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The Milliped Genus *Piedolus* Chamberlin (Spirobolida: Atopetholidae: Arinolinae)

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ABSTRACT

The milliped genus *Piedolus* Chamberlin comprises one species, *P. utus* Chamberlin. It is diagnosed by the long lobes of the 3rd male coxae and the configuration of the posterior gonopod, in which the long, slender solenomere is partly shielded by an expanded, laminate prefemoral process. The taxa occur in the deserts of California and southwestern Utah.

INTRODUCTION

The Atopetholidae is the most diverse diplopod family inhabiting the southwestern American deserts. Hoffman & Orcutt (1960), Hoffman (1980, 1998), and Shelley (1998) accounted 13 genera, most polyspecific, and around 37 species in the United States. Perhaps the least known genus is *Piedolus* Chamberlin, whose sole species, *P. utus* Chamberlin, is known from only two localities, the type locality in Washington County, Utah, and a site in Inyo County, California (Chamberlin & Hoffman 1958, Hoffman & Orcutt 1960, Shelley & Bauer 1997). Chamberlin (1930) proposed the genus and species, and illustrated the gonopods of the holotype. Chamberlin & Hoffman (1958), Jeekel (1971), and Hoffman (1980) cited the taxa in various listings, and Hoffman & Orcutt (1960) incorporated them into a review of the family. However, the last authors could not illustrate *P. utus* because the gonopods of the type specimen are lost. While perusing unsorted atopetholids from

the University of California at Davis (UCD) and the Los Angeles County Museum of Natural History (LACMNH), I discovered specimens whose gonopods match Chamberlin's drawings from two localities in the California desert; one of these localities was reported by Shelley & Bauer (1997). I here report the other and provided accounts of the genus and species.

Genus *Piedolus* Chamberlin

Piedolus Chamberlin, 1930: 117. Chamberlin & Hoffman, 1958: 158. Hoffman & Orcutt, 1960: 158-159. Jeekel, 1971: 203. Hoffman, 1980: 75.

TYPE SPECIES: *Piedolus utus* Chamberlin, 1930, by original designation.

DIAGNOSIS: A genus of large (diameter to 3.2 mm) arinoline atopetholids, body with about 44 segments; color grayish, caudal margins of segments lighter and imparting an annulate color pattern; collum short, lateral ends terminating above ventrolateral corners of succeeding pleurotergite; 1st-3rd legs of males incrassate, coxae of 3rd legs with elongated, curved processes extending caudad over coxae of 4th legs. Sternum of anterior gonopods produced into elongated median projection extending to level of gonocoxal apices, latter submembranous along distal margins, shorter than telopodites, distal corners of latter elevated; posterior gonopod with long apophysis, telopodite divided subbasally with expanded calyciform process shielding the long, slender, solenomere, latter extending beyond margin of prefemoral process, bisinuate curved at 2/3rds length (Figs. 1-4)

SPECIES: One:

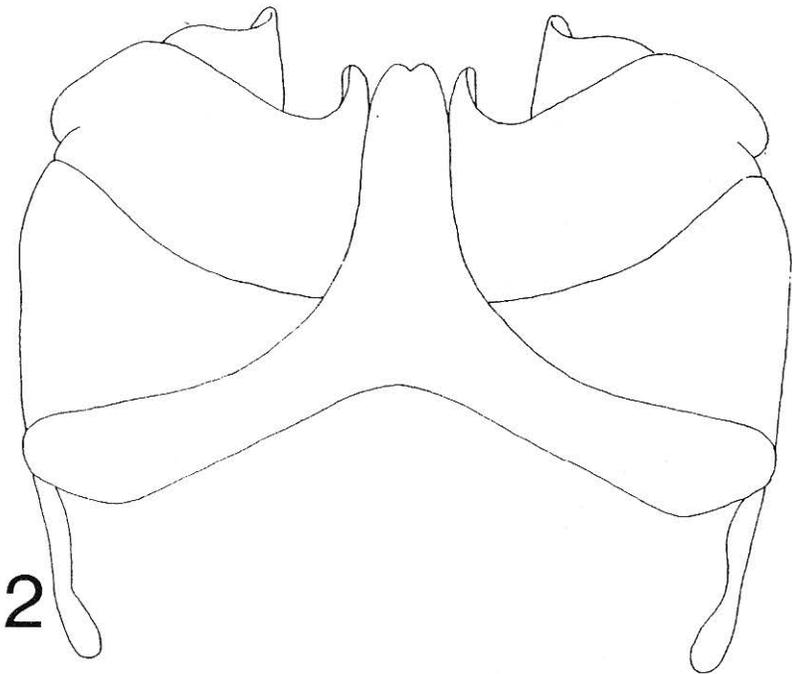
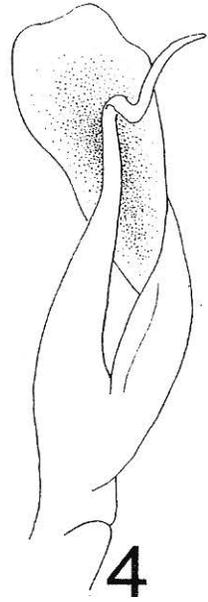
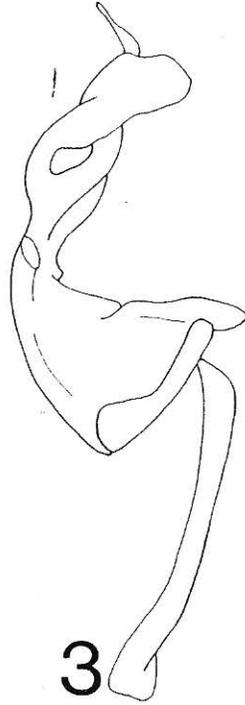
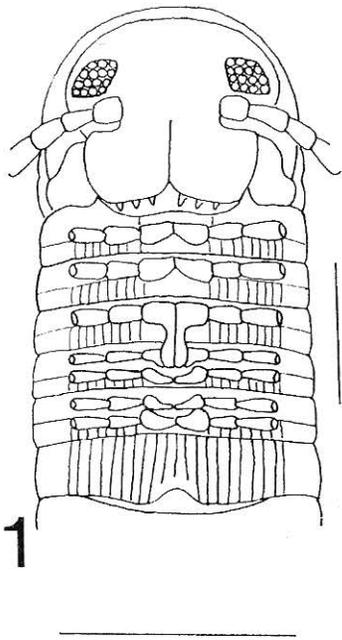
DISTRIBUTION: Known only from Washington County, Utah, and Inyo County, California, but probably also occurring in the intervening region of southern Nevada (Fig. 5).

