The present catalog is an updated version of the chapter Family Vaejovidae, by W. David Sissom, in the Catalog of the Scorpions of the World (1758-1998). It is reproduced here and updated with written permission from the publisher, the New York Entomological Society.

Family VAEJOVIDAE Thorell, 1876

Historically, the family Vaejovidae has included a diverse assemblage of taxa from around the world. As originally construed by Thorell (1876a), it included only the genera *Vaejovis* C. L. Koch (incorrectly emended to "*Vejovis*") and *Hadrurus* Thorell. *Iurus* Thorell and *Uroctonus* Thorell were placed in the subfamily Iurinae of the Pandinoidae. Pocock (1893) placed these four genera, along with *Scorpiops* Peters, *Anuroctonus* Pocock, *Caraboctonus* Pocock, and *Hadruroides* Pocock into the family Iuridae, as a subfamily Iurini. This assemblage was elevated to family level by Laurie (1896a) and divided into two subfamilies, the Iurini (for *Iurus*, *Uroctonus*, and *Caraboctonus*) and the Vejovini (for *Scorpiops*, *Vejovis*, *Anuroctonus*, *Hadrurus*, and *Hadruroides*). The name Vejovidae was reapplied for this family by Kraepelin (1905), who added *Syntropis* Kraepelin and recognized five subfamilies: Syntropinae (containing *Syntropis*), Vejovinae (containing the Nearctic genera *Vejovis*, *Uroctonus*, *Anuroctonus*, and *Hadrurus*), Caraboctoninae (containing the South American *Caraboctonus* and *Hadruroides*), the Iurinae (containing the Eurasian *Iurus*), and the Scorpiopsinae (for *Scorpiops* from southern Asia; correct spelling is Scorpiopinae). This basic arrangement persisted into recent times, with genera added to the subfamilies as authors thought appropriate. Stahnke (1974a) separated *Hadrurus* and *Anuroctonus* into a separate subfamily, the Hadrurinae Stahnke.

The first major change in this scheme was the recognition of the family Iuridae Thorell as a clade distinct from the Vaejovidae (Francke & Soleglad, 1981). *Iurus*, *Calchas*, *Hadrurus*, *Hadruroides*, and *Caraboctonus* were consequently removed from the Vaejovidae. *Anuroctonus* was thoroughly discussed by those authors, but not included in the Iuridae for a number of reasons (Francke & Soleglad, 1981). Subsequently, Stockwell (1992) placed *Anuroctonus* in the Iuridae as the sister group of *Hadrurus*, essentially as Stahnke (1974a) had previously done.

Two other modifications were important to provide the current interpretation of this family. First, Francke (1976a) suggested that the Scorpiopsinae (including *Scorpiops*, *Parascorpiops* Banks, and *Dasyscorpiops* Vachon) were distinct from the Vaejovidae, but opted not to discuss the issue in his paper and made no formal changes. The transfer was officially made by Stockwell (1992). That author indicated closer relationship to the chactoid groups, and chose to elevate the Scorpiopsinae to family level (spelling emended from Scorpiopsidae to Scorpiopidae by Fet [2000]). Finally, based on cladistic analysis, Soleglad & Sissom (2001) transferred the scorpiopids to the Euscorpiidae. Second, the genus *Nullibrotheas* Williams, considered a vaejovid by Williams (1974, 1980), was transferred to the Chactidae by Stockwell (1992).

A catalog of Mexican scorpions was recently published by Beutelspacher (2000). This catalog was based primarily on the literature and upon a significant number of new specimens deposited in the Colección Nacional de Aracnido del Instituto de Biología de la Universidad Nacional Autónoma de México. The author did not accept or (in some cases) was not aware of recent changes in the classification of vaejovids, and returned to the out-dated classification scheme that placed *Anuroctonus*, *Hadrurus*, and *Nullibrotheas* in the Vaejovidae, despite overwhelming evidence to the contrary. Without providing a cladistic analysis or new data of any sort, he synonymized *Serradigitus* and *Pseudouroctonus* back into *Vaejovis*. He was

unaware of the revisions of *Paruroctonus* published by Haradon (1983, 1984a, 1984b, 1985), and failed to recognize the genus (or subgenus) *Smeringurus* Haradon. We do not accept these synonymies, pending the results of our upcoming cladistic analysis. The catalog of Beutelspacher (2000) is plagued with other errors. As verified by W. D. Sissom, O. F. Francke, and E. González Santillán, many of his specimens were misidentified, rendering his reports on geographical distributions (particularly range extensions) questionable. He used several old species names, although they were synonymized many years ago (largely due to inadequate knowledge and use of the literature). Individual errors in Beutelspacher's (2000) catalog, as have thus far been elucidated, are discussed below in the species treatments.

In a recent development, Soleglad & Fet (2003a, 2004), as part of an analysis of the phylogenetic relationships of extant scorpions, transferred *Uroctonus* from the Vaejovidae to the Chactidae. Soleglad & Fet (2003a, 2004) resurrected the subfamily Uroctoninae to accommodate *Uroctonus* and also *Anuroctonus*, which they transferred from the Iuridae. In turn, they redefined the Iuridae to include only *Calchas* and *Iurus*, and created another family, the Caraboctonidae, to accommodate *Caraboctonus*, *Hadruroides* and *Hadrurus*. We reject the subfamily Uroctoninae *sensu* Soleglad & Fet (2003a, 2004) and the transferal of *Uroctonus* from the Vaejovidae to the Chactidae for the following reasons. The methods used in the phylogenetic analysis presented by these authors have been discredited and their resultant classification rejected (Prendini & Wheeler 2004, 2005). *Uroctonus* and *Anuroctonus* were artificially forced to be monophyletic in Soleglad & Fet's (2003a) analysis by the inclusion of false synapomorphies (e.g., '3–4 lateral ocelli') and the omission of characters that might support alternative hypotheses. These taxa are not sister taxa, let alone closely related, based on phylogenetic analyses by others (e.g. Stockwell 1989) and work in progress, where characters supporting alternative hypotheses have also been included. The transferal of *Uroctonus* from Vaejovidae to Chactidae renders both families paraphyletic.

Authorities uniformly regard the family Vaejovidae to include only North American elements. No subfamilies are recognized. Recognition of the family in this light is supported by two hypothesized synapomorphies (Stockwell, 1992): the presence of a longitudinal carina on the inner face of the pedipalp patella (absent in a number of species) and a pouch-like invaginated sperm duct on the hemispermatophore. The search for additional synapomorphies is needed. Further, the phylogenetic relationships of the genera are still obscure, and it is not possible at this time to recognize subfamilies or tribes.

The present catalog is derived from Sissom (2000), updated to accommodate the literature published on vaejovids from the beginning of 1998 to the end of 2005. The classification of vaejovids presented herein provides the basis for the REVSYS project. The current count of taxa in the Vaejovidae (excluding the dubious "*Vaejovis flavescens*" from Brazil) is ten genera, 154 species, and 35 subspecies (including 15 nominotypical forms).

In using the catalog, one will note that the opinions of specialists on subjects such as the validity of genera, species, and subspecies; the placement of species in genera; and distributional data for species often differ. In such cases, we have attempted to identify the "last reviser" who has provided well documented justification for their opinion, typically based on the study of types and other materials. A mere statement that a species is a synonym of another, or the listing a new or old combination without justication, was not considered a revisionary act and was not accepted in the catalog. Cases of differing opinion are often discussed in the "Notes" sections following the taxon in question.

Abbreviations used in this catalog are as follows: IOS = incorrect original spelling; ISS = incorrect subsequent spelling; UE = unjustified emendation; MIS = misidentification. The

depositories (identified in the body of the catalog by acronyms) and bibliography may be found on separate links.

Vejovoidae (IOS) Thorell, 1876a: 10 (part); type genus *Vaejovis* C. L. Koch, 1836.

SYNONYMS:
Syntropinae Kraepelin, 1905: 340; type genus *Syntropis* Kraepelin, 1900.
Uroctoninae Mello-Leitão, 1934a: 79, 81; type genus *Uroctonus* Thorell, 1876.

REFERENCES:
Vejovoidae (ISS): Thorell, 1876b: 83, 183 (part); Karsch, 1879a: 12, 21 (part); Karsch, 1879b: 97; Thorell & Lindström, 1885: 25.
Vejovidae (ISS): Simon, 1879: 92; Kraepelin, 1899: 176-178 (part); Pocock, 1900: 64 (part); Kraepelin, 1901: 273 (part); Kraepelin, 1905: 330-331, 340-341, 345 (part); Birula, 1917a: 15-16, 162-163, 170, 184, 190 (part); Birula, 1917b: 57, 88, 107-108 (part); Pavlovsky, 1924: 80 (part); Pavlovsky, 1925: 190-191, 195 (part); Hoffmann, 1931: 333 (part); Mello-Leitão, 1934a: 75, 77-81 (part); Mello-Leitão, 1934b: 5 (part); Werner, 1934: 280 (part); Mello-Leitão, 1945: 24, 118 (part); Millot & Vachon, 1949: 428; Bücherl, 1959: 270-272 (part); Bücherl, 1964: 61; Bücherl, 1967: 114 (part); Bücherl, 1969: 768 (part); Bücherl, 1971: 328-329 (part); Gertsch & Soleglad, 1972: 553-564 (part); Stahnke, 1974a: 108-113; Stahnke, 1974b: 339.
Iuridae (part): Pocock, 1893: 306, 308-309; Laurie, 1896a: 129.
Vejovini (ISS; subfamily; part): Kraepelin, 1894: 7, 181-183 (part); Laurie, 1896a: 130.
Vaejovidae: Pocock, 1902: 1, 4-5 (part); Ewing, 1928: 6-7 (part); Stahnke, 1974a: 339 (in part); Vachon, 1974: 906, 914, 916 (part); Williams, 1974: 14-15 (part); Lamoral, 1980: 440 (in part); Francke, 1982: 74 (part); Francke, 1985: 18 (part); Sissom, 1990a: 103-114 (part); Nenilin & Fet, 1992: 5 (part); Stockwell, 1992: 408-410, 412, 419; Kovarík, 1998: 143; Beutelspacher, 2000: 6, 24, 55, 151; Sissom, 2000:503-504; Ponce Saavedra & Beutelspacher, 2001: 20, 46, 71, 95; Soleglad & Fet, 2003b: 31; Soleglad & Fet, 2003a: 4, 15, 33, 36, 58, 61, 65, 67, 74, 80, 87, 93, 94, 109, 136, 138, 140-146, 148, 150, 163, 164, figs. 110-112, 114, 116, D-6, Tabs. 9, 11, Soleglad & Fet, 2004: 83; Prendini & Wheeler, 2005: 472, 479, Tab. 10.
Vejovaria (”tribus”; part): Birula, 1917a: 162; Birula, 1917b: 57.
Vaejovinae: Nenilin & Fet, 1992: 9 (part).
Vejovinae: Kraepelin, 1905: 340; Birula, 1917a: 162, 163; Birula, 1917b: 57; Werner, 1934: 281-282; Mello-Leitão, 1934a: 79-80; Mello-Leitão, 1945: 118; Millot & Vachon, 1949: 428; Stahnke, 1974a: 113, 118-120.
Syntropinae: Birula, 1917a: 163; Birula, 1917b: 57; Werner, 1934: 281; Mello-Leitão, 1945: 118; Millot & Vachon, 1949: 428; Gertsch, 1958: 14-15; Stahnke, 1974a: 112, 113 (part).
Uroctoninae: Werner, 1934: 281, 283-284; Mello-Leitão, 1945: 119, 128; Millot & Vachon, 1949: 428; Soleglad & Fet, 2003a: 95, 102 (part; *Uroctonus* only); Soleglad & Fet, 2004: 81-128 (part; *Uroctonus* only).

DISTRIBUTION. NORTH AMERICA. Extreme southwestern Canada; western, central, and southeastern USA, Mexico. CENTRAL AMERICA. Guatemala.

NOTES.

1. With the rearrangements of the chactoid groups, the Vaejovidae now includes only Nearctic elements. It is not practical at this point to recognize subfamilies, and a cladistic analysis of the vaejovid genera is necessary before this can be accomplished. This is hampered by the fact that some of the genera of the Vaejovidae are poorly defined and often based on plesiomorphic characters.
2. Koch's (1836) original spelling of *Vaejovis* was unjustly emended to *Vejovis*, and both spellings have been used through the years. Likewise, the spelling of the family name has varied accordingly. The spelling was formally corrected by Williams (1971b) and Francke (1977b). See Notes under *Vaejovis*.

Genus *PARAVAEJOVIS* Williams, 1980

Paravaejovis Williams, 1980: 29-30, fig. 32A-D; type species*Vejovis pumilis* Williams, 1970 [=*Paravaejovis pumilis* (Williams, 1970)].

REFERENCES:
Paravaejovis: Haradon, 1984b: 319; Francke, 1985: 11, 18, 21; Sissom, 1990a: 110, 114; Nenilin & Fet, 1992: 9; Stockwell, 1992: 409, 416, fig, 62-63; Kovarík, 1998: 143; Beutelspacher, 2000: 56, 63, 151; Sissom, 2000:504; Soleglad & Fet, 2003a: 15, 36, 41, 48, 67, 104, 163, 164, figs. 66, 79, 80, D-5, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 5; Prendini & Wheeler, 2005: 473, 476, Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA. Mexico (Baja California Sur).

NOTES. Haradon (1984b) suggests that *Paravaejovis* is most closely related to members of the *Paruroctonus borregoensis* group and possibly is subordinate to that group. *Paravaejovis pumilis* is endemic to the Magdalena Plain and southern parts of the Sierra de la Giganta; it is a burrower, and Williams (1980) reports that it prefers sedimentary soils in sparsely vegetated areas.

Paravaejovis pumilis (Williams, 1970)

Vejovis pumilis Williams, 1970b: 297-302, fig. 13, 14.
Holotype: M (CAS, Type No. 10425), 43.1 km W Ciudad Constitución (= El Crucero), Baja California Sur, Mexico.
Paratypes: 241 specimens (CAS; one F allotype) from the type locality and six other locations from the San Raymundo area south to near La Paz, Baja California Sur, Mexico.

REFERENCES:
Vejovis pumilis: Williams, 1970e: 181, 183.
Paruroctonus pumilis: Stahnke, 1974a: 138
Paravaejovis pumilis: Williams, 1980: 30, fig. 32-34, 54N; Haradon, 1984b: 319; Kovarík, 1998: 143; Beutelspacher, 2000: 56, 63, 151; Sissom, 2000:505; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 41, 61, 67, 161, figs. 6, 78; Prendini & Wheeler, 2005: Fig. 28.

Paruroctonus pseudopumilis: Williams, 1970e: 181-183 (part; record from 13 km N San Raymundo); Beutelspacher, 2000: 69, 137, map 38 (part; record from 13 km N San Raymundo).

DISTRIBUTION. NORTH AMERICA. Mexico (Baja California Sur).

Genus *PARUROCTONUS* Werner, 1934

Paruroctonus Werner, 1934 (January?): 283, fig. 363; type species by monotypy *Uroctonoides gracilior* Hoffmann, 1931 [=*Paruroctonus gracilior* (Hoffmann, 1931)].

SYNONYMS:
Uroctonoides Hoffmann, 1931: 405, fig. 42; type species by monotypy *Uroctonoides gracilior* Hoffmann, 1931 [=*Paruroctonus gracilior* (Hoffmann, 1931)]; preoccupied as *Uroctonoides* Chamberlin, 1920 (=*Teuthraustes* Simon, 1878) (synonymized by Werner, 1934: 283).
Hoffmanniellius Mello-Leitão, 1934a (June 30): 80 (proposed replacement name for *Uroctonoides* Hoffmann); type species *Uroctonoides gracilior* Hoffmann, 1931 [=*Paruroctonus gracilior* (Hoffmann, 1931)] [synonymized by Stahnke, 1957: 253 (in footnote)].

REFERENCES:
Paruroctonus: Kästner, 1941: 237; Stanhke, 1957: 253 (part); Stahnke, 1965: 262, 263 (part); Bücherl, 1971: 329; Williams, 1972: 1-3 (part; reinstated as genus); Soleglad, 1972a: 71-75 (part); Soleglad, 1973b: 353, 355 (part); Williams, 1974: 15 (part); Stahnke, 1974a: 119, 136, fig. 10; Vachon, 1974: 914, 916; Williams, 1980: 31-34, fig. 35-37 (part); Francke & Soleglad, 1981: 241, 243 (part); Sissom & Francke, 1981: 93 (part); Francke, 1985: 11, 18, 21; Sissom & Francke, 1985: 264 (part); Sissom, 1990a: 110, 114 (part); Stockwell, 1992: 408, 409, 416, 419, fig. 12, 37, 39, 58; Sissom et al., 1998: 17-19; Kovarík, 1998: 143; ICZN, 1999: 209-210; Beutelspacher, 2000: 56, 65, 152; Sissom, 2000:505-506; Soleglad & Fet, 2003a: 15, 31, 33, 36, 67, 140, 142, 163, 164, figs. 66, 79, 80, 111, D-5, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4-7; Prendini & Wheeler, 2005: 463, 464, Fig. 27, Tab. 3, 4, 5, 10.
Hoffmanniellus (ISS): Mello-Leitão, 1945: 118; Vachon, 1963a: 163.
Vejovis (*Paruroctonus*): Gertsch & Allred, 1965: 4 (part); Gertsch & Soleglad, 1966: 3-7 (part); Gertsch & Soleglad, 1972: 553, 559 (part); Williams & Hadley, 1967: 112 (part); Williams, 1968a: 7 (part); Williams, 1970b: 277 (part).
Vaejovis (*Paruroctonus*): Hjelle, 1972: 26 (part).
Vaejovis: Díaz Najera, 1975: 3, 6 (part).
Paruroctonus (*Paruroctonus*): Haradon, 1983: 256; Haradon, 1984a: 205-209; Haradon, 1984b: 317-318; Haradon, 1985: 19-21.

DISTRIBUTION. NORTH AMERICA. Western portion from southern Canada to Aguascalientes, Mexico.

NOTES.
1. The actual date of publication is not clear, as Werner's work was produced in three parts published separately in 1934 and 1935. The date "January, 1934" is found in the preface to the first part, and the description of *Paruroctonus* is in the second part. Unfortunately, there

appears to be no way to clarify the publication date for this part, and Article 21c of the Code specifies that the date of 31 December 1934 must be accepted as the official date. A petition submitted to the International Commission on Zoological Nomenclature to conserve *Paruroctonus* as the valid genus name because of its universal usage (Sissom et al., 1998) was accepted.

2. The genus *Paruroctonus* was revised by Haradon (1983, 1984a, 1984b, 1985) and divided into two subgenera, *Paruroctonus* Werner and *Smeringurus* Haradon. The subgenus *Paruroctonus* was divided into a number of infragroups, some of which in turn, are divided into microgroups. *Smeringurus* has been treated as a separate genus (Stockwell, 1992), without data for justification beyond that provided originally by Haradon. We feel that the situation requires further study, but have listed *Smeringurus* as a separate genus here.

   Haradon (1984a, 1984b, 1985) further divided his "subgenus" *Paruroctonus* into a number of presumably monophyletic groupings. Larger groups were referred to as infragroups and some of these were subdivided into microgroups. A key to the infragroups appears in Haradon (1985).

   Most *Paruroctonus* spp. are psammophiles that occur throughout sandy areas (dunes) in the deserts of western USA and northwestern Mexico. Some species, such as *P. gracilior*, prefer more packed sandy soils and even rocky or gravelly habitats.

I. *gracilior* infragroup

Paruroctonus gracilior (Hoffmann, 1931)

Uroctonoides gracilior Hoffmann, 1931: 406-408, fig. 42-43.
Lectotype (designated by Gertsch & Soleglad, 1966: 29): M (AMNH), Tepazala, Aguascalientes, Mexico.
Paralectotypes: 2M (AMNH), same locality as holotype.

SYNONYMS:

Vejovis (*Paruroctonus*) *pallidus* Williams, 1968a: 6-11, fig. 4-6 (synonymized by Haradon, 1985: 22-23).
Holotype: M (CAS, Type No. 10174), 0.5 km SW Cuatro Cienegas, Coahuila, Mexico.
Paratypes: 64M, 25F (CAS, including an allotype"CAS Type No. 10174"), same locality as holotype; 5M, 2F (CAS), 4.3 km NNW Cuatro Cienegas; 1F (4 km E Cuatro Cienegas).

REFERENCES:

Hoffmanniellius gracilior: Mello-Leitão, 1934a: 80.
Paruroctonus gracilior: Werner, 1934: 283, fig. 363; Stahnke, 1957: 253; Stahnke, 1961: 206; Bücherl, 1971: 329; Williams, 1972: 3; Soleglad, 1972a: 73; Soleglad, 1973b: 355; Stahnke, 1974a: 136-138, fig. 10A, 11A-B; Williams, 1980: 31-32, fig. 35A-B, 36C-D; Sissom & Francke, 1981: 97-98, 102, 107, fig. 7-12, 33-35; Francke & Soleglad, 1981: 242, fig. 22; Haradon, 1985: 21-23, 40; Sissom, 1997: 13; Kovarík, 1998: 144; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 66, 136, 138, 152, map 31; Sissom, 2000:506; Soleglad & Fet, 2003a: 8, 31, 36, 104, fig. 75.
Uroctonoides gracilior: Gertsch, 1958: 15, 17; Vázquez & Zaragoza, 1979: 583.
Vejovis (*Paruroctonus*) *gracilior*: Gertsch & Allred, 1965: 9; Gertsch & Soleglad, 1966: 6, 26-30, fig. 13, 18, 21, 23, 33-35; Williams, 1968a: 7.

Hoffmanniellus (ISS) *gracilior*: Gertsch & Soleglad, 1966: 26 (in synonymy); Williams, 1972: 3 (in synonymy).
Paruroctonus pallidus: Williams, 1972: 3; Soleglad, 1972a: 73; Soleglad, 1973b: 355; Stahnke, 1974a: 138; Sissom & Francke, 1981: 98, 102; Beutelspacher, 2000: 69, 138, 152, map 31.
Uroctonus gracilior: Díaz Najera, 1975: 2 (erratum)
Vaejovis gracilior: Díaz Najera, 1975: 2, 6, 8, 20.
Vejovis (*Paruroctonus*) *pallidus*: Díaz Najera, 1975: 7, 20.

DISTRIBUTION. NORTH AMERICA. Mexico (Aguascalientes, Coahuila), USA (southeastern Arizona, southern New Mexico, southwestern Texas).

NOTES. Beutelspacher (2000) recognized both *P. gracilior* and *P. pallidus* in his catalog of Mexican scorpions. Because he failed to cite Haradon's (1985) revision of *Paruroctonus*, it is clear that he was unaware of the synonymy.

II. *boreus* infragroup

A. *boreus* microgroup

The members of the *boreus* microgroup were revised and keyed by Haradon (1985). Two species, *P. variabilis* Hjelle and *P. maritimus* Williams, are not included in the revision.

Paruroctonus arnaudi Williams, 1972

Paruroctonus arnaudi Williams, 1972: 4-5, 8, fig. 1.
Holotype: M (CAS, Type No. 11334), Socorro Sand Dunes, Baja California Norte, Mexico.
Paratypes: 61 specimen (41M, 20F, including an allotype "CAS, Type No. 11334"), same locality as holotype.

REFERENCES:
Paruroctonus arnaudi: Soleglad, 1973b: 355; Williams, 1980: 32, 34, fig. 38, 39; Haradon, 1985: 24, 40; Kovarík, 1998: 143; Beutelspacher, 2000: 66, 136, 152, map 32; Sissom, 2000:506; Soleglad & Fet, 2003b: 6; Soleglad & Fet, 2003a: 8.

DISTRIBUTION. NORTH AMERICA. Mexico (northwestern coast of Baja California Norte).

Paruroctonus bantai (Gertsch & Soleglad, 1966)

Vejovis (*Paruroctonus*) *bantai* Gertsch & Soleglad, 1966: 6, 20-23, fig. 12, 22, 29.
Holotype: F (CAS), Saline Valley, Warm Springs Road, Station 94, Inyo County, California, USA.

REFERENCES:
Vejovis (*Paruroctonus*) *bantai*: Williams & Hadley, 1967: 112; Williams, 1970a: 8.
Paruroctonus bantai: Williams, 1972: 3; Soleglad, 1972a: 75; Soleglad, 1973b: 355; Stahnke, 1974a: 138; Williams, 1976: 2; Haradon, 1985: 27-29, 41, fig. 3-6; Kovarík, 1998: 143; Sissom, 2000:507.

DISTRIBUTION. NORTH AMERICA. USA (California, Saline Valley and southern Death Valley).

***Paruroctonus bantai bantai* (Gertsch & Soleglad, 1966)**

Vejovis (*Paruroctonus*) *bantai* Gertsch & Soleglad, 1966: 6, 20-23, 41, fig. 12, 22, 29.

REFERENCES:
Paruroctonus (*Paruroctonus*) *bantai*: Haradon, 1985: 28-29, fig. 3-5; Sissom, 2000:507.

DISTRIBUTION. NORTH AMERICA. USA (California: Saline Valley)

Paruroctonus *bantai saratoga* Haradon, 1985

Paruroctonus bantai saratoga Haradon, 1985: 24, 29, 41, fig. 6.
Holotype: M (CAS, Type No. 15057), Saratoga Springs, Death Valley National Monument, San Bernardino County, California, USA.
Paratypes: 1F (CAS; allotype), 29M, 31F (AMNH), same locality as holotype.

REFERENCES:
Paruroctonus bantai saratoga: Kovarík, 1998: 143; Sissom, 2000:507.

DISTIRBUTION. NORTH AMERICA. USA (California: southern Death Valley).

***Paruroctonus boreus* (Girard, 1854)**

Scorpio (*Telegonus*) *boreus* Girard, 1854: 267-269, fig. 5-7 (part; not Eagle Pass, Texas record).
Holotype: F (USNM), valley of the Great Salt Lake, Utah, USA.

SYNONYMS:
Vejovis aquilonalis Stahnke, 1940: 101 (synonymized by Sissom & Francke, 1981: 94).
Holotype: M (CAS, Type No. 15273), 30 mi S of Grand Canyon on Highway 64, Coconino County, Arizona, USA (type locality corrected by Sissom & Francke, 1981: 94).
Vejovis (*Paruroctonus*) *auratus* Gertsch & Soleglad, 1966: 7, 34, 44-47, fig. 55, 58 (part; holotype only) (synonymized by Haradon, 1985: 25).
Holotype: F (AMNH), Saratoga Springs, Death Valley National Monument, San Bernardino County, California, USA.

REFERENCES:
Buthus boreus: Wood, 1863a: 110; Wood, 1863b: 368.
Vejovis boreus: Marx, 1890: 91; Banks, 1900a: 424; Banks, 1910: 187, 189; Comstock, 1912: 31; Webster, 1923: 248; Chamberlin, 1924: 64; Werner, 1934: 282; Comstock, 1940: 31; Stahnke, 1940: 101; Gertsch, 1958: 6 (part); Bücherl, 1971: 329; Knowlton, 1972: 2.
Unidentified scorpion: Robinson, 1924: 64.
Vaejovis boreus: Ewing, 1928: 10, 12; Kurata, 1930: 28; Hjelle, 1972: 6, 22-23, fig. 46, 51.
Vejovis (*Paruroctonus*) *boreus*: Gertsch & Allred, 1965: 9 (part); Gertsch & Soleglad, 1966: 6, 7-14, fig. 1-3, 6, 8, 10, 11, 16-17, 24-25, 31, 46-48, 57.

Vejovis (*Paruroctonus*) *aquilonalis*: Gertsch & Allred, 1965: 9, fig. 8, 20; Gertsch & Soleglad, 1966: 7, 42-44, fig. 20, 23 (part; see Sissom & Francke, 1981: 94); Williams, 1968b: 313.
Vejovis (*Paruroctonus*) *auratus*: Williams, 1968b: 313.
Paruroctonus aquilonalis: Williams, 1972: 3; Soleglad, 1972: 74; Soleglad, 1973b: 355; Stahnke, 1974: 138; Sissom & Francke, 1981: 94.
Paruroctonus auratus: Williams, 1972: 3; Soleglad, 1972: 75 (part); Soleglad, 1973b: 355 (part); Stahnke, 1974: 138; Williams, 1976: 2; Williams, 1980: 47; Sissom & Francke, 1981: 96 (part).
Paruroctonus boreus: Williams, 1972: 3; Soleglad, 1972a: 74; Soleglad, 1973b: 355; Allred, 1973: 251–254; Stahnke, 1974a: 138; Tourtlotte, 1974: 167-179; Anderson, 1975: 7–13, fig. 2, 7, 9–10, 12, tab. 1; Williams, 1976: 2; Allred & Gertsch, 1976: 93–96; Sissom & Francke, 1981: 93-94, 96; Haradon, 1985: 24-27, 41, fig. 1-2; Williams, 1987b: 329; Sissom, 1997: 13; Kovarík, 1998: 143; Sissom & Jackman, 1997: 151; Sissom, 2000:507-508; Soleglad & Fet, 2003a: 8, 150, 161, figs. 75, B-1, B-2.

DISTRIBUTION. Canada (Alberta, British Colombia, Saskatchewan), USA (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, Wyoming).

***Paruroctonus maritimus* Williams, 1987**

Paruroctonus maritimus Williams, 1987b: 329-332, fig. 1.
Holotype: M (CAS, Type No. 15791), Seaside, Monterey County, California, USA.
Paratypes: 22F (including allotype), 3 juv M (CAS), same locality as holotype.

