: 79, 2002: 56; VÁZQUEZ 1999: 59; SUBÍAS 2004: 37 sub *Epilohmannioides xena*).

Other: Mexico (Quintana Roo), Cuba.

***Epilohmannia* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).

***Epilohmannia* spp.**

Panama: without detailed site record (soil on roots of palm seedlings, U.S. plant quarantine station, HAMMER 1969: 67).

***Epilohmannioides terrae* Jacot 1936**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 90).

Other: Nearctic (New York: orig. descr.), Oriental (China).

Family Nothridae

***Nothrus anauniensis* Canestrini & Fanzago 1876**

Belize: without detailed site record (PALMER & NORTON 1991: 78).

Other: Nearctic, Palaearctic (Italy: orig. descr.), Australian.

***Nothrus willmanni* Mahunka 1983**

Guatemala: Petén: Tikal, lowland rain forest, in litter (orig. descr.; MAHUNKA 1983b: 715; BALOGH & BALOGH 1988: 60, 2002: 82; VÁZQUEZ 1999: 60).

Panama: Cordillera de Talamanca: V. Barú, summit, 3400-3475 m, subalpine páramo, in moss; La Fortuna, 1200 m, montane rain forest (SCHATZ 2006).

Other: Mexico (Quintana Roo), Cuba.

Nothrus spp.

Panama: without detailed site record (*Colocasa* sp., U.S. plant quarantine station, HAMMER 1969: 68).

Family Crotoniidae

Crotonia pulchra (Beck 1962)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 3300 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (Quintana Roo), Ecuador (orig. descr. sub *Acronothrus pulcher*), Peru.

Crotonia sp.

Costa Rica: without detailed site record (HOFFMANN & LÓPEZ-CAMPOS 2000).

Panama: without detailed site record (HOFFMANN & LÓPEZ-CAMPOS 2000).

Other: Mexico.

Family Camisiidae

Camisia hamulifera Hammer 1961

Costa Rica: Cordillera Central: Volcán Poas, in moss on bark (COLLOFF 1993; BALOGH & BALOGH 2002: 87); V. Irazú, 3400 m, subalpine páramo, in grass litter; Cordillera de Talamanca: Parque Nacional Chirripó, 2800 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 1900-3400 m, montane rain forest, in leaf litter and moss, in epiphytic lichens (SCHATZ 2006).

Other: Peru (orig. descr.), South Africa, South Atlantic: Gough Island.

Camisia horrida (Hermann 1804)

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo; Cordillera de Talamanca: V. Chirripó, summit, 3800 m, subalpine páramo, in moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3400-3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Mexico, Nearctic, Palaearctic (France: orig. descr. sub *Notaspis horridus*), Ethiopian.

Camisia spinifer (C.L. Koch 1835)

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss; La Fortuna, 1350 m, montane rain forest, in moss (SCHATZ 2006).

Other: Brazil?, Nearctic, Palaeartic (Germany: orig. descr. sub *Nothrus*), Oriental.

Camisia spp.

Costa Rica: without detailed site record (orchids, U.S. plant quarantine station, HAMMER 1969: 68).

Heminothrus targionii (Berlese 1885)

Panama: Cordillera de Talamanca: V. Barú, 2270-2330 m, montane rain forest (SCHATZ 2006).

Other: Nearctic, Palaeartic (Italy: orig. descr. sub *Nothrus*), Oriental.

Platynothrus sibiricus Sitnikova 1975

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, subalpine páramo, 2900-3400 m, montane rain forest, in leaf litter and moss in mire, subalpine páramo; Parque Nacional Chirripó, subalpine páramo, 2800-3600 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2270-3300 m, montane rain forest, in leaf litter and moss; near Boquete, 1750 m, montane rain forest; La Fortuna, 1350 m, montane rain forest, in moss (SCHATZ 2006). New record: Las Nubes near Cerro Punta, 2470 m, montane rain forest, in epiphytic moss (H. Schatz coll.).

Other: Nearctic, Palaeartic (Siberia: orig. descr.).

Platynothrus sp.

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 3250-3300 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Platynothrus* sp. nr. *skottsbergi*) [*Platynothrus skottsbergi* Trägårdh 1931: Chile (Juan Fernández Island: orig. descr.), Argentina, New Zealand, South Georgia].

Platynothrus sp.

Costa Rica: without detailed site record (PALMER & NORTON 1991: 76 sub *Platynothrus* n. sp. B).

Family Trhypochthoniidae

Afronothrus incisivus Wallwork 1961

Costa Rica: without detailed site record (PALMER & NORTON 1991: 79; COLLOFF & HALLIDAY 1998: 71).

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91). New record: Madden Dam: deciduous dry forest (H. Schatz coll.).

Other: Mexico (Quintana Roo, other states), Cuba, Puerto Rico, Dominica, Jamaica, Lesser Antilles, Paraguay, Brazil, Ethiopian (Ghana: orig. descr.), Oriental, Australia, Pacific; tropical regions (BALOGH & BALOGH 1988: 66 sub *Afronothrus incisivus neotropicus*; BALOGH & BALOGH 2002: 83).

Allonothrus neotropicus Balogh & Mahunka 1969

Panama: without detailed site record (PALMER & NORTON 1991: 79); Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91). New records: Costa Abajo: between Piña and Achiote, tropical wet forest; Madden Dam: deciduous dry forest (H. Schatz coll.).

Other: Mexico (Quintana Roo), Cuba, Lesser Antilles, Bolivia (orig. descr.), Brazil.

Allonothrus sp.

Costa Rica: without detailed site record (PALMER & NORTON 1991: 79 sub *Allonothrus* sp. A).

Allonothrus sp.

Panama: without detailed site record (PALMER & NORTON 1991: 79 sub *Allonothrus* sp. C).

Allonothrus sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Allonothrus* sp. nr. *neotropicus*).

Archegozetes longisetosus Aoki 1965

Costa Rica: without detailed site record (PALMER & NORTON 1991: 79).

Panama: without detailed site record (PALMER & NORTON 1991: 79); Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 90). New records: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.); Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Mexico (Quintana Roo), Cuba, Puerto Rico, Lesser Antilles, Florida, Venezuela, Brazil, Oriental (Thailand: orig. descr.), Australia, Pacific [considered as

synonym of *Archegozetes magnus* (Sellnick 1925) according to BADEJO et al. 2002. Valid species according to authors. *A. magnus* (Sellnick 1925): Mexico, Brazil, Oriental (Sumatra: orig. descr. sub *Epilohmannia magna*), New Guinea, Pacific; circum-tropical (BALOGH & BALOGH 2002: 83)].

***Trhypochthoniellus* sp.**

Costa Rica: without detailed site record (PALMER & NORTON 1991: 79).

***Trhypochthonius tectorum* (Berlese 1896)**

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006).

Other: Peru, Galapagos Islands, Nearctic, Palaearctic (Italy: orig. descr. sub *Hypochthonius*), Oriental.

***Trhypochthoniidae* sp.**

Nicaragua: León: without detailed site record (MAES et al. 1989: 46).

Family Malaconothridae

***Malaconothrus hauseri* Mahunka 1984**

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91).

Other: Mexico (Quintana Roo), Venezuela, Paraguay (orig. descr.), Galapagos Islands.

***Malaconothrus monodactylus* (Michael 1888)**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2600 m, montane rain forest (SCHATZ 2006).

Other: Peru, Argentina; Nearctic; Palaearctic (England: orig. descr. sub *Nothrus*); Western Oriental; South America: southern part (BALOGH & BALOGH 1988: 69 sub *Malaconothrus mollisetosus*), Andes: from Canada to South Chile (BALOGH & BALOGH 1988: 69 sub *Malaconothrus mollisetosus*; BALOGH & BALOGH 2002: 75).

Malaconothrus valeriae Balogh & Balogh 2002

Costa Rica: without detailed site record (orig. descr.; BALOGH & BALOGH 2002: 76).

Trimalaconothrus maior (Berlese 1910)

Panama: Cordillera de Talamanca: V. Barú, 3300 m, montane rain forest (SCHATZ 2006).

Other: Argentina, Chile, Galapagos Islands, Florida (orig. descr. sub *Malaconothrus*), Nearctic, Palaearctic, New Zealand, Subantarctic (BALOGH & BALOGH 1988: 71 sub *Trimalaconothrus novus*).

Trimalaconothrus multipilosus Balogh & Balogh 2002

Costa Rica: without detailed site record (orig. descr.; BALOGH & BALOGH 2002: 80).

Trimalaconothrus platyrhinus Hammer 1962

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Other: Venezuela, Chile (orig. descr.), New Zealand.

Family Nanhermanniidae

Cyrthermannia guadeloupenensis Mahunka 1985

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91).

Other: Lesser Antilles (Guadeloupe: orig. descr.).

Cyrthermannia simplex Mahunka 1985

Belize — new records: Maya Mountains: south of Belmopan near Hummingbird Hwy., in fern litter; Mountain Pine Ridge near Hidden Fall, 680 m, in *Pinus*-forest (H. Schatz coll.).

Guatemala — new records: Rio Dulce: Golfete, Manatee Biotope Chocon Machacas, lowland rain forest; at River Los Altares near Livingston, lowland rain forest (H. Schatz coll.).

Costa Rica — new record: Prov. Puntarenas: Parque Nacional Manuel Antonio near Quepos, coastal rain forest, in rotten wood (H. Schatz coll.). Cocos Island — new record: premontane rain forest, in leaf litter and moss (H. Schatz coll.).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).

Other: Lesser Antilles (St. Lucia: orig. descr.), Brazil, Galapagos Islands.

Cyrthermannia sp.

Guatemala — new record: Rio Dulce: Golfete, Manatee Biotope Chocon Machacas, lowland rain forest (H. Schatz coll.).

Masthermannia sp.

Costa Rica: without detailed site record (PALMER & NORTON 1991: 78).
Other: Lesser Antilles, Florida.

Masthermannia sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Masthermannia* sp. nr. *mammillaris*) [*Masthermannia mammillaris* (Berlese 1904): Mexico (Quintana Roo), Cuba, Nearctic, Palaearctic (Italy: orig. descr. sub *Angelia*), Oriental, Ethiopian, Pacific].

?Masthermannia — *?Cyrthermannia* sp.

Panama: without detailed site record (soil at from roots of palm seedlings, U.S. plant quarantine station, HAMMER 1969: 67).

Nanhermannia nana (Nicolet 1855)

Guatemala — new record: Baja Verapaz: Quetzal Biotope south of Purulha, 1550-1600 m, cloud forest, in leaf and fern litter (H. Schatz coll.).

Costa Rica — new records: Cordillera de Tilarán: Monteverde, 1550-1700 m, lower montane rain forest; Cordillera de Talamanca: Tapantí, 1300-1400 m, lower montane rain forest, in leaf litter and moss (H. Schatz coll.).

Panama: Cordillera de Talamanca: V. Barú, 2300 m, montane rain forest (SCHATZ 2006).

Other: Venezuela, Peru, Chile, Nearctic, Palaearctic (France: orig. descr. sub *Nothrus nanus*), Oriental, New Zealand, Subantarctic.

Nanhermannia sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, subalpine páramo, 2900-3400 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 2510-3000 m, montane rain forest (SCHATZ 2006 sub *Nanhermannia* cf. *elegantissima*). New record: Cordillera de Tilarán: Monteverde, 1600-1700 m, lower montane rain forest (H. Schatz coll.).

Panama: Cordillera de Talamanca: V. Barú, 2200-2470 m, montane rain forest (SCHATZ 2006 sub *Nanhermannia* cf. *elegantissima*) [*Nanhermannia elegantissima* Hammer 1958: Venezuela, Bolivia (orig. descr.), Argentina].

***Nanhermannia* sp.**

Costa Rica: without detailed site record (PALMER & NORTON 1991: 78 sub *Nanhermannia dorsalis* group sp.).

Panama: without detailed site record (PALMER & NORTON 1991: 78 sub *Nanhermannia dorsalis* group sp.).

Other: Brazil.

Family Hermanniellidae

***Ampullobates nigriclavatus* Grandjean 1962**

Guatemala: Petén: Tikal, lowland rain forest (MAHUNKA 1983b: 710).

Panama: near Colón: lowland rain forest, in leaf litter and on a tree trunk with humus and epiphytes; Isla Coiba: tropical moist forest (orig. descr.; GRANDJEAN 1962: 632; BALOGH & BALOGH 1988: 84, 2002: 94; SUBÍAS et al. 2004: 91).

Other: Mexico (Quintana Roo).

***Baloghacarus hauseri* Mahunka 1983**

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b: 718; BALOGH & BALOGH 1988: 85, 2002: 95).

