

TAXONOMY OF PASSALIDAE OF THE NEW WORLD

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SUBFAMILY PASSALINAE LEACH 1815

TRIBE PASSALINI LEACH 1815

This Pantropical tribe includes six genera (five described) in the New World.

***Passalus* Fabricius 1792**

Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo & Schuster (1983), nomenclatural change; Boucher (1986), descriptions; Boucher (1990), description and revalidation; Boucher & Reyes-Castillo (1991), description; Fonseca (1989), description; Reyes-Castillo & Amat-García (1991), description; Reyes-Castillo & Castillo (1994), revalidation; Mesa & Martins (1986), Karyotypes. Also, one fossil species from upper Oligocene desposits of Oregon (Reyes-Castillo 1977). Traditionally divided in three subgenera: *Passalus* Fabricius 1792, *Mitrorhinus* Kaup 1871 and *Pertinax* Kaup 1869. Aproximately 139 valid species. Distributed from U.S.A. (historical citation of Arizona) to Argentina (Schuster 1983).

Keys to species

Amazon basin (Vulcano & Pereira 1967), Brazil (Luederwaldt 1931), French Guiana (Reyes-Castillo 1973, Boucher 1986), Panamá (Reyes-Castillo & Castillo 1992), U.S.A. (Schuster 1983).

Faunal lists

México (Reyes-Castillo 2000, 2002), Chilpancingo, Guerrero, México (Reyes-Castillo & Castillo 1993), Chamela, Jalisco, México (Reyes-Castillo 1988), Los Tuxtlas, México (Castillo & Reyes-Castillo 1997), Sierra Madre Oriental, México (Reyes-Castillo 2004), Guatemala (Schuster 2006), Belize (Schuster 2006), El Salvador (Hincks 1953, Schuster 2006), Honduras (Schuster 2006), Nicaragua (Maes 1987, Schuster 2006), Panamá (Reyes-Castillo & Castillo 1992), Colombia (Amat-García & Reyes-Castillo 2002, Reyes-Castillo & Amat-García 2003, Amat-García *et al.* 2004), Brazil (Fonseca & Reyes-Castillo 2004), Serra dos Carajas, Para, Brazil (Fonseca & Albuquerque 1993), West Indies (Ivie & Gillogly 1998), Hispaniola (Reyes-Castillo *et al.* 1995).

***Passipassalus* Fonseca & Reyes-Castillo 1993**

Monotypic genus endemic to Brazil.

New Genus, Reyes-Castillo in prep.

Reyes-Castillo (in prep.) key to the species and genus diagnosis. Five species to be removed from *Passalus* (*Pertinax*). Tamaulipas, Chiapas, Guatemala, Honduras, Nicaragua.

***Ptichopus* Kaup 1869**

Reyes Castillo (1970b) generic diagnosis and species list; Fonseca & Reyes-Castillo (1994), generic diagnosis and key to species. U.S.A. (Arizona), México, Central America, South America. Four species, we suspect only two (perhaps one, *P. angulatus*).

***Spasalus* Kaup 1869**

Reyes-Castillo (1973), generic diagnosis, nomenclatorial changes, description; Fonseca (1990, 1992), Amat-García & Fonseca (1998), and Santos-Silva (2000) descriptions. Seven species. Caribbean islands, South America.

***Paxillus* MacLeay 1819**

Luederwaldt (1934), revision of genus; Reyes-Castillo (1970b), generic diagnosis and species; Reyes-Castillo & Fonseca (1992, 1997), nomenclatorial changes and key to species, Doesbourg (1974), sexual dimorphism. Nine species. México, Central America, South America, Jamaica and Hispaniola.

TRIBE PROCULINI KAUP 1868

This tribe, endemic to the New World, includes 20 genera (19 described).

***Verres* Kaup 1871**

Reyes-Castillo (1970b) generic diagnosis and species list; Castillo & Reyes-Castillo (1992), nomenclatorial change; Boucher & Pardo-Locarno (1997), description. Revision of genus in preparation by Christopher J. Marshall (U. of Cornell). At least 13 known species, some new species to be described. México, Central America, South America.