REFERENCES:
Paruroctonus maritimus: Kovarík, 1998: 144; Sissom, 2000:508.

DISTRIBUTION. NORTH AMERICA. USA (coastal dunes of Monterey County, California).

***Paruroctonus silvestrii* (Borelli, 1909)**

Vejovis silvestrii Borelli, 1909: 225-227.
Holotype: F (MIZT), Sierra Madre, Los Angeles County, California, USA.

REFERENCES:
Vejovis silvestrii: Ewing, 1928: 14
Vaejovis silvestrii: Ewing, 1928: 14; Hjelle, 1972: 6, 23-26, 27, fig. 11, 47, 48, 51.
Vejovis boreus (part; MIS): Gertsch, 1958: 6.
Vejovis (*Paruroctonus*) *silvestrii*: Gertsch & Soleglad, 1966: 15-20, fig. 1, 4, 5, 7, 9, 27, 28.
Paruroctonus silvestrii: Williams, 1972: 3, 4, 8; Soleglad, 1973b: 355; Williams, 1976: 2; Williams, 1980: 32, 39-41, fig. 39, 46; Hjelle, 1982: 98; Haradon, 1985: 24, 40; Williams, 1987b: 329; Kovarík, 1998: 144; Beutelspacher, 2000: 69, 136, 146, 152, map 39; Sissom, 2000:508; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 67, 150, figs. 107, B-1.

DISTRIBUTION. Mexico (Baja California Norte), USA (southern California).

NOTES. Beutelspacher (2000) lists a record of *P. silvestrii* from Sonora (Benjamin Hill); this record was based on a misidentified specimen of *Vaejovis spinigerus* (Wood).

Paruroctonus variabilis Hjelle, 1982

Paruroctonus variabilis Hjelle, 1982: 98-101, fig. 1.
Holotype: M (CAS, Type No. 14093), 5-10 mi W of Highway 5 on Panoche Road, Fresno County, California, USA.
Paratypes: numerous specimens (CAS; including allotype F, Type No. 14093, from the same locality as holotype), from Fresno, San Benito, Stanislaus, and Monterey Counties, California, USA.

REFERENCES:
Vaejovis (*Paruroctonus*) *silvestrii* (part): Hjelle, 1972: 6, 23-27, fig. 11, 47, 48, 51.
Paruroctonus variabilis: Kovarík, 1998: 144; Sissom, 2000:508.

DISTRIBUTION. NORTH AMERICA. USA (California).

B. *becki* microgroup

Paruroctonus becki (Gertsch & Allred, 1965)

Vejovis becki Gertsch & Allred, 1965: 2, 9-11, fig. 1, 2, 4-7, 10, 20.
Holotype: M (AMNH), Nevada Test Site, approx. 34 mi N Mercury, Nye County, Nevada, USA.

REFERENCES:
Vejovis (*Paruroctonus*) *becki*: Gertsch & Soleglad, 1966: 6, 47-52, fig. 39-41, 56, 59, 60, 65.
Paruroctonus becki: Williams, 1972: 3; Soleglad, 1973b: 355; Williams, 1976: 2; Hjelle, 1982: 98; Haradon, 1985: 24, 40; Kovarík, 1998: 143; Sissom, 2000:508; Soleglad & Fet, 2003a: 31.

DISTRIBUTION. NORTH AMERICA. USA (California, Nevada)

C. *xanthus* microgroup

Paruroctonus xanthus (Gertsch & Soleglad, 1966)

Vejovis (*Paruroctonus*) *xanthus* Gertsch & Soleglad, 1966: 34.
Holotype: F (AMNH), 21 km N Winterhaven, Imperial County, California, USA.

REFERENCES:
Paruroctonus xanthus: Williams, 1972: 3; Soleglad, 1973b: 355; Williams, 1976: 2; Williams, 1980: 32, 46, fig. 36E, 37E; Haradon, 1984a: 210; Haradon, 1984b: 318; Haradon, 1985: 24, 40; Kovarík, 1998: 144; Beutelspacher, 2000: 70, 136, 146, 152, map 42; Sissom, 2000:508-509.

DISTRIBUTION. NORTH AMERICA. Mexico (Sonora), USA (California).

D. *baergi* microgroup

The members of the *baergi* microgroup were revised and keyed by Haradon (1984a).

Paruroctonus arenicola Haradon, 1984

Paruroctonus arenicola Haradon, 1984a: 212, fig. 11, 15-16, 21-22, 25-30, 37, 39.
Holotype: M (CAS, Type No. 15055), Amargosa Desert, 0.8 mi N California and Nevada border along State Rt. 29, Nye County, Nevada, USA.
Paratypes: 28M, 10F (CAS; including one allotype F), same locality as holotype.

REFERENCES:
Paruroctonus arenicola: Kovarík, 1998: 144; Sissom, 2000:509.

DISTRIBUTION. NORTH AMERICA. USA (California, Nevada).

Paruroctonus arenicola arenicola Haradon, 1984

Paruroctonus arenicola arenicola Haradon, 1984a: 214, fig. 11, 15-16, 21-22, 25-28, 37, 39.

REFERENCES:
Paruroctonus arenicola arenicola: Sissom & Henson, 1998: 241, 246; Sissom, 2000:509.

DISTRIBUTION. NORTH AMERICA. USA (California, Nevada).

Paruroctonus arenicola nudipes Haradon, 1984

Paruroctonus arenicola nudipes Haradon, 1984a: 214, fig. 29-30, 39.
Holotype: M (CAS, Type No. 15056),1.6 mi S Kelso, along Kelbaker Road, San Bernadino County, California, USA.
Paratypes: 51M, 65F (CAS; inclufing one allotype F), same locality as holotype; 3M, 1F (CAS), Kelso Sand Dunes; 1M, 5F (CAS), Kelso Sand Dunes, 6 mi S Kelso on Cima Rd, San Bernadino County, California, USA.

REFERENCES:
Paruroctonus arenicola nudipes: Kovarík, 1998: 143; Sissom & Henson, 1998: 241, 246; Sissom, 2000:509.

DISTRIBUTION. NORTH AMERICA. USA (California: eastern Mojave Desert)

Paruroctonus baergi (Williams & Hadley, 1967)

Vejovis (*Paruroctonus*) *baergi* Williams & Hadley, 1967: 108, fig 2-4.
Holotype: M (CAS, Type No. 9479), Cholla Bay, near Puerto Peñasco, Sonora, Mexico.
Paratypes: 16M, 13F (CAS; including allotype F “CAS, Type No. 9479”), same locality as holotype.

REFERENCES:
Paruroctonus baergi: Williams, 1972: 3; Soleglad, 1972: 74; Soleglad, 1973b: 355; Haradon, 1984a: 210, fig. 1-4, 9, 13-14, 17-18, 35, 39; Haradon, 1985: 24; Kovarík, 1998: 143; Sissom & Henson, 1998: 241, 246; ; Beutelspacher, 2000: 66, 146, 152, map 33; Sissom, 2000:509.
Vaejovis baergi: Díaz Najera, 1975: 6, 31.

DISTRIBUTION. NORTH AMERICA. Mexico (Sonora), USA (Arizona, California)

Paruroctonus boquillas **Sissom & Henson, 1998**

Paruroctonus boquillas Sissom & Henson, 1998: 240-246, fig. 1-8.
Holotype: M (USNM), Boquillas Canyon (29º12'02'' N, 102 °55'11'' W), Big Bend National Park, Brewster County, Texas, USA.
Paratypes: 2M, 11F, numerous subadults and juveniles (USNM, AMNH, CAS, WDS, RNH), same locality as holotype.

REFERENCES:
Paruroctonus boquillas: Sissom, 2000: 509-510.

DISTRIBUTION. USA (Texas).

Paruroctonus marksi **Haradon, 1984**

Paruroctonus marksi Haradon, 1984a: 215, fig. 12, 23-24, 31-34, 38, 39.
Holotype: M (CAS, Type No. 15061), 7 mi N Littlerock, 0.5 mi N jct. Avenue O, along 90th St E, Los Angeles County, California, USA.
Paratypes: MF (CAS; including allotype from the same locality as holotype), several localities in Los Angeles and San Bernardino Counties, California, USA.

REFERENCES:
Paruroctonus marksi: Kovarík, 1998: 143; Sissom & Henson, 1998: 241, 246; Sissom, 2000:510.

DISTRIBUTION. NORTH AMERICA. USA (southern California)

Paruroctonus utahensis **(Williams, 1968)**

Vejovis (*Paruroctonus*) *utahensis* Williams, 1968b: 313-315, fig. 1-2.
Holotype: M (CAS, Type No. 10175), 2 mi NE Bluff, San Juan County, Utah, USA.
Paratypes: 12M, 19F (CAS; including F allotype "CAS, Type No. 10175"), same locality as holotype; 46M, 20F from 1/2 mi W Bluff (CAS); 9M, 8F from Bluff city limits, in flood plain of San Juan River, San Juan County, Utah, USA.

REFERENCES:
Vejovis boreus (MIS): Bugbee, 1942: 320.
Vejovis (*Paruroctonus*) *aquilonalis* (MIS): Gertsch & Allred, 1965: 9 (part); Gertsch & Soleglad, 1966: 7, 42-44, fig. 20, 23 (part).

Paruroctonus aquilonalis (MIS): Williams, 1972: 3 (part?); Soleglad, 1972a: 74 (part?); Soleglad, 1973b: 355 (part?); Stahnke, 1974a: 138 (part?); Muma, 1975a: 55; Rowland & Reddell, 1976: 1; Beutelspacher, 2000: 65, 139, 146, 152, map 31.
Paruroctonus utahensis: Williams, 1972: 3; Soleglad, 1972a: 74; Soleglad, 1973b: 355; Allred & Gertsch, 1976: 95, 99; Sissom & Francke, 1981: 94, 95, 107, fig. 1-6, 29, 30, 35; Francke & Soleglad, 1981: 251; Bradley & Brody, 1984: 437-440; Sissom, 1997: 13; Kovarík, 1998: 144; Sissom & Jackman, 1997: 151; Sissom, 2000:510.
Vaejovis aquilonalis (MIS): Díaz Najera, 1975: 6, 19.
Paruroctonus (*Paruroctonus*) *utahensis*: Haradon, 1984a: 211-212, fig. 5-8, 10, 19-20, 36; Haradon, 1985: 24.

DISTRIBUTION. NORTH AMERICA. Mexico (Chihuahua), USA (northern Arizona, New Mexico, Texas, Utah).

NOTES. Beutelspacher (2000) used the name *Paruroctonus aquilonalis*, although it has long been placed in synonymy (Sissom & Francke, 1981). He also erroneously listed the species as part of the fauna of Sonora (p. 146), although his only record is the specimen from the Samalayuca Dunes in Chihuahua reported by Gertsch & Soleglad (1966).

III. *stahnkei* infragroup

The microgroups of the *stahnkei* infragroup were revised and keyed by Haradon (1985).

A. *stahnkei* microgroup

Paruroctonus stahnkei (Gertsch & Soleglad, 1966)

Vejovis (*Paruroctonus*) *stahnkei* Gertsch & Soleglad, 1966: 30-34, fig. 36-38, 56.
Holotype: M (AMNH), Sentinel, Maricopa County, Arizona, USA.

REFERENCES:
Paruroctonus stahnkei: Soleglad, 1972: 73; Soleglad, 1973b: 355; Stahnke, 1974a: 138; Williams, 1972: 3; Sissom & Francke, 1981: 102; Haradon, 1985: 31, 40; Kovarík, 1998: 144; Sissom, 2000:510; Soleglad & Fet, 2003a: 8, 31, 36, 104, 161, figs. 6, 75; Soleglad & Fet, 2005: 6.

DISTRIBUTION. NORTH AMERICA. Mexico (Sonora), USA (Arizona).

B. *shulovi* microgroup

The members of the *shulovi* microgroup were revised and keyed by Haradon (1985).

Paruroctonus shulovi (Williams, 1970)

Vejovis (*Paruroctonus*) *shulovi* Williams, 1970a: 7-11, fig. 5, 6.
Holotype: F (CAS, Type No. 10427), Grapevine Spring, 4 mi E Ubehebe Crater, Death Valley National Monument, Inyo County, California, USA.
Paratypes: 3M (including allotype, Type No. 10427), 9F (CAS), same locality as holotype.

REFERENCES:
Paruroctonus shulovi: Williams, 1972: 3; Soleglad, 1972a: 74; Soleglad, 1973b: 355; Stahnke, 1974a: 138; Williams, 1976: 2; Haradon, 1985: 31, 41, fig. 7-10, 15, 17-20; Kovarík, 1998: 144; Sissom, 2000:511.

DISTRIBUTION. NORTH AMERICA. USA (Death Valley in California; southern Nevada).

***Paruroctonus shulovi shulovi* (Williams, 1970)**

Vejovis (*Paruroctonus*) *shulovi* Williams, 1970a: 7-11, fig. 5, 6.

REFERENCES:
Paruroctonus (*Paruroctonus*) *shulovi shulovi*: Haradon, 1985: 32-34, 41, fig. 7-10, 15, 17, 19-20; Sissom, 2000:511.

DISTRIBUTION. NORTH AMERICA. USA (Death Valley in California)

***Paruroctonus shuvoli nevadae* Haradon, 1985**

Paruroctonus shulovi nevadae Haradon, 1985: 34, 41, fig. 18.
Holotype: F (CAS, Type No. 15062), Corn Creek Field Station, Clark County, Nevada, USA.

REFERENCES:
Paruroctonus shulovi nevadae: Kovarík, 1998: 144; Sissom, 2000:511.

DISTRIBUTION. NORTH AMERICA. USA (western Nevada, adjacent California).

***Paruroctonus simulatus* Haradon, 1985**

Paruroctonus simulatus Haradon, 1985: 35, 41, fig. 11-14, 16, 21-22.
Holotype: M (CAS, Type No. 15063), 7 mi N Hawthorne, dunes SE Walker Lake, Mineral County, Nevada, USA.
Paratypes: MF (CAS), several localities in Mineral and Esmeralda Counties, Nevada and Inyo County, California, USA.

REFERENCES:
Paruroctonus simulatus: Kovarík, 1998: 144; Sissom, 2000:511.

DISTRIBUTION. NORTH AMERICA. USA (southeastern California, western Nevada).

C. *borregoensis* microgroup

The members of the *borregoensis* microgroup were revised and keyed by Haradon (1984b).

***Paruroctonus ammonastes* Haradon, 1984**

Paruroctonus ammonastes Haradon, 1984b: 325, fig. 9-12, 15, 19-20, 25-26, 27.
Holotype: M (CAS, Type No. 15054), 2 mi N Lake Havasu, Mohave County, Arizona, USA.
Paratypes: 1M, 10F (CAS; including allotype), same locality as holotype; 2F (AMNH), 3 mi N Topock, Mohave County, Arizona, USA.

REFERENCES:
Paruroctonus ammonastes: Kovarík, 1998: 143; Sissom, 2000:51; Soleglad & Fet, 2003a: 41, fig. 80.

DISTRIBUTION. NORTH AMERICA. USA (western Arizona).

Paruroctonus bajae Williams, 1972

Paruroctonus bajae Williams, 1972: 6, fig. 3.
Holotype: M (CAS, Type No. 11335), Bahía San Luis Gonzaga, Baja California Norte, México.
Paratypes: 3M (CAS), same locality as holotype.

REFERENCES:
Paruroctonus bajae: Soleglad, 1972a: 74; Soleglad, 1973b: 355; Díaz Najera, 1975: 5, 9; Haradon, 1984b: 332, fig. 36; Kovarík, 1998: 143; Sissom, 2000:511-512.
Paruroctonus luteolus (MIS): Williams, 1980: 36, fig. 41 (part, records from Oakie Landing and 13 km N San Luis Gonzaga, Baja California Norte, México); Beutelspacher, 2000: 66.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte).

NOTES. Beutelspacher (2000) listed *P. bajae* as a junior synonym of *P. luteolus* without justification.

Paruroctonus borregoensis Williams, 1972

Paruroctonus borregoensis Williams, 1972: 5-6, 7, fig. 2.
Holotype: M (CAS, Type No. 11336), 13 mi NE Borrego Springs, San Diego County, California, USA.
Paratypes: 22M, 8F (CAS; including allotype F "CAS, Type No. 11336"), same locality as holotype.

REFERENCES:
Vejovis (*Paruroctonus*) *luteolus* (MIS): Gertsch & Soleglad, 1966: 42, fig. 56.
Paruroctonus borregoensis: Soleglad, 1972a: 74; Soleglad, 1973b: 355; Williams, 1976: 2; Williams, 1980: 33, 34, fig. 35D, 36B, 37C, 41; Haradon, 1984a: 210; Haradon, 1984b: 319, fig. 1-2, 5-8, 14, 17-18, 27; Kovarík, 1998: 143; Beutelspacher, 2000: 66, 136, 146, 152, map 34; Sissom, 2000:512.
Vejovis luteolus (MIS): Díaz Najera, 1975: 10 (part; female from San Felip, Baja California Norte, México).
Paruroctonus luteolus (MIS): Williams, 1980: 36, fig. 41 (part; records from San Felipe and Persebu, Baja California Norte, México); Beutelspacher, 2000:66, 136, map 36 (part).

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Sonora), USA (southwestern Arizona, southeastern California).

NOTES. Beutelspacher (2000) was unaware that the records of *P. luteolus* from San Felipe and Persebu, Baja California (Norte) were referable to *P. borregoensis.*

***Paruroctonus borregoensis borregoensis* Williams, 1972**

Paruroctonus borregoensis Williams, 1972: 3, 5-6, fig. 2.

REFERENCES:
Paruroctonus borregoensis borregoensis: Haradon, 1984b: 320-321, 338, fig. 1-2, 5-8, 14, 17-18, 27; Sissom, 2000:512.

DISTRIBUTION. NORTH AMERICA. México (northern Sonora, Baja California Norte), USA (southern California, southwestern Arizona)

***Paruroctonus borregoensis actites* Haradon, 1984**

Paruroctonus borregoensis actites Haradon, 1984b: 321, fig. 27.
Holotype: F (CAS, Type No. 15058), 1 mi N San Felipe, Baja California Norte, México.
Paratypes: 2M, 2F (CAS), San Felipe, 1 mi N San Felipe, and Persebu in Baja California Norte, México.

REFERENCES:
Vejovis (*Paruroctonus*) *luteolus* (MIS): Gertsch & Soleglad, 1966: 42, fig. 56 (part; record from San Felipe, Baja California Norte).
Vaejovis luteolus (MIS): Díaz Najera, 1975: 7 (part).
Paruroctonus luteolus (MIS): Williams, 1980: 36, fig. 41 (part, records from San Felipe and Persebu, Baja California Norte); Beutelspacher, 2000:66, 136, map 36 (part).
Paruroctonus borregoensis actites: Kovarík, 1998: 144; Sissom, 2000:512.

DISTRIBUTION. NORTH AMERICA. México (northeast coast of Baja California Norte).

NOTES. Beutelspacher (2000) was unaware that the records of *P. luteolus* from San Felipe and Persebu, Baja California (Norte) were referable to *P. borregoensis actites.*

***Paruroctonus hirsutipes* Haradon, 1984**

Paruroctonus hirsutipes Haradon, 1984b: 327, fig. 16, 23-24, 27, 28-31.
Holotype: F (CAS, Type No. 15060), 14 mi W Winterhaven, Imperial County, California, USA.
Paratypes: 1M, 1F (AMNH), 13 mi N Winterhaven; 1F (AMNH), 1 mi W Somerton, Yuma County, Arizona, USA.

REFERENCES:
Paruroctonus hirsutipes: Kovarík, 1998: 144; Sissom, 2000:512.

DISTRIBUTION. NORTH AMERICA. USA (southeastern California, southwestern Arizona).

Paruroctonus luteolus (Gertsch & Soleglad, 1966)

Vejovis (*Paruroctonus*) *luteolus* Gertsch & Soleglad, 1966: 6, 40-42, fig. 30, 52-54, 56, 63, 68, 69 (part, not records on p. 42 from San Felipe and 25 mi N Punta Prieta in Baja California Norte, México)
Holotype: F (AMNH), 3.2 km E Anza-Borrego State Park on Highway 78, San Diego County, California, USA.

REFERENCES:
Paruroctonus luteolus: Williams, 1972: 3, 5; Soleglad, 1972a: 74; Soleglad, 1973b: 355, fig. 8; Stahnke, 1974a: 138; Williams, 1976: 2; Williams, 1980: 33, 34, 36, 117, fig. 36A, 37A-B, 41, 43 (part); Haradon, 1984a: 210; Haradon, 1984b: 323-325, fig. 3-4, 13, 21-22, 42-46; Polis & McCormick, 1986: 61; Kovarík, 1998: 144; Beutelspacher, 2000:66, 136, 152, map 36 (part) ; Sissom, 2000:513; Soleglad & Fet, 2003a: 8, 150, figs. 75, B-1.
Paruroctonus luteolis (ISS): Polis & Farley, 1979: 526.
Paruroctonus borregoensis (MIS): Polis & Farley, 1979: 526.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte), USA (southern California, southwestern Arizona, southern Nevada)

Paruroctonus nitidus Haradon, 1984

Paruroctonus nitidus Haradon, 1984b: 332.
Holotype: F (AMNH), 25 mi N Punta Prieta, Baja California Norte, México.

REFERENCES:
Vejovis (*Paruroctonus*) *luteolus* (MIS): Gertsch & Soleglad, 1966: 42, fig. 56 (part; F from 25 mi N Punta Prieta, Baja California Norte, México).
Vaejovis luteolus (MIS): Díaz Najera, 1975: 10 (part).
Paruroctonus nitidus: Kovarík, 1998: 144; Sissom, 2000:513.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte).

Paruroctonus pseudopumilis (Williams, 1970)

Vejovis pseudopumilis Williams, 1970e: 181-183, fig. 1-2.
Holotype: M (CAS, Type No. 10424), San Angel, 21 km W San Ignacio, Baja California Sur, México.

REFERENCES:
Paruroctonus pseudopumilus (ISS): Stahnke, 1974a: 138.
Vaejovis pseudopumilis: Díaz Najera, 1975: 7, 15.
Paruroctonus pseudopumilis: Williams, 1980: 33, 38, fig. 41, 45 [part; not record from 13 km N San Raymundo, Baja California Sur, México, which refers to *Paravaejovis pumilis* (Williams, 1970)]; Haradon, 1984b: 337, fig. 34-35, 37; Kovarík, 1998: 144; Beutelspacher, 2000: 69, 137, 152, map 38 (part); Sissom, 2000:513.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Paruroctonus surensis Williams & Haradon, 1980

Paruroctonus surensis Williams & Haradon in Williams, 1980: 33, 41, fig. 41,47.
Holotype: M (CAS, Type No. 12249), 12 k SE Guerrero Negro, Baja California Sur, México.
Paratypes: 4 specimens (CAS; including F allotype "CAS, Type No. 12249"), same locality as holotype.

REFERENCES:
Paruroctonus surensis: Haradon, 1984b: 336, fig. 32, 33, 40, 41; Kovarík, 1998: 144; Beutelspacher, 2000: 69, 137, 152, map 40; Sissom, 2000:513.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Paruroctonus ventosus Williams, 1972

Paruroctonus ventosus Williams, 1972: 8, fig. 4.
Holotype: M (CAS, Type No. 11337), Socorro Sand Dunes, Baja California Norte, México.
Paratypes: 1F (CAS; allotype), same locality as holotype; 6F (CAS), three of which are listed from the same locality as holotype.

REFERENCES:
Paruroctonus ventosus: Soleglad, 1972a: 74; Soleglad, 1973b: 355; Díaz Najera, 1975: 5, 9; Williams, 1980: 33, 45, fig. 41, 48; Haradon, 1984b: 335, fig. 38, 39; Kovarík, 1998: 144; Beutelspacher, 2000: 70, 136, 152, map 41; Sissom, 2000:513-514.

DISTRIBUTION. NORTH AMERICA. México (northwest coastal dunes of Baja California Norte).

D. williamsi microgroup

The members of the *williamsi* microgroup were revised and keyed by Haradon (1985).

Paruroctonus coahuilanus Haradon, 1985

Paruroctonus coahuilanus Haradon, 1985: 38, 41, fig. 27-30.
Holotype: M (CAS, Type No. 15059), Cuatro Cienegas Basin, Coahuila, México.
Paratypes: 12M (CAS), same locality as holotype.

REFERENCES:
Paruroctonus coahuilanus: Kovarík, 1998: 144; Sissom, 2000:514.

DISTRIBUTION. NORTH AMERICA. México (Coahuila).

Paruroctonus pecos Sissom & Francke, 1981

Paruroctonus pecos Sissom & Francke, 1981: 103-107, fig. 21-28.
Holotype: M (AMNH), 15 mi E Loving, Eddy County, New Mexico, USA.
Paratypes: 1M (AMNH), same locality as holotype; 6F, 2 juvs (WDS, AMNH), 20.5 mi W Caprock, USA; 1 juv (WDS), 19.2 mi W Caprock, Chaves County, New Mexico, USA.

REFERENCES:
Paruroctonus (*Paruroctonus*) *pecos*: Haradon, 1985: 31, 38-39, 41.
Paruroctonus pecos: Sissom, 1997: 13; Kovarík, 1998: 144; Sissom & Jackman, 1998: 151; Sissom, 2000:514; Soleglad & Fet, 2003a: 31.

DISTRIBUTION. NORTH AMERICA. USA (New Mexico, Texas).

***Paruroctonus williamsi* Sissom & Francke, 1981**

Paruroctonus williamsi Sissom & Francke, 1981: 98-102, fig. 13-20, 31-32.
Holotype: M (AMNH), Grapevine Ranch, north base of Grapevine Mt., Big Bend National Park, Brewster County, Texas, USA.
Paratypes: 13M, 1F (AMNH), 2 M (WDS), same locality as holotype.

REFERENCES:
Paruroctonus (*Paruroctonus*) *williamsi*: Haradon, 1985: 31, 38, 39, 41.
Paruroctonus williamsi: Kovarík, 1998: 144; Sissom & Jackman, 1998: 151; Sissom, 2000:514; Soleglad & Fet, 2003a: 31.

DISTRIBUTION. NORTH AMERICA. USA (Texas: Big Bend National Park).

NOTES. There is some debate about the locality, as the Grapevine Hills are the only landmark by that name that can be verified. Repeated attempts to recollect this species in and around the Grapevine Hills in Big Bend National Park, Texas have failed.

Genus *PSEUDOUROCTONUS* Stahnke, 1974

Pseudouroctonus Stahnke, 1974: 119, 132, fig. 7E, 9A-B; type species *Vaejovis reddelli* Gertsch & Soleglad, 1972 [=*Pseudouroctonus reddelli* (Gertsch & Soleglad, 1972)].

REFERENCES:
Vaejovis (part): Williams, 1980: 48-55 (part), 74-79 (*V. minimus* group); Sissom, 1990a: 109, 111, 114; Williams & Savary, 1991: 284 (*V. minimus* group).
Uroctonus (part): Sissom, 1990a: 109, 111, 114.
Pseudouroctonus: Sissom, 1990a: 114; Stockwell, 1992: 409-410, 416, 419 Kovarík, 1998: 144; Sissom, 2000:514-515; Soleglad & Fet, 2003a: 15, 28, 31, 33, 36, 58, 67, 86, 103, 140, 142, 145, 163, 164, figs. 66, 79, 80, 111, D-3, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4-7; Prendini & Wheeler, 2005: 463, 464, 478 Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA. USA (Texas).

NOTES. As originally construed, *Pseudouroctonus* was monotypic. Neither Sissom (1990a) nor Beutelspacher (2000) considered the genus valid, but it was accepted and expanded by Stockwell (1992) to include most of the so-called *Vaejovis minimus* group species. Owing to the complexity of vaejovid phylogeny and the uncertainties in our understanding of it, further study of a revisionary nature is warranted to clarify the relationships of these species. We have followed Stockwell's classification here only because it is the most recent revisionary treatment, not because we are in agreement with it. There is no key for this genus in its current state; the key to *Uroctonus* provided by Gertsch & Soleglad (1972) will nevertheless be helpful in distinguishing most of the species included here.

Pseudouroctonus reddelli, known from south central Texas, is a common inhabitant of caves there. It also occurs in epigean habitats, and may be found under rocks among litter on wooded slopes. The other species assigned here occur on rocky slopes (lower and higher elevations) and in rocky outcrops, often under fairly mesic conditions; they are encountered under rocks and fallen logs or in crevices in boulders and outcrops.

Pseudouroctonus andreas (Gertsch & Soleglad, 1972)

Uroctonus andreas Gertsch & Soleglad, 1972: 568, 587-589.
Holotype: F (AMNH), Andreas Canyon, off Palm Canyon, 4 mi S Palm Springs, Riverside County, California, USA.

REFERENCES:
Uroctonus andreas: Soleglad, 1973b: 353, fig. 4; Díaz Najera 1975: 6, 9.
Vejovis andreas: Stahnke, 1974: 136.
Vaejovis andreas: Williams, 1976: 2; Williams, 1980: 53, 74, fig. 55f, 77, 78; Williams & Savary, 1991: 284, fig. 24; Beutelspacher, 2000: 73, 136, 152, map 45.
Pseudouroctonus andreas: Stockwell, 1992: 409; Kovarík, 1998: 144; Sissom, 2000:515; Soleglad & Fet, 2003a: 8, 58, 162, fig. 74; Prendini & Wheeler, 2005: 479.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte), USA (southern California).