Other: Mexico (Quintana Roo), Venezuela.

***Dicastrribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Dicastrribates* cf. *heterotrichus*) [*Dicastrribates heterotrichus* (Mahunka 1983): Paraguay (orig. descr. sub *Sacculobates*)].

***Hermanniella* sp.**

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo; V. Poás, 2650 m, montane rain forest, in leaf litter; V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest; Parque Nacional Chirripó, 2510-3000 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2200-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

***Hermanniella* spp.**

Belize: without detailed site record (orchids, ferns, U.S. plant quarantine station, HAMMER 1969: 69 sub British Honduras).

Guatemala: without detailed site record (orchids, ferns, U.S. plant quarantine station, HAMMER 1969: 69).

Sacculobates horologiorum Grandjean 1962

Guatemala: Petén: Tikal, lowland rain forest (MAHUNKA 1983b: 710).

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (MAHUNKA 1982: 181).

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Central America: without detailed site record (BALOGH & BALOGH 1988: 83, 2002: 95; VÁZQUEZ 1999: 69).

Other: Mexico (Quintana Roo), Cuba, Lesser Antilles, Colombia (orig. descr.), Venezuela, Brazil.

Sacculobates sp.

Panama: Cordillera de Talamanca: V. Barú, 2200-2270 m, montane rain forest (SCHATZ 2006).

Sacculobates sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Sacculobates* cf. *horologiorum*).

Family Plasmobatidae

Solenozetes cribratus (Grandjean 1929)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2200-3300 m, montane rain forest, in leaf litter and moss (SCHATZ 2006). New record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Lesser Antilles, Venezuela (orig. descr. sub *Plasmobates*).

Family Liodidae

Teleliodes madininensis Grandjean 1934

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91). New record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Mexico (Quintana Roo), Lesser Antilles (Martinique: orig. descr.), Venezuela.

Teleioliodes zikani (Sellnick 1930)

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91).
New record: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Other: Mexico (Quintana Roo), Lesser Antilles, Venezuela, Peru, Brazil (orig. descr. sub *Neoliodes*).

Teleioliodes sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Teleioliodes* cf. *madinensis*).

Family Gymnodamaeidae

?*Plesiodamaeus* sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006).

Family Plateremaeidae

Plateremaeus berlesei Balogh & Mahunka 1978

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).

Other: Brazil (orig. descr.).

?*Plateremaeus* sp.

Belize: without detailed site record (orchid plants, bromeliads, U.S. plant quarantine station, HAMMER 1969: 69 sub British Honduras).

Family Pherolioididae

Pheroliodes wehncke (Willmann 1930)

Guatemala: barrancos around Ciudad Guatemala, in moss and lichens from trees (orig. descr.; WILLMANN 1930: 243 sub *Cymbaeremaeus*; BALOGH & BALOGH 1988: 94 sub *Phereliodes* [sic!]).

Other: Lesser Antilles, Venezuela.

Pheroliodes sp.

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 1900-3300 m, montane rain forest, in leaf litter and moss, in epiphytic lichens (SCHATZ 2006 sub *Pheroliodes* cf. *dentatus*) [*Pheroliodes dentatus* (Hammer 1961): Peru (orig. descr. sub *Pedrocortesia*)].

Family Damaeidae

Belba sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *Belba* sp. 1).

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Belba* sp. 1).

Belba sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Belba* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Belba* sp. 2).

Epidamaeus sp.

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter (SCHATZ 2006 sub *Epidamaeus* sp. 1).

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006 sub *Epidamaeus* sp. 1).

Epidamaeus sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006 sub *Epidamaeus* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Epidamaeus* sp. 2).

Epidamaeus sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2510-3000 m, montane rain forest (SCHATZ 2006 sub *Epidamaeus* sp. 3).

Epidamaeus sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Epidamaeus* sp. 4).

Epidamaeus sp.

Panama: Cordillera de Talamanca: V. Barú, 2800-2880 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Epidamaeus* sp. 5).

Epidamaeus sp.

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006 sub *Epidamaeus* sp. 6).

Family Cepheidae

Eupterotegaeus sp.

Panama: Cordillera de Talamanca: V. Barú, 3300 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Reticulocephus decoui Vasiliu & Calugar 1977

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Cuba (orig. descr.).

Family Microtegeidae

Microtegeus borhidii Balogh & Mahunka 1974

Panama — new record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Cuba (orig. descr.), Lesser Antilles, Venezuela, Galapagos Islands, Japan, East Asia.

Microtegeus mexicanus Mahunka 1983

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (Chiapas: orig. descr., Quintana Roo).

Microtegeus quadrisetosus Balogh & Mahunka 1977

Panama — new record: Pipeline Road, tropical moist forest (H. Schatz coll.).

Other: Mexico (Quintana Roo), Bolivia (orig. descr.), Paraguay, Brazil, Western Oriental.

Microtegeus similis Balogh & Mahunka 1980

Panama — new record: Prov. Chiriquí, La Fortuna, 1200 m, lower montane rain forest, in epiphytic moss (H. Schatz coll.).

Other: Mexico (Quintana Roo), Cuba (orig. descr.).

***Microtegeus* sp.**

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Family Eremaezetidae

Eremaezetes dividipeltatus Mahunka 1985

Belize — new record: Maya Mountains: south of Belmopan near Hummingbird Hwy., tropical moist forest (H. Schatz coll.).

Costa Rica — new record: Prov. Heredia: La Selva, lowland rain forest, on trees (H. Schatz coll.).

Panama — new records: Barro Colorado Island: tropical moist forest; Soberanía National Park, tropical moist forest; Pipeline road, tropical moist forest; Isla Taboga, deciduous dry forest (H. Schatz coll.).

Other: Mexico (H. Schatz coll.), Cuba, Lesser Antilles (St. Lucia: orig. descr.; BALOGH & BALOGH 1988 sub *E. diversipeltatus* [sic!]).

Eremaeozetes roguini Mahunka 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, on trees (SCHATZ 2001: 491, H. Schatz coll.). Cocos Island: Cerro Pelón, premontane rain forest, in epiphytic moss (SCHATZ 2001: 491).

Other: Lesser Antilles (St. Lucia: orig. descr.).

Eremaeozetes ursulae Mahunka 1985

Costa Rica, Cocos Island — new record: premontane rain forest, in moss (H. Schatz coll.).

Panama — new records: Barro Colorado Island: tropical moist forest; Soberanía National Park, Camino de Cruces, tropical moist forest; Pipeline Road, tropical moist forest; Isla Taboga, deciduous dry forest (H. Schatz coll.).

Other: Lesser Antilles (St. Lucia: orig. descr.).

Eremaeozetes sp.

Nicaragua: León: in epiphytic *Tillandsia* (MAES et al. 1989: 44).

Family Anderemaecidae

Epieremulus sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *E. cf. granulatus*) [*Epieremulus granulatus* (Balogh & Mahunka 1979): Cuba (orig. descr.), Venezuela].

Epieremulus sp.

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006 sub *Epieremulus* sp. 2).

Family Nodocepheidae

Nodocepheus laterodentatus Piffel 1972

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: V. Chirripó, 3200 m, subalpine páramo, at shore of mountain lake (orig. descr.; PIFFEL 1972: 289), Parque Nacional Chirripó, 2650 m, montane rain forest (BALOGH & BALOGH 1988: 101, 2002: 259; SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

Family Microzetidae

Acaroceras dechambrieri Mahunka 1983

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b: 718; BALOGH & BALOGH 1988: 124, 2002: 283).

Other: Venezuela.

Acaroceras pugio Balogh 1962

Panama: Cordillera de Talamanca: V. Barú, 2270-2600 m, montane rain forest (SCHATZ 2006).

Other: Peru (orig. descr.).

Berlesezetes auxiliaris (Grandjean 1936)

Costa Rica, Cocos Island — new record: premontane rain forest, in fern litter (H. Schatz coll.).

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91).

Other: Cuba, Lesser Antilles, Trinidad, Venezuela (orig. descr. sub *Microzetes*), Galapagos Islands, Brazil, New Mexico, Palaeartic, Ethiopian, Oriental, Australia, Pacific, circumtropical (BALOGH & BALOGH 2002: 284).

Berlesezetes sp.

Panama: Cordillera de Talamanca: V. Barú, 2470 m, montane rain forest (SCHATZ 2006 sub *Berlesezetes* sp. nr. *auxiliaris*).

Hauserozetes mausia Mahunka 1980

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (orig. descr.; MAHUNKA 1980: 134; BALOGH & BALOGH 1988: 126, 2002: 289).

Microzetes sp.

Panama: without detailed site record (in soil in a burrow, U.S. plant quarantine station, HAMMER 1969: 70).

Undulozetes sp.

Panama — new record: Prov. Darién: Cana, 580 m, tropical wet forest, in leaf litter (H. Schatz coll. sub *Undulozetes* sp. n. nr. *granulatus*) [*Undulozetes granulatus* Balogh & Mahunka 1969: Bolivia (orig. descr.), Peru, Brazil)].

Family Eremulidae

Eremulus translamellatus Balogh & Mahunka 1969

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).
Other: Mexico (Quintana Roo), Lesser Antilles, Peru, Brazil (orig. descr.).

Eremulus sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Eremulus* sp. nr. *rigidisetosus* [sic!]) [*Eremulus rigidisetus* Balogh & Mahunka 1969: Mexico (Quintana Roo), Cuba, Bolivia (orig. descr.), Peru, Brazil, Galapagos Islands].

Family Damaeolidae

Fosseremus laciniatus (Berlese 1905)

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91); Cordillera de Talamanca: V. Barú, 2270 m, montane rain forest (SCHATZ 2006). New record: Madden Dam: deciduous dry forest (H. Schatz coll.).

Other: Lesser Antilles, Peru, Galapagos Islands, Nearctic, Palaearctic (Italy: orig. descr. sub *Dameosoma laciniatum*), Ethiopian, Oriental, Australia, New Zealand, Pacific; cosmopolitan (BALOGH & BALOGH 2002: 104).

Family Eremobelbidae

Eremobelba piffli Mahunka 1985

Costa Rica, Cocos Island — new record: premontane rain forest, in grass litter and moss (H. Schatz coll.).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).
Other: Mexico (Quintana Roo), Lesser Antilles (St. Lucia: orig. descr.).

Family Heterobelbidae

Heterobelba oxapampensis Beck 1962

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).
Other: Peru (orig. descr.), Brazil.

Family Basilobelbidae

Basilobelba insularis Mahunka 1985

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91).
Other: Mexico (Quintana Roo, Yucatán), Lesser Antilles (St. Lucia: orig. descr.).

Basilobelba weneri Mahunka 1982

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (orig. descr.; MAHUNKA 1982: 190; BALOGH & BALOGH 1988: 147, 2002: 98).

Family Eremaeidae

Eueremaeus columbianus (Berlese 1916)

Panama — new record: Barro Colorado Island: tropical moist forest [introduced?] (M. Kaspari coll.).
Other: Nearctic (Missouri: orig. descr. sub *Eremaeus*).

Family Zetorchestidae

Zetorchestes schusteri Krisper 1984

Belize — new record: Light House Reef: Long Cay, in leaf litter (H. Schatz coll.).

Panama — new record: Prov. Darién: Punta Patiño, premontane moist forest (H. Schatz coll.).

Other: Mexico (Quintana Roo: H. Schatz coll.), Lesser Antilles, Brazil (orig. descr.), Galapagos Islands.

Family Liacaridae

Liacarus sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006 sub *Liacarus* sp. 2).

Liacarus sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *Liacarus* sp. 3). New record: Tapantí, 1400 m, montane rain forest (H. Schatz coll.).

Liacarus sp.

Panama: Cordillera de Talamanca: V. Barú, 2270 m, montane rain forest (SCHATZ 2006 sub *Liacarus* sp. 4).

Liacarus sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; 3400 m, subalpine páramo (SCHATZ 2006 sub *Liacarus* sp. 5).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 1900-3475 m, montane rain forest, in leaf litter and moss, in epiphytic lichens (SCHATZ 2006 sub *Liacarus* sp. 5).

Liacarus (Rhaphidosus) sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Tapantí, 1400 m, montane rain forest; Parque Nacional Chirripó, 2800-3000 m, montane rain forest (SCHATZ 2006 sub *Liacarus (Rhaphidosus)* cf. *alticola* [*Liacarus (Rhaphidosus) alticola* P. Balogh 1984: Colombia, 3200 m, páramo (orig. descr.)]).

Xenillus sp.