***Vindex* Kaup 1871**

Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo & Castillo (1993), description. Four valid species. At least nine species to be described. México, Guatemala, Honduras, El Salvador, Nicaragua. A map in Boucher (2005) shows its range extending into Panama, but we know of no specimens from Costa Rica or Panama.

***Pseudacanthus* Kaup 1869**

Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo (1974), nomenclatorial changes; Reyes-Castillo & Schuster (1983) nomenclatorial changes; Reyes-Castillo & Castillo (1986), description. Seven valid species plus two new undescribed species. México and western Guatemala. However, Boucher (2005) transferred *P. obesus* to *Proculejus* as well as *P. nigidioides* and *P. violetae* to *Undulifer* resulting in only four valid species plus the new species. We do not recognize his changes to *Undulifer* (see *Undulifer*). Therefore, there remain 6 valid species plus two undescribed.

***Proculus* Kaup 1868**

Reyes-Castillo (1970b), generic diagnosis and species list; Schuster *et al.* (2003) revision of genus, phylogenetic and biogeographic analysis, key to species. Six valid species. México (Chiapas), Guatemala, Belice, Honduras, and (?)Colombia. Has been historically cited from Costa Rica, but no recent specimens known. Boucher (2005) claims it to be in Nicaragua.

***Chondrocephalus* Kuwert 1896**

Reyes-Castillo (1970b), generic diagnosis and species list. Reyes-Castillo & Castillo (1986), description. Five valid species. Many species to be described. México, Guatemala, Honduras, El Salvador. Boucher (2005) transferred *Petrejoides salvadorae* to *Chondrocephalus*; however, we will include it in a new genus (Schuster and Cano).

New genus Schuster & Cano in prep. To be described. Includes four species described as *Petrejoides* (one of which was transferred to *Chondrocephalus* by Boucher (2005) and one to be described. Endemic to Nuclear Central America (mountains of Guatemala, Honduras and El Salvador).

***Spurius* Kaup 1871**

Reyes-Castillo (1970a), description; Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo (1978) revision of genus, key to species. Four species plus at least one to be described. México, Central America and Colombia.

***Xylopassaloides* Reyes-Castillo, Fonseca & Castillo 1987**

Reyes-Castillo *et al.* (1987) and Schuster (1993), key to species, generic diagnosis and descriptions. Five species. México (Chiapas), Guatemala and Honduras.

***Ogyges* Kaup 1871**

Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo & Castillo (1986) description; Schuster & Reyes-Castillo (1990), revision of genus and key to species; Schuster *et al.* (2005), nomenclatorial changes, species descriptions and key to species. Sixteen valid species (Schuster *et al.* 2005). Several species to be described. México (Chiapas), Guatemala, Honduras, El Salvador, and (?)Nicaragua.

***Oileus* Kaup 1869**

Reyes-Castillo (1970b), generic diagnosis and species list; Quintero & Reyes-Castillo (1983), key to species, generic diagnosis. Five species. A few new species from México. México, Central America and Colombia.

***Popilius* Kaup 1871**

Reyes-Castillo (1970b), generic diagnosis and species list; Boucher (1986), key to Guiana species and description; Reyes-Castillo & Castillo (1992), nomenclatural change and description; Boucher (2005), redefinition of genus. According to Boucher (2005) includes 13 species; he transferred some to *Heliscus* and *Petrejoides*, resulting in the genus being restricted to Panama and South America. Revision of genus in preparation by Alan Gillogly.

***Petrejoides* Kuwert 1896**

Reyes-Castillo (1970b), generic diagnosis and species list; Castillo & Reyes-Castillo (1984) revision of genus; Schuster (1991), key to species and descriptions; Schuster (1988, 1990), Reyes-Castillo & Schuster (1983), and Cano & Schuster (1995), descriptions. Boucher (2005), nomenclatorial changes. According to Boucher (2005), 22 species including two undescribed, 8 transferred from *Popilius* and one from *Pseudoarrox*. One was transferred

to Chondrocephalus. We separate three of these species into a new genus, to be described. México, Central America, Colombia, Ecuador.