Pseudouroctonus angelenus (Gertsch & Soleglad, 1972)

Uroctonus angelenus Gertsch & Soleglad, 1972: 568, 580-582, fig. 121, 124.
Holotype: M (AMNH), Malibu, Los Angeles County, California, USA.

REFERENCES:
Uroctonus angelenus: Soleglad, 1973b: 353.
Vejovis angelenus: Stahnke, 1974: 130, 136.
Vaejovis angelenus: Williams, 1976: 2; Williams & Savary, 1991: 284, fig. 27.
Pseudouroctonus angelenus: Stockwell, 1992: 409; Kovarík, 1998: 144; Sissom, 2000:515; Soleglad & Fet, 2003a: 8, 41, 58, 162, fig. 73; Prendini & Wheeler, 2005: 479, Fig. 25.

DISTRIBUTION. NORTH AMERICA. USA (California).

NOTES. Williams (1976) listed *V. williamsi* (Gertsch & Soleglad, 1972) as a junior synonym of this species. Later, Williams & Savary (1991) regarded this taxon as a separate species.

Pseudouroctonus apacheanus (Gertsch & Soleglad, 1972)

Uroctonus apacheanus Gertsch & Soleglad, 1972: 568, 575-577.
Holotype: F (AMNH), Southwestern Research Station, 5 mi SW Portal, Cochise County, Arizona, USA.

REFERENCES:
Uroctonus apacheanus: Soleglad, 1973b: 353; Sissom & Jackman, 1998: 151.
Vejovis apacheanus: Stahnke, 1974: 130, 136.
Vaejovis apacheanus: Williams & Savary, 1991: 284.
Pseudouroctonus apacheanus: Stockwell, 1992: 410.
"*Uroctonus*" *apacheanus*: Sissom, 1997: 13.
Pseudouroctonus apachenus (ISS): Kovarík, 1998: 144; Sissom, 2000:515; Soleglad & Fet, 2003a: 8, 58, fig. 74; Prendini & Wheeler, 2005: 479.

DISTRIBUTION. NORTH AMERICA. USA (southern Arizona, southern New Mexico, western Texas).

Pseudouroctonus bogerti (Gertsch & Soleglad, 1972)

Uroctonus bogerti Gertsch & Soleglad, 1972: 566, 577-579, fig. 17, 18, 68-71, 122, 123.
Holotype: F (AMNH), Snow Creek, San Jacinto Mountains, Riverside County, California, USA.

REFERENCES:
Uroctonus bogerti: Soleglad, 1973b: 353.
Vejovis bogerti: Stahnke, 1974: 130, 136.
Vaejovis bogerti: Williams, 1976: 2; Williams & Savary, 1991: 284, fig. 26.
Pseudouroctonus bogerti: Stockwell, 1992: 409; Kovarík, 1998: 144; Sissom, 2000:515; Soleglad & Fet, 2003a: 41; Prendini & Wheeler, 2005: Fig. 25.

DISTRIBUTION. NORTH AMERICA. USA (California).

Pseudouroctonus cazieri (Gertsch & Soleglad, 1972)

Uroctonus cazieri Gertsch & Soleglad, 1972: 565, 582-584, fig. 30, 31, 131, 132.
Holotype: F (CAS, Type No. 11473), Mission San Borja, Baja California Norte, México.

SYNONYMS:
Vaejovis montcazieri Williams, 1980: 52, 76, fig. 55G, 78, 80; a replacement name for *Uroctonus cazieri* Gertsch & Soleglad, 1972 (synonymized by Kovarík, 1998: 144).

REFERENCES:
Uroctonus cazieri: Soleglad, 1973b: 353; Díaz Najera, 1975: 6, 9.
Vejovis cazieri: Stahnke, 1974: 136 (not *Vaejovis cazieri* Williams, 1968).

Vaejovis montcazieri: Williams & Savary, 1991: 284, fig. 25; Beutelspacher, 2000: 97, 137, 153, map 76.
Pseudouroctonus montcazieri: Stockwell, 1992: 410.
Pseudouroctonus cazieri: Kovarík, 1998: 144; Sissom, 2000:516; Soleglad & Fet, 2003a: 33.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte).

NOTES. Stahnke (1974a: 136) transferred *Uroctonus cazieri* Gertsch & Soleglad, 1972 to the genus *Vaejovis*; it thus became a secondary junior homonym of *Vaejovis cazieri* Williams, 1968. The replacement name, *Vaejovis montcazieri*, was proposed by Williams (1980). Since the species is now listed under *Pseudouroctonus*, the Gertsch & Soleglad name is no longer a homonym. It has priority as *Pseudouroctonus cazieri* and *Vaejovis montcazieri* becomes its junior synonym.

***Pseudouroctonus chicano* (Gertsch & Soleglad, 1972)**

Uroctonus chicano Gertsch & Soleglad, 1972: 568, 577.
Holotype: F (AMNH), 1 mi E La Sauceda, Chihuahua, México.

REFERENCES:
Uroctonus chicano: Soleglad, 1973b: 353; Díaz Najera, 1975: 6, 19.
Vejovis chicano: Stahnke, 1974: 130, 136.
Vaejovis chicano: Williams & Savary, 1991: 284; Beutelspacher, 2000: 79, 139, 152, map 50.
Pseudouroctonus chicano: Stockwell, 1992: 410; Kovarík, 1998: 144; Sissom, 2000:516.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua).

***Pseudouroctonus glimmei* (Hjelle, 1972)**

Uroctonus glimmei Hjelle, 1972: 9, fig. 10, 25-29, 31, 49, 52.
Holotype: M (CAS, Type No. 3502), 5 mi N Rayhouse Road, at junction of Davis and Cache Creeks, Lake County, California, USA.
Paratypes: 1F (allotype, CAS, Type No. 3502), 10 specimens (depository unknown), same locality as holotype; 4M, 2F, 1 sub from several localities in Lake, Mendocino, Napa, and Stanislaus Counties, California, USA.

REFERENCES:
Uroctonus *glimmei*: Soleglad, 1973b: 353.
Vejovis glimmei: Stahnke, 1974a: 130, 136.
Vaejovis glimmei: Williams, 1976: 2; Williams & Savary, 1991: 284, fig. 29.
Pseudouroctonus glimmei: Stockwell, 1992: 410; Kovarík, 1998: 144; Sissom, 2000:516.

DISTRIBUTION. NORTH AMERICA. USA (California: Coastal Ranges).

***Pseudouroctonus iviei* (Gertsch & Soleglad, 1972)**

Vejovis iviei Gertsch & Soleglad, 1972: 593-595, fig. 13, 21, 150.
Holotype: F (AMNH), San Juan, Nevada County, California, USA.

REFERENCES:
Vejovis ivie (ISS): Stahnke, 1974: 136.
Vaejovis iviei: Williams, 1976: 2; Williams & Savary, 1991: 284, fig. 28.
Pseudouroctonus iviei: Stockwell, 1992: 410; Kovarík, 1998: 145; Sissom, 2000:516.

DISTRIBUTION. NORTH AMERICA. USA (California).

***Pseudouroctonus lindsayi* (Gertsch & Soleglad, 1972)**

Uroctonus lindsayi Gertsch & Soleglad, 1972: 568, 585-587, fig. 127, 128.
Holotype: F (CAS, Type No. 3502), Sierra de la Laguna, Baja California Sur, México.

REFERENCES:
Vejovis lindsayi: Soleglad, 1973b: 359; Stahnke, 1974: 130, 136.
Uroctonus lindsayi: Díaz Najera, 1975: 6, 13.
Vaejovis lindsayi: Williams, 1980: 53, 75, fig. 78, 79; Williams & Savary, 1991: 284, fig. 21; Beutelspacher, 2000: 92, 138, 153, map 69.
Pseudouroctonus lindsayi: Stockwell, 1992: 409; Kovarík, 1998: 145; Sissom, 2000:517.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Pseudouroctonus minimus* (Kraepelin, 1911)**

Vejovis minimus Kraepelin, 1911: 83.
Lectotype (designated by Gertsch & Soleglad, 1972: 600): F (ZMH), San Pedro, Los Angeles County, California, USA.
Paralectotypes: 1M, 1F (ZMH), same locality as lectotype.

REFERENCES:
Vejovis minimus: Ewing, 1928: 11; Weidner, 1959: 105; Gertsch & Soleglad, 1972: 598; Soleglad, 1973b: 359; Stahnke, 1974: 135.
Vaejovis minimus: Williams, 1976: 2; Williams, 1980: 76; Williams & Savary, 1991: 284, fig. 22.
Pseudouroctonus minimus: Stockwell, 1992: 410; Kovarík, 1998: 145; Sissom, 2000:517; Soleglad & Fet, 2003a: 73.

DISTRIBUTION. NORTH AMERICA. USA (California: Los Angeles County).

***Pseudouroctonus minimus minimus* (Kraepelin, 1911)**

Vejovis minimus: Kraepelin, 1911: 83.

REFERENCES:
Vejovis minimus minimus: Gertsch & Soleglad, 1972: 598-600, fig. 136, 137, 144.
Pseudouroctonus minimus minimus: Stockwell, 1992; Sissom, 2000: 517

DISTRIBUTION. NORTH AMERICA. USA (California: Los Angeles County).

***Pseudouroctonus minimus castaneus* (Gertsch & Soleglad, 1972)**

Vejovis minimus castaneus Gertsch & Soleglad, 1972: 600, fig. 14, 141-143
Holotype: F (CAS, Type No. 15204), Santee, San Diego County, California, USA.

REFERENCES:
Vaejovis minimus castaneus: Williams, 1980: 53, 76.
Pseudouroctonus minimus castaneus: Stockwell, 1992: 410; Kovarík, 1998: 145; Sissom, 2000:517; Soleglad & Fet, 2003a: 8, 58.

DISTRIBUTION. NORTH AMERICA. USA (California: San Diego County).

***Pseudouroctonus minimus thompsoni* (Gertsch & Soleglad, 1972)**

Vejovis minimus thompsoni Gertsch & Soleglad, 1972: 600, fig. 138-140.
Holotype: F (AMNH), Anacapa Island, Ventura County, California, USA.

REFERENCES:
Vaejovis minimus thompsoni: Williams, 1980: 95.
Pseudouroctonus minimus thompsoni: Stockwell, 1992: 410; Kovarík, 1998: 145; Sissom, 2000:517.

DISTRIBUTION. NORTH AMERICA. USA (California: Northern Channel Island).

***Pseudouroctonus reddelli* (Gertsch & Soleglad, 1972)**

Vejovis *reddelli* Gertsch & Soleglad, 1972: 595-598, fig. 12, 22, 38, 39, 135.
Holotype: F (AMNH), Pablo's Cave, Uvalde County, Texas, USA.

REFERENCES:
Vejovis sp.: Reddell, 1965: 167; Reddell, 1970: 402.
Vejovis reddelli: Soleglad, 1973b: 359.
Pseudouroctonus reddelli: Stahnke, 1974: 132; Kovarík, 1998: 145; Sissom, 2000:517-518; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 28, 33, 58, 67, 103, 162, figs. 6, 36, 61, 73; Soleglad & Fet, 2005: 2, 6; Prendini & Wheeler, 2005: 479.
Vaejovis reddelli: Reddell, 1981: 114; Sissom, 1990a: 109; Sissom & Jackman, 1997: 151, 155.

DISTRIBUTION. NORTH AMERICA. USA (Texas).

***Pseudouroctonus rufulus* (Gertsch & Soleglad, 1972)**

Uroctonus rufulus Gertsch & Soleglad, 1972: 568, 584-585, fig. 27, 129, 130.
Holotype: M (CAS, Type No. 11474), Punta Banda, Baja California Norte, México.

REFERENCES:
Uroctonus rufulus: Soleglad, 1973b: 353; Díaz Najera, 1975: 6, 9.
Vejovis rufulus: Stahnke, 1974: 130, 136.

Vaejovis rufulus: Williams, 1980: 53, 78, fig. 78, 81; Williams & Savary, 1991: 284, fig. 23; Beutelspacher, 2000: 108, 137, 154, map 89.
Pseudouroctonus rufulus: Stockwell, 1992: 409; Kovarík, 1998: 145; Sissom, 2000:518.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte).

Pseudouroctonus williamsi (Gertsch & Soleglad, 1972)

Uroctonus williamsi Gertsch & Soleglad, 1972: 566, 579-580, fig. 11, 20, 34, 35, 125, 126. Holotype: F (CAS, Type No. 11475), Mission George, 1 mi W Padre Dam, San Diego County, California, USA.

REFERENCES:
Uroctonus williamsi: Soleglad, 1973b: 353.
Vejovis williamsi: Stahnke, 1974: 130, 136; Williams & Savary, 1991: 284.
Vaejovis angelenus (part): Williams, 1976: 2 (see note below).
Pseudouroctonus williamsi: Stockwell, 1992: 409; Kovarík, 1998: 145; Sissom, 2000:518.

DISTRIBUTION. NORTH AMERICA. USA (California).

NOTES. Williams (1976) listed *V. williamsi* (Gertsch & Soleglad, 1972) as a junior synonym of *V. angelenus* (Gertsch & Soleglad, 1972). Later, Williams & Savary (1991) regarded them as separate species.

Genus *SERRADIGITUS* Stahnke, 1974

Serradigitus Stahnke, 1974: 130-132, fig. 6C, 6D; type species *Vejovis wupatkiensis* Stahnke, 1940.

REFERENCES:
Vaejovis (part): Williams, 1980: 88-90 (*wupatkiensis* group); Francke, 1985: 13, 18, 21.
Serradigitus: Williams & Berke, 1986: 350-351; Sissom, 1990a: 114; Sissom & Stockwell, 1991: 197-199; Stockwell, 1992: 409, 416, 419, fig. 40, 42; Yahia & Sissom, 1996: 86; Kovarík, 1998: 145; Sissom, 2000:518; Soleglad & Fet, 2003a: 15, 36, 67, 142, 163, 164, figs. 66, 79, 80, 111, D-6, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4-7; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 28, 33, 58, 67, 103, 162, figs. 6, 36, 61, 73; Soleglad & Fet, 2005: 2, 6; Prendini & Wheeler, 2005: Fig. 24, Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA (western México, western USA).

NOTES. A key that covers all of the species currently referred to this genus is not available. For identification purposes, one should consult keys to the *Vaejovis wupatkiensis* group by Soleglad (1972b) and Williams (1980); a key to the species in Sonora (Sissom & Stockwell, 1991) is also available.

Beutelspacher (2000) did not accept the assessments by Williams & Berke (1986) and Sissom & Stockwell (1992) that revalidated the genus *Serradigitus*. Consequently, he placed

all Mexican *Serradigitus* back into *Vaejovis*, using the previous arguments of Williams (1980).

Serradigitus spp. are inhabitants of rocky and boulder-strewn slopes, canyon walls, vertical cliff faces, etc., seeking shelter in cracks and crevices during periods of inactivity. Although generally found in rocky habitats in desert areas, some species are encountered in moderate to high elevations (pine-oak or pine-juniper habitats).

***Serradigitus adcocki* (Williams, 1980)**

Vaejovis adcocki Williams, 1980: 50, 90, 103, fig. 53k, 90, 91.
Holotype: M (CAS, Type No. 12112), Isla Cerralvo, Bahía Limona, Baja California Sur, México.
Paratypes: 1F (CAS, allotype), same locality as holotype; unspecified numbers and sexes (CAS, SDMNH), 27.4 km S Loreto, Isla Coronados, Isla Danzante, Isla Monserrat, Isla San José (Bahía el Amortajado, Salinas), Isla San Francisco, Isla Cerralvo (Arroyo Aguaje and Piedras Gordas).

REFERENCES:
Serradigitus adcocki: Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:518; Soleglad & Fet, 2005: 2; Soleglad & Fet, 2005: 6.
Vaejovis adcocki: Beutelspacher, 2000: 73, 137, 152, map 44.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Gulf Coast and islands).

***Serradigitus agilis* Sissom & Stockwell, 1991**

Serradigitus agilis Sissom & Stockwell, 1991: 205-207, fig. 36-52.
Holotype: M (AMNH), 5-6 mi W Pena Blanca Lake & Sycamore Canyon, Santa Cruz County, Arizona, USA.
Paratypes: 1M, 1F (AMNH), 2M, 1F (WDS), same locality as holotype; 1M (AMNH), 10 mi S Nacozari, Sonora, México; 2F (WDS), 7 mi W Animas, Hidalgo County, New Mexico, USA.

REFERENCES:
Serradigitus agilis: Sissom, 1997: 13; Kovarík, 1998: 145; Sissom, 2000:519.
Vaejovis agilis: Beutelspacher, 2000: 73, 146, 152, map 44.

DISTRIBUTION. NORTH AMERICA. México (Sonora), USA (Arizona, New Mexico).

***Serradigitus allredi* Sissom & Stockwell, 1991**

Serradigitus allredi Sissom & Stockwell, 1991: 199-200, 206, 207, fig. 1-13.
Holotype: M (AMNH), Pichaco Peak, Pinal County, Arizona, USA.
Paratypes: 1 sub F (AMNH), 1M, 1 sub F (WDS), same locality as holotype; 1F (WDS), Dripping Springs, Organ Pipe National Monument, Arizona, USA; 1M, 1F (AMNH), Cornelio, Sonora, México.

REFERENCES:

Serradigitus allredi: Kovarík, 1998: 145; Sissom, 2000:519.

DISTRIBUTION. México (Sonora), USA (Arizona).

Serradigitus armadentis **(Williams, 1980)**

Vaejovis armadentis Williams, 1980: 52, 92, fig. 54H, 55E, 92, 93.
Holotype: M (CAS, Type No. 12113), SW side of the Isla Santa Cruz, Baja California Sur, México.
Paratypes: unspecified numbers and sexes (SDMNH), Isla Santa Catalina, Baja California Sur, México.

REFERENCES:
Serradigitus armadentis: Williams & Berke, 1986: 351, 352; Kovarík, 1998: 145; Sissom, 2000:519.
Vaejovis armadentis: Beutelspacher, 2000: 73, 137, 152, map 46.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Santa Catalina & Santa Cruz Islands).

Serradigitus baueri **(Gertsch, 1958)**

Vejovis *baueri* Gertsch, 1958: 6-9.
Holotype: M (AMNH), W San Benito Island, Baja California Norte, México.
Paratype: F (AMNH; allotype), same locality as holotype.

REFERENCES:
Vejovis baueri: Gertsch & Soleglad, 1972b: 598.
Vaejovis baueri: Williams, 1980: 50, 93, 110, fig. 53E, 93, 94; Williams & Berke, 1986: 350; Kovarík, 1998: 146; Beutelspacher, 2000: 74, 136, 152, map 46.
Serradigitus baueri: Sissom & Stockwell, 1991: 198; Sissom, 2000:519.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte: San Benito Island).

Serradigitus bechteli **(Williams, 1980)**

Vaejovis bechteli Williams, 1980: 51, 95, 98, fig. 54D, 91, 95.
Holotype: F (CAS, Type No. 12114), Isla Las Animas, Baja California Sur, México.
Paratypes: unspecified numbers and sexes (depository unknown), Isla San José, Baja California Sur, México.

REFERENCES:
Vaejovis bechteli: Williams & Berke, 1986: 350; Kovarík, 1998: 146; Beutelspacher, 2000: 74, 137, 152, map 47.
Serradigitus bechteli: Sissom & Stockwell, 1991: 198-199; Sissom, 2000:519.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Islas Las Animas and San José).

Serradigitus calidus (Soleglad, 1974)

Vejovis calidus Soleglad, 1974: 109, fig. 5, 7, 8-13, 15.
Holotype: F (AMNH), 2 mi E Cuatro Cienegas, Coahuila, México.
Paratypes: 1M (AMNH; allotype), 1F (MES), same locality as holotype.

REFERENCES:
Serradigitus calidus: Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:520; Soleglad & Fet, 2003a: 8, 162; Soleglad & Fet, 2005: 2.
Vaejovis calidus: Beutelspacher, 2000: 76, 138, 152, map 48.

DISTRIBUTION. NORTH AMERICA. México (Coahuila).

Serradigitus deserticola (Williams, 1970)

Vejovis deserticola Williams, 1970a: 4-7, fig. 3, 4.
Holotype: M (CAS, Type No. 10412), Travertine Spring, Death Valley National Monument, Inyo County, California, USA.
Paratype: F (CAS, Type No. 10412; allotype), same locality as holotype.

REFERENCES:
Vejovis deserticola: Soleglad, 1973b: 357; Soleglad, 1974: 109, fig. 3.
Serradigitus deserticola: Stahnke, 1974a: 132; Kovarík, 1998: 145; Sissom, 2000:520; Soleglad & Fet, 2005: 2.

DISTRIBUTION. NORTH AMERICA. USA (California: Death Valley).

Serradigitus dwyeri (Williams, 1980)

Vaejovis dwyeri Williams, 1980: 51, 95, fig. 91, 96.
Holotype: M (CAS, Type No. 12115), NW side, Isla Danzante, Baja California Sur, México.
Paratypes: unspecified number and sexes (depository unknown), same locality as holotype.

REFERENCES:
Serradigitus dwyeri: Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:520.
Vaejovis dwyeri: Beutelspacher, 2000: 80, 137, 153, map 55.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Danzante Island).

Serradigitus gertschi (Williams, 1968)

Vejovis gertschi Williams, 1968b: 317-321, fig. 3-4.
Holotype: M (CAS, Type No. 10171), 1.6 km E San Ysidro, San Diego County, California, USA.
Paratypes: 21 specimens (CAS), same locality as holotype (including 1F allotype); 11M, 24 F, 12 juvs (CAS) from several localities in San Diego County, California, USA.

REFERENCES:
Vejovis gertschi gertschi: Hjelle, 1972: 20; Soleglad, 1974: 109, fig. 4.
Vejovis gertschi: Soleglad, 1973b: 357; Williams, 1970b: 286; Soleglad, 1972b: 181, 190.
Serradigitus gertschi: Stahnke, 1974a: 132; Williams & Berke, 1986: 351, 352; Williams, 1987c: 364; Sissom & Stockwell, 1991: 205; Kovarík, 1998: 145; Sissom, 2000:520; Soleglad & Fet, 2003a: 150, fig. B-1.
Vaejovis gertschi: Williams, 1976: 2; Williams, 1980: 52, 90, 92, 95, 97, 101, 104, fig. 53I, 54G, 97, 98; Beutelspacher, 2000: 83, 136, 137, 153, map 57.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur), USA (California).

***Serradigitus gertschi gertschi* (Williams, 1970)**

Vejovis gertschi Williams, 1968b: 317.

REFERENCES:
Vaejovis gertschi gertschi: Hjelle, 1972: 20; Soleglad, 1974: 109, fig. 4.
Serradigitus gertschi gertschi: Sissom, 2000: 520; Soleglad & Fet, 2003a: 8, 28, figs. 37, 67; Soleglad & Fet, 2005: 2.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur), USA (California).

***Serradigitus gertschi striatus* (Hjelle, 1972)**

Vaejovis gertschi striatus Hjelle, 1972: 20-22, fig. 41-45, 49.
Holotype: M (CAS, Type No. 3525), Frank Raines Park, 18 mi W Patterson, Stanislaus County, California, USA.
Paratypes: 1F (CAS, Type No. 3525; allotype), 59 specimens (depository unknown), same locality as holotype; 104 additional specimens from Mendocino, Lake, Napa, and Stanislaus Counties (depository unknown), California, USA.

REFERENCES:
Serradigitus gertschi striatus: Kovarík, 1998: 145; Sissom, 2000:520-521.

DISTRIBUTION. NORTH AMERICA. USA (California: Coastal Ranges).

***Serradigitus gigantaensis* (Williams, 1980)**

Vaejovis gigantaensis Williams, 1980: 51, 100, 108, fig. 53G, 54E, 99, 100.
Holotype: M (CAS, Type No. 12178), 11.7 km N San José de Comondú, Baja California Sur, México.
Paratypes: numbers and sexes unspecified (CAS), same locality as holotype.

REFERENCES:

Serradigitus gigantaensis: Williams & Berke, 1986: 351; Sissom, 1991b: 26; Kovarík, 1998: 145; Sissom, 2000:521.
Vaejovis gigantaensis: Beutelspacher, 2000: 85, 137, 153, map 58.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Sierra de la Giganta, N of San José de Comondú).

***Serradigitus gramenestris* (Williams, 1970)**

Vejovis gramenestris Williams, 1970a: 1-4, fig. 1-2.
Holotype: M (CAS, Type No. 10416), Travertine Creek, Death Valley National Monument, Inyo County, California, USA.
Paratypes: 2 juv M, 19F (CAS, including allotype), same locality as holotype; 1F (CAS, Type No. 10416), Grapevine Spring, 4 mi E Ubehebe Crater, Death Valley National Monument; 8M, 2F (CAS), 20 Mule Team Canyon, Death Valley National Monument; Inyo County, California, USA.

REFERENCES:
Vejovis gramenestris: Soleglad, 1973b: 357.
Serradigitus gramenestris: Stahnke, 1974a: 132; Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:521.

DISTRIBUTION. NORTH AMERICA. USA (California: Death Valley).

***Serradigitus haradoni* (Williams, 1980)**

Vaejovis haradoni Williams, 1980: 52, 101, 108, fig. 101.
Holotype: M (CAS, Type No. 12116), 121 km NW La Paz, Baja California Sur, México.
Paratypes: 1F (CAS; allotype), same locality as holotype; numbers and sexes unspecified (depository not indicated), Isla Santa Catalina (W side, S end, and Punta Arena on NW end), 56.8 km NW Los Aripes, 24.1 km NW Los Aripes, 34.4 km NW Los Aripes, 121 km NW La Paz, Baja California Sur, México.

REFERENCES:
Serradigitus haradoni: Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:521.
Vaejovis haradoni: Beutelspacher, 2000: 88, 138, 153, map 62.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Serradigitus harbisoni* (Williams, 1970)**

Vejovis harbisoni Williams, 1970b: 281-286, fig. 4, 5.
Holotype: M (CAS, Type No. 10419), Calamajue Arroyo, Baja California Norte, México.
Paratypes: 6M, 5F (CAS, including F allotype), same locality as holotype; 1M, 1F (CAS), 6 mi N Bahía San Luis Gonzaga; 2F (CAS), 7 mi N Bahía San Luis Gonzaga; 1M, 6F, Bahía de Los Angeles, Baja California Norte, México.

REFERENCES:
Vejovis harbisoni: Soleglad, 1972b: 181; Soleglad, 1973b: 357; Soleglad, 1974: 109, fig. 1.
Serradigitus harbisoni: Stahnke, 1974a: 132; Williams & Berke, 1986: 351; Sissom & Stockwell, 1991: 202, 203; Kovarík, 1998: 145; Sissom, 2000:521.
Vaejovis harbisoni: Williams, 1976: 2 (see comment); Williams, 1980: 49, 90, 103, fig. 53J, 54I, 98, 102.
Vaejovis polisi (part): Beutelspacher, 2000: 102, 137, 138, 153, map 84.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte and associated islands).

NOTES. Williams (1976) considered *Serradigitus subtilimanus* Soleglad, 1972 a synonym of this species. Sissom & Stockwell (1991) continued to recognize them as separate taxa, suggesting the case warranted further study.

Beutelspacher (2000) regarded *S. harbisoni* Williams, 1970 as a junior synonym of *S. polisi* Sissom & Stockwell, 1992, contrary to the Law of Priority. He provided no justification for the synonymy. The only material he had available for *S. polisi* was a specimen from Isla Tiburon, Sonora. The differences between *S. polisi* and *S. harbisoni* were fully elaborated by Sissom & Stockwell (1992). The population on Isla Tiburon exhibits slight differences from both *polisi* and *harbisoni* and warrants further study.

***Serradigitus hearnei* (Williams, 1980)**

Vaejovis hearnei Williams, 1980: 51, 95, 98, 103, fig. 53H, 100, 203.
Holotype: F (CAS, Type No. 12117), 32 km S Santa Rosalia, Baja California Sur, México.
Paratypes: 1M (CAS; allotype), same locality as holotype; numbers and sexes unspecified (CAS, AMNH, SDMNH), Punta Trinidad, Santa Rosalia, 11.6 km SW Loreto, 13.4 km SW Loreto, 27 km S Loreto, 0.8 km W Rancho Las Parras, Isla San José, Baja California Sur, México.

REFERENCES:
Serradigitus hearnei: Williams & Berke, 1986: 351; Sissom & Stockwell, 1991: 203, 205, 207; Kovarík, 1998: 145; Sissom, 2000:522.
Vaejovis hearnei: Beutelspacher, 2000: 88, 138, 146, map 63.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur, Sonora).

***Serradigitus joshuaensis* (Soleglad, 1972)**

Vejovis joshuaensis Soleglad, 1972b: 190, fig. 2, 4, 6, 8, 10, 14-17.
Holotype: M (AMNH), Cotton Wood Springs, Joshua Tree National Monument, Riverside County, California, USA.
Paratypes: 1F (AMNH; allotype), same locality as holotype; 14M, 2 juv M, 9F (MES), from several localities in the Colorado Desert, San Diego and Imperial Counties, California, USA.

REFERENCES:
Vejovis joshuaensis: Soleglad, 1973b: 357; Soleglad, 1974: 109, fig. 6.

Vaejovis joshuaensis: Williams, 1976: 2.
Serradigitus joshuaensis: Williams & Berke, 1986: 351; Kovarík, 1998: 145; Sissom, 2000:522; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, fig. 67; Soleglad & Fet, 2005: 2; Soleglad & Fet, 2005: 6, 7.