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kas-

pari coll. sub *Xenillus* sp. n. nr. *irregularis*) [*Xenillus irregularis* P. Balogh 1986: Ecuador (orig. descr.)].

Xenillus sp.

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari coll. sub *Xenillus* sp. n. nr. *sanctipauli*) [*Xenillus sanctipauli* Pérez-Íñigo & Baggio 1980: Brazil (orig. descr.)].

Xenillus sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006 sub *Xenillus* sp. nr. *fazendae*) [*Xenillus fazendae* Balogh & Balogh 1985: Venezuela, Brazil (orig. descr.)].

Family Astegistidae

Cultroribula bicuspidata Mahunka 1978

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006).

Other: Ethiopian (Mauritius: orig. descr.).

Family Metrioppiidae

Ceratoppia sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, subalpine páramo, 2900-3400 m, montane rain forest; Parque Nacional Chirripó, 3600 m, subalpine páramo (SCHATZ 2006 sub *Ceratoppia* cf. *bipilis*).

Panama: Cordillera de Talamanca: V. Barú, 2200-3250 m, montane rain forest (SCHATZ 2006 sub *Ceratoppia* cf. *bipilis*) [*Ceratoppia bipilis* (Hermann 1804): Mexico, Nearctic, Palaearctic (France: orig. descr. sub *Notaspis*), Oriental].

Ceratorchestes baloghi Mahunka 1983

Panama — new record: Bocas del Toro: Isla Bastimentos, tropical moist forest (H. Schatz coll.).

Other: Mexico (Chiapas: orig. descr.).

Ceratorchestes cornutus Mahunka 1982

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (orig. descr.; MAHUNKA 1982: 191; BALOGH & BALOGH 2002: 245).

Ceratorchestes sp.

Panama: Cordillera de Talamanca: V. Barú, 2470-3250 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Ceratorchestes* cf. *baloghi*).

Ceratorchestes sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Ceratorchestes* sp. nr. *baloghi*).

Family Gustaviidae

Gustavia sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2270-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Family Carabodidae

Austrocarabodes falcatus Hammer 1973

Costa Rica, Cocos Island — new record: premontane rain forest (H. Schatz coll.).

Other: Pacific (Tongatapu: orig. descr.).

Austrocarabodes travei (Balogh & Cziszar 1963)

Costa Rica, Cocos Island — new record: premontane rain forest, in moss litter (H. Schatz coll.).

Other: Argentina (orig. descr. sub *Carabodes*).

Carabodes sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510-2650 m, montane rain forest (SCHATZ 2006 sub *Carabodes* sp. 1).

Panama: Cordillera de Talamanca: V. Barú, 2270 m, montane rain forest (SCHATZ 2006 sub *Carabodes* sp. 1).

***Carabodes* sp.**

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Carabodes* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 3300-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Carabodes* sp. 2).

***Carabodes* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Carabodes* sp. 3).

***Carabodes* sp.**

Panama: Cordillera de Talamanca: V. Barú, 1900-2200 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006 sub *Carabodes* sp. 4 nr. *borhidii*) [*Carabodes borhidii* Balogh & Mahunka 1979: Cuba (orig. descr.)].

?*Carabodes* sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).

***Cubabodes radiatus* Balogh & Mahunka 1974**

Panama — new record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Mexico (Quintana Roo), Cuba (orig. descr.).

***Cubabodes verrucatus* Balogh & Mahunka 1980**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92). New record: Barro Colorado Island: tropical moist forest (M. Kaspari coll.).

Other: Cuba (orig. descr.).

***Neocarabodes* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Neocarabodes* cf. *sexpilosus*) [*Neocarabodes sexpilosus* Balogh & Mahunka 1969: Brazil (orig. descr.), Oriental].

***Pentabodes* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Pentabodes* sp. nr. *insolitus*) [*Pentabodes insolitus* P. Balogh 1984: Colombia (orig. descr.)].

***Yoshiobodes irmayi* (Balogh & Mahunka 1969)**

Costa Rica, Cocos Island — new record: premontane rain forest, in leaf litter and moss (H. Schatz coll.).

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 92).

Other: Brazil (orig. descr. sub *Carabodes*), Peru, Nearctic.

***Carabodidae* sp.**

Costa Rica: Prov. Guanacaste: in cave (PALACIOS-VARGAS 1994b).

Family Otocepheidae

***Cavernocephus monstruosus* Balogh & Mahunka 1969**

Costa Rica: Prov. Cartago: Turrialba, 560 m, lowland rain forest, in litter (MAHUNKA 1982: 181; BALOGH & BALOGH 2002: 150).

Other: Peru, Brazil (orig. descr.).

***Cavernocephus obliquus* P. Balogh 2002**

Costa Rica: without detailed site description (orig. descr.; BALOGH & BALOGH 2002: 150).

***Cavernocephus undulatus* P. Balogh 2002**

Costa Rica: without detailed site description (orig. descr.; BALOGH & BALOGH 2002: 150).

***Cavernocephus* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Cavernocephus* sp. nr. *monstruosus*).

Dolicheremaeus amazonicus Balogh & Mahunka 1969

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91).
Other: Brazil (orig. descr.).

Neotocepheus sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Neotocepheus* sp. nr. *longipilus*) [*Plenotocepheus longipilus* (Trägårdh 1931): Juan Fernández Island (orig. descr. sub *Otocepheus*)].

Pseudotocepheus sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Pseudotocepheus* sp. nr. *septemtuberculatus*) [*Pseudotocepheus septemtuberculatus* Balogh & Mahunka 1978 synonym of *P. amonstruosus* Mahunka 1973 according to GROBLER 1997: Mexico (Quintana Roo), Brazil, Oriental (Sri Lanka: orig. descr.), Ethiopia].

Family Tectocepheidae

Tectocepheus minor Berlese 1913

Panama — new record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Galapagos Islands, Nearctic, Palaearctic (Italy: orig. descr.), Oriental, New Zealand, Pacific.

Tectocepheus ?velatus

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; V. Poás, 2650 m, montane rain forest, in leaf litter; V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900-3400 m, in leaf litter and moss in mire, subalpine páramo; Parque Nacional Chirripó, 2610-3600 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2270-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006). New record: Colón: Fort Gulig Forest near Margarita, in epiphytic bromelia (H. Schatz coll.). [*Tectocepheus velatus* (Michael 1880): Lesser Antilles, Argentina, Galapagos Islands, Nearctic, Palaearctic (England: orig. descr. sub *Tegeocranus*), Oriental, Australia, New Zealand, Pacific, Subantarctic, Antarctic; cosmopolitan (NÜBEL-REIDELBACH 1994: 89)].

Tectocephus spp.

Guatemala: without detailed site record (orchid plants, U.S. plant quarantine station, HAMMER 1969: 69).

Family Dampfiellidae

Beckiella borhidii Balogh & Mahunka 1978

Panama — new record: Cordillera Central: Cerro Tute near Santa Fé, 830 m, lower montane wet forest (H. Schatz coll.).

Other: Cuba (orig. descr.).

Beckiella sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 91 sub *Beckiella* sp. nr. *foveolata*) [*Beckiella foveolata* Balogh & Mahunka 1969: Brazil (orig. descr.)].

Dampfiella procera Sellnick 1931

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2510-2800 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (orig. descr.).

Family Oppiidae

Acroppia sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Acroppia* cf. *curvispina*) [*Acroppia curvispina* (Mahunka 1983): Brazil, Surinam (orig. descr. sub *Stachyoppia*)].

Aeroppia mariehammerae Subías et al. 2004

Panama: Isla Coiba, Cerro Torre (300 m), Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 92 nom. nov. for ?*Aeroppia* sp. Hammer 1962).

Other: Chile (orig. descr. sub ?*Aeroppia* sp. Hammer 1962).

***Aeroppia* sp.**

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll. sub *Aeroppia* sp. nr. *adjacens*) [*Aeroppia adjacens* Mahunka 1985: Lesser Antilles (St. Lucia: orig. descr.)].

***Amerioppia barrancensis* (Hammer 1961)**

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Pseudoamerioppia barrancensis*).

Other: Mexico (Chiapas, Veracruz), Peru (orig. descr. sub *Oppia*), Brazil, Galapagos Islands, Philippines.

***Amerioppia espeletiarum* P. Balogh 1984**

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; Cordillera de Talamanca: Cerro de la Muerte, 3400 m, subalpine páramo, in moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2800-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Colombia (orig. descr.), Galapagos Islands.

***Amerioppia salvadoriensis* (Woas 1986)**

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (orig. descr.; WOAS 1986: 172 sub *Oppia salvadoriensis*; BALOGH & BALOGH 1990: 24 sub *A. salvadorensis* [sic!]; BALOGH & BALOGH 2002: 197 sub *A. salvadorensis* [sic!]).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Neoamerioppia (Amerigloboppia) salvadoriensis*).

***Amerioppia* sp.**

Nicaragua: Matagalpa: in moss (MAES et al. 1989: 45).

***Amerioppia* sp.**

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo (SCHATZ 2006 sub *Amerioppia* sp. nr. *espeletiarum*).

***Amerioppia* sp.**

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Amerioppia* sp. 1 nr. *sturmi*) [*Amerioppia sturmi* P. Balogh 1984: Colombia (orig. descr.)].

***Amerioppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2200-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Amerioppia* sp. 2 nr. *sturmi*).

***Arcoppia (Wallworkoppia) cervifer* (Mahunka 1983)**

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (WOAS 1986: 141 sub *Arcoppia longiramosa*; BALOGH & BALOGH 1990: 34, 2002: 193 sub *Arcoppia longiramosa* Woas 1986 [synonym of *A. cervifer* according to BALOGH & BALOGH 1990]).

Other: Mexico (Chiapas: orig. descr. sub *Oppia*).

***Arcoppia dechambrierorum* (Mahunka 1983)**

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2800-3300 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (Chiapas: orig. descr. sub *Oppia*).

***Arcoppia dendropectinata* Woas 1986**

El Salvador: Cordillera Metapán Alotepeque: Cerro Montecristo, 2415 m, cloud forest (orig. descr.; WOAS 1986: 141; BALOGH & BALOGH 1990: 33, 2002: 191).

***Arcoppia gracilis* Woas 1986**

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (orig. descr.; WOAS 1986: 147; BALOGH & BALOGH 1990: 34, 2002: 192).

***Arcoppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200-2270 m, montane rain forest (SCHATZ 2006 sub *Arcoppia* sp. nr. *euramosa*) [*Kokoppia euramosa* (Balogh & Mahunka 1969): Brazil (orig. descr. sub *Oppia*)].

***Arcoppia* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Arcoppia* cf. *tripartita*) [*Arcoppia tripartita* (Hammer 1961): Peru (orig. descr. sub *Oppia*)].

***Arcoppia* sp.**

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf litter; V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la

Muerte, 3400 m, subalpine páramo; 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, subalpine páramo, 2510-3500 m, montane rain forest (SCHATZ 2006 sub *Arcoppia* sp. 1).

Panama: Cordillera de Talamanca: V. Barú, summit, subalpine páramo, 3400-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Arcoppia* sp. 1).

***Arcoppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200-2600 m, montane rain forest (SCHATZ 2006 sub *Arcoppia* sp. 2 nr. *corniculifera*) [*Amerioppia corniculifera* (Mahunka 1978): Mauritius (orig. descr. sub *Oppia*)].

***Arcoppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Arcoppia* sp. 3).

***Baloghoppia* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Baloghoppia* sp. nr. *dentata*) [*Baloghoppia dentata* Mahunka 1983; Brazil (orig. descr.)].

***Brachioppia* sp.**

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

***Brachioppiella* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Brachioppiella* cf. *periculosa*) [*Brachioppiella periculosa* Hammer 1962: Chile (orig. descr.)].

?*Brachioppiella* sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 3500 m, subalpine páramo, in moss (SCHATZ 2006).

***Corynoppia* sp.**

Panama: Isla Coiba: La Fala, Playa Hermosa, tropical moist forest (SUBÍAS & ARILLO 2001: 176 sub *Corynoppia kosarovi*); SUBÍAS et al. 2004: 92 [*Corynoppia kosarovi* (Jeleva 1962): Southern Europe (Bulgaria: orig. descr. sub *Stachyoppia*), Caucasus].

Discoppia (Cylindroppia) cylindrica (Pérez-Íñigo 1965)

Panama: Isla Coiba: Estación Biológica, tropical moist forest (SUBÍAS & ARILLO 2001, SUBÍAS et al. 2004).

Other: Southern Europe (Spain: orig. descr. sub *Oppia*).

Graptoppia sp.

