



Way Down South: The milliped family Parajulidae (Julida: Parajulini) in Mexico and Central America; first records from El Salvador and the Baja California Peninsula

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Abstract

Accounts and drawings are presented of all established species of the Parajulini with extant types and genitalia, which appear to comprise nine species groups, four with available generic names. *Parajulus* Humbert & de Saussure, 1869, and *Thriniulus* Chamberlin, 1940, contain only the respective type species, *P. olmecus* Humbert & de Saussure, 1869, and *T. leucocliui* (Chamberlin, 1922). Both *Mexicoiulus* Verhoeff, 1926, and *Pheniulus* Chamberlin, 1943, contain the respective types, *M. dampfi* Verhoeff, 1926, and *Pheniulus phenotypus* Chamberlin, 1943, and, tentatively, two additional species. No new combinations are proposed, so except for the four types, all species are temporarily placed in "*Parajulus*." *Thriniulus schachti* Chamberlin, 1941, is returned to "*Parajulus*," and *Pheniulus mimeticus* Chamberlin, 1943, is transferred into it. "*Parajulus*" *zempoalus* Chamberlin, 1943, and "*P.*" *gyratus*, Loomis, 1971, are reduced to subspecies of "*P.*" *pueblanus* and "*P.*" *rosanus*, both by Chamberlin, 1943, respectively. "*Parajulus*" *schmidti* Chamberlin, 1952, comprises two subspecies, the nominate and "*P.*" *s. australis*, **n. subsp.**, from El Salvador, a new country for both the tribe and family and the southernmost indigenous record for the Julida in the Western Hemisphere. New state records include "*Parajulus*" *p. pueblanus*, **n. stat.**, from Veracruz, "*P.*" *r. gyratus* from Puebla and Hidalgo, and "*P.*" *viganus* Chamberlin, 1952, from Hidalgo. The distribution of the Parajulidae in North America is detailed, and the family and tribe Bollmaniulini are newly recorded from the Baja California peninsula. Lectotype designation is formalized for *Parajulus aztecus* Pocock, 1903.

Key words: Baja California, El Salvador, Guatemala, Mexico, Parajulini, "*Parajulus*"

Introduction

The Parajulidae (order Julida), the dominant Nearctic diplopod family, is one of the few native, non-flying soil invertebrate taxa that can be reasonably expected in Alaska, all Canadian provinces bordering the United States (US), and every county in every state in the "lower 48." It has been documented in every Canadian province from British Columbia to Québec, and based on known occurrences in Maine, *Uroblaniulus canadensis* (Newport, 1844) potentially inhabits southwestern New Brunswick. The northernmost North American localities are Yakutat, Gustavus, and Haines, Alaska (extensive searches at nearby Skagway, where habitats are drier, have not yielded parajulids); Baxter State Park, Maine; and the following Canadian locales: Edmonton, Alberta; Fosston, Saskatchewan; Riding Mountain National Park, Manitoba; the Albany River at James Bay, Ontario; and Île d'Orléans, Québec (Cook 1904; Chamberlin 1911, 1940; Chamberlin and Hoffman 1958; Shelley 1988, 1990, 2002a; Hoffman 1999; Shelley, unpubl. data). Extrapolating these points yields a smooth curve that extends into southwestern New Brunswick. Causey (1974) cited 61°N as the northernmost latitude, which is actually slightly north of Yakutat at 59° 47' 60.0"N; Yakutat is also the westernmost parajulid locality in North America, at 139° 35' 60.0"W. In 2006, M. Medrano and I searched without success for millipeds in general and parajulids specifically at Cordova, the closest accessible community west of Yakutat. The family may occupy the inaccessible 368 km (230 mi) between them, but 65 km (40 mi) wide Malaspina Glacier, the world's largest Piedmont glacier and a formidable dispersal barrier for poorly vagile soil organisms, lies opposite Yakutat on the western side of Yakutat Bay. Yakutat may therefore be both the northern- and westernmost parajulid locality in North America (Fig. 1).