DISTRIBUTION. NORTH AMERICA. USA (Colorado Desert of Arizona, California).

***Serradigitus littoralis* (Williams, 1980)**

Vaejovis littoralis Williams, 1980: 52, 107, fig. 53D, 54B, 55H, 93.
Holotype: F (CAS, Type No. 12119), Isla San José, Baja California Sur, México.
Paratypes: numbers and sexes unspecified (depository not indicated), Isla Angel de la Guarda (Puerto Refugio), Baja California Norte, México; Isla San José, Isla Danzante, Baja California Sur, México.

REFERENCES:
Vaejovis littoralis: Williams & Berke, 1986: 350; Due & Polis, 1985: 563-579; Kovarík, 1998: 147; Beutelspacher, 2000: 92, 137, 138, 153, map 70.
Serradigitus littoralis: Sissom & Stockwell, 1991: 198, 207; Sissom, 2000:522.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte: Isla Angel de la Guarda; Baja California Sur: Gulf of California shores and islands).

***Serradigitus minutis* (Williams, 1970)**

Vejovis *minutis* Williams, 1970b: 286-290, fig. 7-9.
Holotype: M (CAS, Type No. 10423), 8 km SW La Paz, Baja California Sur, México.
Paratypes: 1M, 16F (inlcuding allotype) (CAS), same locality as holotype; 2M, 1F (CAS), 2.9 mi NW San Antonio; 9F (CAS), Las Cruces; 7F (CAS), from Las Cruces to 5 mi SW Las Cruces, Baja California Sur, México.

REFERENCES:
Vejovis minutis: Soleglad, 1972b: 181, 190; Soleglad, 1973b: 357.
Serradigitus minutis: Stahnke, 1974a: 132; Williams & Berke, 1986: 351; Kovarík, 1998: 145; Soleglad & Fet, 2003a: 8, fig. 67; Soleglad & Fet, 2005: 2.
Vaejovis minutis: Williams, 1980: 52, 100, 101, 107, fig. 53F, 54F, 98, 105; Williams, 1986a: 358; Beutelspacher, 2000: 97, 138, 153, map 75.
*Serradigitus minutus (*ISS*):* Sissom, 2000:522; Soleglad & Fet, 2003a: 150, fig. B-1.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

NOTES. The original spelling of the species epithet is "*minutis"*, and the "*minutus*" spelling should be regarded as an incorrect subsequent spelling (ISS).

***Serradigitus pacificus* (Williams, 1980)**

Vaejovis pacificus Williams, 1980: 50, 95, 109, fig. 53C, 54C, 93, 106.
Holotype: F (CAS, Type No. 12120), Isla Cedros, Baja California Norte, México.

Paratypes: 1F (AMNH), sex? (CAS?), Bahía San Bartolomé, Isla Cedros, Baja California Norte, México.

REFERENCES:
Vaejovis pacificus: Williams & Berke, 1986: 350; Kovarík, 1998: 147; Beutelspacher, 2000: 102, 137, 138, 153, map 81.
Serradigitus pacificus: Sissom & Stockwell, 1991: 198; Sissom, 2000:523.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte: Vizcaino Desert and Isla Cedros).

***Serradigitus polisi* Sissom & Stockwell, 1991**

Serradigitus polisi Sissom & Stockwell, 1991: 200, 201-202, 207, fig. 14-26.
Holotype: M (CAS, Type No. 16105), Kino Bay (= Bahía Kino), Sonora, México.
Paratypes: 1F (WDS), New Kino Bay (= Bahía Nuevo Kino); 2F (CAS), Isla Tiburon; 1F (WDS), Isla Tiburon; 1F (CAS), San Carlos Bay (= Bahía San Carlos); 1F (AMNH), San Pedro Bay (= Bahía San Pedro), Sonora, México.

REFERENCES:
Vaejovis harbisoni (MIS): Williams, 1980: 98 (part; Isla Tiburon record only).
Serradigitus polisi: Kovarík, 1998: 146; Sissom, 2000:523.
Vaejovis polisi (part; Sonoran records only): Beutelspacher, 2000: 102, 146, 153, map 84.

DISTRIBUTION. NORTH AMERICA. México (Sonora).

NOTES. See "Notes" under *Serradigitus harbisoni*.

***Serradigitus subtilimanus* (Soleglad, 1972)**

Vejovis subtilimanus Soleglad, 1972b: 181, fig. 1, 3, 5, 7, 9, 11-13.
Holotype: M (AMNH), 23 mi N Winterhaven, Imperial County, California, USA.
Paratype: F (AMNH; allotype), same locality as holotype.

REFERENCES:
Vejovis subtilimanus: Soleglad, 1973b: 357; Soleglad, 1974: 109, fig. 2.
Serradigitus subtilimanus: Williams & Berke, 1986: 351; Sissom & Stockwell, 1991: 200, 202-203, 207; Kovarík, 1998: 146; Sissom, 2000:523; Soleglad & Fet, 2003b: 6, figs. 7, 31; Soleglad & Fet, 2003a: 8, 67, 150, 162, figs. 6, 67, 106, B-1; Soleglad & Fet, 2005: 2; Soleglad & Fet, 2005: 6.
Vaejovis subtilimanus: Beutelspacher, 2000: 112, 146, 154, map 92.

DISTRIBUTION. NORTH AMERICA. México (Sonora), USA (Arizona, California).

NOTES. Williams (1976) considered *Serradigitus subtilimanus* Soleglad, 1972 to be a junior synonym of *S. harbisoni* (Williams, 1970). Sissom & Stockwell (1991) continued to recognize them as separate taxa, suggesting the case warranted further study.

Serradigitus torridus Williams & Berke, 1986

Serradigitus torridus Williams & Berke, 1986: 351, fig. 1.
Holotype: M (CAS, Type No. 15750), Red Rock Canyon State Rec. Area, Kern County, California, USA.
Paratypes: 1F (CAS, Type No. 15750; allotype), 8M, 2F, 3 juv (CAS), same locality as holotype; 2F (CAS), Jaw Bone Canyon, Kern County, California, USA; 3F (CAS), 20 miles N Mojave, Kern County, California, USA.

REFERENCES:
Serradigitus torridus: Williams, 1987c: 364; Kovarík, 1998: 146; Sissom, 2000:523; Soleglad & Fet, 2003a: 150, fig. B-1.

DISTRIBUTION. NORTH AMERICA. USA (California).

Serradigitus wupatkiensis (Stahnke, 1940)

Vejovis wupatkiensis Stahnke, 1940: 105.
Lectotype (designated by Williams, 1987c: 363): F (CAS, Type No. 15173), Wupatki National Monument, Coconino County, Arizona, USA.
Paralectotypes (designated by Williams, 1987): 1M (allolectotype), 6F (CAS, Type No. 15173), same locality as lectotype.

REFERENCES:
Vejovis wupatkiensis: Gertsch & Allred, 1965: 8, fig. 11, 20; Williams, 1968b: 317; Williams, 1970a: 1, 5; Williams, 1970b: 282; Soleglad, 1972b: 180; Soleglad, 1973b: 357.
Vaejovis wupatkiensis: Johnson & Allred, 1972: 168-169, fig. 24; Allred & Gertsch, 1976: 93–96, tab. 7–10; Williams, 1976: 2
Serradigitus wupatkiensis: Stahnke, 1974a: 132; Williams & Berke, 1986: 351, 352; Williams, 1987c: 363-366, fig. 1; Sissom, 1997: 13; Kovarík, 1998: 146; Sissom, 2000:523-524; Soleglad & Fet, 2003a: 8, 162, fig. 67; Soleglad & Fet, 2005: 2.

DISTRIBUTION. NORTH AMERICA. USA (Arizona, Idaho, Nevada, New Mexico, Utah).

Serradigitus yaqui Sissom & Stockwell, 1991

Serradigitus yaqui Sissom & Stockwell, 1991: 203-205, 206, 207, fig. 27-35.
Holotype: F (CAS, Type No. 16106), San Carlos Bay, Sonora, México.
Paratypes: 2F (AMNH), Bahía San Carlos; 2F (CAS), San Carlos Bay (= Bahía San Carlos); 1F, 2 juv F (WDS), 1M, 1F, juv F (AMNH), 2F (CAS), Guaymas; 1F (MCZ), near Guaymas; 1F (AMNH), 20 mi E San Pedro, Sonora, México.

REFERENCES:
Serradigitus yaqui: Kovarík, 1998: 146; Sissom, 2000:524.
Vaejovis yaqui: Beutelspacher, 2000: 116, 146, 154, map 92.

DISTRIBUTION. NORTH AMERICA. México (Sonora).

Genus *SMERINGURUS* Haradon, 1983

Paruroctonus (*Smeringurus*) Haradon, 1983: 255-256; type species *Paruroctonus vachoni* Stahnke, 1961.

REFERENCES:
Paruroctonus (Smeringurus): Haradon, 1985: 20.
Smeringurus: Stockwell, 1992: 409, 416, 419, fig. 59-60; Kovarík, 1998: 146; Sissom, 2000:524; Soleglad & Fet, 2003a: 15, 31, 33, 36, 163, 164, figs. 66, 79, 80, 111, D-5, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4-7; Prendini & Wheeler, 2005: Fig. 27, Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Sonora), USA (Arizona, California, Nevada).

NOTES. Haradon's (1983) revision of this group contains a key for identification of its species. *Smeringurus mesaensis* (Stahnke) is perhaps one of the best studied scorpions in the world, and many facets of its biology have been covered. *Smeringurus aridus* and *S. vachoni* are found in packed, often gravelly soils; *S. grandis* is associated with soils accumulating in rocky volcanic habitats. Unlike the other three members of this clade, *S. mesaensis* is a psammophile, restricted to shifting dune systems in its geographical range.

Beutelspacher (2000) was unaware of Haradon's (1983) revision, where the subgenus *Smeringurus* was proposed, and of Stockwell's (1992) elevation of the subgenus to generic level.

Smeringurus aridus (Soleglad, 1972)

Paruroctonus *aridus* Soleglad, 1972a: 72, 82-86, fig. 2, 5, 7, 9.
Holotype: M (AMNH), Anza-Borrego Desert State Park, 1 mi W Seventeen Palms Oasis, San Diego County, California, USA.
Paratype: F (AMNH; allotype), same locality as holotype.

REFERENCES:
Paruroctonus *aridus*: Soleglad, 1973b: 355; Williams, 1976: 2
Paruroctonus (*Smeringurus*) *aridus*: Haradon, 1983: 266-267, 268, fig. 7, 8.
Smeringurus aridus: Kovarík, 1998: 146; Sissom, 2000:524; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 150, 161, figs. 6, 76, B-1.

DISTRIBUTION. NORTH AMERICA. USA (California: San Diego County).

Smeringurus grandis (Williams, 1970)

Vejovis (*Paruroctonus*) *grandis* Williams, 1970b: 277-281, fig. 1-2.
Holotype: M (CAS, Type No. 10417), Oakies Landing, 27 mi S Puertecitos, Baja California Norte, México.
Paratypes: 1F (CAS, Type No. 10417; allotype), same locality as holotype; 1,895 specimens from the type locality and 12 other locations on the eastern side of the Baja Peninsula, Baja California Norte, México.

REFERENCES:

Paruroctonus grandis: Williams, 1972: 3, 4, 1980: 32, 35-36, fig. 39, 42; Soleglad, 1972a: 72, 75; Soleglad, 1973b: 355; Stahnke, 1974a: 138; Beutelspacher, 2000: 66, 136, 152, map 35.

Vaejovis grandis: Díaz Najera, 1975: 6, 9.

Paruroctonus mesaensis (MIS): Williams, 1980: 32, 38 (part, from Bahía San Luis Gonzaga, Baja California Norte, México).

Paruroctonus (*Smeringurus*) *grandis*: Haradon, 1983: 264-266, 268, fig. 5, 6, 13, 14.

Smeringurus grandis: Kovarík, 1998: 146; Sissom, 2000:524-525; Soleglad & Fet, 2003a: 8, 28, figs. 38, 62, 76.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte).

***Smeringurus mesaensis* (Stahnke, 1957)**

Paruroctonus mesaensis Stahnke, 1957: 253-259, fig. 1.
Holotype: F (CAS, Type No. 15168), NW of Mesa, Arizona, USA.

REFERENCES:

Paruroctonus mesaensis: Gertsch, 1958: 15-17; Stahnke, 1961: 206, 207; Stahnke, 1965: 262; Stahnke, 1974a: 138; Gertsch, 1958: 15-17 (erratum, p. 17, "*imperialis*"); Williams, 1972: 3; Soleglad, 1972a: 72, 75; Soleglad, 1973b: 355, fig. 7; Williams, 1976: 2; Williams, 1980: 32, 37-38, fig. 37D, 39, 44 (part); Polis & McCormick, 1986: 61; Yamashita & Polis, 1995a: 495-505; Yamashita & Polis, 1995b: 60-64; Fet et al., 1998: 613, fig. 2; Beutelspacher, 2000: 69, 136, 146, 152, map 37.

Vejovis (*Paruroctonus*) *mesaensis*: Gertsch & Allred, 1965: 9; Gertsch & Soleglad, 1966: 6, 35-37, 39, 40, fig. 26, 42-45, 55, 61, 62, 67, 70; Williams & Hadley, 1967: 106, 113-114; Williams, 1968b: 313; Williams, 1969a: 291; Williams, 1970b: 277, 281; Newlands, 1972: 248.

Vaejovis mesaensis: Díaz Najera, 1975: 7, 10, 31.

Paruroctonus (*Smeringurus*) *mesaensis*: Haradon, 1983: 262-264, 268, fig. 1, 9, 10, 17, 19.

Smeringurus mesaensis: Kovarík, 1998: 146; Sissom, 2000:525; Soleglad & Fet, 2003b: 6, fig. 32; Soleglad & Fet, 2003a: 8, 33, 150, 161, figs. 5, 76, B-1, B-2, B-3.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Sonora), USA (Arizona, California).

***Smeringurus vachoni* (Stahnke, 1961)**

Paruroctonus vachoni Stahnke, 1961: 206-212.
Holotype: F (CAS, Type No. 16488), Sheep Creek Springs, 37 mi N Baker, San Bernardino County, California, USA.

SYNONYMS:

Paruroctonus immanis Soleglad, 1972a: 73, 75-82, fig. 1, 3, 4, 6, 8-10, 11-13 (synonymized by Haradon, 1983: 260; see *S. vachoni immanis*).
Holotype: M (AMNH), Indio Hills, 2 miles NW Thousand Palms, 1.2 miles N intersection of Varner and Rio del Sol Roads, Riverside County, California, USA. Type locality

restricted (M. E. Soleglad, pers. comm. 25 June 1981 to R. M. Haradon) from: “two miles west of Thousand Palms.”

Paratype: F (AMNH; allotype), same locality as holotype.

REFERENCES:

Vejovis (*Paruroctonus*) *vachoni*: Gertsch & Allred, 1965: 9; Gertsch & Soleglad, 1966: 6, 23-26, fig. 14, 15, 22, 49-51, 64, 66; Williams, 1970b: 277, 281.

Paruroctonus vachoni: Stahnke, 1974a: 138; Williams, 1972: 3; Williams, 1976: 2; Soleglad, 1972a: 72, 75; Soleglad, 1973b: 355; Haradon, 1974: 26.

Paruroctonus (*Smeringurus*) *vachoni*: Haradon, 1983: 257-262, 268, fig. 3, 4, 11, 12, 15, 16, 18.

Smeringurus vachoni: Kovarík, 1998: 146; Sissom, 2000:525; Soleglad & Fet, 2003a: 160, fig. B-1.

DISTRIBUTION. NORTH AMERICA. USA (Arizona, California).

***Smeringurus vachoni vachoni* (Stahnke, 1961)**

Paruroctonus vachoni Stahnke, 1961: 206-212.

REFERENCES:

Paruroctonus (*Smeringurus*) *vachoni vachoni*: Haradon, 1983: 258-259, 268, fig. 15; Sissom, 2000:525.

DISTRIBUTION. NORTH AMERICA. USA (California).

***Smeringurus vachoni immanis* (Soleglad, 1972)**

Paruroctonus immanis Soleglad, 1972a: 73, 75-82, fig. 1, 3, 4, 6, 8-10, 11-13.

Holotype: M (AMNH), Indio Hills, 2 miles NW Thousand Palms, 1.2 miles N intersection of Varner and Rio del Sol Roads, Riverside County, California, USA. Type locality restricted (M. E. Soleglad, pers. comm. 25 June 1981 to R. M. Haradon) from: “two miles west of Thousand Palms.”

Paratype: F (AMNH; allotype), same locality as holotype.

REFERENCES:

Vejovis (*Paruroctonus*) *vachoni*: Gertsch & Allred, 1965: 9 (part?); Gertsch & Soleglad, 1966: 6, 23-265, fig. 14, 15, 22, 49-51, 64, 66 (part); Williams, 1970b: 277, 281 (part).

Paruroctonus vachoni: Williams, 1972: 3 (part); Soleglad, 1972a: 72, 75 (part); Soleglad, 1973b: 355 (part); Haradon, 1974: 26; Stahnke, 1974a: 138 (part); Williams, 1976: 2 (part).

Paruroctonus immanis: Soleglad, 1973b: 355.

Paruroctonus (*Smeringurus*) *vachoni immanis*: Haradon, 1983: 260-262, 268, fig. 15.

Smeringurus vachoni immanis: Kovarík, 1998: 146; Sissom, 2000:526.

DISTRIBUTION. NORTH AMERICA. USA (California). Populations intermediate between *S. vachoni vachoni* and *S. vachoni immanis* are known along the Colorado River on both the California and Arizona sides.

Genus *SYNTROPIS* Kraepelin, 1900

Syntropis Kraepelin, 1900: 16-17; type species by monotypy *Syntropis macrura* Kraepelin, 1900.

REFERENCES:

Syntropis: Birula, 1917a: 163; Werner, 1934: 281; Kästner, 1941: 272; Mello Leitão, 1945: 118; Williams, 1969a: 285; Williams, 1974: 15 (part); Stahnke, 1974a: 113-120; 1975: 257-258; Vachon, 1974: 914, 916; Díaz Najera, 1975: 3, 6; Williams, 1980: 47; Sissom, 1990a: 110, 114; Sissom, 1991b: 26; Nenilin & Fet, 1992: 9; Stockwell, 1992: 408; Kovarík, 1998: 146; Beutelspacher, 2000: 55, 70, 152, Lam. IId; Sissom, 2000:526; Ponce Saavedra & Beutelspacher, 2001: 20; Soleglad & Fet, 2003a: 15, 36, 67, 144, 163, figs. 66, 79, 80, D-4, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4, 6, 7; Prendini & Wheeler, 2005: Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur and associated islands).

NOTES. The only known species of this genus, *S. macrura* Kraepelin, is one of the most interesting scorpions in North America. Its large size (up to 80 mm) and elongated pedipalps and metasoma are striking among vaejovids. For decades known only from the holotype, Williams (1969a, 1980) reported additional material and provided signficant information on its biology. *Syntropis macrura* is lithophilic and can be encountered along boulder-strewn slopes and vertical cliff faces, where it inhabits cracks and crevices.

Syntropis macrura Kraepelin, 1900

Syntropis macrura Kraepelin, 1900: 16-17.
Holotype: M (MNHN), "Lower California", México.

REFERENCES:

Syntropis macrura: Kraepelin, 1901: 274; Werner, 1934: 281; Gertsch, 1958: 14-15; Stahnke, 1965: 257-263, fig. 1, 2; Williams, 1969a: 285, 290-291; Stahnke, 1974a: 120; Hjelle, 1974: 221-226; Vachon, 1974: fig. 140, 148-150; Díaz Najera, 1975: 6, 12; Williams, 1980: 47-48, fig. 49, 50, 108B; Kovarík, 1998: 146; Beutelspacher, 2000: 70, 136, 152, map 43; Sissom, 2000:526; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 67, 162; Prendini & Wheeler, 2005: Fig. 24.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur and associated islands).

NOTES. Beutelspacher (2000: 136) erroneously listed *Syntropis macrura* for Baja California (Norte) rather than for Baja California Sur.

Genus *UROCTONITES* Williams & Savary, 1991

Uroctonites Williams & Savary, 1991: 273; type species *Uroctonites giulianii* Williams & Savary, 1991.

REFERENCES:

Uroctonites Stockwell, 1992: 409, 416, 419, fig. 54; Kovarík, 1998: 145; Sissom, 2000: 526, 527; Soleglad & Fet, 2003a: 15, 28, 31, 36, 145, 163, 164, figs. 66, 79, 80, D-3, Tab. 9; Soleglad & Fet, 2005: 6, 7; Prendini & Wheeler, 2005: 478, 479, Table 10.

DISTRIBUTION. NORTH AMERICA (USA: Arizona, California).

NOTES. This genus was established and information of its individual species updated by Williams & Savary (1991); a key to species is included there. *Uroctonites* species are encountered on rock outcrops and talus slopes in a variety of habitats, including coastal areas and montane forests. *Uroctonites sequoia* is known from cave and epigean habitats.

Uroctonites giulianii Williams & Savary, 1991

Uroctonites giulianii Williams & Savary, 1991: 278-281, 282, 284, fig. 1, 3, 4, 11, 13, 15-19.
Holotype: F (CAS, Type No. 16436), White Mts., Inyo National Forest, Ancient Bristlecone Pine Forest, 1.1 km S Schulman Grove, Inyo County, California, USA.
Paratypes: 1M (CAS, Type No. 16436; allotype), same locality as holotype 10M, 14F, 7 juvs (CAS), from several localities in the White Mountains in Inyo and Mono Counties, California, USA.

REFERENCES:
Uroctonites giulianii: Kovarík, 1998: 145; Sissom, 2000:527.

DISTRIBUTION. NORTH AMERICA. USA (California: White Mountains).

Uroctonites huachuca (Gertsch & Soleglad, 1972)

Uroctonus huachuca Gertsch & Soleglad, 1972: 565, 573-575, fig. 64-67, 116-118.
Holotype: F (AMNH), Madera Canyon, Santa Rita Mountains, Santa Cruz County, Arizona, USA.

REFERENCES:
Uroctonus huachuca: Soleglad, 1973b: 353.
Uroctonus (?) *huachuca*: Stahnke, 1974: 130.
Uroctonites huachuca: Williams & Savary, 1991: 280, 282, 283, fig. 12, 17; Kovarík, 1998: 145; Sissom, 2000:527; Soleglad & Fet, 2003b: 6; Soleglad & Fet, 2003a: 8, 58, 162, fig. 74.

DISTRIBUTION. NORTH AMERICA. USA (Arizona: Santa Rita & Huachuca Mountains).

Uroctonites montereus (Gertsch & Soleglad, 1972)

Uroctonus montereus Gertsch & Soleglad, 1972: 565, 589-591, fig. 10, 36, 37.
Holotype: F (AMNH), Red Hill, Hastings Natural History Reservation, Monterey County, California, USA.

REFERENCES:
Uroctonus montereus: Soleglad, 1973b: 353.
Vejovis montereus: Stahnke, 1974: 130, 136.

Vaejovis montereus: Williams, 1976: 2.
Uroctonites montereus: Williams & Savary, 1991: 275, 281-282, 283, fig. 9, 16, 17; Kovarík, 1998: 145; Sissom, 2000:527; Soleglad & Fet, 2003a: 8, 58, fig. 74.

DISTRIBUTION. NORTH AMERICA. USA (California).

Uroctonites sequoia (Gertsch & Soleglad, 1972)

Uroctonus sequoia Gertsch & Soleglad, 1972: 565, 591-592.
Holotype: F (AMNH), Clough Cave, Sequoia National Park, Tulare County, California, USA.

REFERENCES:
Uroctonus sequoia: Soleglad, 1973b: 353; Reddell, 1981: 114.
Vejovis sequoia: Stahnke, 1974: 130, 136.
Vaejovis sequoia: Williams, 1976: 2.
Uroctonites sequoia: Williams & Savary, 1991: 281, 283, fig. 17; Kovarík, 1998: 145; Sissom, 2000:527.

DISTRIBUTION. NORTH AMERICA. USA (California).

Genus *UROCTONUS* Thorell, 1876

Uroctonus Thorell, 1876a: 11; type species by monotypy *Uroctonus mordax* Thorell, 1876.

REFERENCES:
Uroctonus: Thorell, 1876b: 196; Karsch, 1879b: 103; Pocock, 1893: 328; Thorell, 1893: 374; Kraepelin, 1894: 182, 193; Kraepelin, 1899: 182; Pocock, 1902: 14; Comstock, 1912: 30; Ewing, 1928: 12; Hoffmann, 1931: 402; Werner, 1934: 283-284; Mello-Leitão, 1934a: 81; Kästner, 1941: 273; Mello-Leitão, 1945: 128; Gertsch & Allred, 1965: 4; Bücherl, 1971: 329; Gertsch & Soleglad, 1972: 553-568 (part); Hjelle, 1972: 9 (part); Soleglad, 1973b: 351-360 (part); Vachon, 1974: 914, 916; Williams, 1974: 15 (part); Stahnke, 1974a: 119, 129-130, 132, fig. 7A, 8A, 8B, tab. 3, 4; Sissom, 1990a: 111, 114 (part); Williams & Savary, 1991: 272, 274, 284; Stockwell, 1992: 409, 416, 419, fig. 47, 49, 51, 52, 53; Kovarík, 1998: 145; Sissom, 2000:527-528; Soleglad & Fet, 2004: 83-90; Soleglad & Fet, 2003a: 40-43, 57, 58, 84-86, 102-104, 141, figs. 39, 116, 117, Tabs. 3, 4, 9; Prendini & Wheeler, 2005: 472, 477, 478, Tab. 3, 4, 5, 10.

DISTRIBUTION. NORTH AMERICA. USA (California, Oregon, Washington).

NOTES. This genus has had a complex taxonomic history. At one time, most of the species now placed in the genera *Pseudouroctonus* and *Uroctonites* were placed in *Uroctonus*, but the genus was later redefined to include only three species (Stahnke, 1974a; Williams, 1980; Williams & Savary, 1991). A key to the species and subspecies was provided by Fet & Soleglad (2004). As already discussed in the introduction to this catalog, Soleglad & Fet (2003a, 2004) placed *Uroctonus* in the family Chactidae, a move with which we disagree.

Our justification for not accepting their classification is given in the introduction to the catalog.

Uroctonus mordax is encountered under logs and rocks along the California coast and into montane forests (the Cascades and Sierras) at elevations ranging from 24-1900 m (Gertsch & Soleglad, 1972); it also utilizes burrows. *Uroctonus franckei* is known only from yellow pine forests above 2133 m in the Sierra Nevada. The third species, *U. grahami*, is cave-adapted.

Uroctonus franckei Williams, 1986

Uroctonus franckei Williams, 1986b: 359-362, fig. 1.
Holotype: M (CAS, Type No. 15749), 17.7 km W Big Pine, Inyo County, California, USA.
Paratypes: 3M, 3F (CAS; including F allotype "type No. 15749"); same locality as holotype; 6M (CAS), Oh Ridge Camp, June Lake, Mono County, California, USA; 2F (CAS), 4.8 km E Whitney Portal, Inyo County, California, USA.

REFERENCES:
Uroctonus franckei: Williams & Savary, 1991: 284; Kovarík, 1998: 145; Sissom, 2000:528; Soleglad & Fet, 2004: 89-90, figs. 19, 22; Table I; Soleglad & Fet, 2003a: 103.

DISTRIBUTION. NORTH AMERICA. USA (California: eastern Sierra Nevada in Inyo & Mono Counties).

Uroctonus grahami Gertsch & Soleglad, 1972

Uroctonus grahami Gertsch & Soleglad, 1972: 565, 592-593, fig. 15, 16, 26, 32, 33, 52-63.
Holotype: F (AMNH), Samwell Cave, Shasta County, California, USA.

REFERENCES:
Uroctonus grahami: Soleglad, 1973b: 353.
Uroctonus (?) *grahami*: Stahnke, 1974: 130.
Vaejovis grahami: Williams, 1976: 2; Kovarík, 1998: 147.
Uroctonus grahami: Reddell, 1981: 114; Williams & Savary, 1991: 284; Sissom, 2000:528; Soleglad & Fet, 2004: 89, Table I; Soleglad & Fet, 2003a: 103.

DISTRIBUTION. NORTH AMERICA. USA (California).

Uroctonus mordax Thorell, 1876

Uroctonus mordax Thorell, 1876a: 11.
Lectotype (designated by Hjelle, 1972: 15): F (NRS 59b), San Francisco, California, USA (see Notes).

SYNONYMS:
Vejovis yosemitensis Ewing, 1928: 11, pl. II, fig. 3 (synonymized by Gertsch & Soleglad, 1972: 568).
Holotype: M (USNM), Yosemite Falls, Yosemite Valley, California, USA.
Uroctonus mordax canaliculatus Karsch, 1879b: 103 (synonymized by Sissom, 2000: 529).
Holotype: M (ZMB-15), California, USA.