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2800-3400 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Fron-doppia* sp. nr. *exigua*) [*Graptoppia exigua* (Mahunka 1983): Surinam, Brazil (orig. descr. sub *Fron-doppia*)].

Gittella sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Gittella* cf. *maxima*) [*Gittella maxima* (Balogh & Mahunka 1981): Paraguay (orig. descr. sub *Multioppia*)].

Globoppia centraliamericana Mahunka 1983

Central America: without detailed site record (BALOGH & BALOGH 1990: 29).

Other: Mexico (Chiapas: orig. descr.), Venezuela.

Globoppia sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Globoppia* sp. nr. *trichotos*).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 1900-3475 m, montane rain forest, in leaf litter and moss, in epiphytic lichens (SCHATZ 2006 sub *Globoppia* sp. nr. *trichotos*) [*Vietoppia trichotos* (Balogh & Mahunka 1977): Brazil (orig. descr. sub *Oppia*)].

Globoppia spp.

Belize: without detailed site record (orchids and bromeliads, U.S. plant quarantine station, HAMMER 1969: 71 sub British Honduras).

Costa Rica: without detailed site record (orchids and bromeliads, U.S. plant quarantine station, HAMMER 1969: 71).

Panama: without detailed site record (wild cucurbit vines; soil in a burrow, U.S. plant quarantine station, HAMMER 1969: 71).

Insculptoppia elliptica (Berlese 1908)

Costa Rica: Prov. Limón: Cahuita, tropical moist forest (SUBÍAS & ARILLO 2001: 238, L.S. SUBÍAS pers. comm.).

Other: Nearctic, Europe (Italy: orig. descr. sub *Lohmannia*), Macaronesia.

***Insculptoppia* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Ramusella* (*Insculptoppia*) sp. nr. *claudelionsi*) [*Insculptoppia claudelionsi* (Calugar & Vasiliu 1983): Cuba (orig. descr. sub *Oppia*)].

***Machuella ventrisetosa* Hammer 1961**

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (MAHUNKA 1980: 136).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).

Other: Lesser Antilles, Peru (orig. descr.), Brazil, Galapagos Islands, Japan, Oriental, Australia, New Zealand, Pacific.

***Microppia minus* (Paoli 1908)**

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 1900-3475 m, montane rain forest, in leaf litter, moss, epiphytic lichens (SCHATZ 2006).

Other: Mexico, Venezuela, Nearctic, Palaeartic (Italy: orig. descr. sub *Dameosoma*), Ethiopian, Australian region, Pacific, Subantarctic; cosmopolitan (BALOGH & BALOGH 1990: 19, 2002: 193 sub *Microppia minutissima* (Sellnick 1950)).

***Neostrinatina mixoppia* Mahunka 1980**

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (orig. descr.; MAHUNKA 1980: 136; BALOGH & BALOGH 1990: 16, 2002: 183).

***Oppia incisirostra* Woas 1986**

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (orig. descr.; WOAS 1986: 158; BALOGH & BALOGH 2002: 227).

***Oppia* spp.**

Panama: without detailed site record (soil in a burrow, U.S. plant quarantine station, HAMMER 1969: 71).

***Oppiella nova* (Oudemans 1902)**

Costa Rica: Cordillera de Talamanca: Cerro del la Muerte, 3400 m, subalpine páramo; Parque Nacional Chirripó, 2510-3000 m, montane rain forest (SCHATZ 2006).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92); Cordillera de Talamanca: V. Barú, subalpine páramo, 2200-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006); without detailed site record (SUBÍAS & ARILLO 2001: 135).

Other: Mexico, Cuba, Rep. Dominicana, Lesser Antilles, Venezuela, Brazil, Argentina, Galapagos Islands, Florida, Nearctic, Palaeartic (Netherlands: orig. descr. sub *Eremaeus novus*), Oriental, Ethiopian, Australia, New Zealand, Pacific, Subantarctic; cosmopolitan (BALOGH & BALOGH 1990: 18).

Oxyoppia (Oxyoppiella) polynesia (Hammer 1972)

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).

Other: Polynesia (Tahiti: orig. descr. sub *Oppiella*).

Oxyoppia (Oxyoppiella) suramericana (Hammer 1958)

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2200-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Paraguay, Bolivia, Argentina (orig. descr. sub *Oppia*), Galapagos Islands, Western Oriental, Australia, New Zealand.

***Oxyoppia* sp.**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006).

***Pulchroppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2600 m, montane rain forest (SCHATZ 2006 sub *Pulchroppia* sp. nr. *amazonica*) [*Multipulchroppia amazonica* (Balogh & Mahunka 1969): Venezuela, Brazil (orig. descr. sub *Multioppia*)].

Ramusella (Ramusella) junonis Pérez-Íñigo 1986

Panama: in forest, without detailed site record (SUBÍAS & ARILLO 2001: 216; L.S. SUBÍAS pers. comm.).

Other: Venezuela, Southern Europe, Canary Islands (orig. descr.).

Ramusella nana (Woas 1986)

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (orig. descr.; WOAS 1986: 160 sub *Oppia*; BALOGH & BALOGH 2002: 206 sub *Ramusella*).

Ramusella sengbuschi Hammer 1968

Panama: in forest, without detailed site record (SUBÍAS & ARILLO 2001: 219; L.S. SUBÍAS pers. comm.).

Other: Argentina, Palaeartic, Oriental, Australia, New Zealand (orig. descr.).

Ramusella sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Ramusella* (*Ramusella*) cf. *chulumanensis*) [*Ramusella chulumaniensis* (Hammer 1958): Bolivia (orig. descr. sub *Oppia*), Eastern Oriental].

Serratoppia minima Subías & Rodríguez 1988

Costa Rica: Prov. Limón: Cahuita, tropical moist forest (SUBÍAS & ARILLO 2001: 111; L.S. SUBÍAS pers. comm.).

Other: Spain (orig. descr.).

Striatoppia opuntiseta Balogh & Mahunka 1968

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).

Other: Lesser Antilles, Galapagos Islands, Oriental (Java: orig. descr.), Japan, Madagascar, Pacific, circumtropical? (BALOGH & BALOGH 2002: 185).

Striatoppia sp.

Nicaragua: Chinandega: in soil (MAES et al. 1989: 45).

Varioppia sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Varioppia* cf. *radiata*) [*Varioppia radiata* Mahunka 1985: Lesser Antilles (St. Lucia: orig. descr.)].

Varioppia sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Varioppia* sp. nr. *radiata*).

Oppiidae sp.

Nicaragua: León: in soil (MAES et al. 1989: 45).

Family Oxyameridae

?Oxyamerus sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).

Family Quadropiidae

Coronoquadropia circumita (Hammer 1961)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2270-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006). New records: Barro Colorado Island: tropical moist forest (M. Kaspari coll.); Costa Abajo: between Piña and Achote, tropical wet forest, in epiphytic bromelia (H. Schatz coll.).

Other: Venezuela, Ecuador, Peru (orig. descr. sub *Oppia*), Brazil, Galapagos Islands, Caucasus, Eastern Oriental, New Zealand, Pacific.

Quadropia hammerae Minguez, Ruiz & Subías 1985

Costa Rica: Cordillera Central: Parque Nacional Braulio Carillo, in liverworts (SUBÍAS & ARILLO 2001; L.S. SUBÍAS pers. comm.).

Other: Spain (orig. descr.), Canary Islands.

Family Granuloppiidae

Bornemissaella furnieri P. Balogh 1994

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in forest litter (orig. descr.; P. BALOGH 1994: 17; BALOGH & BALOGH 2002: 179).

Bornemissaella ramirezi P. Balogh 1994

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, La Gloria, 1800 m, lower montane wet forest, in decaying leaf litter (orig. descr.; P. BALOGH 1994: 17; BALOGH & BALOGH 2002: 179).

Bornemisszaella salasi P. Balogh 1994

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in decaying litter (orig. descr.; BALOGH 1994: 17; BALOGH & BALOGH 2002: 179).

Family Sternoppiidae

Sternoppia striata Mahunka 1983

Guatemala: Petén: Tikal, lowland rain forest, in litter and soil (orig. descr.; MAHUNKA 1983b: 720; BALOGH & BALOGH 1990: 12, 2002: 175).

Sternoppia vicina Balogh & Mahunka 1980

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).
Other: Cuba (orig. descr.).

Sternoppia sp.

Panama — new record: Bocas del Toro: Isla Bastimentos, tropical moist forest (H. Schatz coll. sub *Sternoppia* cf. *incisa*) [*Sternoppia incisa* Balogh & Mahunka 1977: Bolivia (orig. descr.)].

Family Suctobelbidae

Allosuctobelba centroamericana (Woas 1986)

El Salvador: Cordillera Metapán Alotepeque: Cerro Montecristo, 2415 m, cloud forest, in litter (orig. descr.; WOAS 1986: 92 sub *Suctobelba*; BALOGH & BALOGH 1990: 39 sub *Suctobelbella*; BALOGH & BALOGH 2002: 140 sub *Suctobelba*).

Suctobelba ?longicuspis

El Salvador: Cordillera Metapán Alotepeque: Cerro Montecristo, 2160 m, cloud forest, in litter (WOAS 1986: 104 sub *Suctobelba longicuspis* aff. Jacot; BALOGH & BALOGH 2002 sub *Discosuctobelba longicuspis* aff. Jacot). [*Suctobelba longicuspis* (Jacot 1937): Nearctic (North Carolina: orig. descr. sub *Suctobelbella*)].

Suctobelba peracuta Balogh & Mahunka 1980

Panama: Cordillera de Talamanca: V. Barú, 2270-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Cuba (orig. descr.).

Suctobelba pseudornata Woas 1986

El Salvador: Cordillera Metapán Alotepeque: Cerro Montecristo, 2160 m, cloud forest, in litter (orig. descr.; WOAS 1986: 88; BALOGH & BALOGH 1990: 39 sub *Suctobelbella*; BALOGH & BALOGH 2002: 144 sub *Discosuctobelba*).

Suctobelba variabilis Hammer 1962

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; Cordillera de Talamanca: Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Chile (orig. descr.).

Suctobelba sp.

Panama: Cordillera de Talamanca: V. Barú, 2470 m, montane rain forest (SCHATZ 2006 sub *Suctobelbella* cf. *perdentata*) [*Suctobelba perdentata* Hammer 1961: Peru (orig. descr.), Galapagos Islands].

Suctobelba sp.

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2600-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Suctobelbella* sp. nr. *sicilifera*) [*Suctobelba sicilifera* Hammer 1961: Peru (orig. descr.)].

Suctobelba sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-3150 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Suctobelba sp.

Panama: without detailed site record (orchid plants, U.S. plant quarantine station, HAMMER 1969: 70 sub *Suctobelbe* sp.).

Suctobelbella complexa (Hammer 1958)

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbella* (*Discosuctobelba*) *complexa*).

Other: Lesser Antilles, Brazil, Galapagos Islands, Argentina (orig. descr. sub *Suctobelba*, Eastern Oriental).

Suctobelbella penicillata (Balogh & Mahunka 1966)

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbella* (*Flagrosuctobelba*) *penicillata*).

Other: Ethiopian (Zaire: orig. descr. sub *Suctobelba*).

Suctobelbella similidentata Mahunka 1983

Panama: Cordillera de Talamanca: V. Barú, subalpine páramo, 2270-3475 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (orig. descr.).

Suctobelbella sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 3400 m, subalpine páramo (SCHATZ 2006 sub *Suctobelbella* sp. nr. *similidentata*).

Suctobelbella sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbella* (*Suctobelbella*) *asinus*) [*Suctobelbella asinus* (Balogh & Mahunka 1980): Cuba (orig. descr. sub *Suctobelba*)].

Suctobelbella sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbella* (*Discosuctobelba*) cf. *longiclava*) [*Suctobelbella longiclava* (Hammer 1958): Argentina (orig. descr. sub *Suctobelba*)].

Suctobelbella sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbella* (*Discosuctobelba*) cf. *subcomplexa*) [*Suctobelbella subcomplexa* (Balogh & Mahunka 1968): Argentina (orig. descr. sub *Suctobelba*), Eastern Oriental].

?*Suctobelbella* sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

***Suctobelbilla dentata* (Hammer 1961)**

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest (SCHATZ 2006).

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Peru (orig. descr. sub *Rhynchobella*), Western Oriental, New Zealand, Pacific.

***Suctobelbilla* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Suctobelbilla* cf. *pocsi*) [*Suctobelbilla pocsi* Balogh & Mahunka 1980: Cuba (orig. descr.)].

***Suctobelbidae* sp.**

Nicaragua: León: without detailed site record (MAES et al. 1989: 46 sub *Sactobelbidae* [sic!]).