***Yumtaax* Boucher 2005**

Boucher (2005), generic diagnosis and species list. Six species, transferred from *Petrejoides* by Boucher (2005). Endemic to México north of Isthmus of Tehuantepec.

***Heliscus* Zang 1906**

Reyes-Castillo (1970b), generic diagnosis and species list; Reyes-Castillo & Castillo (1986), description; Boucher (2005), generic redefinition and nomenclatural changes. According to Boucher (2005), 8 species, including the only described species of *Coniger* Zang. He removed *H. yucatanus* and *H. decipiens* to *Odontotaenius*. We feel that the definition of this genus should be further studied, especially considering larvae. Various species to be described. México to Ecuador and Venezuela.

***Odontotaenius* Kuwert 1896**

Reyes-Castillo (1970b), generic diagnosis; Schuster (1994), generic diagnosis and key to species. Eleven valid species, including *O. yucatanus* and *O. decipiens* transferred from *Heliscus* by Boucher (2005). We feel that the definition of this genus should be further studied, especially considering larvae. Some species to be described. Canadá, U.S.A., México, Central America, South America (Andes).

***Proculejus* Kaup 1868**

Reyes-Castillo (1970b), generic diagnosis and species list mentions seven species. Boucher (2005) transfers *Pseudacanthus obesus* to *Proculejus* and mentions that 10 species exist. Endemic to México.

***Undulifer* Kaup 1869**

Reyes-Castillo (1970b), generic diagnosis and species list. Two species listed; however, probably only one. However, Boucher (2005) transferred *Pseudacanthus nigridiodes* and *P. violetae* to *Undulifer*, resulting in 3 valid species as well as a new undescribed species which fits his definition. Nevertheless, we examined all species and noticed certain inconsistencies: 1. Only *U. incisus* has a truly undulate and convex clypeus (*P. violetae* has a projecting clypeus, but not undulate and is straight on anterior border, not convex or arcuate). 2. Elytral punctations are not as strong as *P. violetae* or *P. nigridiodes*; they are more similar to *P. subopacus* and *P. junctistriatus*. 3. Metatibial spines NOT strongly developed, only at most 1 spine developed. 4. Disc of meta sternum NOT punctuate in *P. nigridiodes*. Mexico and Guatemala. Also, the mesosternum is covered with fine punctations unlike any other of the species. The rugosity of the frons seems variable and not a clear character to use. Therefore, we prefer to retain the old classification with the possibility of separating *Pseudacanthus* in two groups (genera?) after future study. As such, we recognize only 1, or possibly 2, species in the genus. The new species thus remains in *Pseudacanthus*.

***Pseudoarrox* Reyes-Castillo 1970**

Reyes-Castillo (1970b), description of genus and species; Reyes-Castillo & Pardo (1995), description and key to species. Two species, one from Costa Rica and another from Colombia and Ecuador. Boucher (2005) transferred one of these species to *Petrejoides*.

***Veturius* Kaup 1871**

Reyes-Castillo (1970b) and Boucher (2005), generic diagnosis and species list. Doesburg (1957), description; Boucher (1986, 1987), checklists, keys, and description of French Guiana material; Boucher (1988a), descriptions of Colombia material; Boucher (1988b), description from México; Fonseca (1999), descriptions from Brazil; Fonseca & Reyes-Castillo (2004), description from Brazil; Schuster *et al.* (2005), nomenclatural changes and new record. Revision of genus by Boucher (2005). According to Boucher (2005), comprises 74 species in three subgenera (*Publius* Kaup 1871, *Ouayana* Boucher 2005, *Veturius* Kaup 1871). From México (Veracruz) through northern Argentina. Unrecorded from Guatemala, Belize and El Salvador.

***Arrox* Zang 1905**

Boucher (2005), revalidation, generic diagnosis, species list. Two species. Chiapas to Nicaragua.

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