REFERENCES:

Uroctonus mordax: Mann, 1876: 212; Thorell, 1876b: 196-198; Karsch, 1879b: 102-103; Pocock, 1893: 330, pl. XIV, fig. 11; Thorell, 1893: 374; Kraepelin, 1894: 194 (part); Kraepelin, 1899: 182; Banks, 1900a: 424; Kraepelin, 1901: 274; Pocock, 1902: 14, pl. IV, fig. 2, 2a-f; Banks, 1904: 365; Borelli, 1909: 224; Banks, 1910: 186, 188, fig. 81e; Comstock, 1912: 30, fig. 35; Cox, 1921: 13; Pavlovsky, 1925: 151; Ewing, 1928: 7, 15; Hoffmann, 1931: 402-403; Werner, 1934: 283-284; Comstock, 1940: 30, fig. 35; Mello-Leitão, 1945: 128; Gertsch & Allred, 1965: 4; Parrish, 1966: 12-13; Díaz Najera, 1970: 116; Bücherl, 1971: 329; Gertsch & Soleglad, 1972: 551, 565, 568-573, fig. 1-9, 19, 28, 29, 40-51, 113-115, 119, 120, 133, 134; Soleglad, 1973b: 353; Stahnke, 1974: 130; Vachon, 1974: fig. 16(1), 78, 137; Francke, 1976b: 254-260; Williams, 1976: 2; Williams, 1986b: 359; Crawford, 1990: 258-259; Williams & Savary, 1991: 274, 284, fig. 2, 6, 8, 14, 20; Kovarík, 1998: 145; Sissom, 2000:528-529; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2004: 87; Soleglad & Fet, 2003a: 160.

Uroctonus mordax canaliculatus: Moritz & Fischer, 1980: 311.

DISTRIBUTION. NORTH AMERICA. USA (California, Oregon, Washington).

NOTES. In the NRS collection, in the same vial as the lectotype are two males (one subadult, one juvenile). Hjelle (1972) was not convinced that these specimens were collected in San Francisco with the lectotype, but they were mentioned by Thorell (1877: 198) in his longer description of the species. In both descriptions, Thorell (1876, 1877) gives the pectinal tooth count for the species as 8-10; since the lectotype has a count of 8/9, it seems likely that all three specimens were used in the original description. Hence, the two male specimens should be regarded as paralectotypes.

The type specimen of *U. mordax canaliculatus* has been examined; it is conspecific with *U. mordax mordax*.

Soleglad & Fet (2004) attributed a record of *U. mordax* from Utah to Sissom (2000: 528-529). The record is inaccurate, being based on older literature which considered *Anuroctonus* a junior synonym of *Uroctonus*. The record was mistakenly inserted into the distributional statement by a coauthor of the scorpion catalog and went to press without Sissom's knowledge.

***Uroctonus mordax mordax* Thorell, 1876**

Uroctonus mordax Thorell, 1876a: 11.

SYNONYM:

Uroctonus mordax canaliculatus Karsch, 1879b: 103 (synonymized by Sissom, 2000: 529). Holotype: M (ZMB-15), California, USA.

REFERENCES:

Uroctonus mordax mordax: Hjelle, 1972: 5, 12-19, fig. 1-3, 7-9, 30, 32-36, 50, 52; Sissom, 2000:529; Soleglad & Fet, 2004: 88, figs. 1, 3, 6, 12, 16, 18, 23, 26, 28, 32, Table I; Soleglad & Fet, 2003a: 8, figs, 9, 81, 102.

DISTRIBUTION. NORTH AMERICA. USA (California, Oregon, Washington).

***Uroctonus mordax pluridens* Hjelle, 1972**

Uroctonus mordax pluridens Hjelle, 1972: 5, 19-20, fig. 37-40, 50, 52.
Holotype: M (CAS), near Corralitos, Santa Cruz County, California, USA.
Paratype: F (CAS; allotype), Scotts Valley, Santa Cruz County, California, USA.

REFERENCES:
Uroctonus mordax pluridens: Kovarík, 1998: 145; Sissom, 2000:529; Soleglad & Fet, 2004: 88-89, figs. 4, 14, 33, Table I; Soleglad & Fet, 2003a: 8.

DISTRIBUTION. NORTH AMERICA. USA (California: Santa Clara and Santa Cruz Counties).

Genus *VAEJOVIS* C. L. Koch, 1836

Vaejovis C. L. Koch, 1836: 51; type species by monotypy*Vaejovis mexicanus* C. L. Koch, 1836.

SYNONYMS:
Parabroteas Penther, 1913: 244-245, fig. 5; type species by monotypy *Parabroteas montezuma* Penther, 1913; a junior homonym of *Parabroteas* Mrázek, 1902, (Crustacea) (synonymized by Soleglad, 1976b: 299).
Pentheria Francke, 1985: 3, 11, 16, 19; type species *Parabrotheas montezuma* Penther, 1913; a replacement name for *Parabroteas* Penther, 1913 (synonymized by Sissom, 2000: 529; see Notes).
Lissovaejovis Ponce Saavedra & Beutelspacher, 2001: 88, 98. Type species not designated. See notes below.
Sissomius Ponce Saavedra & Beutelspacher, 2001: 88, 99. Type species not designated. See notes below.
Franckeus Soleglad & Fet, 2005: 2-7, figs. 2, 3,5, 6, 9 (synonymized by Prendini & Wheeler, 2005: 481).

REFERENCES:
Vejovis (ISS): Thorell, 1876a: 10; Kraepelin, 1894: 182, 198; Laurie, 1896b: 187, 189, 193; Lauire, 1896a: 130; Kraepelin, 1899: 183; Comstock, 1912: 31; Birula, 1917a: 163; Pavlovsky, 1924: 80; Hoffmann, 1931: 346; Werner, 1934: 282; Kästner, 1941: 273; Gertsch & Allred, 1965: 3-4 (part); Gertsch & Soleglad, 1966: 3-4 (part); Bücherl, 1964: 61 (part); Bücherl, 1971: 328 (part); Gertsch & Soleglad, 1972: 553, 557, 559, 564, 593 (part); Soleglad, 1972b: 179-180 (part); Soleglad, 1973b: 351-360 (part); Stahnke, 1974a: 132-136, fig. 9C, 9D (part).
Vaejovis: Pocock, 1902: 8; Ewing, 1928: 7, 9-10; Hjelle, 1972: 20 (part); Vachon, 1974: 914, 916; Williams, 1974: 15 (part); Williams, 1980: 48-55, fig. 51-57 (part); Sissom, 1989a: 132; Sissom, 1990a: 110, 114; Sissom, 1991b: 4, 26-27; Sissom, 1991a: 215-216; Sissom & Stockwell, 1991: 199; Williams & Savary, 1991: 284; Nenilin & Fet, 1992: 9, 10; Kovarík, 1998: 146; Beutelspacher, 2000: 56, 73, 152, Plate 12 (part), Plate 13 (part) ; Sissom, 2000:529-530; Ponce Saavedra & Beutelspacher, 2001: 71; Soleglad & Fet, 2003a: 15, 28,

36, 67, 103, 109, 163, 164, figs. 66, 79, 80, D-2, D-4, Tab. 9; Prendini & Wheeler, 2005: Tab. 453, 3, 4, 5, 10.

Parabroteas: Birula, 1917a: 163; Birula, 1917b: 139-140; Werner, 1934: 286, 287; Kästner, 1941: 235; Bücherl, 1971: 329; Soleglad, 1976b: 299; Francke, 1985: 20.

Pentheria: Stockwell, 1992: 411; Kovarík, 1998: 128.

DISTRIBUTION. NORTH AMERICA (México, USA). CENTRAL AMERICA (Guatemala).

NOTES.

1. The correct spelling is *Vaejovis* while *Vejovis*, used for a long time by many authors, is an unjustified emendation, as discussed by Williams (1971b: 78) and Francke (1977: 125-126). Koch's original spelling "*Vaejovis*" reflects a 19th century German convention of spelling Latin, where the "ae" indicated that the Latin vowel was a long "e". Although the correct classical spelling is "*Vejovis*", there is no doubt Koch wanted to spell it "*Vaejovis*" (H. D. Cameron, pers. comm.).
2. The generic name *Pentheria* Francke, 1985 was introduced as a replacement name for *Parabroteas* Penther, 1913, a junior homonym of *Parabroteas* Mrázek, 1902 (Crustacea). Based on Penther's (1913) figures 5-7, this genus is undoubtedly a synonym of *Vaejovis* C. L. Koch; this point was made by both Soleglad (1976b) and Stockwell (1992).
3. The identity of the species *Parabroteas montezuma* Penther, 1913 has not been formally determined, but M. Soleglad has related (pers. comm., 1998) that he considers it a synonym of *V. mexicanus mexicanus.* This renders the type locality questionable, as suggested originally by Penther.
4. *Vaejovis* is the largest genus of North American scorpions, but it is not monophyletic (Sissom, unpub. data, 1985; Stockwell, 1992). It is currently divided into a number of species groups, and these are treated separately below. No modern key exists that covers the entire genus, and most older keys are long outdated. The key for species in Baja California (Williams, 1980), however, is current and complete.
5. Stockwell (1989) in an unpublished Ph.D. dissertation described three new genera of Vaejovidae. Two of these, *Lissovaejovis* and *Sissomius* were listed and diagnosed by Ponce Saavedra & Beutelspacher (2001), citing Stockwell as the author of the genera. According to the Code of Zoological Nomenclature (Article 13b), these descriptions are invalid because Ponce Saavedra & Beutelspacher (2001), who would have been the actual authors of the genera, failed to designate a type species. The validity of these genera will be tested.

I. *eusthenura* group

The *eusthenura* group was formally diagnosed by Williams (1970g), although he had made earlier references to it. Initially (e.g. Williams, 1968a), he suggested separate "*spinigerus*" and "*eusthenura*" groups, but later considered them to represent only a single group. Members of this group are found throughout western North America, including southwestern USA, Baja Calfornia, and most of mainland México. Key to the species in Baja Calfornia was provided by Williams (1980), and that key will also be helpful for adjacent areas of southwestern USA. The only key that treats species in mainland México is that of Hoffmann (1931); as readily guessed, it is outdated, and the species there are in need of reevaluation.

Vaejovis bilineatus Pocock, 1898

Vaejovis bilineatus Pocock, 1898: 395.
Holotype: F (BMNH), "San Diego, Texas, USA" (spurious locality).

REFERENCES:
Vejovis spinigerus var. *bilineata*: Kraepelin, 1899: 187.
Vejovis bilineatus: Borelli, 1915: 5; Hoffmann, 1931: 362-364, fig. 26; Gertsch, 1958: 7; Williams, 1970c: 238-241, fig. 1, 2; Gertsch & Soleglad, 1972: 605-606.
Vaejovis bilineatus: Díaz Najera, 1975: 6, 8, 22; Sissom & Francke, 1983a: 69-75; Francke & Sissom, 1984: 17, tab. 6, 7; Sissom, 1991b: 14; Yahia & Sissom, 1996: 81-87; Kovarík, 1998: 146; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 74, 138, 139, 143, 145, 147, 152, map 48; Sissom, 2000:530; Hendrixson 2001: 49; Soleglad & Fet, 2005: 5.

DISTRIBUTION. NORTH AMERICA. México (Aguascalientes, Coahuila, ?Guanajuato, Nuevo León, San Luis Potosí, Tamaulipas).

Vaejovis coahuilae Williams, 1968

Vejovis coahuilae Williams, 1968a: 16-21, fig. 9, 10.
Holotype: M (CAS, Type No. 10170), 0.5 km SW Cuatro Cienegas de Carranza, Coahuila, México.
Paratypes: 19M, 25F (CAS; including 1F allotype, Type No. 10170), same locality as holotype; 48 specimens, Cuatro Cienegas area and Wil Banks Ranch, Pecos County, Texas, USA.

REFERENCES:
Vejovis spinigerus (MIS): Baerg, 1924: 350; Baerg, 1929: 431.
Vaejovis mexicanus (MIS): Baerg, 1929: 427.
Vaejovis coahuilae: Williams, 1971c: 60; Díaz Najera, 1975: 6, 20; Muma, 1975b: 257, 262, 268; Francke, 1977b: 49; Francke & Sissom, 1984: 3-4; Bradley & Brody, 1984: 437-440; Sissom, 1997: 13; Kovarík, 1998: 146; Sissom & Jackman, 1998: 151, 154; Beutelspacher, 2000: 79, 138, 152, map 51; Sissom, 2000:531.
Vejovis coahuilae: Stahnke, 1974a: 135.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua, Coahuila, Durango), USA (Arizona, New Mexico, Texas).

NOTES. Specimens reported by Baerg (1929) as *V. mexicanus* were examined and found to be referable to *V. coahuilae*; this represents the first published record for the species in Durango. The listing for Chihuahua is based on material located in the AMNH.

Vaejovis confusus Stahnke, 1940

Vejovis confusus Stahnke, 1940: 101.
Syntypes: 3M, 3F (CAS, Type No. 15170), Coolidge, Mesa, Superior, Tucson, Wickenburg, and Casa Grande National Monument, Arizona, USA.

REFERENCES:
Vejovis flavus (MIS): Ewing, 1928: 13 (part); Stahnke, 1956: 27; Gertsch, 1958: 11 (part); Gertsch & Allred, 1965: 4 (part?).
Vejovis confusus: Gertsch & Allred, 1965: 4; Williams & Hadley, 1967: 112-113; Williams, 1968a: 2; Williams, 1969b: 3, 13; Williams, 1970d: 256, 261-266; Williams, 1970b: 303; Williams, 1970f: 401; Soleglad, 1973b: 359; Stahnke, 1974a: 135.
Vaejovis confusus: Johnson & Allred, 1972: 166-168; Díaz Najera, 1975: 6, 31; Anderson, 1975: 13–16, fig. 2, 4, 7, 11–12, tab. 1; Williams, 1976: 2; Allred & Gertsch, 1976: 93–96, tab. 7–10; Francke, 1979: 27-28, fig. 10-14; Williams, 1980: 55, 56-57, fig. 53P, 54J, 58, 59; Polis & McCormick, 1986: 61; Sissom, 1991a: 219-220, fig. 5-10; Kovarík, 1998: 146; Beutelspacher, 2000: 79, 146, 152, map 51; Sissom, 2000:531.
Vaejovis puritanus (MIS): Polis, 1979: 343.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Sonora), USA (Arizona, California, Idaho, Nevada, Utah).

***Vaejovis diazi* Williams, 1970**

Vejovis diazi Williams, 1970b: 307-313, fig. 19-20.
Holotype: M (CAS, Type No. 10413), 34.4 km W Ciudad Constitución (= El Crucero), Baja California Sur, México.
Paratypes: 10M, 10F (CAS; including F allotype), same locality as holotype; 568M, 826F (CAS), numerous localities in Baja California Sur, México.

REFERENCES:
Vejovis diazi: Williams, 1970f: 410; Soleglad, 1973b: 359; Stahnke, 1974a: 135
Vaejovis diazi: Díaz Najera, 1975: 6, 14; Williams, 1980: 55, 58-60, fig. 55A, 61, 62, 63; Kovarík, 1998: 146; Beutelspacher, 2000: 80, 137, 153, map 53; Sissom, 2000:531.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis diazi diazi* Williams, 1970**

Vejovis diazi Williams, 1970b: 307-313.

REFERENCES:
Vaejovis diazi diazi: Williams, 1970f: 415; Williams, 1980: 59-60, fig. 55A, 61, 62; Sissom, 2000:531-532.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis diazi transmontanus* Williams, 1970**

Vejovis diazi transmontanus Williams, 1970f: 415-417.
Holotype: M (CAS, Type No. 10414), coastal sand dunes, Punta San Telmo, Baja California Sur, México.
Paratypes: 7M, 3F (CAS), same locality as holotype.

REFERENCES:

Vaejovis diazi transmontanus: Díaz Najera, 1975: 6, 14; Williams, 1980: 55, 60, fig. 55A, 62, 63; Kovarík, 1998: 146; Sissom, 2000:532.

Vaejovis diazi "form" *transmontanus*: Beutelspacher, 2000: 80, 137, 153, map 53.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis eusthenura (Wood, 1863)

Buthus eusthenura Wood, 1863a: 109.

Syntypes: (lost; see Williams, 1980: 57), "Cape St. Lucas" (Cabo San Lucas), Baja California Sur, México.

REFERENCES:

Buthus eusthenura: Wood, 1863b: 368.

Vaejovis mexicanus (MIS; part): Kraepelin, 1894: 199; Kraepelin, 1899: 184-185.

Vejovis eusthenura: Gertsch, 1958: 13-14; Williams, 1970b: 308; Williams, 1970f: 395; Stahnke, 1974a: 135.

Vaejovis eusthenura: Díaz Najera, 1975: 6, 32; Williams, 1980: 55, 57, fig. 54M, 55B, 59, 60; Cokendolpher & Peek, 1991: 96; Kovarík, 1998: 146; Beutelspacher, 2000: 83, 137, 153, map 55; Sissom, 2000:532; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 8, 67, 150, 161, figs. 70, B-1, Tabs. 3, 4.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis flavus Banks, 1900

Vejovis flavus Banks, 1900a: 424-425.

Holotype: F (USNM), "Albuquerque, New Mexico".

REFERENCES:

Vaejovis flavus: Ewing, 1928: 13 (part); Cokendolpher & Peek, 1991: 97-98; Kovarík, 1998: 146; Sissom, 2000:532.

Vejovis flavus: Soleglad, 1973a: 165 (part; not redescription based on MCZ female); Bücherl, 1971: 329; Stahnke, 1974a: 135.

NOTES. The identity of this species, briefly described in a key couplet by Banks (1900), has long been problematic. Soleglad (1973a) redescribed the species, based on a specimen in the MCZ presumed to be the type. This specimen is apparently not the type (J. Bigelow, pers. comm.), and the true type is in the USNM. The specimens are not conspecific. Until V. flavus is redescribed from the USNM material, its identity cannot be known with certainty; Bigelow (pers. comm.) indicates, however, that it is a member of the *eusthenura* group. The MCZ specimen belongs to an undescribed species in the *punctipalpi* group.

Nothing matching either the original description or Soleglad's redescription has subsequently been collected in the Albuquerque area (or anywhere else in New Mexico), despite extensive efforts (Sissom, unpublished). A specimen examined by Sissom that he considered to be conspecific with the one in the MCZ was found as part of the type series of *V. punctipalpi* in the USNM (Cokendolpher & Peek, 1991). Whether this specimen was

actually part of the original type series cannot be confirmed; if it was, then this species would occur in Baja California Sur.

DISTRIBUTION. Unknown.

Vaejovis galbus Williams, 1970

Vejovis galbus Williams, 1970f: 403, 407-410, figs. 7, 8.
Holotype: M (CAS, Type No. 10415), 8.0 km S Loreto, Baja California Sur, México.
Paratypes: 9M, 10F (CAS; 1F allotype), same locality as holotype.

REFERENCES:
Vejovis galbus: Soleglad, 1973b: 359, tab. 4; Stahnke, 1974a: 136.
Vaejovis galbus: Díaz Najera, 1975: 6, 14; Williams, 1980: 55, 60-61, fig. 59, 64; Kovarík, 1998: 146; Beutelspacher, 2000: 83, 137, 153, map 56; Sissom, 2000:532-533.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis glabrimanus Sissom & Hendrixson, 2005

Vaejovis glabrimanus Sissom & Hendrixson, 2005: 35-39, figs. 1-12.
Holotype: M (FSCA), 4.9 mi N La Ascension (24˚19'N: 99˚54'W), Nuevo León, Mexico.
Paratype: M (FSCA), 10.8 mi S, 0.1 mi E Arteaga at Los Pinos (25˚17'N: 100˚50'W), Coahuila, Mexico.

DISTRIBUTION. NORTH AMERICA. México (Coahuila, Nuevo León).

Vaejovis globosus Borelli, 1915

Vaejovis globosus Borelli, 1915: 4-5.
Holotype: F (MIZT), Dinamita, Durango, México.

SYNONYMS:
Vejovis gilvus Williams, 1968a: 2-6, fig. 1-2 (synonymized by Francke, 1977b: 45).
Holotype: M (CAS), 13 km SW Cuatro Cienegas de Carranza, Coahuila, México.
Paratypes: 3 specimens (CAS, including 1F allotype), same locality as holotype; 5M, 1F, vicinity of Cuatro Cienegas de Carranza, Coahuila, México.

REFERENCES:
Vejovis *globosus*: Hoffmann, 1931: 402; Hoffmann, 1938: 318.
Vejovis gilvus: Soleglad, 1973b: 359, tab. 4; Stahnke, 1974a: 135.
Vaejovis globosus: Díaz Najera, 1975: 6, 22; Francke, 1977b: 45-49; Kovarík, 1998: 147; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 85, 138, 140, 148, 153, map 59; Sissom, 2000:533.
Vaejovis gilvus: Díaz Najera, 1975: 6, 20.

DISTRIBUTION. NORTH AMERICA. México (Coahuila, Durango), USA (southwestern Texas).

Vaejovis gravicaudus Williams, 1970

Vejovis gravicaudus Williams, 1970b: 325-331, fig. 29-30.
Holotype: M (CAS, Type No. 10418), 34.4 km W Los Aripes, Baja California Sur, México.
Paratypes: 13M, 15F (CAS; including F allotype), same locality as holotype; 170 specimens (CAS), numerous localities in Baja California Sur, México.

REFERENCES:
Vejovis spinigerus (MIS: part): ?Kraepelin, 1901: 274; Díaz Najera, 1964: 21.
Vejovis gravicaudus: Stahnke, 1974a: 135.
Vaejovis gravicaudus: Díaz Najera, 1975: 6, 14; Williams, 1980: 55, 61-62, fig. 65, 66; Sissom, 1991a: 215-217; Kovarík, 1998: 147; Beutelspacher, 2000: 88, 136, 137, 153, map 61 (part) ; Sissom, 2000:533; Hendrixson 2001: 49; Soleglad & Fet, 2003a: 8, 161, figs. 6, 69.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur).

NOTES. Beutelspacher's (2000) listing of *V. gravicaudus* from Isla Tiburon, Sonora is incorrect. The specimens are referable to *V. spinigerus* (Wood)(Sissom 1992, pers. obs.).

Vaejovis hoffmanni Williams, 1970

Vejovis hoffmanni Williams, 1970b: 313-317, fig. 21-22.
Holotype: M (CAS, Type No. 10420), 4.8 km N Manuela, Baja California Norte, México.
Paratypes: 74M, 64F (CAS; including F allotype), same locality as holotype; 161M, 143F (CAS), Miller's Landing, Baja California Norte to La Purísima, Baja California Sur, México.

REFERENCES:
Vejovis hoffmanni: Soleglad, 1973b: 359, tab. 4; Stahnke, 1974a: 135.
Vaejovis hoffmanni: Díaz Najera, 1975: 6, 10, 15; Williams, 1980: 55, 64, fig. 62, 67, 68; Kovarík, 1998: 147; Beutelspacher, 2000: 89, 137, 138, 153, map 65; Sissom, 2000:533.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur).

Vaejovis hoffmanni hoffmanni Williams, 1970

Vejovis hoffmanni Williams, 1970b: 313-317.

REFERENCES:
Vaejovis hoffmanni hoffmanni: Williams, 1970f: 413; Williams, 1980: 64, fig. 62, 67; Sissom, 2000:533.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur).

Vaejovis hoffmanni fuscus Williams, 1970

Vejovis hoffmanni fuscus Williams, 1970f: 413-415.
Holotype: M (CAS, Type No. 10421), 24 mi NE San José de Comondú, Baja California Sur, México.
Paratypes: 10M, 3F (CAS, including F allotype), same locality as holotype; 3M, 2F, 21 mi S San Miguel de Comondú, Baja California Sur, México.

REFERENCES:
Vaejovis hoffmanni fuscus: Díaz Najera, 1975: 6, 36; Williams, 1980: 55, 64, fig. 62, 68; Kovarík, 1998: 147; Sissom, 2000:533-534.
Vaejovis hoffmanni "form" *fuscus*: Beutelspacher, 2000: 89, 138, 153, map 65.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis punctatus Karsch, 1879

Vaejovis punctatus Karsch, 1879b: 135.
Holotype: F (ZMB, No. 11), "México".

SYNONYMS:
Vaejovis nigropictus Pocock, 1898: 395 (synonymized by Kraepelin, 1899: 187).
Holotype: F (BMNH), "Jalisco", México (probably lost; P. D. Hillyard, pers. comm.).

REFERENCES:
Vaejovis spinigerus var. *punctata*: Kraepelin, 1899: 187; Kraepelin, 1901: 274.
Vejovis punctatus: Borelli, 1909: 225; Hoffmann, 1931: 353-354; Bücherl, 1971: 329; Ponce Saavedra & Beutelspacher, 2001: 46, 48, 82, 100, Maps 26, 27.
Vaejovis punctatus: Borelli, 1909: 225; Yahia & Sissom, 1996: 86; Kovarík, 1998: 147; Beutelspacher, 2000: 103, 136, 140, 141, 142, 144, 147, 154, map 85; Sissom, 2000:534; Soleglad & Fet, 2003a: 9, 28, 161, figs. 35, 69, 104; Soleglad & Fet, 2005: 5.

DISTRIBUTION. NORTH AMERICA. México (Aguascalientes, Guanajuato, Guerrero, Hidalgo, Jalisco, Michoacán, Estado deMéxico, Morelos, Oaxaca, Puebla, Querétaro, Zacatecas).

NOTES.
1. The synonymy of *Vaejovis nigropictus* Pocock and *V. punctatus* Karsch has been accepted since the time of Kraepelin (1899), but it seems likely that it is incorrect. Pocock's type originated from Jalisco, where only *V. punctatus spadix* is known. Consequently, *Vaejovis nigropictus* and *V. punctatus spadix* are probably synonyms, and a neotype for *V. nigropictus* should be proposed.
2. The subspecies of *V. punctatus* have been misidentified in certain contributions. The distributional lists for the subspecies given below are based on detailed study of numerous specimens by W. D. Sissom.

3. In the original catalog, the species was reported from Distrito Federal; this was due to the erroneous assignment of several localities to Distrito Federal, rather than Estado de Mexico. The species has not been found in Distrito Federal (E. González Santillán, unpublished data).

***Vaejovis punctatus punctatus* Karsch, 1879**

Vaejovis punctatus Karsch, 1879b: 135.

REFERENCES:
Vejovis punctatus punctatus: Hoffmann, 1931: 354-357, fig. 23; Hoffmann, 1937: 204, 205, fig. 1; Hoffmann, 1938: 317; Díaz Najera, 1964: 20, 21?, 24?, 26; Williams, 1970b: 290.
Vaejovis punctatus punctatus: Díaz Najera, 1975: 7, 24, 25, 29, 30; Yahia & Sissom, 1996: 87; Yahia & Sissom, 1996: 87; Sissom, 2000:534.

DISTRIBUTION. NORTH AMERICA. México (Guanajuato, Hidalgo, Oaxaca, Puebla, Querétaro).

NOTES. See Note 3 under *V. punctatus*.

Vaejovis *punctatus spadix* Hoffmann, 1931

Vejovis punctatus spadix Hoffmann, 1931: 357-359, fig. 24.
Holotype: M (AMNH?), Jalpa, Zacatecas, México.
Paratypes: 1M, 1F (IBUNM 053), same locality as holotype.

REFERENCES:
Vejovis spinigerus var. *punctata*: Kraepelin, 1901 (part).
Vaejovis punctatus: Pocock, 1902: 12.
Vejovis punctatus spadix: Díaz Najera, 1964: 20, 25.
Vejovis punctatus punctatus: Díaz Najera, 1964: 21 (Aguascalientes record)?
Vaejovis punctatus spadix: Díaz Najera, 1975: 7, 26, 35; Vázquez & Zaragoza, 1979: 583; Kovarík, 1998: 147; Beutelspacher, 2000: 103, 136, 141, 148, 154, map 85; Sissom, 2000:534-535.
Vaejovis punctatus punctatus: Díaz Najera, 1975: 8 (Aguascalientes record)?

DISTRIBUTION. NORTH AMERICA. México (Aguascalientes, Jalisco, Zacatecas).

NOTES. An unknown number of syntypes of this subspecies were presumably deposited in the AMNH after Hoffmann's death; however, attempts to locate them have been unsuccessful. One of the IBUNAM specimens should be designated as lectotype.

***Vaejovis punctatus variegatus* Pocock, 1898**

Vaejovis variegatus Pocock, 1898: 394.
Syntypes: MF (BMNH), Amula, Guerrero, México.

REFERENCES:

Vejovis spinigerus var. *variegata*: Kraepelin, 1899: 187.
Vaejovis variegatus: Pocock, 1902: 11-12, tab. III, fig. 2, 2a-h; Baerg, 1934: 528; Beutelspacher, 2000: 112, 140, 142, 144, 154, map 94; Ponce Saavedra & Beutelspacher, 2001: 46, 48, 86, 100, Maps 30, 31.
Vejovis punctatus variegatus: Hoffmann, 1931: 347, 359-361; Díaz Najera, 1964: 20, 24, 26.
Vejovis variegatus: Bücherl, 1971: 329.
Vaejovis punctatus variegatus: Díaz Najera, 1975: 7, 24, 26 (part, Puebla record only); Kovarík, 1998: 147; Sissom, 2000:535.

DISTRIBUTION. NORTH AMERICA. México (Guerrero, México, Michoacán, Morelos, Puebla).

NOTES. This species was considered a subspecies of *V. punctatus* Karsch by Hoffmann (1931) and most subsequent authors. It was returned to species status by Beutelspacher (2000), who provided no justification for the change. Pending revision of the group, we continue to recognize *V. variegatus* as a subspecies of *punctatus*.