Family Teratoppiidae

***Teratoppia centroamericana* Woas 1986**

El Salvador: Volcán de San Vicente, eastern summit, 1775 m, cloud forest, in litter (orig. descr.; WOAS 1986: 66; BALOGH & BALOGH 1990: 21, 2002: 177).

Family Arceremaeidae

***Tecteremaeus* sp.**

Panama — new record: Prov. Darién: Serranía de Pirre, 1600 m, premontane rain forest, in litter under palm (H. Schatz coll. sub *Tecteremaeus* cf. *anoporosus*) [*Tecteremaeus anoporosus* Balogh & Mahunka 1969: Cuba, Brazil (orig. descr.)].

Family Autognetidae

Austrogneta sp.

Nicaragua: León: in epiphytes (MAES et al. 1989: 44).

Family Rynchoribatidae

Rhynchoribates edentatus Balogh & Mahunka 1969

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92).
Other: Bolivia (orig. descr.).

Rhynchoribates sp.

Panama: Cordillera de Talamanca: V. Barú, 2800-3300 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Rhynchoribates sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 92 sub *Rhynchoribates* cf. *spathulatus*) [*Rhynchoribates spathulatus* Balogh & Mahunka 1969: Bolivia (orig. descr.)].

Family Limnozetestidae

Limnozetestes sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006 sub *Limnozetestes* sp. nr. *ciliatus*) [*Limnozetestes ciliatus* (Schrank 1803): Europe (orig. descr. sub *Acarus*)].

Family Fortuyniidae

Fortuynia yunkerii van der Hammen 1963

Panama: Prov. Panama: Ft. Kobbe beach west of Panama City, intertidal zone, in an empty barnacle shell (orig. descr.; VAN DER HAMMEN 1963: 153; BALOGH & BALOGH 1990: 53, 2002: 125).

Family Tegeocranellidae

Tegeocranellus alas Behan-Pelletier 1997

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in swamp, from moss and trunks partially in water, in detritus (orig. descr.; BEHAN-PELLETIER 1997: 545).

Tegeocranellus mediolamellatus Behan-Pelletier 1997

Guatemala: Sierra de las Minas: near San Lorenzo Zacapa, cloud forest, in wet moss (orig. descr.; BEHAN-PELLETIER 1997: 551).

Family Cymbaeremaeidae

Scapheremeus flamiferus Palacios-Vargas & Rios 1998

Nicaragua: León: epiphytic in *Tillandsia* and *Epidendrum*; Matagalpa: "Selva Negra" 1600 m, in trunk and bark of trees (PALACIOS-VARGAS & RIOS 1998: 34; MAES et al. 1989: 44 sub *Scapheremaeus* sp.).

Other: Mexico (orig. descr., Quintana Roo, other states).

Scapheremaeus sp.

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006 sub *Scapheremaeus* cf. *grahamius*) [*Scapheremaeus grahamius* Rios & Palacios-Vargas 1998: Mexico (orig. descr.)].

Scapheremaeus sp.

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo; V. Poás, 2650 m, montane rain forest, in leaf litter (SCHATZ 2006 sub *Scapheremaeus* sp. 1).

Panama: Cordillera de Talamanca: V. Barú, 1900-3300 m, subalpine páramo, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006 sub *Scapheremaeus* sp. 1).

Scapheremaeus spp.

Panama: without detailed site record (*Citrus* lemon fruit, U.S. plant quarantine station, HAMMER 1969: 71).

?Scapheremaeus sp.

Panama: Cordillera de Talamanca: V. Barú, summit, 3400-3475 m, subalpine páramo, in moss (SCHATZ 2006 sub *?Scapheremaeus* sp. 2).

Family Licneremaeidae

Licneremaeus discoidalis Willmann 1930

Guatemala: barrancos around Ciudad Guatemala, in moss and lichens from trees (orig. descr.; WILLMANN 1930: 244; BALOGH & BALOGH 2002: 264).

Panama: Cordillera de Talamanca: V. Barú, 1900-2470 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006). New record: Isla Taboga, dry deciduous forest (H. Schatz coll.).

Other: Lesser Antilles.

Family Scutoverticidae

Scutovertex spp.

El Salvador: without detailed site record (sweet lemon, U.S. plant quarantine station, HAMMER 1969: 69).

Costa Rica: without detailed site record (guava, U.S. plant quarantine station, HAMMER 1969: 69).

Family Parakalummidae

Neoribates sp.

Panama: Isla Coiba, Cerro Torre (300 m), Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Neoribates* sp. nr. *foraminiferus*) [*Neoribates foraminiferus* Sellnick 1923: Brazil (orig. descr.)].

Neoribates sp.

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari coll.).

Neoribates sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest. (SCHATZ 2006 sub *Neoribates* sp. nr. *fulvus*) [*Neoribates fulvus* Sellnick 1923: Brazil (orig. descr. sub *Neoribates foraminiferus* var. *fulvus*)].

Neoribates sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *Neoribates* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, 2200-2600 m, montane rain forest (SCHATZ 2006 sub *Neoribates* sp. 2).

Family Zetomotrichidae

Ghilarovus sp.

Panama — new record: Madden Dam: deciduous dry forest (H. Schatz coll. sub *Ghilarovus* cf. *elegans*) [*Ghilarovus elegans* Mahunka 1983: Mexico (orig. descr.)].

Family Mochlozetidae

Dynatozetes amplus Grandjean 1960

Guatemala: Petén: Tikal, lowland rain forest (MAHUNKA 1983b: 710).

Panama: near Colón: humid forest, on trees (orig. descr.; GRANDJEAN 1960: 104; BALOGH & BALOGH 1990: 67, 2002: 301); Isla Coiba: tropical moist forest (SUBÍAS ET AL. 2004: 93); Cordillera de Talamanca: V. Barú, 2470 m, montane rain forest (SCHATZ 2006). New records: Barro Colorado Island: tropical moist forest (M. Kaspari coll.); Costa Abajo: between Piña and Achioté, tropical wet forest (H. Schatz coll.).

Other: Venezuela.

Mochlozetes asculpturatus Mahunka 1985

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Lesser Antilles (St. Lucia: orig. descr.).

Mochlozetes flatus Grandjean 1930

Panama: near Colón: in rotten bark and wood, on a trunk and on trees (orig. descr.; GRANDJEAN 1930: 282; BALOGH & BALOGH 1990: 68, 2002: 300).

Mochlozetes penetrabilis Grandjean 1930

Panama: near Colón: in rotten bark and wood, on a trunk and on trees (orig. descr.; GRANDJEAN 1930: 276; BALOGH & BALOGH 1990: 68, 2002: 300); Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Venezuela, Colombia (orig. descr.), Galapagos Islands.

?*Dynatozetes* — *Mochlozetes* sp.

Guatemala: without detailed site record (U.S. plant quarantine station, HAMMER 1969: 72).

Honduras: without detailed site record (U.S. plant quarantine station, HAMMER 1969: 72).

Panama: without detailed site record (U.S. plant quarantine station, HAMMER 1969: 72).

Family Oribatulidae

***Phauloppia* sp.**

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in leaf litter, moss, in epiphytic lichens (SCHATZ 2006).

?*Phauloppia* sp.

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest (SCHATZ 2006 sub ?*Phauloppia* sp. 2).

***Spinoppia magniserrata* Higgins & Woolley 1966**

Central America: without detailed site record (BALOGH & BALOGH 2002: 272).

Other: Florida (orig. descr.).

***Zygoribatula bonairensis* Willmann 1936**

Panama — new record: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (H. Schatz coll.).

Other: Rep. Dominicana, Lesser Antilles (Bonaire: orig. descr.).

***Zygoribatula* sp.**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 3400 m, subalpine páramo, in moss; V. Chirripó, summit, 3800 m, subalpine páramo, in moss (SCHATZ 2006).

Oribatidae? [sic!] sp.

Nicaragua: Managua: without detailed site record (MAES et al. 1989: 46).

Family Haplozetidae

Haplozetes minimicoma Beck 1964

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).
Other: Peru (orig. descr.), Brazil, Galapagos Islands.

Haplozetes triungulatus Beck 1964

El Salvador: Cuscatlán near San Miguel, tropical moist forest, in soil (orig. descr.; BECK 1964: 173; BALOGH & BALOGH 1990: 82, 2002: 355).

Haplozetes sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2800-2900 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Haplozetes sp.

Panama: Cordillera de Talamanca: V. Barú, 2470 m, montane rain forest (SCHATZ 2006 sub *Haplozetes* sp. 2).

Haplozetes sp.

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Haplozetes* sp. 3).

Incabates sp.

Panama: Cordillera de Talamanca: V. Barú, 1900-2200 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006 sub *Incabates* cf. *nudus*) [*Incabates nudus* Hammer 1961: Peru (orig. descr.), Eastern Oriental].

Peloribates antillensis (Mahunka 1985)

Panama: Isla Coiba: tropical moist forest (SUBÍAS ET AL. 2004: 94 sub *Protoribates*); Cordillera de Talamanca: V. Barú, 2270 m, montane rain forest (SCHATZ 2006).

New records: Prov. Los Santos, Punta Mala, in mangrove litter; Soberanía National Park, tropical moist forest, in leaf litter with fungus (H. Schatz coll.).

Other: Lesser Antilles (St. Lucia: orig. descr. sub *Xylobates*).

Peloribates dispersus Beck 1964

El Salvador: Cuscatlán near San Miguel, tropical moist forest, in litter and moss (BECK 1964: 182; BALOGH & BALOGH 1990: 84, 2002: 353).

Other: Peru (orig. descr.).

Peloribates grandis (Willmann 1930)

Guatemala: base of Volcán Pacaya, 760 m, in moss (orig. descr.; WILLMANN 1930: 240 sub *Parazetes grandis*; BECK 1964: 176; BALOGH & BALOGH 1990: 84, 2002: 352).

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Peloribates longisetosus (Willmann 1930)

Guatemala: barrancos near Ciudad Guatemala, in moss (orig. descr.; WILLMANN 1930: 241 sub *Parazetes*; BECK 1964: 176; BALOGH & BALOGH 1990: 84).

Other: Venezuela.

Peloribates porosus Beck 1964

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Other: Peru (orig. descr.).

***Peloribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Peloribates* sp. nr. *paraguayensis*) [*Peloribates paraguayensis* Balogh & Mahunka 1981: Paraguay (orig. descr.), Western Oriental].

***Peloribates* sp.**

Panama: Cordillera de Talamanca: V. Barú, 1900-2470 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006 sub *Peloribates* sp. nr. *dispersus*).

Protoribates capucinus Berlese 1908

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94).
New records: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.); Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Other: Lesser Antilles, Venezuela(?), Peru, Brazil, Galapagos Islands, Argentina, Nearctic, Palearctic (Italy: orig. descr.), Ethiopian, Oriental, New Zealand, Pacific; cosmopolitan (BALOGH & BALOGH 1990: 71, 2002: 342).

***Protoribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Brasilobates* cf. *bipilis*) [*Protoribates praeoccupatus* Subías 2004: Brazil (orig. descr. sub *Brasilobates bipilis* Pérez-Íñigo & Baggio 1980 nec Hammer 1972), Galapagos Islands].

***Protoribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Brasilobates* sp. nr. *bipilis*).

***Protoribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94 sub *Protoribates* sp. nr. *antillensis*).

***Protoribates* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94 sub *Protoribates* sp. nr. *capucinus*).

***Protoribates* sp.**

Costa Rica: Cordillera de Talamanca: V. Chirripó, summit, 3800 m, subalpine páramo (SCHATZ 2006 sub *Protoribates* sp. 1 nr. *longior*) [*Protoribates longior* Berlese 1908: Palearctic (Italy: orig. descr.)].

***Protoribates* sp.**

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510-2650 m, montane rain forest (SCHATZ 2006 sub *Protoribates* sp. 2 nr. *capucinus*).

***Protoribates* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Protoribates* sp. 3).

?*Protoribates* sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94).

***Protoribates* spp.**

Honduras: without detailed site record (ornamental plants, U.S. plant quarantine station, HAMMER 1969: 74).

***Rostrozetes ovulum* (Berlese 1908)**

El Salvador: Sonsonate: between Los Cóbano and Acajutla, 50 m, in litter; La Libertad: Sitio del Niño, at base of Cerro El Playón, 520 m, tropical dry forest, in litter; El Boquerón, trail to Quezaltepeque, 954 m, in litter; Pichacho: 1945 m, summit of volcano, in litter (BECK 1965: 48 sub *R. foveolatus*).