Piedolus utus Chamberlin, 1930

Figs. 1-4

Piedolus utus Chamberlin, 1930:118, middle and bottom right figures on p. 120. Chamberlin & Hoffman, 1958: 158. Hoffman & Orcutt, 1960: 159.

Figs. 1-4. *Piedolus utus*, specimen from Inyo County, California. 1, head and segments 1-7, ventral view. 2, anterior gonopods, anterior view. 3, left posterior gonopod, lateral view. 4, distal part of telopodite of the same, medial view. Scale line for fig. 1=1.00 mm; line for other figs. = 0.25 mm for fig. 3, 0.30 mm for fig. 4, 0.50 mm for fig. 5.



TYPE SPECIMEN: Male holotype (National Museum of Natural History, Smithsonian Institution [NMNH]) collected by L. Woodbury, 3 April 1929, at St. George, Washington County, Utah.

DIAGNOSIS: With the characters of the genus (Figs. 1-4).

ECOLOGY: No information is available on the habitat of this species.

DISTRIBUTION: In addition to the holotype, the following samples are known (Fig. 5); the first was reported by Shelley & Bauer (1997). CALIFORNIA: *Inyo Co.*, Panamint Springs, 2♂♂, date unknown, S. Harrison (UCD); and Death Valley Nat. Pk., Emigrant Sps., ♂, 2♀♀, 24 February 1957, A. Menke (LACMNH).

REMARKS: *Piedolus utus* is one of the few millipedes occurring in Death Valley National Park, the hottest, and one of the driest places in the United States. The only other diplopod known from there that I am aware of is *Tylobolus utahensis* Chamberlin (Spirobolida: Spirobolidae) (Shelley & Bauer 1997)

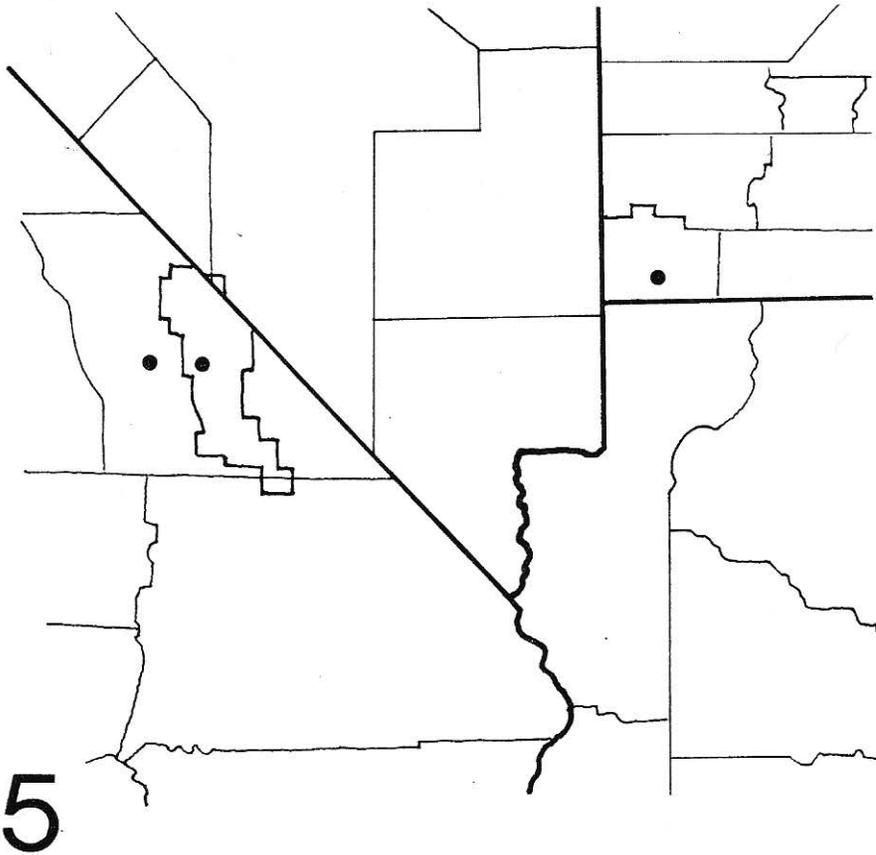


Fig. 5. Distributions of *Piedolus* and *P. utus*.

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