***Vaejovis puritanus* Gertsch, 1958**

Vejovis puritanus Gertsch, 1958: 11-13.
Holotype: M (AMNH), Santo Tomas, Baja California Norte, México.
Paratype: F (AMNH; allotype), Jacumba, San Diego County, California, USA.

SYNONYMS:
Vejovis schwenkmeyeri Williams, 1970b: 302-307, 313, fig. 16-17 (synonymized by Williams, 1980: 67).
Holotype: M (CAS, Type No. 10426), Bahía de Los Angeles, Baja California Norte, México.
Paratypes: 75M, 79F (CAS, including allotype F "Type No, 10426), same locality as holotype; 490 specimens (CAS), many localites between Puertecitos, Baja California Norte and La Purísima, Baja California Sur, México.
Vejovis terradomus Williams, 1970f: 403-407, fig. 5-6 (synonymized by Williams, 1980: 67).
Holotype: M (CAS, Type No. 10428), 1 mi SW Rancho Canipole, Baja California Sur, México.
Paratypes: 6M, 3F (CAS), same locality as holotype.

REFERENCES:
Vejovis schwenkmeyeri: Williams, 1970f: 397, 403, 410; Soleglad, 1973b: 359, tab. 4.
Vejovis puritanus: Soleglad, 1973b: 359, tab. 4.
Vejovis terradomus: Soleglad, 1973b: 359, tab. 4.
Vaejovis schwenkmeyeri: Díaz Najera, 1975: 7, 10
Vaejovis terradomus: Díaz Najera, 1975: 7, 17.
Vaejovis puritanus: Williams, 1976: 2; Williams, 1980: 54, 67-69, fig. 53N, 54M, 70, 71; Williams, 1986a: 355; Kovarík, 1998: 148; Beutelspacher, 2000: 106, 137, 138, 154, map 87; Sissom, 2000:535; Soleglad & Fet, 2003a: 9, 150, figs. 70, B-1.
Vaejovis puritanus "form" *schwenkmeyeri*: Beutelspacher, 2000: 106, 154, map 87.
Vaejovis puritanus "form" *terradomus*: Beutelspacher, 2000: 106, 154, map 87.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur), USA (southwestern California).

Vaejovis spinigerus (Wood, 1863)

Buthus spinigerus Wood, 1863a: 110.
Lectotype (designated by Cokendolpher & Peek, 1991: 98): M (USNM; S-9, Jar 3), "Texas", USA.
Paralectotypes: 1M, 1F (USNM; S-9, Jar 3), 2 M (USNM; S-10, Jar 3), same locality as lectotype.

SYNONYMS:
Vejovis spinigerus sonorensis Hoffmann, 1931: 351-353, fig. 22 (synonymized by Sissom, 1991a: 217).
Holotype: F (AMNH), Bacerac, Sonora, México.
Paratypes: 1M, 4F, 1 juv F (AMNH), 1M, 1F (IBUNM 052), same locality as holotype.

REFERENCES:
Buthus spinigerus: Wood, 1863b: 370.
Vejovis spinigerus: Kraepelin, 1894: 203 (part); Kraepelin, 1899: 185, 187 (part); Banks, 1900a: 425; Banks, 1901b: 588; Banks, 1910: 187; Pavlovsky, 1924: 80; Pavlovsky, 1925: 151; Ewing, 1928: 13; Hoffmann, 1931: 349-353; Gertsch, 1958: 7; Bücherl, 1964: 61; Williams, 1968a: 16; Williams, 1969b: 3-18; Williams, 1970b: 326; Bücherl, 1971: 329.
Vejovis spiniger (ISS): Marx, 1890: 91.
? *Vaejovis subcristatus* (MIS): Borelli, 1909: 225.
Vaejovis spinigerus: Borelli, 1915: 7; Werner, 1934: 282; Stahnke, 1974a: 135; Vachon, 1974: fig. 138, 163-165 (*spinigenus*; erratum); Williams, 1976: 2; Williams, 1980: 55, 69-70, fig. 55D, 66, 72; Cokendolpher & Peek, 1991: 98; Sissom, 1991a: 216-219, fig. 1-4; Yahia & Sissom, 1996: 86; Sissom, 1997: 13; Kovarík, 1998: 148; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 110, 137, 141, 146, map 91; Sissom, 2000:535-536; Hendrixson 2001: 49; Soleglad & Fet, 2003a: 9, 150, figs. 5, 69, B-1, Tab. 2; Soleglad & Fet, 2005: 5.
Vejovis spinigerus spinigerus: Hoffmann, 1931: 349-351.
Vaejovis spinigerus spinigerus: Díaz Najera, 1975: 7, 10.
Vaejovis spinigerus sonorensis: Díaz Najera, 1975: 7, 31; Vázquez & Zaragoza, 1979: 583; Beutelspacher, 2000: 110, 146, 154, map 91.
Vaejovis gravicaudus (MIS): Williams, 1980: 63 (Isla Tiburon record only).

DISTRIBUTION. México (Baja California Norte, Sonora), USA (Arizona, California, New Mexico, ?Texas).

NOTES. Aside from the type series, no published record exists that places *Vaejovis spinigerus* in Texas.

Vaejovis viscainensis Williams, 1970

Vejovis viscainensis Williams, 1970f: 410-413, fig. 9-10.
Holotype: M (CAS, Type No. 10429), 3.2 km N Miller's Landing, Baja California Norte, México.

Paratypes: 5M, 4F (CAS), same locality as holotype; 1F (CAS; allotype), 23 km S Guerrero Negro, Baja California Sur, México; additional specimens, several sites in Baja California Sur (San Angel, 13 mi W San Ignacio; 1 mi E Las Bombas, 2 mi E Las Bombas), México.

REFERENCES:
Vejovis viscainensis: Soleglad, 1973b: 359, tab. 4.
Paruroctonus viscainensis: Stahnke, 1974a: 138; Kovarík, 1998: 144.
Vaejovis viscainensis: Díaz Najera, 1975: 7, 10, 17; Williams, 1980: 54, 70-71, fig. 53O, 54L, 59, 73; Williams, 1986a: 355; Beutelspacher, 2000: 113, 137, 138, 154, map 95; Sissom, 2000:536; Soleglad & Fet, 2003a: 9, figs. 6, 70; Soleglad & Fet, 2005: 6.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur: Vizcaino Desert).

Vaejovis vittatus Williams, 1970

Vejovis vittatus Williams, 1970b: 290-297, fig. 10-12.
Holotype: M (CAS, Type No. 10430), 8.0 km SW San Miguel Comondú, Baja California Sur, México.
Paratypes: 1F (CAS; allotype), same locality as holotype; numerous MF from various localities in Baja California Sur, México.

REFERENCES:
Vaejovis vittatus: Díaz Najera, 1975: 7, 17; Williams, 1980: 54, 72-73, fig. 74, 75; Kovarík, 1998: 148; Beutelspacher, 2000: 113, 138, 154, map 96; Sissom, 2000:536; Soleglad & Fet, 2003a: 9, 161.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis waeringi Williams, 1970

Vejovis waeringi Williams, 1970f: 397-400, 401, fig. 1-2.
Holotype: M (CAS, Type No. 10431), Oakie Landing, 43 km S Puertecitos, Baja California Norte, México.
Paratypes: 179M, 54F (CAS; including F allotype “Type No. 10431”) same locality as holotype; 22M, 7F (CAS), San Felipe, Baja California Norte, México; 15M, 7F (CAS), Puertecitos, Baja California Norte, México; 2F (CAS), 4 mi W Rio Hardy Fishing Camp, Baja California Norte, México.

SYNONYMS:
Vejovis coloradensis Williams, 1970f: 401-403, fig. 3-4 (synonymized by Williams, 1980: 73).
Holotype: M (CAS, Type No. 10411), Andrade, Imperial County, California, USA.
Paratypes: 1M, 1F (allotype) (CAS), same locality as holotype; 2M (CAS), Glamis, California, USA; 2M (CAS), 19 mi W Calexico, California, USA; 2M (CAS), 10 mi E Calexico, California, USA; 2M, 2F (CAS), 2 mi S Algodones, Baja California Norte, México; 3M (CAS), Algodones, Baja California Norte, México.

REFERENCES:
Vejovis waeringi: Soleglad, 1973b: 359, tab. 4; Stahnke, 1974a: 135.
Vejovis coloradensis: Williams, 1970f: 397; Soleglad, 1973b: 359, tab. 4.
Vaejovis waeringi: Díaz Najera, 1975: 7, 11; Williams, 1980: 55, 73-74, fig. 53Q, 54K, 55C, 59, 76; Sissom, 1991a: 219; Kovarík, 1998: 148; Beutelspacher, 2000: 113, 137, 154, map 96; Sissom, 2000:536-537; Soleglad & Fet, 2003a: 9, 150, figs. 70, B-1.
Vaejovis coloradensis: Díaz Najera, 1975: 6, 14 (locality erroneously placed in México); Sissom, 1991a: 219.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte), USA (southern California).

Vaejovis waueri Gertsch & Soleglad, 1972

Vejovis *waueri* Gertsch & Soleglad, 1972: 605, fig. 145, 146.
Holotype: F (AMNH), The Basin, Chisos Mountains, Big Bend National Park, Brewster County, Texas, USA.

REFERENCES:
Vejovis bilineatus (MIS): Gertsch, 1939: 18.
Vaejovis waueri: Stahnke, 1974a: 136; Sissom & Francke, 1983a: 70; Yahia & Sissom, 1996: 86; Kovarík, 1998: 148; Sissom & Jackman, 1998: 151, 155; Beutelspacher, 2000: 116, 143, 154, map 97; Sissom, 2000:537; Hendrixson 2001: 47, 49, 52-54, figs. 1, 3.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua, Coahuila, Durango, Nuevo León), USA (Texas).

NOTES. The records of this species from Sonora (Gertsch & Soleglad, 1972: 605; Sissom, 1991a: 215; Beutelspacher, 2000) are referable to *V. pequeno* Hendrixson. The listing for Coahuila is based on a female specimen from Saltillo in the AMNH. Those for Durango are based on material from Tlahualito in the W. J. Baerg collection at the University of Arkansas (Baerg, 1929: 427).

II. *intrepidus* group

The *intrepidus* group consists of three species, one of which is regarded as polytypic. Aside from a paper revising the status of *Vaejovis subcristatus* Pocock and *V. occidentalis* Hoffmann (Sissom, 1989b), the group has not been evaluated since the time of Hoffmann (1931); his key is the only one available.

Vaejovis intrepidus is the largest of all vaejovids. The holotype, at 84 mm long, is the largest specimen of *Vaejovis* recorded to date. Published information suggests that the nominotypical subspecies exhibits a disjunct distribution: the eastern coast in the vicinity of Veracruz and the western coast in Colima. The records in Veracruz are most likely the result of labeling errors (O.F. Francke & E. González Santillán, personal observations).

Vaejovis intrepidus Thorell, 1876

Vejovis intrepidus Thorell, 1876a: 10 (erroneously indicated as type species of *Vaejovis*).

Holotype: F (NRS), “México”.

SYNONYMS:
Vaejovis cristimanus Pocock, 1898: 397 (synonymized by Hoffmann, 1931: 378; see *V. intrepidus cristimanus*).
Holotype: F (BMNH 85.40), Zacatecas, México.

REFERENCES:
Vejovis intrepidus: Thorell, 1876b: 183; Bücherl, 1971: 329; Ponce Saavedra & Beutelspacher, 2001: 73, Map 18.
Vaejovis mexicanus (MIS; part): Kraepelin, 1894: 199; Kraepelin, 1899: 185.
Vaejovis intrepidus: Pocock, 1902: 13.
Vaejovis intrepidus: Hoffmann, 1931: 373-385, fig. 30-35; Kovarík, 1998: 147; Beutelspacher, 2000: 89, 139, 140, 142, 143, 153, map 68; Sissom, 2000:537; Soleglad & Fet, 2003a: fig. 68; Soleglad & Fet, 2005: 5.

DISTRIBUTION. NORTH AMERICA. México (Aguascalientes, Colima, Guanajuato, Jalisco, Michoacán, Veracruz?, Zacatecas).

***Vaejovis intrepidus intrepidus* Thorell, 1876**

Vejovis *intrepidus* Thorell, 1876a: 10.

REFERENCES:
Vejovis intrepidus intrepidus: Hoffmann, 1931: 374-378, fig. 30-32; Williams & Hadley, 1967: 112.
Vaejovis intrepidus intrepidus: Díaz Najera, 1975: 7, 21, 33; Ponce Saavedra & Beutelspacher, 2001: 46, 48, 49, 100, Map 19; Sissom, 2000:538.
Vaejovis increpidus increpidus (ISS): Williams, 1986a: 355, 358.

DISTRIBUTION. NORTH AMERICA. México (Colima, Michoacán, Veracruz?).

***Vaejovis intrepidus atrox* Hoffmann, 1931**

Vejovis intrepidus atrox Hoffmann, 1931: 382-385, fig. 35.
Syntypes: 3 F, 3 juvs (AMNH?), Colima, Colima, México.

REFERENCES:
Vaejovis intrepidus atrox: Díaz Najera, 1975: 7, 21; Kovarík, 1998: 147; Beutelspacher, 2000: 92, 139, 143?, 153, map 68 (part); Ponce Saavedra & Beutelspacher, 2001: 46, 48, 49, 76, 101, Map 20; Sissom, 2000:538.

DISTRIBUTION. NORTH AMERICA. México (Colima, Michoacán).

NOTES. Beutelspacher's records of *V. intrepidus atrox* from Nayarit (p. 143) and San Luis Potosí (p. 145) are based on misidentifications of an undescribed species.

***Vaejovis intrepidus cristimanus* Pocock, 1898**

Vaejovis cristimanus Pocock, 1898: 397.
Holotype: F (BMNH 85.40), Zacatecas, México.

REFERENCES:
Vejovis cristimanus: Kraepelin, 1899: 184, 186; Kraepelin, 1901: 274; Pavlovsky, 1925: 198; Bücherl, 1964: 61; Bücherl, 1971: 328.
Vaejovis cristimanus: Pocock, 1902: 11, pl. III, fig. 1, 1a-d; Beutelspacher, 2000: 140, 141 (lapsus).
Vejovis intrepidus cristimanus: Hoffmann, 1931: 378-381, fig. 33-34; Hoffmann, 1938: 318;
Vejovis nitidulus intermedius (MIS): Díaz Najera, 1964: 25 (Jalisco record only).
Vaejovis intrepidus cristimanus: Díaz Najera, 1975: 7, 8, 26; Kovarík, 1998: 147; Beutelspacher, 2000: 92, 136, 140, 141, 145?, 153, map 68; Sissom, 2000:538; Ponce Saavedra & Beutelspacher, 2001: 46, 48, 49, 76, 101, Map 21; Soleglad & Fet, 2003a: 8, 161, fig. 8, Tab. 2.
Vaejovis nitidulus intermedius (MIS): Díaz Najera, 1975: 26 (Jalisco record only).

DISTRIBUTION. NORTH AMERICA. México (Aguascalientes, Guanajuato, Jalisco, Michoacán, Zacatecas).

NOTES. In several instances, Beutelspacher (2000) listed both *V. cristimanus* and *V. intrepidus cristimanus* (even on the same page). It is clear that he intended to recognize *cristimanus* as a subspecies of *intrepidus*, as it appears that way in the main body of the catalog.

***Vaejovis occidentalis* Hoffmann, 1931**

Vejovis subcristatus occidentalis Hoffmann, 1931: 385-388, fig. 36.
Holotype: F (AMNH), Acapulco, Guerrero, México.
Paratypes: 2F, 1 juv F (AMNH), same locality as holotype.

REFERENCES:
? *Vejovis subcristatus* (MIS): Penther, 1913: 247.
Vejovis subcristatus occidentalis: Hoffmann, 1938: 318; Díaz Najera, 1964: 20, 26.
Vejovis punctatus punctatus (MIS): Díaz Najera, 1964: 24 (part, Guerrero record only).
Vaejovis subcristatus occidentalis: Díaz Najera, 1975: 7, 24, 29; Williams, 1986a: 355, 358.
Vaejovis punctatus punctatus (MIS): Díaz Najera, 1975: 24 (part, Guerrero record only).
Vaejovis occidentalis: Sissom, 1989b: 180-185, fig. 1-2, 5-10; Kovarík, 1998: 147; Beutelspacher, 2000: 100, 140, 142?, 144, 153, map 80; Ponce Saavedra & Beutelspacher, 2001: 46, 49, 80, 100, Maps 24, 25; Sissom, 2000:538; Soleglad & Fet, 2003a: 9.

DISTRIBUTION. NORTH AMERICA. México (Guerrero, Michoacán, Oaxaca).

NOTES. Beutelspacher's (2000) record of *V. occidentalis* for Estado de México is undoubtedly an error. Although the record appears on his map (p. 104) and in his geographical listing for Estado de México (p. 145), the locality does not appear in the main catalog.

***Vaejovis subcristatus* Pocock, 1898**

Vaejovis subcristatus Pocock, 1898: 396.
Lectotype (designated by Stahnke, 1973: 95): M (BMNH 1890.7.1.246), San Andres (Tuxtla), Veracruz, México.
Paralectotypes: 2F (BMNH 1890.7.1.247 & 248), same locality as holotype.

REFERENCES:
Vejovis subcristatus: Kraepelin, 1899: 184, 186; Gertsch, 1958: 11; Bücherl, 1971: 328; Stahnke, 1973: 95-99, fig. 1A-C, 2A-C.
Vaejovis subcristatus: Pocock, 1902: 10-11, tab. II, fig. 6, 6a-b; Herrera, 1917: 271; Ewing, 1928: 14 (part); Baerg, 1934: 528; Sissom, 1989b: 185-186, fig. 3-4, 11-14; Kovarík, 1998: 148; Beutelspacher, 2000: 112, 144, 148, 154, map 92; Sissom, 2000:538; Soleglad & Fet, 2005: 5.
Vejovis subcristatus subcristatus: Hoffmann, 1931: 385; Hoffmann, 1938: 318.

DISTRIBUTION. NORTH AMERICA. México (Oaxaca, Puebla, Veracruz).

NOTES. Beutelspacher (2000) lists two records of *V. subcristatus* for Estado de México (p. 142): Teyuca and NE of Zacatepec. Both of these localities are derived from the records listed by Sissom (1989b) for the state of Puebla.

III. *mexicanus* group

What is now referred to as the *mexicanus* group is apparently a heterogeneous assemblage of species that cannot be assigned readily to other groups. They are grouped together on the basis of plesiomorphic characters, namely the possession of six rows of denticles on the chela fixed finger, the basal position of trichobothria *ib* and *it* on the fixed finger, stocky pedipalps, and moderately to well developed ventral metasomal carinae. Most species have dark mottling on a brownish background color.

The earliest treatment of this group was by Hoffmann (1931), but his work is very outdated. Soleglad (1973c) provided a diagnosis for the group and expanded it to include *Vaejovis vorhiesi* Stahnke and relatives from Arizona and *V. carolinianus* (Beauvois) from southeastern USA. Sissom (1989a) described six new Mexican species and revised two of the existing species, *V. granulatus* Pocock and *V. pusillus* Pocock. Additional work on this group is in progress (unpublished studies in New Mexico, Sissom; México, Sissom & Soleglad; and Arizona, Fritts & Sissom). There is no doubt that this group will prove to be very diverse as the mountain systems of México, especially the Sierra Madre Occidental are explored biologically.

Vaejovis vorhiesi and most of its relatives in Arizona and New Mexico inhabit mountainous (2100-2700m) slopes, where they are commonly encountered under stones among pine and oak litter. The Mexican species are associated with similar habitats and elevations. *Vaejovis carolinianus* is found in limestone outcroppings in the southeastern USA, where it may be found under logs, rocks, and in crevices. It is expected that many new species will be discovered in the largely unexplored Sierra Madres of México.

Vaejovis carolinianus (Beauvois, 1805)

Scorpio carolinianus Beauvois, 1805: 191, pl. V, fig. 3.
Holotype: M (MNHN?), "South Carolina", USA.

SYNONYMS:
Vaejovis carolinus C. L. Koch, 1842: 7, pl. CCCXXVII, fig. 759 (synonymized by Stahnke, 1974a: 135).
Syntypes: 4 specimens (formerly ZMB 9; now apparently lost; Moritz & Fischer, 1980: 312), "North America, Carolina", USA
?*Vaejovis asperulus* C. L. Koch, 1842: 11, pl. CCCXXVIII, fig. 761 (synonymized by Kraepelin, 1899: 185; under doubt).
Holotype: (lost), "possibly México".

REFERENCES:
Vejovis carolinianus: Karsch, 1879b: 134-135; Muma, 1967: 14, fig. 1, 11, 12; Stahnke, 1974a: 135.
Vejovis mexicanus carolinus: Kraepelin, 1894: 202.
Vejovis carolinus: Kraepelin, 1899: 184, 185; Banks, 1900a: 425; Banks, 1900b: 541-543; Comstock, 1912: 32; Werner, 1934: 282, fig. 360; Bücherl, 1964: 61; Bücherl, 1971: 328; Taylor, 1971: 80-82 (part), fig. 1; Soleglad, 1973b: 361.
Vaejovis carolinianus: Pocock, 1902: 24; Ewing, 1928: 14; Shelley, 1975a: 8-9, 2 fig.; Shelley, 1975b: 29-30, fig. 1; Rossman, 1979: 10-12, fig. 1; Sissom & Francke, 1985: 244; Shelley, 1994a: 45, 52-54 fig. 1-3; Shelley, 1994b: 57-68, fig. 1-2; Kovarík, 1998: 146; Sissom & Jackman, 1998: 151; Sissom, 2000:539-540; Soleglad & Fet, 2003a: 8, 160, fig. 72; Soleglad & Fet, 2005: 2.
Vaejovis carolinus: Moritz & Fischer, 1980: 312 (reference to lost types); Kovarík, 1998: 146.

DISTRIBUTION. NORTH AMERICA. USA (Alabama, Georgia, Kentucky, Louisiana, Mississippi, western North Carolina, western South Carolina, Tennessee, western Virginia).

NOTES.
1. Kraepelin (1894) originally treated both *V. asperulus* and *V. carolinus* C. L. Koch as synonyms of *V. mexicanus*, retaining *V. carolinus* as a subspecies. The synonymy of *Vaejovis asperulus* has not been reviewed since.
2. The species epithets "*carolinianus*" and "*carolinus*" have been used intermittently; however, "*carolinianus*" belongs to the senior synonym. The formal synonymy was made only by Stahnke (1974a).
3. *Vaejovis carolinianus* was considered a member of the *Vaejovis nitidulus* group by Sissom & Francke (1985). This species seems closer to *Vaejovis granulatus* and related species in México than to members of the *nitidulus* group. Further study is required to assess the relationship of these particular *mexicanus* group forms to members of the *nitidulus* group.

Vaejovis chamelaensis Williams, 1986

Vaejovis chamelaensis Williams, 1986a: 355-358, fig. 1
Holotype: M (CAS, Type No. 15744), Estación de Biología, Chamela (= 122 km N Manzanillo), Jalisco, México.
Paratypes: 7M (CAS; Type No. 15744), same locality as holotype.

REFERENCES
Vaejovis chamelaensis: Kovarík, 1998: 146; Beutelspacher, 2000: 76, 141, 152, map. 50; Sissom, 2000:530-531.

NOTES. Based on examination of the types (Sissom & Savary, unpub. data), *Vaejovis chamelaensis* is more appropriately placed at this time in the *mexicanus* group, along with its close relative *V. pattersoni*. It was previously placed in the *eusthenura* group by Williams (1986a).

DISTRIBUTION. NORTH AMERICA. México (Coastal Jalisco).

Vaejovis chiapas Sissom, 1989

Vaejovis chiapas Sissom, 1989a: 139-141, 157, fig. 20-28.
Holotype: F (CAS, Type No. 16107), Municipio Las Margaritas, 48 km NE Las Margaritas on road to Campo Alegre, Chiapas, México.
Paratypes: 1M, 2F (CAS), same locality as holotype; 1F (CAS), 8-10 km NNE La Soledad, near road between Las Margaritas and Campo Alegre, Chiapas, México.

REFERENCES:
Vaejovis chiapas: Kovarík, 1998: 146; Beutelspacher, 2000: 79, 139, 152, map 52; Sissom, 2000:540.

DISTRIBUTION. NORTH AMERICA. Guatemala, México (east of Chiapas).

Vaejovis chisos Sissom, 1990

Vaejovis chisos Sissom, 1990b: 48, 49-51, fig, 2A-G.
Holotype: F (AMNH), Kibbee Spring, Chisos Mountains, Big Bend National Park, Brewster County, Texas, USA.

REFERENCES:
Vaejovis chisos: Kovarík, 1998: 146; Sissom & Jackman, 1998: 151; Sissom, 2000:540; González Santillán & Sissom, 2004: 9; Jarvis et al. 2005: 207-211, figs. 1-4.

DISTRIBUTION. NORTH AMERICA. USA (Texas: Chisos Mountains).

Vaejovis dugesi Pocock, 1902

Vaejovis mexicanus dugesi Pocock, 1902: 9.
Holotype: F (BMNH), Guanajuato, México.

REFERENCES:
Vaejovis dugesi: Ewing, 1928: 12; Sissom, 1990b: 47-49, fig. 1A-G; Kovarík, 1998: 146; Beutelspacher, 2000: 80, 140, 153, map 54 (part); Sissom, 2000:540; González Santillán & Sissom, 2004: 9; Jarvis et al. 2005: 207.
Vaejovis mexicanus dugesi: Beutelspacher, 2000: 142 (*lapsus*).

Vejovis mexicanus dugesi: Hoffmann, 1931: 398; Gertsch, 1958: 6.

DISTRIBUTION. NORTH AMERICA. México (Guanajuato).

NOTES. *Vaejovis dugesi* was listed from the state of Michoacán by Beutelspacher (2000: 80, 142) and Ponce Saavedra & Beutelspacher (2001). This record is based on a misidentification (the specimen in question is referable to *Vaejovis monticola* Sissom). The type locality remains the only locality from which *V. dugesi* is known.

Beutelspacher (2000) listed both *V. dugesi* and *V. mexicanus dugesi* in his catalog to Mexican scorpions. It is clear from the main text that he accepted it as a full species.

Vaejovis franckei Sissom, 1989

Vaejovis franckei Sissom, 1989a: 150-152, 157, fig. 54-61.

Holotype: F (AMNH), Sierra Aloapaneca, 8-18 mi (via road) NNE San Juan del Estado, 8400-9700 ft, Oaxaca, México.

Paratypes: 2F (AMNH), El Punto, north of Continental Divide on road to Guelatao, 7000-7500 ft; juv F (MCZ), 17.6 mi S Ixtlan de Juarez, 7900 ft, in bromeliads); 2F (WDS), Cerro San Felipe, 10500 ft, México.

REFERENCES:

Vaejovis franckei: Kovarík, 1998: 146; Beutelspacher, 2000: 83, 144, 153, map 52; Sissom, 2000:540.

DISTRIBUTION. NORTH AMERICA. México (Oaxaca, Veracruz).

NOTES. Beutelspacher's (2000) record of *V. franckei* in Baja California Sur (p. 137) is clearly an error. He did not list a record from that state in the main body of the catalog or on his distributional map.

Vaejovis granulatus Pocock, 1898

Vaejovis granulatus Pocock, 1898: 398.

Holotype: F (BMNH 1880-32), “México”.

REFERENCES:

Vejovis granulatus: Kraepelin, 1899: 184, 186; ?Hoffmann, 1931: 389-392, fig. 37-38 (?MIS); Hoffmann, 1938: 318; Gertsch, 1958: 7; Bücherl, 1964: 61; Bücherl, 1971: 328; Williams, 1971a: 45; Soleglad, 1973b: 359, 361.

Vaejovis granulatus: Pocock, 1902: 10, Pl. II, fig. 4, 4a-b; Díaz Najera, 1975: 6, 22, 25; Sissom, 1989a: 132-135, 157, fig. 1-10, 65, 72-73; Sissom, 1990b: 47; Kovarík, 1998: 147; Beutelspacher, 2000: 85, 139, 141, 142, 153, map 60; Sissom, 2000:540; Soleglad & Fet, 2005: 5.

DISTRIBUTION. NORTH AMERICA. México (Distrito Federal, Estado de México, Morelos).

NOTES. The record of *V. granulatus* from Hidalgo (Hoffmann, 1931; Díaz Najera, 1975; Beutelspacher, 2000) is based on a misidentification (Sissom, 1989a). A record published

by Sissom (1989a, 2000) from Michoacán is probably based on a misidentification of *V. monticola*.

Vaejovis jonesi Stahnke, 1940

Vejovis jonesi Stahnke, 1940: 101.
Holotype: F (CAS, Type No. 15165), Wupatki National Monument, Coconino County, Arizona, USA.

REFERENCES:
Vejovis jonesi: Stahnke, 1974: 135.
Vaejovis jonesi: Sissom & Francke, 1985: 244; Sissom, 1997: 13; Kovarík, 1998: 147; Sissom, 2000:541; Soleglad & Fet, 2003a: 8, fig. 71; Soleglad & Fet, 2005: 2.

DISTRIBUTION. NORTH AMERICA. USA (northern Arizona, southeastern Utah).

NOTES. *Vaejovis jonesi* was considered a member of the *Vaejovis nitidulus* group by Sissom & Francke (1985). This species appears to be closer to *Vaejovis vorhiesi* and related species in Arizona than to members of the *nitidulus* group. Further study is required to assess the relationship of these species to those of the *nitidulus* group.