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2510-2800 m, montane rain forest (SCHATZ 2006). Cocos Island — new record: premontane rain forest, in grass litter (H. Schatz coll.).

Panama: near Colón, in litter of a former sugar cane field (BECK 1965: 48 sub *R. foveolatus*); Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93); Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006); without detailed site record (soil at base of buttress tree, U.S. plant quarantine station, HAMMER 1969: 74 sub *R. ?foveolatus*).

Other: Mexico (Quintana Roo, other states), Cuba, Lesser Antilles, Venezuela, Peru, Brazil, Argentina, Galapagos Islands, Florida (type locality according to NORTON & KETHLEY 1989: 472, orig. descr. sub *Trachyoribates*), Nearctic, Palaearctic, Ethiopian, Oriental, Australia, New Guinea, New Zealand, Pacific, Holarctic (?introduced, BALOGH & BALOGH 2002: 355 sub *R. foveolatus*); in all tropical and subtropical regions (BALOGH & BALOGH 1990 sub *R. foveolatus*); cosmopolitan (BALOGH & BALOGH 2002: 354 sub *R. foveolatus*).

***Rostrozetes* sp.**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006 sub *Rostrozetes* sp. nr. *nebulosus*) [*Rostrozetes nebulosus* Beck 1965: Peru (orig. descr.)].

***Rostrozetes* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Rostrozetes* sp. 2).

Family Nasobatidae

Nasobates spinosus Woolley 1966

Honduras: without detailed site record (taken with orchid plants from Honduras, at Miami, orig. descr.; WOOLLEY 1966a: 337; BALOGH & BALOGH 1990: 88).

Other: Paraguay.

Family Scheloribatidae

Cryptozetes usnea Norton & Palacios-Vargas 1987

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2900 m, montane rain forest, in moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3400-3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Mexico (orig. descr.).

Domotorina suramericana (Hammer 1958)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

Other: Venezuela, Argentina, Bolivia (orig. descr. sub *Oribatula*), Galapagos Islands; wide distribution (BALOGH & BALOGH 1990: 92).

Domotorina* sp. ?*plantivaga

Costa Rica: without detailed site record (*Persea americana* fruit, U.S. plant quarantine station, HAMMER 1969: 75).

Panama: without detailed site record (*Anona* sp., U.S. plant quarantine station, HAMMER 1969: 75) [*Domotorina plantivaga* (Berlese 1895): Mexico (record doubtful), Nearctic, Palaearctic (Italy: orig. descr. sub *Oribatula*), Ethiopian, Eastern Oriental].

***Hemileius* sp.**

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94 sub *Hemileius* cf. *microclava*) [*Domotorina microclava* (Hammer 1961): Peru (orig. descr. sub *Schelorbitates*)].

Ischeloribates rostratus (Hammer 1958)

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94).
Other: Argentina (orig. descr. sub *Scheloribates*).

Scheloribates acuticlava Pérez-Íñigo & Baggio 1986

Guatemala: without detailed site record (BALOGH & BALOGH 1990: 100).
Other: Brazil (orig. descr. sub *Scheloribates praeincisus* ssp. *acuticlava*).

Scheloribates elegans Hammer 1958

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).
Other: Bolivia (orig. descr.), Galapagos Islands, Oriental, Pacific.

Scheloribates huancayensis Hammer 1961

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94).
Other: Peru (orig. descr.), Western Oriental.

Scheloribates luciensis Mahunka 1985

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94).
Other: Lesser Antilles (St. Lucia: orig. descr.), Cuba.

Scheloribates minifimbriatus Minguez, Subías & Ruiz 1986

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94).
Other: Western Palaearctic (Spain: orig. descr.).

Scheloribates praeincisus Berlese 1910

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94).
New records: Costa Abajo: between Piña and Achiote, tropical wet forest, in leaf litter and epiphytic bromelia (H. Schatz coll.); Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Other: Brazil, Galapagos Islands, Iran, Oriental (Java: orig. descr. sub *Protoribates* (*Scheloribates*) *praeincisus*), Pacific.

Scheloribates sp.

Nicaragua: León, Managua: in epiphytic *Tillandsia* (MAES et al. 1989: 46).

Scheloribates sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94 sub *Scheloribates* cf. *dlouhyi*) [*Scheloribates dlouhyi* Mahunka 1984: Paraguay (orig. descr.)].

Scheloribates sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 94 sub *Scheloribates* sp. nr. *polygonatus*) [*Scheloribates polygonatus* Balogh & Mahunka 1974: Cuba (orig. descr.)].

Scheloribates sp.

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; Cordillera de Talamanca: Cerro de la Muerte, 3400 m, subalpine páramo; 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 3500 m, subalpine páramo, in moss (SCHATZ 2006 sub *Scheloribates* sp. 1 cf. *curvialatus*).

Panama: Cordillera de Talamanca: V. Barú, 2200-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Scheloribates* sp. 1 cf. *curvialatus*) [*Scheloribates curvialatus* Hammer 1961: Peru (orig. descr.), Western Oriental].

Scheloribates sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter in mire; Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *Scheloribates* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, 2200-2270 m, montane rain forest (SCHATZ 2006 sub *Scheloribates* sp. 2).

Scheloribates sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter in mire; Parque Nacional Chirripó, 2650-3600 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Scheloribates* sp. 3).

Panama: Cordillera de Talamanca: V. Barú, 2800-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Scheloribates* sp. 3).

Scheloribates sp.

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006 sub *Scheloribates* sp. 4).

***Scheloribates* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Scheloribates* sp. 5 nr. *laticlava*) [*Grandjeanobates laticlava* (Hammer 1961); Peru (orig. descr. sub *Scheloribates*), Galapagos Islands, Western Oriental].

***Scheloribates* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Scheloribates* sp. 6 nr. *volcanensis*) [*Scheloribates volcanensis* Hammer 1962: Chile (orig. descr.)].

?*Scheloribates* sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 94).

Family Oripodidae

***Benoibates excavatus* (Woolley 1961)**

Belize — new record: Cockscomb Basin Reserve, tropical moist forest (H. Schatz coll.).

Honduras: without detailed site record (on orchid leaf at Miami, WOOLLEY 1966b: 20; BALOGH & BALOGH 1990: 104 sub *Exoripoda excavata*).

Costa Rica: without detailed site record (on orchid plants at Miami, WOOLLEY 1966b: 20).

Panama: without detailed site record (on orange fruit at Miami, WOOLLEY 1966b: 20; BALOGH & BALOGH 1990: 104 sub *Exoripoda excavata*).

Central America: without detailed site record (BALOGH & BALOGH 2002: 309 sub *Exoripoda excavata*).

Other: Mexico (Tabasco), Jamaica (on unknown wood cuttings at Miami, orig. descr. sub *Exoripoda excavata*).

***Gymnobates* spp.**

El Salvador: without detailed site record (orchid plants, U.S. plant quarantine station, HAMMER 1969: 75).

***Oripoda clavata* Woolley 1961**

El Salvador: San Salvador: on *Simaruba glanca* (WOOLLEY 1966b: 10).

Panama: Panama Canal: on *Citrus* limon fruit (at Miami, WOOLLEY 1966b: 10).

Central and South America: without detailed site record, on trees (BALOGH & BALOGH 1990: 106, 2002: 311).

Other: Mexico, Cuba, Jamaica, Trinidad, Colombia, Brazil, Argentina, Florida (on orange fruit from Mexico at Miami, orig. descr.).

Oripoda lobata Mahunka 1985

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006). New record: Barro Colorado Island: tropical moist forest (M. Kaspari coll.).

Other: Mexico (Quintana Roo), Lesser Antilles (St. Lucia: orig. descr.), Venezuela.

Oripoda longiseta Woolley 1961

Honduras: without detailed site record (excavated with orchid plants at Miami, orig. descr.; WOOLLEY 1961: 280, 1966b: 11; BALOGH & BALOGH 1990: 106).

Other: Cuba (on bark at Miami, orig. descr.), Jamaica, Colombia, Brazil, Florida, Bermuda.

Oripoda sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650-2800 m, montane rain forest, in leaf litter, moss, epiphytic lichens (SCHATZ 2006 sub *Oripoda* sp. 1 nr. *lobata*).

Panama: Cordillera de Talamanca: V. Barú, 1900-2800 m, montane rain forest (SCHATZ 2006 sub *Oripoda* sp. 1 nr. *lobata*).

Oripoda sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Oripoda* sp. 2 nr. *montana*).

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006 sub *Oripoda* sp. 2 nr. *montana*) [*Oripoda montana* (Hammer 1961): Peru (orig. descr. sub *Gymnobates montanus*)].

Oripoda sp.

Panama: Cordillera de Talamanca: V. Barú, 1900-3250 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006 sub *Oripoda* sp. 3 nr. *trilabiata*) [*Oripoda trilabiata* Hammer 1961: Peru (orig. descr.)].

Oripoda sp.

Panama: Cordillera de Talamanca: V. Barú, 1900-3400 m, subalpine páramo, montane rain forest, in leaf litter, moss, epiphytic lichens (SCHATZ 2006 sub *Oripoda* sp. 4).

Oripoda sp.

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2650 m, montane rain forest (SCHATZ 2006 sub *Oripoda* sp. 5).

Oripoda sp.

Panama: Cordillera de Talamanca: V. Barú, 1900-3300 m, subalpine páramo, montane rain forest, in leaf litter, moss, epiphytic lichens (SCHATZ 2006 sub *Oripoda* sp. 6 nr. *cubana*) [*Oripoda cubana* (Balogh & Mahunka 1980): Cuba (orig. descr. sub *Truncopes cubanus*)].

Oripoda sp.

Panama: Cordillera de Talamanca: V. Barú, 3300 m, montane rain forest (SCHATZ 2006 sub *Oripoda* sp. 7).

?*Oripoda* sp.

Costa Rica: Cordillera de Talamanca: V. Chirripó, summit, 3800 m, subalpine páramo (SCHATZ 2006).

Parapirnodus longus Balogh & Mahunka 1968

Panama: Cordillera de Talamanca: V. Barú, 1900-2470 m, montane rain forest, in leaf litter and epiphytic lichens (SCHATZ 2006).

Other: Argentina (orig. descr.), Galapagos Islands.

Pteroripoda sp.

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006 sub *Pteroripoda* cf. *minutissima*) [*Pteroripoda minutissima* Balogh & Mahunka 1974: Cuba (orig. descr.)].

Family Chamobatidae

?*Chamobates* sp.

Panama: Cordillera de Talamanca: V. Barú, 3300 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Family Euzetidae

Euzetes centroamericana (Stoll 1891)

Belize: Rio Hondo; Rio Sarstoon; Belize City (orig. descr.; STOLL 1891: 24 sub *Oribata centro-americana*; ZOOLOGICAL RECORD 1892: 37 sub *Oribata*; MICHAEL 1898: 21 sub *Oribata*; all sub British Honduras).

Guatemala: Antigua; Guatemala City, under stones and on moist walls (orig. descr.; STOLL 1891: 24 sub *Oribata centro-americana*; ZOOLOGICAL RECORD 1892: 37 sub *Oribata*; MICHAEL 1898: 21 sub *Oribata*); without detailed site record (WILLMANN 1930: 239 sub *Euzetes centro-americana*).

Honduras: without detailed site record (ZOOLOGICAL RECORD 1892: 37 sub *Oribata*) [prob. British Honduras? = Belize].

Panama: Volcán de Chiriquí (Barú), 2500-4000 feet (orig. descr.; STOLL 1891: 24 sub *Oribata*).

Euzetes spp.

Guatemala: without detailed site record (orchids, U.S. plant quarantine station, HAMMER 1969: 73).

Panama: without detailed site record (orchid plants, U.S. plant quarantine station, HAMMER 1969: 73).

Family Zetomimidae

Heterozetes heleios Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, from vegetation on surface of water (orig. descr.; BEHAN-PELLETIER 1998: 366).

Zetomimus naias Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, from vegetation on surface of water (orig. descr.; BEHAN-PELLETIER 1998: 371).

Other: Florida.

Family Ceratozetidae

Allozetes alas Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in leaf litter and from fungi (orig. descr.; BEHAN-PELLETIER 1998: 356).

Allozetes lacandonicus Mahunka & Palacios-Vargas 1996

Costa Rica: Prov. Heredia: La Selva, lowland rain forest (BEHAN-PELLETIER 1998: 358).

Other: Mexico (Chiapas: orig. descr.).

Allozetes sp.

Panama — new record: Soberanía National Park, tropical moist forest (H. Schatz coll. sub *Allozetes* cf. *translamellatus*) [*Allozetes translamellatus* Hammer 1973: Eastern Oriental, Pacific (West Samoa: orig. descr.)].