Vaejovis lapidicola Stahnke, 1940

Vejovis lapidicola Stahnke, 1940: 102.
Syntypes: 3F (CAS, Type No. 15171, HLS no. 74.0, HLS no. 71.1), 1M (CAS, Type No. 10170), 1 mi. E Flagstaff, Coconino County, Arizona, USA.

REFERENCES:
Vejovis lapidicola: Stahnke, 1974: 135.
Vaejovis lapidicola: Kovarík, 1998: 147; Sissom, 2000:541; Soleglad & Fet, 2005: 2.

DISTRIBUTION. USA (north central Arizona).

Vaejovis maculosus Sissom, 1989

Vaejovis maculosus Sissom, 1989a: 141-144, fig. 29-36, 74-75.
Holotype: M (AMNH), hills NE Zacatepec, 5-10 mi towards Totalca along MEX Hwy 140, Puebla, México.
Paratypes: 1F (AMNH); 1M, 1F (CAS); 14M, 4 F, 1 juv (WDS), same locality as holotype.

REFERENCES:
Vaejovis maculosus: Kovarík, 1998: 147; Beutelspacher, 2000: 95, 144, 153, map 71; Sissom, 2000:541.

DISTRIBUTION. México (Puebla).

Vaejovis mexicanus C. L. Koch, 1836

Vaejovis mexicanus C. L. Koch, 1836: 51, pl. XCI, fig. 206.
Syntypes: (numbers and sexes unknown), "México"; types are not in ZMB (M. Moritz, pers. comm., 1985) or the BMNH (J. Knight, pers. comm.), and may be lost.

REFERENCES:
Vaejovis (*Centrurus*) *mexicanus*: Gervais, 1844b: 50.
Vaejovis mexicanus: Pocock, 1898: 400; Pocock, 1902: 9, pl. II, fig. 3, 3a-c; Borelli, 1909: 224; Ewing, 1928: 12 (part); Borelli, 1915: 3; Kovarík, 1998: 147; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 95, 139, 141, 142, 144, 145?, 147?, 153, map 73; Sissom, 2000: 541; Soleglad & Fet, 2003a: fig. 72; Soleglad & Fet, 2005: 5.
Vejovis mexicanus: Kraepelin, 1894: 199 (part); Kraepelin, 1899: 184, 185 (part); Kraepelin, 1901: 274 (part, record from "México"); Hoffmann, 1931: 392-398, fig. 39-40; Gertsch, 1958: 5-7; Bücherl, 1964: 61; Gertsch & Soleglad, 1966: 2; Bücherl, 1971: 328; Williams, 1971a: 45; Soleglad, 1973b: 359, 361.

DISTRIBUTION. NORTH AMERICA. México (Distrito Federal, Estado de Mexico, Morelos).

NOTES. Previous records for this species in the United States (e.g., Banks, 1900a: 424; Chamberlin, 1921; Ewing, 1928: 10, 12) are based on misidentifications or erroneous locality data (some apparently referring to the Eagle Pass, Texas record from Marx collection). Ewing's (1928: 12) treatment of the species identifies only the subspecies *dugesi* (now a full species) and *smithi* in central México. For the nominal subspecies, Ewing lists erroneous records in the state of Durango in the Baerg collection [based on specimens of *V. coahuilae*; repeated by Baerg (1929: 427)]. Records for Hidalgo (Beutelspacher, 2000) and Guerrero (Source?) are also incorrect (E. González Santillán, pers. obs.).

***Vaejovis mexicanus mexicanus* C. L. Koch, 1836**

Vaejovis mexicanus C. L. Koch, 1836: 51, pl. XCI, fig. 206.

SYNONYMS:
?*Parabroteas montezuma* Penther, 1913: 244-245, fig. 5-7 (see Notes).
Syntypes: 3F (NMW), ?Acapulco, Guerrero, México.

REFERENCES:
Vejovis mexicanus mexicanus: Hoffmann, 1931: 394-396, fig. 39; Hoffmann, 1938: 318; Gertsch, 1958: 6; Díaz Najera, 1964: 20, 23, 24, 25.
?*Parabroteas montezuma*: Birula, 1917b: 139-140; Werner, 1934: 287.
Vaejovis mexicanus mexicanus: Díaz Najera, 1975: 7, 22, 25; Sissom, 2000: 541-542; Soleglad & Fet, 2003a: 8; Soleglad & Fet, 2005: 2.
?*Pentheria montezuma*: Kovarík, 1998: 128.

DISTRIBUTION. NORTH AMERICA. México (Distrito Federal: Valle de México, Estado de México).

NOTES. The types of *Parabroteas montezuma* have been studied by M. E. Soleglad (pers. comm.,1998), and it is his opinion that *P. montezuma* is conspecific with *Vaejovis*

mexicanus mexicanus. Consequently, the type locality for *P. montezuma*, originally questioned by Penther himself, seems dubious.

Beutelspacher's (2000) records of *V. mexicanus* (apparently meaning the subspecies *mexicanus*) from Morelos, San Luis Potosí, and Tamaulipas are probably all erroneous; the latter is based on a record from Cueva San Rafael de los Castros of "*Vaejovis* sp. (*mexicanus* group)" from Reddell & Mitchell (1971a).

***Vaejovis mexicanus smithi* Pocock, 1902**

Vaejovis mexicanus smithi Pocock, 1902: 9.
Holotype: juv M (BMNH), Cuernavaca, Morelos, México.

REFERENCES:
Vejovis mexicanus smithi: Hoffmann, 1931: 396-398, fig. 40; Hoffmann, 1938: 318; Gertsch, 1958: 6.
Vaejovis mexicanus smithi: Ewing, 1928: 12; Díaz Najera, 1975: 7, 27; Kovarík, 1998: 147; Beutelspacher, 2000: 95, 140, 142, 153, map 73; Sissom, 2000: 542.

DISTRIBUTION. NORTH AMERICA. México (Morelos).

NOTES. Hoffmann (1931) indicated that *V. mexicanus smithi* occurs in Guerrero, but no records support that contention.

***Vaejovis monticola* Sissom, 1989**

Vaejovis monticola Sissom, 1989a: 147-149, fig. 46-53, 78-79.
Holotype: F (MCZ), northern side of Nevado de Colima, Jalisco, México.
Paratypes: 1F (MCZ), Volcan de Colima, Colima, México; 2F (MCZ), same locality as holotype; 1F (WDS), Nevado de Colima, Jalisco, México; 1M (AMNH), Guadalajara, Jalisco, México.

REFERENCES:
Vaejovis monticola: Kovarík, 1998: 147; González Santillán & Sissom, 2004: 11; Beutelspacher, 2000: 97, 139, 141, 153, map 77; Sissom, 2000: 542; Soleglad & Fet, 2005: 7.
Vaejovis dugesi (MIS): Beutelspacher, 2000: 80, 142, map 54 (part); Ponce Saavedra & Beutelspacher, 2001: 46, 48, 49, 72-73, 101, Maps 16, 17.
?*Vaejovis granulatus* (MIS): Sissom, 1989a: 135 (part, record from Michoacán only); Sissom, 2000: 542 (part, record from Michoacán only).

DISTRIBUTION. NORTH AMERICA. México (Colima, southern Jalisco, Michoacán).

NOTES. Beutelspacher's (2000) records of *V. dugesi* and *V. granulatus* from Michoacán are based upon misidentified specimens of *V. monticola* (W.D. Sissom, E. González Santillán, unpublished data).

***Vaejovis nigrofemoratus* Hendrixson & Sissom, 2001**

Vaejovis nigrofemoratus Hendrixson & Sissom, 2001: 217-220, figs. 1-8.
Holotype: F (AMNH), Cofradia (8 mi SW San Vicente Lachixo), Oaxaca, México.

DISTRIBUTION: NORTH AMERICA. Mexico (Oaxaca).

Vaejovis pattersoni Williams, 1980

Vaejovis pattersoni Williams, 1980: 54, 65-66, fig. 56F, 69, 75.
Holotype: M (CAS, Type No. 12250), vicinity of La Laguna, 1707 m, Sierra de La Laguna, Baja California Sur, México.
Paratypes: 24 specimens (CAS; including F allotype), same locality as holotype.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

REFERENCES:
Vaejovis monticola: Kovarík, 1998: 147; Beutelspacher, 2000: 102, 138, 153, map 82; Sissom, 2000: 542.

NOTES. Williams (1980) placed this species in the *eusthenura* group. Examination of a topoparatype revealed that it is closely related to members of the *mexicanus* group (e.g., *V. granulatus* Pocock) from mainland México (W. D. Sissom, pers. obs.).

Vaejovis paysonensis Soleglad, 1973

Vejovis paysonensis Soleglad, 1973b: 363-371, fig. 16-22, 24, 26-28.
Holotype: F (AMNH), 25 mi NE Payson, Gila County, Arizona, USA.
Paratypes: 1M (AMNH; allotype), 7F, 1 sub F, 3 sub M (MES?), same locality as holotype.

REFERENCES:
Vaejovis paysonensis: Kovarík, 1998: 147; Sissom, 2000: 542; Soleglad & Fet, 2003a: 9, fig. 72; Soleglad & Fet, 2005: 2.

DISTRIBUTION. NORTH AMERICA. USA (central Arizona).

Vaejovis pusillus Pocock, 1898

Vaejovis pusillus Pocock, 1898: 399.
Lectotype: F (BMNH), Omiltemi, Guerrero, México.
Paralectotypes: M, F (BMNH), same locality as lectotype.

REFERENCES:
Vejovis pusillus: Kraepelin, 1899: 184, 185; Stahnke, 1974: 135; Bücherl, 1971: 328; Gertsch & Soleglad, 1972: 598.
Vaejovis pusillus: Pocock, 1902: 10, pl. II, fig. 5, 5a-c; Sissom, 1989a: 136-138, fig. 11-19 (part); Kovarík, 1998: 148 (part); Beutelspacher, 2000: 106, 140, 154, map 88 (part); Sissom, 2000: 543; Hendrixson & Sissom, 2001: 215-217.

DISTRIBUTION. NORTH AMERICA. México (Guerrero).

NOTES. Confusion surrounding the type specimens was discussed by Hendrixson & Sissom (2001). In that paper, the concept of the species was restricted to include only the type series. Material previously assigned to the species from Michoacán and Estado de México (Sissom, 1989a; Beutelspacher, 2000; Ponce Saavedra & Beutelspacher, 2001) are in need of further study to assess their species identities.

The specimen from Cofradia, Oaxaca listed by Sissom (1989a) and Beutelspacher (2000) is now assigned to a different species, *Vaejovis nigrofemoratus* Hendrixson & Sissom, 2001.

Vaejovis rossmani Sissom, 1989

Vaejovis rossmani Sissom, 1989a: 144-147, fig. 37-45, 76-77.
Holotype: M (AMNH), Rancho Nuevo, Tamaulipas, México.
Paratypes: numerous specimens (AMNH, FSCA, TMM, WDS) from various localities in Nuevo León and Tamaulipas, México.

REFERENCES:
Vaejovis rossmani: Kovarík, 1998: 148; Beutelspacher, 2000: 108, 143, 147, 154, map 71; Sissom, 2000: 543; González Santillán & Sissom, 2004: 11; Soleglad & Fet, 2005: 7.

DISTRIBUTION. NORTH AMERICA. México (southern Nuevo León, Tamaulipas).

Vaejovis setosus Sissom, 1989

Vaejovis setosus Sissom, 1989a: 152-154, 157, fig. 62-64, 66-71.
Holotype: F (AMNH), 3 mi SE Tlacolula (16o56'N, 96o25'W), Oaxaca, México.
Paratypes: juv F (AMNH), same locality as holotype; 1F (AMNH), Tlacolula, Oaxaca, México.

REFERENCES:
Vaejovis setosus: Kovarík, 1998: 148; Beutelspacher, 2000: 108, 144, 154, map 90; Sissom, 2000: 543.

DISTRIBUTION. NORTH AMERICA. México (Oaxaca).

Vaejovis sprousei Sissom, 1990

Vaejovis sprousei Sissom, 1990b: 48, 51-53, fig. 3A-G.
Holotype: F (AMNH), Conrado Castillo, Tamaulipas, México.

REFERENCES:
Vaejovis sprousei: Kovarík, 1998: 148; Beutelspacher, 2000: 110, 143, 147, 154, map 90; Sissom, 2000: 543; González Santillán & Sissom, 2004: 9-11, figs. 1-5; Jarvis et al. 2005: 207, 210.

DISTRIBUTION. NORTH AMERICA. México (Nuevo León, Tamaulipas).

Vaejovis tesselatus Hendrixson & Sissom, 2001

Vaejovis tesselatus Hendrixson & Sissom, 2001: 220-223, figs. 9-16.
Holotype: F (AMNH), Hwy 57 in Villa Hidalgo, San Luis Potosí, México.
Paratype: F (CAS), same locality as holotype.

DISTRIBUTION. NORTH AMERICA. México (San Luis Potosí).

Vaejovis vaquero Gertsch & Soleglad, 1972

Vejovis vaquero Gertsch & Soleglad, 1972: 604.
Holotype: sub F (AMNH), Arroyo del Alamo, Sierra del Nido, Chihuahua, México.

REFERENCES:
Vejovis vaquero: Soleglad, 1973b: 359, 363; Stahnke, 1974: 136.
Vaejovis vaquero: Díaz Najera, 1975: 7, 19; Kovarík, 1998: 148; Beutelspacher, 2000: 112, 139, 154, map 93; Sissom, 2000: 543.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua).

Vaejovis vorhiesi Stahnke, 1940

Vejovis vorhiesi Stahnke, 1940: 102.
Syntypes: 1F (CAS, Type No. 15172), Huachuca Mountains, Miller Canyon, Cochise County, Arizona, USA; 1M (CAS, Type No. 15172), Santa Catalina Mountains, Tucson, Pima County, Arizona, USA.

REFERENCES:
Vejovis vorhiesi: Soleglad, 1973b: 359, 361, 363-364; Stahnke, 1974: 135.
Vaejovis vorhiesi: Sissom, 1991a: 221-222; Sissom, 1997: 13; Kovarík, 1998: 148; Jarvis et al. 2005: 210; Sissom, 2000: 544; Soleglad & Fet, 2003a: 9, 160, fig. 71.

DISTRIBUTION. NORTH AMERICA. USA (southern Arizona)

IV. *nitidulus* group

The *nitidulus* group was established and diagnosed by Sissom & Francke (1985); this was followed by an additional treatment in which seven new species were described (Sissom, 1991b). Recently, Sissom & González Santillán (2004) updated distributional information for most of the species and provided a key to species. The species assigned to this group are crack and crevice dwellers inhabiting rocky and boulder-strewn slopes, rocky outcrops, vertical cliff faces, and similar habitats. They may be found under a variety of conditions, from desert slopes to montane forests. *Vaejovis gracilis* is troglobitic; this species has the pedipalps and metasoma extraordinarily elongated, as well as reduced eyes.

This group includes the recently described genus *Franckeus* Soleglad & Fet, 2005, based on those species with 3 *esb* trichobothria (Soleglad & Fet, 2005). These authors ignored other

apomorphic features of the *nitidulus* group which conflict with the trichobothrial character. Because no cladistic analysis of the group was performed using parsimony criteria, the validity of the group cannot be properly assessed. If the *nitidulus* group is monophyletic, recognition of *Franckeus* renders Soleglad & Fet's "*nigrescens* group" paraphyletic, being based on the plesiomorphic states of *Franckeus*.

***Vaejovis curvidigitus* Sissom, 1991**

Vaejovis curvidigitus Sissom, 1991b: 5-8, 10, fig. 1-10, 71, 72.
Holotype: M (AMNH), Taxco, Guerrero, México.
Paratypes: MF (AMNH, CAS, FMNH, USNM), Taxco, Guerrero; Cuernavaca and Tepoztlán, Morelos, México.

REFERENCES:
Vaejovis curvidigitus: Kovarík, 1998: 146; Beutelspacher, 2000: 79, 140, 142, 152, map 52; Sissom, 2000: 544; Sissom & González Santillán 2004: 4, 6; Soleglad & Fet, 2005: 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Guerrero, Estado de México, Morelos, Oaxaca).

***Vaejovis davidi* Soleglad & Fet, 2005**

Vaejovis davidi Soleglad & Fet, 2005: 2, 7-11, figs. 5, 7, Table 1.
Holotype: F (AMNH), Cueva de la Barranca, 8 km SW Cuetzalan, Puebla, Mexico.
Paratypes: F (AMNH), same locality as holotype; F (AMNH), Grutas de Jonotla, 7 km SW Cuetzalan, Puebla, Mexico.

REFERENCES:
Vaejovis gracilis: Soleglad, 1975: 108-119 (part: Puebla specimens only)(MIS).
Vaejovis, unnamed sp.: Sissom, 1986: 11.

***Vaejovis decipiens* Hoffmann, 1931**

Vejovis mexicanus decipiens Hoffmann, 1931: 349, 399-401, fig. 41.
Holotype: M (AMNH, C. C. Hoffmann Collection), Batopilas, Chihuahua, México.
Paratype: M (AMNH, C. C. Hoffmann Collection); specimen of unknown sex (IBUNAM 054), same locality as holotype.

REFERENCES
Vejovis mexicanus decipiens: Hoffmann, 1938: 318; Gertsch, 1958: 6.
Vaejovis mexicanus decipiens: Díaz Najera, 1975: 7, 19; Vázquez & Zaragoza, 1979: 583; Williams, 1980: 106-107.
Vaejovis decipiens: Sissom & Francke, 1985: 244, 259-262, fig. 34-43; Sissom, 1991a: 220-221, fig. 15-18; Sissom, 1991b: 24; Kovarík, 1998: 146; Beutelspacher, 2000: 80, 139, 146, 152, map 51; Sissom, 2000: 544; Capes, 2001:42, 43; Sissom & González Santillán 2004: 2, 4, 7; Soleglad & Fet, 2005: 2, 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua, southern Sonora).

NOTES. The type series originally consisted of 3 males, 4 females, and 2 juveniles; only three of these are currently known to exist.

Vaejovis gracilis Gertsch & Soleglad, 1972

Vejovis gracilis Gertsch & Soleglad, 1972: 603-604, fig. 24, 25, 80-83, 147-149.
Holotype: juv F? (AMNH), Cueva de Atoyac, Atoyac, Veracruz, México.

REFERENCES:
Vejovis gracilis: Reddell, 1973: 37.
Vaejovis gracilis: Soleglad, 1975: 107-120, fig. 1-32 (part: references to holotype only); Díaz Najera, 1975: 6, 33; Reddell, 1981: 114; Lourenço & Francke, 1985: 4, 5, 7; Sissom & Francke, 1985: 244; Sissom, 1986b: 11-14, fig. 1-12; Armas, 1994: 19, 21; Lourenço, 1994b: 182-183; Kovarík, 1998: 147; Beutelspacher, 2000: 85, 148, map 59 (part) ; Sissom, 2000: 544-545; Sissom & González Santillán 2004: 4, 7; Soleglad & Fet, 2005: 10, 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Veracruz).

NOTES. The juvenile holotype was suggested to be a female by Gertsch & Soleglad; however, its pectinal tooth count suggests that it is a male.

Beutelspacher's (2000) records from Oaxaca and Puebla are based on Soleglad's (1975) earlier misidentifications; see Sissom (1986) for a discussion.

Vaejovis intermedius Borelli, 1915

Vaejovis intermedius Borelli, 1915: 6.
Lectotype (designated by Sissom & Francke, 1985: 253): M (MIZT), Dinamita, Durango, México.
Paralectotypes: 2M, 3F (MIZT), same locality as lectotype.

REFERENCES:
Vejovis nitidulus intermedius: Hoffmann, 1931: 368-370, fig. 28; Hoffmann, 1937: 204; Hoffmann, 1938: 318; Gertsch, 1958: 5; Díaz Najera, 1964 (part): 20.
Vaejovis nitidulus intermedius (part): Díaz Najera, 1975: 7, 22.
Vaejovis intermedius: Sissom & Francke, 1985: 244, 253-258, fig. 24-33; Sissom, 1991b: 22, 24, fig. 73, 74; Kovarík, 1998: 147; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 89, 138, 139 (part), 140, 153, map 66 (part) ; Sissom, 2000: 545; Capes, 2001: 43; Sissom & González Santillán 2004: 4, 6; Soleglad & Fet, 2005: 2, 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Chihuahua, Coahuila, Durango, Nuevo León), USA (Texas).

NOTES. Hoffmann's (1931) record of *V. intermedius* from the Sierra de Guadalupe north of Mexico City (repeated by Díaz Najera, 1975: 22 and Beutelspacher, 2000: 89, 139) is either

referable to a different species or is a labeling error. The specimens could not be located for confirmation of their identity. Sissom (1991) suspected that they might be *V. nigrescens*, which closely resembles *V. intermedius* and occurs in parts of central Mexico. However, E. González Santillán (pers. obs.) is aware of only *V. granulatus* in the Sierra de Guadalupe, but suspects *V. mexicanus mexicanus* is also there.

As pointed out earlier (Sissom, 1991b), Díaz Najera's (1975) record of *V. intermedius* from San Juan de los Lagos, Jalisco (repeated by Beutelspacher, 2000) is based on a misidentification of *V. intrepidus cristimanus*; his record for Ixmiquilpan, Hidalgo is probably based on a misidentification of *V. nitidulus.* New records from Distrito Federal and Jalisco reported by Beutelspacher (2000) are also in error; another record based on a specimen from Vizarrón, Querétaro is referable to *V. nitidulus*.

Vaejovis janssi Williams, 1980

Vaejovis janssi Williams, 1980: 50, 105-106, 112, fig. 53A, 104.
Holotype: M (CAS, Type No. 12118), Isla Socorro, Archipielago de Revillagigedo, Baja California Sur, México.
Paratypes: 28 specimens (CAS; including F allotype "CAS, Type No. 12118"), same locality as holotype.

REFERENCES:
Vejovis mexicanus decipiens (MIS): Vasquez, 1960: 209-211.
Vaejovis janssi: Sissom & Francke, 1985: 244, 259; Williams & Berke 1986: 351; Kovarík, 1998: 147; Sissom, 2000: 545; Sissom & González Santillán 2004: 7; Soleglad & Fet, 2005: 11, figs. 7, 20-29, Table 1.
Vaejovis jansi (ISS): Beutelspacher, 2000: 92, 139, 153, map 66.

DISTRIBUTION. NORTH AMERICA. México (Archipielago de Revillagigedo in the Pacific Ocean south of Baja California Sur).

Vaejovis kochi Sissom, 1991

Vaejovis kochi Sissom, 1991b: 7, 8-10, 14, fig. 11-20.
Holotype: M (MNHN RS 4036), Progreso, Hidalgo, México.
Paratypes: 1M, 1F, 1 sub F (MNHN, WDS, AMNH), Cuautepec and 10 km NW Atotonilco El Grande, Hidalgo; Teotihuacan, Estado de México, México.

REFERENCES:
Vejovis nitidulus nigrescens (MIS; part?): Hoffmann, 1931: 366 (record from Pachuca, Hidalgo?); Hoffmann, 1937: 204; Díaz Najera, 1964: 24 (records from Hidalgo).
Vaejovis nitidulus nigrescens (MIS; part?): Díaz Najera, 1975: 25 (records from Hidalgo).
Vaejovis kochi: Kovarík, 1998: 147; Beutelspacher, 2000: 92, 140, 141, 153, map 71; Sissom, 2000: 545; Soleglad & Fet, 2003a: 41; Sissom & González Santillán 2004: 4, 6.
Franckeus kochi: Soleglad & Fet, 2005: 2, 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (Estado de Mexico, Hidalgo).

NOTES. The previous listing of the species in Distrito Federal (Sissom, 1991, 2000) was based on the erroneous assignment of Teotihuacan to D.F.

Vaejovis mauryi Capes, 2001

Vaejovis mauryi Capes, 2001: 43-45, figs. 1-11.
Holotype: M (CAS), 28°55'N: 109°45W, Sonora, México.
Paratypes: F, subadult F (CAS) from same locality as holotype.

REFERENCES:
Vaejovis mauryi: Sissom & González Santillán 2004: 7; Soleglad & Fet, 2005: 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. MÉXICO (Sonora).

Vaejovis minckleyi Williams, 1968

Vejovis minckleyi Williams, 1968: 21-24, fig. 11-12.
Holotype: M (CAS, Type No. 10173), 5.3 km NW Cuatro Cienegas, Coahuila, México.
Paratype: M (CAS, Type No. 10173), second canyon from eastern tip of San Marcos Mountain, 12 km SW Cuatro Cienegas, Coahuila, México.

REFERENCES:
Vejovis minckleyi: Soleglad, 1972: 180; Soleglad, 1973b: 357.
Paruroctonus minckleyi: Stahnke, 1974: 138; Kovarík, 1998: 144.
Vaejovis minckleyi: Sissom & Francke, 1985: 244, 245, 262-264, fig. 44-53; Sissom, 1991b: 19; Kovarík, 1998: 147; Beutelspacher, 2000: 95, 138, 153, map 74; Sissom, 2000: 545-546; Soleglad & Fet, 2003a: 41, fig. 80; Sissom & González Santillán 2004: 2, 6.
Franckeus minckleyi: Soleglad & Fet, 2005: 1, 2, 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (Coahuila: Cuatro Cienegas area).

Vaejovis mitchelli Sissom, 1991

Vaejovis mitchelli Sissom, 1991b: 10-12, 17, fig. 21-30, 79, 80.
Holotype: M (AMNH), 8 mi W Jalpan, Querétaro, México.
Paratypes: 1M, 2F (AMNH, O. F. Francke Collection), 1F (WDS), same locality as holotype; 1M (WDS), Cueva de Cristian (= 4 mi E Xilitla), San Luis Potosí, México.

REFERENCES:
Vaejovis mitchelli: Kovarík, 1998: 147; Beutelspacher, 2000: 97, 145, 153, map 74; Sissom, 2000: 546; Sissom & González Santillán 2004: 5, 6; Soleglad & Fet, 2005: 11, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Querétaro, San Luis Potosí).

Vaejovis nigrescens Pocock, 1898

Vaejovis nigrescens Pocock, 1898: 396.
Holotype: F (BMNH), “México”.

REFERENCES:
Vejovis nitidulus (MIS; part): Kraepelin, 1899: 185, 186; Kraepelin, 1901: 274 (part).
Vaejovis nitidulus (MIS): Pocock, 1902: 12-13, pl. III, fig. 3, 3a-c.
Vejovis nitidulus nigrescens (part): Hoffmann, 1931: 365-368, fig. 27 (“records” from Guanajuato, Jalisco, Michoacán, Aguascalientes, Zacatecas); Hoffmann, 1937: 204; Hoffmann, 1938: 318; Gertsch, 1958: 5; Díaz Najera, 1964: 20, 25, 29.
Vaejovis nitidulus nigrescens (part): Díaz Najera, 1975: 7, 22, 26, 34.
Vaejovis nitidulus nitidulus (MIS; part): Díaz Najera, 1975: 23 (record from León, Guanajuato only).
Vaejovis nigrescens: Sissom & Francke, 1985: 244, 249-253, 255, fig. 14-23; Sissom, 1991b: 10, 17, 22, 24, fig. 75, 76; Kovarík, 1998: 147; Beutelspacher, 2000: 100, 136, 140, 141 (part), 142 (part), 145 (part), 148, 153, map 78; Ponce Saavedra & Beutelspacher, 2001: 46, 48, 49, 78, 101, Maps 22, 23; Sissom, 2000: 546; Soleglad & Fet, 2003a: 8, fig. 71; Sissom & González Santillán 2004: 5, 7; Soleglad & Fet, 2005: 11, Fig. 7, Table 1.

DISTRIBUTION. México (Aguascalientes, Guanajuato, Jalisco, Querétaro, Estado de México, Michoacán, Zacatecas).

NOTES. Beutelspacher's (2000) record of this species from Hidalgo are based on misidentifications of *V. nitidulus*; his records from Morelos, Oaxaca, and Puebla are probably all erroneous. The listing of the species from Distrito Federal by Sissom (1991, 2000) was based on the suggestion that Hoffmann's specimens of *V. nitidulus intermedius* were misidentified as *V. nigrescens*. Alternately, E. González Santillán (pers. observation) suggests the specimens are *V. mexicanus mexicanus* or are mislabeled. The specimens are apparently lost.

Vaejovis nitidulus C. L. Koch, 1842

Vaejovis nitidulus C. L. Koch, 1842: 4, pl. CCCXXVII, fig. 758.
Lectotype (designated by Sissom & Francke, 1985: 245): F (ZMB 10a), “México”.

REFERENCES:
Vaejovis nitidulus: Peters, 1861: 510; Karsch, 1879b: 135; Borelli, 1915: 7; Moritz & Fischer, 1980: 320.
Vejovis nitidus (ISS): Thorell, 1876b: 186.
Vejovis spinigerus (MIS; part): Kraepelin, 1894: 202.
Vejovis nitidulus: Kraepelin, 1901: 274 (part?); Bücherl, 1971: 329; Stahnke, 1974: 135.
Vaejovis nitidulus nitidulus: Díaz Najera, 1975: 7 (all records listed for the species are erroneous or questionable).
Vejovis nitidulus intermedius (MIS; part): Díaz Najera, 1964: 24 (record from Ixmiquilpan, Hidalgo).
Vaejovis nitidulus intermedius (MIS; part): Díaz Najera, 1975: 25 (record from Ixmiquilpan, Hidalgo).