Allozetes sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Allozetes* sp. nr. *translamellatus*).

Ceratozetes ambiguus Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, from vegetation on surface of water (orig. descr.; BEHAN-PELLETIER 1998: 375).

Ceratozetes gracilis (Michael 1884)

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006).

Other: Chile, Nearctic, Palaearctic (England: orig. descr. sub *Oribata*), Oriental, New Zealand; cosmopolitan? (BALOGH & BALOGH 2002: 305).

Ceratozetes thienemanni Willmann 1943

Panama: Isla Coiba, Cerro Torre (300 m): tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Mexico (Chiapas), Argentina, Nearctic, Palaearctic (Germany: orig. descr.).

?*Ceratozetes* sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

Fuscozetes sp.

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro

de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; 3400 m, subalpine páramo (SCHATZ 2006 sub *Fuscozetes* sp. nr. *fuscipes*).

Panama: Cordillera de Talamanca: V. Barú, 2800-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Fuscozetes* sp. nr. *fuscipes*) [*Fuscozetes fuscipes* (C.L. Koch 1844): Nearctic, Palaearctic (Germany: orig. descr. sub *Oribates*)].

***Fuscozetes* sp.**

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510-3500 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Fuscozetes* sp. nr. *cuauhtemotzini*).

Panama: Cordillera de Talamanca: La Fortuna, 1350 m, montane rain forest, in moss (SCHATZ 2006 sub *Fuscozetes* sp. nr. *cuauhtemotzini*) [*Fuscozetes cuauhtemotzini* Palacios-Vargas & Martínez-Crespo 1987: Mexico (orig. descr.)].

***Fuscozetes* s.l. sp.**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter in mire (SCHATZ 2006).

***Guatemalozetes aelleni* Mahunka 1980**

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (orig. descr.; MAHUNKA 1980: 138; BALOGH & BALOGH 1990: 115, 2002: 303).

***Trichoribates* sp.**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900-3400 m, subalpine páramo, montane rain forest; Parque Nacional Chirripó, 3000 m, montane rain forest, in moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3475 m, subalpine páramo, in moss (SCHATZ 2006).

***Ceratozetidae* sp.**

Nicaragua: Carazo: without detailed site record (MAES et al. 1989: 44).

Family Mycobatidae

***Mycobates royi* Palacios-Vargas & Vázquez 1988**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 3300-3400 m, subalpine páramo, in leaf litter and moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, summit, 3400-3475 m, subalpine páramo, in leaf litter and moss (SCHATZ 2006).

Other: Mexico (orig. descr.).

Pelopsis baloghi Behan-Pelletier & Eamer 2003

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, aquatic vegetation and debris (orig. descr.; BEHAN-PELLETIER & EAMER 2003: 10).

Selvazetes sylvanus Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in primary forest soil (orig. descr.; BEHAN-PELLETIER 1998: 351).

Family Phenopelopidae

Eupelops sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006 sub *Eupelops* sp. 1).

Eupelops sp.

Costa Rica: Cordillera de Tilarán: Monteverde, 1600 m, lower montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2510-2800 m, montane rain forest (SCHATZ 2006 sub *Eupelops* sp. 2).

Panama: Cordillera de Talamanca: V. Barú, 2200-2270 m, montane rain forest; near Boquete, 1750 m, montane rain forest (SCHATZ 2006 sub *Eupelops* sp. 2).

Phenopelopidae sp.

Panama: Cordillera de Talamanca: V. Barú, 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006).

Family Oribatellidae

Oribatella dechambrieri Mahunka 1983

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 3000 m, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2270 m, montane rain forest (SCHATZ 2006).

Other: Mexico (Chiapas: orig. descr.).

Oribatella strinatii Mahunka 1980

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (orig. descr.; MAHUNKA 1980: 142; BALOGH & BALOGH 1990: 126, 2002: 298).

Oribatella sp.

Panama — new record: Costa Abajo: between Piña and Achioté, tropical wet forest, in epiphytic bromelia (H. Schatz coll. sub *Oribatella* sp. n. cf. *szaboi*) [*Oribatella szaboi* Balogh & Mahunka 1979: Cuba (orig. descr.), Venezuela].

Oribatella sp.

Panama: Isla Coiba, Cerro Torre (300 m), Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Oribatella* sp. nr. *serrula*) [*Oribatella serrula* Pérez-Íñigo & Baggio 1985: Brazil (orig. descr.)].

Oribatellidae sp.

Nicaragua: León: in dead leaves (MAES et al. 1989: 45).

Family Achipteriidae

Achipteria (Cubachipteria) sp.

Costa Rica: Cordillera de Talamanca: Tapantí, 1400 m, lower montane rain forest, in moss (SCHATZ 2006 sub *Achipteria (Cubachipteria)* sp. 1).

Achipteria (Cubachipteria) sp.

Panama: Cordillera de Talamanca: La Fortuna, 1380 m, lower montane rain forest (SCHATZ 2006 sub *Achipteria (Cubachipteria)* sp. 2).

Anachipteria sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter

and moss in mire; 3400 m, subalpine páramo; Parque Nacional Chirripó, 2650-3600 m, subalpine páramo, montane rain forest (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss; near Boquete, 1750 m, montane rain forest (SCHATZ 2006).

Lamellobates intermedius Nübel-Reidelbach & Woas 1992

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in soil and from fungus (BEHAN-PELLETIER 1998: 358).

Panama – new record: Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Other: Brazil (orig. descr.).

Lamellobates molecula (Berlese 1916)

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93, also sub *Lamellobates gyoergyi* Balogh & Mahunka 1977 [synonym of *L. molecula* according to BALOGH & BALOGH 2002]).

Other: Lesser Antilles, Brazil, Galapagos Islands, Ethiopian (Somalia: orig. descr. sub *Achipteria*), Oriental, New Zealand, Pacific; circumtropical (MAHUNKA 1998: 847); subtropical and tropical regions (BALOGH & BALOGH 2002: 330).

Lamellobates reticulatus Behan-Pelletier 1998

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in litter, soil and in fruit (orig. descr.; BEHAN-PELLETIER 1998: 358).

Lamellobates sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Lamellobates* sp. nr. *gyoergyi*).

Parachipteria nicoleti (Berlese 1883)

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest; Cordillera de Talamanca: Parque Nacional Chirripó, 2800 m, montane rain forest (SCHATZ 2006 sub *Parachipteria willmanni* van der Hammen 1952 [considered as synonym of *P. nicoleti* according to MAHUNKA 1994]).

Other: Nearctic, Palearctic (Italy: orig. descr. sub *Achipteria*).

Parachipteria sp.

Panama: Cordillera de Talamanca: V. Barú, 2800-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Parachipteria* cf. *willmanni*).

***Parachipteria* sp.**

Panama — new record: Prov. Darién: Serranía de Pirre, 1590 m, lower montane rain forest, in leaf litter (H. Schatz coll.).

***Paralamellobates striatus* Behan-Pelletier 1998**

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in leaf litter (orig. descr.; BEHAN-PELLETIER 1998: 363).

Family Tegoribatidae

***Tegoribates* sp.**

Costa Rica: Cordillera Central: V. Irazú, 3400 m, subalpine páramo, in leaf and grass litter; Cordillera de Talamanca: Cerro de la Muerte, 3300-3400 m, subalpine páramo; Parque Nacional Chirripó, 3500 m, subalpine páramo, in moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 3250-3475 m, subalpine páramo, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Family Galumnidae

***Allogalumna microporosa* Mahunka 1980**

Guatemala: Alta Verapaz: Coban-Lanquin, 1450 m (orig. descr.; MAHUNKA 1980: 138; BALOGH & BALOGH 1990: 136, 2002: 383).

***Allogalumna* sp.**

Panama: Cordillera de Talamanca: V. Barú, 2200 m, montane rain forest (SCHATZ 2006 sub *Allogalumna* cf. *borhidii*) [*Allogalumna borhidii* Balogh & Mahunka 1979: Cuba (orig. descr.), Brazil].

***Allogalumna* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Allogalumna* cf. *filiger*) [*Allogalumna filiger* Hammer 1962: Chile (orig. descr.)].

***Allogalumna* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Allogalumna* sp. nr. *borhidii*) [*Allogalumna borhidii* Balogh & Mahunka 1979: Cuba (orig. descr.)].

***Erogalumna zeucta* Grandjean 1966**

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Other: Venezuela (orig. descr.).

***Galumna agueroi* P. Balogh 1997**

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 3400 m, montane rain forest, in moss on barks (orig. descr.; P. BALOGH 1997: 26; BALOGH & BALOGH 2002: 370); Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006).

***Galumna egregia* Sellnick 1923**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Brazil (orig. descr.).

***Galumna flabellifera* Hammer 1958**

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93). New records: Panama City: Parque Metropolitana, 90 m, tropical moist forest, in leaf litter; Barro Colorado Island: tropical moist forest (H. Schatz coll.).

Other: Mexico, Lesser Antilles, Argentina, Bolivia (orig. descr.), Galapagos Islands, Palaearctic, Ethiopian, Oriental, Pacific; circumtropical (BALOGH & BALOGH 1990: 138, 2002: 367).

***Galumna innexa* Pérez-Iñigo & Baggio 1986**

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari coll.).

Other: Brazil (orig. descr.).

***Galumna irazu* P. Balogh 1997**

Costa Rica: Cordillera Central: V. Irazu, ca. 3000 m, rest of an oak forest, in moss on barks (orig. descr.; P. BALOGH 1997: 25; BALOGH & BALOGH 2002: 370).

Panama: Cordillera de Talamanca: V. Barú, 2650 m, montane rain forest (SCHATZ 2006).

Galumna laselvae P. Balogh 1997

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in litter and soil (orig. descr.; P. BALOGH 1997: 25; BALOGH & BALOGH 2002: 370).

Galumna pallida Hammer 1958

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93).
Other: Argentina (orig. descr.).

Galumna reticulata Hammer 1958

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93).
Other: Argentina (orig. descr.).

Galumna sp.

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Galumna* cf. *angularis*) [*Galumna angularis* Jeleva, Scull & Cruz 1984: Cuba (orig. descr.), Lesser Antilles, Brazil, Galapagos Islands].

Galumna sp.

Costa Rica: Cordillera de Talamanca: Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire; Parque Nacional Chirripó, 2650-2800 m, montane rain forest (SCHATZ 2006 sub *Galumna* sp. 2 nr. *clericata*) [*Pseudogalumna clericata* (Berlese 1915): Argentina (orig. descr. sub *Oribates clericatus*), Brazil].

Galumna sp.

Costa Rica: Cordillera Central: V. Barva, 2720 m, montane rain forest (SCHATZ 2006 sub *Galumna* sp. 3 nr. *circularis*) [*Galumna circularis* Hammer 1958: Bolivia (orig. descr.), Galapagos Islands].

Galumna sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Galumna* sp. nr. *egregia*).

Galumna sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Galumna* sp. nr. *flabellifera*).

***Galumna* sp.**

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Galumna* sp. nr. *pallida*).

***Galumna* sp.**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Galumna* cf. *reticulata*).

***Kratzensteinia rugifrons* (Stoll 1891)**

Belize: Belize City (orig. descr.; STOLL 1891: 25 sub *Oribata*; ZOOLOGICAL RECORD 1892: 37 sub *Oribates nigrifrons* [sic!]; MICHAEL 1898: 22 sub *Oribata*; Oudemans 1917: 79 sub *Kratzensteinia*; all sub British Honduras; SUBÍAS 2004: 220 sub ?*Pilizetes (Neopilizetes)*).

Guatemala: Retalhuleu, dead wood in forest (orig. descr.; STOLL 1891: 25 sub *Oribata*; MICHAEL 1898: 22 sub *Oribata*); without detailed site record (WILLMANN 1930: 239).

Panama: without detailed site record (orchid leaf, U.S. plant quarantine station, HAMMER 1969: 73).

Other: Rep. Dominicana (HAMMER 1969: 73)

***Pergalumna curva* ssp. *ventralis* (Willmann 1932)**

Panama: Cordillera de Talamanca: V. Barú; 1900 m, montane rain forest, in epiphytic lichens (SCHATZ 2006).

Other: Bolivia, Galapagos Islands, Nearctic, Eastern Palaearctic, Eastern Oriental (Sumatra: orig. descr. sub *Galumna ventralis*), Pacific.

***Pergalumna horvathorum* P. Balogh 1997**

Costa Rica: Cerro de la Muerte, 3400 m, in moss on barks (orig. descr.; P. BALOGH 1997: 28; BALOGH & BALOGH 2002: 375); Cerro de la Muerte, 2900 m, montane rain forest, in leaf litter and moss in mire (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

***Pergalumna silvatica* Hammer 1961**

Panama — new record: Barro Colorado Island: tropical moist forest (H. Schatz, M. Kaspari coll.).

Other: Peru (orig. descr.).

Pergalumna sura P. Balogh 1997

Costa Rica: Prov. Heredia: La Selva, lowland rain forest, in litter and soil (orig. descr.; P. BALOGH 1997: 28; BALOGH & BALOGH 2002: 376); Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest, in leaf litter and moss (SCHATZ 2006).

Panama: Cordillera de Talamanca: V. Barú, 2200-2800 m, montane rain forest (SCHATZ 2006). New records: Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.); Costa Abajo: between Piña and Achiote, tropical wet forest (H. Schatz coll.).

Pergalumna sp.

Panama: Cordillera de Talamanca: V. Barú, 2270-2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Pergalumna* cf. *aequalis*) [*Pergalumna aequalis* (Sellnick 1923); Brazil (orig. descr. sub *Stictozetes*)].

Pergalumna sp.

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari coll. sub *Pergalumna* cf. *decorata*).

Pergalumna sp.

Panama: Cordillera de Talamanca: V. Barú, 2800 m, montane rain forest, in leaf litter and moss (SCHATZ 2006 sub *Pergalumna* sp. nr. *decorata*) [*Pergalumna decorata* Balogh & Mahunka 1977; Bolivia (orig. descr.)].

Pergalumna sp.

Panama: Isla Coiba, Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Pergalumna* sp. nr. *decorata*).

Pergalumna sp.

Panama — new record: Barro Colorado Island: tropical moist forest (M. Kaspari coll. sub *Pergalumna* cf. *plumata*) [*Pergalumna plumata* Pérez-Íñigo & Baggio 1986; Brazil (orig. descr.)].

Pergalumna sp.

Panama: Isla Coiba, Cerro Torre (300 m), Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Pergalumna* cf. *plumata*).

Pergalumna sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Pergalumna* sp. nr. *plumata*).

Pergalumna sp.

Panama: Isla Coibita: tropical moist forest (SUBÍAS et al. 2004: 93 sub *Pergalumna* cf. *silvatica*).

Pergalumna sp.

Panama: Cordillera de Talamanca: V. Barú, 2270-2600 m, montane rain forest (SCHATZ 2006 sub *Pergalumna* sp. 1).

Pergalumna sp.

Panama: Cordillera de Talamanca: V. Barú, 2300-2470 m, montane rain forest (SCHATZ 2006 sub *Pergalumna* sp. 2).

Galumnidae sp.

Nicaragua: León: in dead leaves (MAES et al. 1989: 45).

Family Epactozetidae

Epactozetes imitator Grandjean 1930

Panama: near Colón: in litter, in litter and rotten bark (orig. descr.; GRANDJEAN 1930: 262; BALOGH & BALOGH 1990: 143, 2002: 360).

Other: Lesser Antilles.

Truncozetes mucronatus Balogh & Mahunka 1969

Panama — new record: Prov. Bocas del Toro: Isla Bastimentos, coastal rain forest, in leaf litter (H. Schatz coll.).

Other: Peru, Bolivia (orig. descr.), Brazil.

Truncozetes sturmi P. Balogh 1984

Panama — new records: Costa Abajo: between Piña and Achioté, tropical wet forest (H. Schatz coll.); Barro Colorado Island: tropical moist forest (M. Kaspari, H. Schatz coll.).

Other: Colombia (orig. descr.), Ecuador.

***Truncozetes* sp.**

Costa Rica: Cordillera de Talamanca: Parque Nacional Chirripó, 2510 m, montane rain forest (SCHATZ 2006 sub *Truncozetes* sp. nr. *sturmi*).

Panama – new record: Panama Canal: near Contractor's Hill, 60 m, deciduous dry forest, in leaf litter (H. Schatz coll. sub *Truncozetes* sp. nr. *sturmi*).

Family Galumnellidae

***Galumnopsis holoscripta* Grandjean 1931**

Panama: near Colón: humid forest, in rotten bark of trees (orig. descr.; GRANDJEAN 1931: 136; BALOGH & BALOGH 1990: 142, 2002: 360).

***Galumnopsis secunda* (Sellnick 1923)**

Panama: Isla Coiba: tropical moist forest (SUBÍAS et al. 2004: 93).

Other: Brazil (orig. descr. sub *Galumnella*).

Family Ceratokalummidae

***Arcozetes* sp.**

Panama — new record: Cordillera Central: Cerro El Gaital near El Valle Antón, 760 m, tropical wet forest, in moss and ferns (H. Schatz coll. sub *Arcozetes* cf. *bicuspidatus*) [*Arcozetes bicuspidatus* Hammer 1958: Ecuador, Argentina (orig. descr.)].

***Cultrobates heterodactylus* Willmann 1930**

Guatemala: around Ciudad Guatemala, 1500 m, in moss from trunks (orig. descr.); Petén: Tikal, lowland rain forest (WILLMANN 1930: 242; MAHUNKA 1983b: 723; BALOGH & BALOGH 1990: 133, 2002: 359).

Panama — new records: Prov. Bocas del Toro: Isla Bastimentos, coastal rain forest, in mangrove leaf litter; Soberanía National Park: Camino de Cruzes, tropical moist forest; Costa Abajo: between Piña and Achiote, tropical wet forest, in epiphytic bromelia; Madden Dam: deciduous dry forest (H. Schatz coll.).

Other: Lesser Antilles, Colombia, Galapagos Islands.

Table 2. Number of Oribatida (Acari) species in common in different Central American countries (Ptyctimous mites included).

| Country | ssp. total | Belize | Guatemala | El Salvador | Honduras | Nicaragua | Costa Rica ¹ | Panama | Mexico | Cuba | Lesser Antilles ² | Florida |
|------------------------------|------------|----------|-----------|-------------|----------|-----------|-------------------------|----------|----------|---------|------------------------------|---------|
| Belize | 26 [+13] | x | 15 [+6] | 1 [+1] | 4 | 0 | 15 [+8] | 17 [+13] | 11 [+6] | 9 [+4] | 16 [+7] | 7 [+1] |
| Guatemala | 66 [+4] | 15 [+6] | x | 1 | 3 | 0 | 25 [+3] | 28 [+8] | 24 [+1] | 14 [+1] | 21 [+2] | 12 [+1] |
| El Salvador | 19 | 1 [+1] | 1 | x | 2 | 0 | 5 | 6 | 7 | 6 | 3 | 3 |
| Honduras | 15 | 4 | 3 | 2 | x | 0 | 7 | 7 | 6 | 4 | 4 | 2 |
| Nicaragua | 1 | 0 | 0 | 0 | 0 | x | 0 | 0 | 1 | 0 | 0 | 0 |
| Costa Rica ¹ | 144 [+6] | 15 [+8] | 25 [+3] | 5 | 7 | 0 | x | 71 [+19] | 45 [+3] | 28 [+2] | 29 [+3] | 17 [+1] |
| Panama | 177 [+47] | 17 [+13] | 28 [+8] | 6 | 7 | 0 | 71 [+19] | x | 54 [+13] | 35 [+7] | 55 [+10] | 16 [+2] |
| Mexico | 280 [+3] | 11 [+6] | 24 [+1] | 7 | 6 | 1 | 45 [+3] | 54 [+13] | x | 46 [+1] | 44 [+2] | 17 |
| Cuba | 193 | 9 [+4] | 14 [+1] | 6 | 4 | 0 | 28 [+2] | 35 [+7] | 46 [+1] | x | 39 | 19 |
| Jamaica | 28 | 5 [+2] | 10 | 5 | 3 | 0 | 14 | 14 | 15 | 14 | 12 | 12 |
| R. Dominicana | 21 | 6 | 7 | 2 | 2 | 0 | 9 | 7 [+1] | 8 | 7 | 8 | 4 |
| Puerto Rico | 14 | 7 | 10 | 0 | 1 | 0 | 11 [+1] | 11 | 10 | 10 | 13 | 9 |
| Lesser Antilles ² | 168 | 16 [+7] | 21 [+2] | 3 | 4 | 0 | 29 [+3] | 55 [+10] | 44 [+2] | 39 | x | 18 |
| Florida | 129 | 7 [+1] | 12 [+1] | 3 | 2 | 0 | 17 [+1] | 16 [+2] | 17 | 19 | 18 | x |
| Bermuda | 20 [+8] | 9 [+3] | 10 [+1] | 2 | 3 | 0 | 12 [+2] | 11 [+3] | 10 [+3] | 13 [+3] | 12 [+2] | 11 |
| Cocos Island | 12 [+14] | 5 [+6] | 5 [+3] | 0 [+1] | 0 | 0 | 9 [+5] | 8 [+11] | 6 [+3] | 6 [+4] | 8 [+10] | 4 [+2] |
| Galapagos Islands | 128 [+3] | 13 [+8] | 16 [+1] | 2 | 1 | 0 | 27 [+2] | 47 [+11] | 28 [+3] | 26 [+1] | 40 [+2] | 13 |
| Venezuela | 105 | 8 [+3] | 15 [+1] | 3 | 2 | 0 | 28 [+1] | 35 [+6] | 29 | 20 | 29 | 8 |
| Colombia | 40 | 1 | 4 | 3 | 2 | 0 | 9 | 9 [+3] | 6 | 6 | 7 | 3 |
| Guyana | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surinam | 14 [+1] | 0 | 0 | 0 | 0 [+1] | 0 | 1 | 2 [+1] | 2 | 1 | 0 [+1] | 0 |

¹ Without Cocos Island; ² incl. Bahamas, Cayman Islands [additional unpublished records in parentheses].

Table 3.

General distribution of Oribatida (Acari) species from the Central American landbridge (Ptyctimous mites included).

| | Named spp. |
|--|------------|
| "Endemic" on Central American landbridge | 86 [+ 1] |
| Central America (Mexico, Antilles) | 56 [+10] |
| South America | 67 [+13] |
| Tropical | 42 [+ 6] |
| (Semi)Cosmopolitan | 29 [+ 3] |
| Nearctic | 4 [+ 1] |
| Nearctic and Palaearctic | 13 [+ 1] |
| Nearctic and Neotropical | 3 |
| Total | 300 [+35] |

[Additional unpublished records in parentheses].

Genavensia hungarorum Mahunka 1983

Guatemala: Petén: Tikal, lowland rain forest (orig. descr.; MAHUNKA 1983b: 721; BALOGH & BALOGH 1990: 133, 2002: 359).

ZOOGEOGRAPHICAL REMARKS

The state of knowledge is very different for each country and most likely reflects extremely uneven collection efforts (Table 1). Apart from Mexico and Cuba, the highest species numbers are recorded from Panama and Costa Rica, where specialists have spent more time. In contrast, Honduras and Nicaragua still represent nearly blanks on an oribatologist's map. The proportion of original descriptions is relatively high, showing that many investigations are confined to descriptions of new species. A considerable number of species is known from the type locality or the type country only ("endemic" in Table 1). Investigations are still rare on biology, ecology, and applied aspects of oribatids in Central America and the surrounding area (e.g. HERRERA DE FOURNIER & FOURNIER 1977; SERAFINO & MERINO 1978; STANTON 1979; REDDELL 1981; DIAZ & NAJT 1990; PAOLETTI et al. 1991; ESTRADA-VENEGAS et al. 1996; ESTRADA-VENEGAS & NORTON 2001; KOUNDA-KIKI et al. 2004; YANOVIK & WALKER 2004).

As can be seen from the low numbers of shared species among countries (Table 2), precise knowledge of specific distributions remains poor. The highest species similarity is found between Costa Rica and Panama, which probably reflects the higher collecting effort in these adjacent countries. However, there is also considerable species overlap among the faunas of those countries with Mexico, Cuba, the Lesser Antilles, Venezuela (BEHAN-PELLETIER et al. 1993), and the Galapagos Islands (SCHATZ 1998).

A total of 86 species are only recorded from the Central American landbridge. Among the species with a wider distribution (Table 3) the majority occur in the

tropics. Altogether 168 oribatid species of the landbridge are in common with other Central and South American countries as well as with other tropical regions. Additional 29 species have a semicosmopolitan distribution and must be added to the tropical as well as to the holarctic species group. Only 20 further species occur also in the Northern continents. In Central America they are mainly found at higher altitudes of the mountains (SCHATZ 2006). These numbers reflect the bridge character of the studied areas between North and South America (see SCHATZ 2004).

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