Vaejovis nitidulus: Sissom & Francke, 1985: 244-249, 263, fig. 1-13; Sissom, 1986b: 14; Sissom, 1991b: 12, 17, 22, fig. 81-82; Fet et al., 1998: 613, 614, fig. 3, 9; Kovarík, 1998: 147; Beutelspacher, 2000: 100, 141, 142 (part), 145, 153, map 79; Sissom, 2000: 546; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 9, 41, 67, 142, 160, figs. 6, 71, 80, Tabs. 3, 4; Sissom & González Santillán 2004: 5, 6.
Franckeus nitidulus: Soleglad & Fet, 2005: 2, 5, 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (Hidalgo, eastern Querétaro).

NOTES. The type series consisted of four specimens, only two of which have been found in the ZMB (Sissom & Francke, 1985). The second specimen is not referable to *V. nitidulus*.
Beutelspacher's (2000) records for Colima, Guanajuato, Michoacán, Estado de México (Ixtapan de la Sal), and Puebla are all in error.

Vaejovis norteno Sissom & González Santillán, 2004

Vaejovis norteno Sissom & González Santillán, 2004: 2-4, 7, figs. 1-5.
Holotype: M (AMNH), Cueva Oyamel, Mesa Colorado, Laguna de Sanchez, Nuevo León, México.
Paratypes: F (AMNH), Cueva de los Llanitos, 1700 m N Los Llanitos (=5 km NW Mesa de las Tablas), Ejido el Potrero, Coahuila, México; F, 3 juv. FF (AMNH), Cueva San Francisco de Asis, Chipinque, Nuevo León, México; F, 1 2nd instar (TMM), Hoya Aporrear, Mesa de la Colorada, Laguna de Sanchez, Nuevo León, México.

REFERENCES:
Vaejovis norteno: Soleglad & Fet, 2005: 2, 12, Table 1

DISTRIBUTION. NORTH AMERICA. México (Coahuila, Nuevo León).

NOTES. This species is reported from several caves, and should be regarded as a troglophile.

Vaejovis peninsularis Williams, 1980

Vaejovis peninsularis Williams, 1980: 50, 90, 105, 111-112, fig. 53B, 54A, 107.
Holotype: M (CAS, Type No. 12121), 13 km N San Raymundo, Baja California Sur, México.
Paratypes: 1F (allotype, "CAS, Type No. 12121"), same locality as holotype; numbers and sexes unspecified (CAS), 8 km N San Ignacio Mission, San Ignacio Mission, 13 Km N San Raymundo, and 5.6 km NE San Ysidro, Baja California Sur, México.

REFERENCES:
Vaejovis peninsularis: Sissom & Francke, 1985: 244; Williams & Berke, 1986: 351; Sissom, 1991b: 25-26; Kovarík, 1998: 147; Beutelspacher, 2000: 102, 138, 153, map 83; Sissom, 2000: 546-547; Sissom & González Santillán 2004: 6.
Franckeus peninsularis: Soleglad & Fet, 2005: 2, 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis platnicki Sissom, 1991

Vaejovis *platnicki* Sissom, 1991b: 10, 12-15, fig. 31-40.
Holotype: F (AMNH), Guayalejo, Tamaulipas, México.
Paratypes: 1F, 3 first instars (AMNH), 1F (WDS), same locality as holotype; sub F (USNM), Tampico, Tamaulipas; sub F (AMNH), 17 mi S Victoria, Tamaulipas; 1F (JAN), 25 km S Victoria, Tamaulipas; 1F (WDS), km 190 on Highway 85, Tamaulipas, México; 1F (WDS), El Tinieblo, San Luis Potosí, México.

REFERENCES:
Vaejovis platnicki: Kovarík, 1998: 147; Beutelspacher, 2000: 102, 145, 147, 153, map 80; Sissom, 2000: 547; Soleglad & Fet, 2003a: 41, fig. 80; Sissom & González Santillán 2004: 6.
Franckeus platnicki: Soleglad & Fet, 2005: 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (San Luis Potosí, Tamaulipas).

***Vaejovis pococki* Sissom, 1991**

Vaejovis pococki Sissom, 1991b: 15-17, fig. 41-50, 83, 84
Holotype: F (MNHN RS 4288), Querétaro (City), Querétaro, México.
Paratypes: 3F (MNHN), same locality as holotype; 1M (MEB), 8 km NW border Guanajuato-Querétaro states; 1F (SMI), Querétaro; 1M, 1F (WDS), Querétaro, México; 1F (WDS), 32 km S San Luis Potosí, San Luis Potosí; juv (AMNH, O. F. Francke Collection), Villa Hidalgo, San Luis Potosí; 1F (MCZ), Alvarez, San Luis Potosí, México.

REFERENCES:
Vejovis nitidulus nigrescens (MIS; part?): Hoffmann, 1931: 366 ("records" from Querétaro, San Luis Potosí?)
Vejovis nitidulus nitidulus (MIS; part): Díaz Najera, 1964: 27.
Vaejovis nitidulus nitidulus (MIS; part): Díaz Najera, 1975: 30.
Vaejovis nitidulus nigrescens (MIS; part); Díaz Najera, 1975: 30.
Vaejovis pococki: Kovarík, 1998: 147; Beutelspacher, 2000: 102, 145, 153, map 88; Sissom, 2000: 547; Sissom & González Santillán 2004: 5, 6; Soleglad & Fet, 2005: 12, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Guanajuato, San Luis Potosí, Querétaro).

Vaejovis *rubrimanus* Sissom, 1991

Vaejovis rubrimanus Sissom, 1991b: 17-20, fig. 51-60.
Holotype: M (AMNH), Gruta Sur de San Bartolo, ca. 3 mi S Santa Catarina, Nuevo León, México.
Paratypes: 2F (WDS), Cañon de Huasteca, Nuevo León, México.

REFERENCES:
Vaejovis rubrimanus: Kovarík, 1998: 148; Beutelspacher, 2000: 108, 143, 154, map 88; Sissom, 2000: 547; Soleglad & Fet, 2003a: 41; Sissom & González Santillán 2004: 2, 5, 6.
Franckeus rubrimanus: Soleglad & Fet, 2005: 2, 7, Figs. 6, 9.

DISTRIBUTION. NORTH AMERICA. México (Nuevo León).

Vaejovis solegladi Sissom, 1991

Vaejovis solegladi Sissom, 1991b: 20-22, fig. 61-70, 77, 78.
Holotype: M (AMNH, C. C. Hoffmann Collection), Cuicatlán, Oaxaca, México.
Paratypes: 1M, 1F, juv (AMNH, C. C. Hoffmann Collection), same locality as holotype; 2F (MES MX-131), 5.8 mi N Teotitlán, Oaxaca; juv M (AMNH), 30 mi N Telixtlahuaca, Oaxaca, México; 1M (UCB), 6 mi N Tehuacán, Puebla, México.

REFERENCES:
Vejovis nitidulus nitidulus (MIS): Hoffmann, 1931: 371-372, fig. 29; Hoffmann, 1938: 318.
Vaejovis nitidulus nitidulus (MIS; part): Díaz Najera, 1975: 29.
Vaejovis solegladi: Kovarík, 1998: 148; Beutelspacher, 2000: 108, 144, 154, map 92; Sissom, 2000: 547; Soleglad & Fet, 2003a: 9, 160, figs. 71, 80; Sissom & González Santillán 2004: 5, 6; Soleglad & Fet, 2005: 12, Fig. 7, Table 1.

DISTRIBUTION. NORTH AMERICA. México (Oaxaca, Puebla).

V. *punctipalpi* group

The *punctipalpi* group was established and diagnosed by Williams (1971c), although there are earlier references to it by that author. A key to the species in Baja California was provided by Williams (1980), but no key exists for those outside the area. The species of this group are burrowers in a variety of soil types.

Vaejovis bruneus Williams, 1970

Vejovis bruneus Williams, 1970b: 317-322, fig. 24-25.
Holotype: M (CAS, Type No. 10410), 8.0 km SW San Miguel de Comondú, Baja California Sur, México.
Paratypes: 124M, 50F (CAS; including F allotype), same locality as holotype; 23M, 3F (CAS), 8 mi NW San Raymundo; 117M, 30F (CAS), 5-10 mi SW San Miguel de Comondú, Baja California Sur, México.

REFERENCES:
Vaejovis bruneus: Williams, 1971c: 57; Díaz Najera, 1975: 6; Williams, 1980: 54, 80-82, fig. 57E-F, 82-84; Kovarík, 1998: 146; Beutelspacher, 2000: 74, 137, 152, map 49; Sissom, 2000: 548; Soleglad & Fet, 2003a: 8, fig. 68.
Vejovis bruneus: Soleglad, 1973b: 357.
Vaejovis broneus (ISS): Díaz Najera, 1975: 13.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis *bruneus bruneus* Williams, 1970

Vejovis bruneus Williams, 1970b: 317-322, fig. 24.

REFERENCES:
Vaejovis bruneus bruneus: Williams, 1971c: 51, 54; Williams, 1980: 54, 81, fig. 82-83; Sissom, 2000: 548.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis bruneus loretoensis* Williams, 1971**

Vaejovis bruneus loretoensis Williams, 1971c: 54-57.
Holotype: M (CAS, Type No. 11466), San Ignacio, Baja California Sur, México.
Paratypes: 16 specimens (CAS; including F allotype "Type No. 11466), same locality as holotype; additional paratypes from numerous localities in Baja California Sur and Isla Coronado, México.

REFERENCES:
Vaejovis bruneus loretoensis: Díaz Najera, 1975: 6; Williams, 1980: 54, 81, fig. 57E, 83, 84; Kovarík, 1998: 146; Sissom, 2000: 548.
Vaejovis broneus (ISS) *loretoensis*: Díaz Najera, 1975: 13.
Vaejovis bruneus "form" *loretoensis*: Beutelspacher, 2000: 74, 137, 152, map 49.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis bruneus villosus* Williams, 1971**

Vaejovis bruneus villosus Williams, 1971c: 51-54.
Holotype: M (CAS, Type No. 11467), 8.0-16.1 km SW San Miguel de Comondú, Baja California Sur, México.
Paratypes: 14 specimens (CAS; including F allotype "Type No. 11467"), same locality as holotype; additional paratypes from numerous localities from Mission San Borja in Baja California Norte to Puerto Escondido in Baja California Sur, as well as some of the Gulf of California Islands.

REFERENCES:
Vaejovis bruneus villosus: Díaz Najera, 1975: 6; Williams, 1980: 54, 81-82, fig. 57F, 83, 84; Kovarík, 1998: 146; Sissom, 2000: 548.
Vaejovis broneus (ISS) *villosus*: Díaz Najera, 1975: 13-14.
Vaejovis bruneus "form" *villosus*: Beutelspacher, 2000: 76, 137, 152, map 49.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte, Baja California Sur).

***Vaejovis cazieri* Williams, 1968**

Vejovis cazieri Williams, 1968a: 12-15, fig. 7-8.
Holotype: M (CAS, Type No. 10169), 0.5 km SW Cuatro Cienegas de Carranza, Coahuila, México.
Paratypes: 19M, 3F (CAS; including F allotype, CAS, Type No. 10169); 3M, 2F (CAS), vicinity of Cuatro Cienegas, Coahuila, México.

REFERENCES:
Vejovis cazieri: Williams, 1971a: 44; Soleglad, 1973b: 357.
Vaejovis cazieri: Díaz Najera, 1975: 6, 20; Kovarík, 1998: 146; Beutelspacher, 2000: 76, 138, 152, map 50; Sissom, 2000: 549; Soleglad & Fet, 2003a: 8, fig. 68.
Vaejovis crassimanus (MIS): Sissom, 1991b: 20.

DISTRIBUTION. NORTH AMERICA. México (Coahuila, Nuevo León).

Vaejovis crassimanus Pocock, 1898

Vaejovis crassimanus Pocock, 1898: 397.
Lectotype (designated by Williams, 1971: 44): F (BMNH), "San Diego, Texas".

REFERENCES:
Vejovis crassimanus: Kraepelin, 1899: 185; Bücherl, 1964: 61; Williams, 1971a: 44-47, fig. 1-2.
Vaejovis crassimanus: Borelli, 1915: 3; Díaz Najera, 1975: 6, 22; Sissom, 1997: 13; Kovarík, 1998: 146; Sissom & Jackman, 1998: 151; Beutelspacher, 2000: 79, 140, 152, map 51; Sissom, 2000: 549.

DISTRIBUTION. NORTH AMERICA. México (Durango, Nuevo León), USA (southern and southwestern Texas, southern New Mexico).

NOTES. A syntype F (BMNH), from the same locality as the lectotype, is not referable to *V. crassimanus* (Williams, 1971).

Vaejovis hirsuticauda Banks, 1910

Vejovis hirsuticauda Banks, 1910: 187, 189, fig. J.
Holotype: F (MCZ), San Bernardino County, California, USA.

REFERENCES:
Vejovis hirsuticauda: Cox, 1921: 13; Gertsch & Allred, 1965: 8; Soleglad, 1973b: 357; Stahnke, 1974a: 135.
Vaejovis hirsuticauda: Ewing, 1928: 10; Williams, 1976: 2; Williams, 1980: 53, 83-84, fig. 56D, 83, 85; Sissom, 1991a: 221-222; Kovarík, 1998: 147; Beutelspacher, 2000: 88, 137, 153, map 64; Sissom, 2000: 549; Soleglad & Fet, 2003a: 8, 150, figs. 68, B-1.

DISTRIBUTION. NORTH AMERICA. México (Baja California Norte), USA (Arizona, California, Nevada, Utah).

Vaejovis insularis Williams, 1971

Vejovis insularis Williams, 1970b: 318, 322-325, fig. 26-27.
Holotype: M (CAS, Type No. 10422), Isla Partida (large central valley), Baja California Sur, México.
Paratypes: 2M, 2F (CAS; including F allotype Type No. 10422), same locality as holotype; 2F (CAS), Isla Partida; 1M, 1F (CAS), Isla Espiritu Santo, Baja California Sur, México.

REFERENCES:
Vejovis insularis: Soleglad, 1973b: 357.
Vaejovis insularis: Díaz Najera, 1975: 7, 15; Williams, 1980: 54, 84-86, fig. 56E, 83, 86; Kovarík, 1998: 147; Beutelspacher, 2000: 88, 137, 153, map 64; Sissom, 2000: 549.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: Isla Partida and Isla Espiritu Santo).

***Vaejovis magdalensis* Williams, 1971**

Vejovis *magdalensis* Williams, 1971c: 40, 47-51, fig. 2.
Holotype: M (CAS, Type No. 11468), 121 km NW La Paz, along road to Ciudad Constitución (= El Crucero), Baja California Sur, México.
Paratypes: 13M, 9F (CAS; including F allotype "Type No. 11468"), same locality as holotype; additional paratypes from other localities in Magdalena Plain in Baja California Sur, México.

REFERENCES:
Vejovis magdalensis: Soleglad, 1973b: 357.
Vaejovis magdalensis: Díaz Najera, 1975: 7, 15; Williams, 1980: 53, 86, fig. 56B, 87, 88.
Vaejovis magdalenensis (ISS): Kovarík, 1998: 147; Beutelspacher, 2000: 95, 138, 153, map 72; Sissom, 2000: 549-550.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis punctipalpi* (Wood, 1863)**

Buthus punctipalpi Wood, 1863a: 109.
Lectotype (designated by Cokendolpher & Peek, 1991: 97-98): F (USNM; S-2, jar 1), Cabo San Lucas, Baja California Sur, México.
Paralectotype: M (USNM; S-1, jar 1), same locality as lectotype.

REFERENCES:
Buthus punctipalpi: Wood, 1863b: 369-370; Underwood, 1885: 165.
Vejovis punctipalpis (ISS): Marx, 1890: 91.
Vejovis mexicanus (MIS): Kraepelin, 1894: 199; Kraepelin, 1899: 184-185 (part).
Vejovis punctipalpi: Banks, 1900a: 424 (part); Banks, 1910: 189 (part); Hoffmann, 1931: 402; Comstock, 1940: 31 (part); Soleglad, 1973b: 357; Stahnke, 1974a: 135.
Vaejovis punctipalpis (ISS): Ewing, 1928: 10 (part).
Vaejovis punctipalpus (ISS): Ewing, 1928: 10-11 (part).
Vejovis punctipalpus (ISS): Gertsch, 1958: 9-11; Gertsch & Soleglad, 1966: 1; Williams, 1970b: 318, 322.
Vaejovis punctipalpi: Williams, 1971c: 40; Williams, 1980: 53, 86-87; Cokendolpher & Peek, 1991: 97-98; Kovarík, 1998: 147; Beutelspacher, 2000: 103, 138, 154, map 86; Sissom, 2000: 550; Soleglad & Fet, 2003b: 6, figs. 7, 30; Soleglad & Fet, 2003a: 9, 67, 150, 161, figs. 6, 68, 105, B-1, Tabs. 3, 4.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

NOTES. In addition to the lectotype and paralectotype, a third specimen exists in the USNM (S-3, jar 1) from “Cape San Lucas, Lower California”. This specimen was previously thought to be one of Xantus de Vesey’s syntypes. It may represent a specimen considered part of the type series by Marx (1890a), and labeled accordingly. Unlike the two genuine types, the label for specimen S-3 is clearly not in Wood’s handwriting (Cokendolpher & Peek 1991). It appears to be conspecific with the MCZ (Harvard University) specimen previously thought to be the holotype of *V. flavus* Banks (see under *V. flavus* for additional details on this matter). Specimen S-3 is not referable to *V. punctipalpi* (Wood) or to any other known taxon.

***Vaejovis punctipalpi punctipalpi* (Wood, 1863)**

Buthus punctipalpi Wood, 1863a: 109.

REFERENCES:
Vaejovis punctipalpi punctipalpi: Williams, 1971c: 40-44, fig. 1; Williams, 1980: 53, 87-88, fig. 51, 52, 53L, 56A, 57 (A-B), 88, 89; Sissom, 2000: 550.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis punctipalpi barbatus* Williams, 1971**

Vaejovis punctipalpi barbatus Williams, 1971c: 45-47, fig. 1.
Holotype: F (CAS, Type No. 11469), Las Cruces, Baja California Sur, México.
Paratypes: 15M, 10F (CAS; including M allotype “Type No. 11469”), same locality as holotype; numerous additional specimens listed in original description (but not specifically designated as paratypes) from other localities in Baja California Sur, México.

REFERENCES:
Vaejovis punctipalpi barbatus: Williams, 1980: 53, 88, fig. 57C, 88; Kovarík, 1998: 148.
Vaejovis punctipalpi "form" *barbatus*: Beutelspacher, 2000: 103, 138, 154, map 86; Sissom, 2000: 550.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

***Vaejovis punctipalpi cerralvensis* Williams, 1971**

Vaejovis punctipalpi cerralvensis Williams, 1971c: 47.
Holotype: M (CAS, Type No. 11470), Bahía Limona, Isla Cerralvo, Baja California Sur, México.
Paratypes: 12M, 8F (CAS; including F allotype “Type No. 11470”), same locality as holotype; 1M (CAS), Isla Cerralvo, SW end of island; 8M, 6F (CAS), Isla Cerralvo, Piedras Gordas, Baja California Sur, México.

REFERENCES:

Vaejovis punctipalpi cerralvensis: Díaz Najera, 1975: 7, 16; Williams, 1980: 53, 88, fig. 88; Kovarík, 1998: 148; Beutelspacher, 2000: 103, 138, 154, map 86; Sissom, 2000: 550-551.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

Vaejovis russelli Williams, 1971

Vaejovis russelli Williams, 1971c: 59-62, fig. 4.
Holotype: M (CAS, Type No. 11471), Portal, Cochise County, Arizona, USA.
Paratypes: 7 specimens (CAS; including F allotype, Type No. 11471), same locality as holotype.

REFERENCES:
Vaejovis punctipalpi (MIS): Banks, 1901a: 594.
Vejovis russelli: Soleglad, 1973b: 357.
Vaejovis russelli: Bradley & Brody, 1984: 437-440; Sissom, 1991a: 221-222; Sissom, 1997: 13; Kovarík, 1998: 148; Sissom & Jackman, 1998: 151; Sissom, 2000: 551.

DISTRIBUTION. NORTH AMERICA. USA (Arizona, New Mexico, Texas).

Vaejovis sonorae Williams, 1971

Vaejovis sonorae Williams, 1971c: 57-59, fig. 3.
Holotype: M (CAS, Type No. 11472), 11.2 mi W Alamos, Sonora, México.
Paratypes: 1M (CAS, Type No. 11472), 7 mi SE Alamos; 1M (CAS), 5.3 mi WSW Alamos on Cuchujaque River Bed along small stream, Sonora, México.

REFERENCES:
Vejovis sonorae: Soleglad, 1973b: 357.
Vaejovis sonorae: Díaz Najera, 1975: 7, 31; Sissom, 1991a: 220, 221, fig. 11-14; Kovarík, 1998: 148; Beutelspacher, 2000: 110, 146, 154, map 89; Sissom, 2000: 551.

DISTRIBUTION. NORTH AMERICA. México (Sonora); USA (Arizona).

VI. *Species Incertae Sedis*

Vaejovis spicatus was placed in the *nitidulus* group of *Vaejovis* by Sissom & Francke (1985: 244); the recent study of *V. spicatus* and its relative, *V. mumai*, clearly indicates that they are not members of that group, but share several important characters with *Serradigitus*, *Syntropis*, and members of the *eusthenura*, *punctipalpi*, and *intrepidus* groups of *Vaejovis* (Sissom, 1993). Three new species, also with spinoid subaculear tubercles, were recently described from México. *Vaejovis cisnerosi*, a very unusual form with completely smooth metasomal carinae and very low setal counts, was recently described by Ponce & Sissom (2004).

Vaejovis acapulco Armas & Eliezer Martín, 2001

Vaejovis acapulco Armas & Eliezer Martín, 2001: 9-13, fig. 1, A-F.
Holotype: M (UNAM), Colonia Francisco Villa, Acapulco, Guerrero, México.
Paratypes: 1F, 1 subadult M, 1 subadult F (UNAM), same data as holotype; 3F, 1 juv F (IES), 2F (ENCB), Fraccionamiento Mozimba, Acapulco, Guerrero, México; 1F, 1 juv F, 1 M (ENCB), Ixtapa, Zihuatanejo, Guerrero, México; 1M, 1 juv F (IES), Colonia Alta Progreso, Acapulco, Guerrero; 2F, 2 juvs (UNAM), 2F, 1M (IES), Colonia el PRI, Acapulco, Guerrero, México; 1F, 1 juv F (ENCB), Colonia Jardín Mangos, Acapulco, Guerrero.

REFERENCES:
Vaejovis acapulco: Francke & Ponce Saavedra, 2006: 63, 67, figs. 11, 18-19.

DISTRIBUTION. NORTH AMERICA. México (Guerrero).

Vaejovis cisnerosi Ponce & Sissom, 2004

Vaejovis cisnerosi Ponce & Sissom, 2004:
Holotype: M (UNAM), Churumuco (18°40'15"N, 101°38'39"W), Michoacán, México.
Paratypes: M, F, 1 sub M, 1 juv M from same locality as holotype (UMM); F (UMM), Cerro de Turitzio (18°31'41"N, 100°55'27"W), Michoacán, México (UMM); Arúa, Mpio. de Huetamo, Michoacán (UMM);F, El Carrizal (19°09'00"N, 101°06'19"W), Mpio. de Carácuaro (UMM).

DISTRIBUTION. NORTH AMERICA. MÉXICO (Michoacán).

"Vaejovis" flavescens C. L. Koch, 1842

Vaejovis flavescens C. L. Koch, 1842: 9-11, pl. CCCXXVIII, fig. 760.
Holotype: (lost), Brazil.

DISTRIBUTION. SOUTH AMERICA. Brazil.

REFERENCES:
"Vaejovis" flavescens: Sissom, 2000: 552.

NOTES. Kraepelin (1894: 199) listed this species as a synonym of *V. mexicanus* and Kraepelin (1899: 186) listed it as a valid species of *Vaejovis*. However, there are no Vaejovidae in Brazil; therefore, familial affiliation of this species remains unclear.

Vaejovis mumai Sissom, 1993

Vaejovis mumai Sissom, 1993: 64-65, 68 fig. 1-7.
Holotype: F (AMNH), Gold Road, Black Mountain, Mohave County, Arizona, USA.

Paratypes: 3 juv (AMNH), same locality as holotype; 1 juv (AMNH), "P" Mountain, near Parker, Arizona, USA.

REFERENCES:
Vaejovis mumai: Kovarík, 1998: 147; Sissom, 2000: 551.

DISTRIBUTION. NORTH AMERICA. USA (western Arizona: along eastern side of Colorado River).

Vaejovis nayarit Armas & Eliezer Martín, 2001

Vaejovis nayarit Armas & Eliezer Martín, 2001: 13-16, fig. 2, A-F
Holotype: M (UNAM), 4 km NE Felipe Carrillo Puerto, Nayarit, México.

DISTRIBUTION. NORTH AMERICA. México (Nayarit).

Vaejovis pequeno Hendrixson, 2001

Vaejovis pequeno Hendrixson, 2001: 48-52, figs. 1,2, 4-14.
Holotype: M (CAS), 15 mi W Yecora (4000 ft.), Sonora, México.
Paratypes: F (CAS), same data as holotype; F (CAS), 15-20 km E Baviacora (29°43'N: 110°05'W), Sonora, México; 2 FF (AMNH), Rio Cuchajaqui, E of Alamos, Sonora, México; 3 FF, 18 1st instars (CAS), 7 mi NE Teso Paco, Sonora, México; 1F, 11 2nd instars (WDS), 3.2 mi NW Huicochi, Sonora, México; 1F (UA), Sierra Alamos above La Cieneguilla (1600-2000 ft.), Sonora, México.

DISTRIBUTION. NORTH AMERICA. México (Sonora).

Vaejovis spicatus Haradon, 1974

Vaejovis spicatus Haradon, 1974: 23-26, fig. 1-7.
Holotype: F (Type No. 12058), Berdoo Canyon, 6.9 mi NE of junction with Dillon Road, Little San Bernardino Mountains, Riverside County, California, USA.
Paratypes: 1F, 3 juv (CAS), same locality as holotype.

REFERENCES:
Vaejovis spicatus: Williams, 1976: 2; Sissom & Francke, 1985: 244; Sissom, 1993: 64, 65-68, fig. 8-14; Kovarík, 1998: 148; Sissom, 2000: 551-552.

DISTRIBUTION. NORTH AMERICA. USA (southern California).

Vaejovis zihuatanejensis Baldazo Monsivais, 2003

Vaejovis zihuatanejensis Baldazo-Monsivais, 2003: 67-71, figs. 1-2.
Holotype: F, Colonia Agua de Correa, Zihuatanejo, Municipio de José Azueta, Guerrero, México.
Paratype: F, same data as holotype.

DISTRIBUTION. NORTH AMERICA. México (Guerrero).

Genus *VEJOVOIDUS* Stahnke, 1974

Vejovoidus Stahnke, 1974: 120-121; type species *Syntropis longiunguis* Williams, 1969 [=*Vejovoidus longiunguis* (Williams, 1969)].

REFERENCES:
Vejovoidus: Williams, 1980: 112, fig. 110; Francke, 1985: 14, 18, 21; Sissom, 1990a: 110, 114; Stockwell, 1992: 409, 416, 419, fig. 56, 57; Kovarík, 1998: 148; Beutelspacher, 2000: 55, 116; Ponce Saavedra & Beutelspacher, 2001: 20; Sissom, 2000: 552; Soleglad & Fet, 2003a: 15, 31, 33, 36, 67, 144, 163, 164, figs. 66, 79, 80, D-5, Tabs. 3, 4, 9; Soleglad & Fet, 2005: 4-7; Prendini & Wheeler, 2005: Tab. 3, 4, 5, 10.
Vaejovoidus (ISS): Nenilin & Fet, 1992: 10.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur).

NOTES. The sole species of this genus, *V. longiunguis* (Williams, 1969a) is an ultrapsammophile, bearing exceptional tarsal adaptations for life on sand dunes. It exists only in the dune systems of the Vizcaino Desert and occurs in extremely high densities there.

Vejovoidus longiunguis (Williams, 1969)

Syntropis longiunguis Williams, 1969a: 285-291, fig. 1.
Holotype: M (CAS, Type No. 10409), San Angel, 21 km W San Ignacio, Baja California Sur, México.
Paratypes: 1F (CAS; allotype), 255M, 325 F, 110 juvs (CAS), same locality as holotype; 29M, 40F (CAS), 3 mi S Rancho Tablon, BCS; 69M, 92F, 37 juvs (CAS), 5 mi W San Angel, BCS; 229M, 216 F, 81 juvs (CAS), approximately 5 mi N La Laguna on E shore of Laguna de San Ignacio, Baja California Sur, México.

REFERENCES:
Vejovoidus longiunguis: Stahnke, 1974a: 120-122; Williams, 1980: 112-113, fig. 50, 108A, C, D, 109-111; Fet et al., 1998: 613, 614, fig. 1, 8; Kovarík, 1998: 148; Beutelspacher, 2000: 116, 137, 138, 154, map 98; Sissom, 2000: 552; Soleglad & Fet, 2003b: 6, fig. 7; Soleglad & Fet, 2003a: 9, 67, 161, figs. 5, 6, 63, 77; Prendini & Wheeler, 2005: Fig. 27.

DISTRIBUTION. NORTH AMERICA. México (Baja California Sur: coastal and inland dunes of Vizcaino Desert).