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DISCOVERY OF THE MILLIPED *TYLOBOLUS UTAHENSIS* CHAMBERLIN IN ARIZONA (SPIROBOLIDA: SPIROBOLIDAE)

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Key words: *Tylobolus utahensis*, *distribution*, *Grand Canyon*, *Utah*.

The milliped *Tylobolus utahensis* Chamberlin, the easternmost representative of the genus that otherwise occurs west of the crest of the Sierra Nevada and Cascade Mountains (Keeton 1960, 1966), is known from Washington County and the western periphery of Kane County, Utah, Nye County, Nevada, and Inyo County, California, an east–west distance of some 300 miles (480 km; Chamberlin 1925, Chamberlin and Hoffman 1958, Keeton 1960, Shelley and Bauer 1997, Hoffman 1999, Shelley 2002). Shelley and Bauer (1997) predicted discovery in intervening parts of Clark and Lincoln Counties, Nevada, and Mohave County, Arizona, along the Virgin River, but did not address potential occurrence to the north or south of the known range. On 3 April 2001 the 2nd author collected 1 male and 1 female of *T. utahensis* at Upper Deer Creek spring, located on the north side of the Colorado River in Grand Canyon National Park, Coconino County, Arizona, around 88 miles (141 km) south-southeast of known localities in Utah. This spring, the primary source of Deer Creek, emerges from a cliff-side pourout at approximately 2985 feet (910 m) elevation and plunges into the main channel of Deer Creek, which empties into the Colorado River at mile 136, downstream from Lees Ferry, Arizona. The individuals were found together during the day under a small slab of limestone near the base of the pourout (elevation 2706 ft [825 m]) and appear to be fully grown adults with legs on all except the last 2 segments. In contrast to the observation by Shelley and Bauer (1997), the male is noticeably larger, being 51.6 mm long, 4.8 mm wide, and with 50 segments, while the female is 44.8 mm long, 3.9 mm wide, and with 48 segments. The female is notably reddish

because of pigmentation on the meso- and metazonites. The mesozonites of the male, however, are light brown while the metazonites are dark reddish brown, the combination imparting an overall brownish coloration. Anatomically, the millipeds conform closely to published characterizations, except that the anterior gonopod coxae of the male are essentially smooth, with only a few scattered denticles, while the denticle fields on the posterior gonopods, as they extend onto the lobe at the base of the tibiotarsus, are larger than shown by Shelley and Bauer (1997, Fig. 3).

The discovery of *T. utahensis* near the Colorado River in the Grand Canyon suggests that the species may also occur in side canyons of Glen Canyon National Recreation Area, an impoundment of the Colorado located east of the known range in Utah; the species may also be expected an equivalent distance to the north in riparian desertine sites in western Iron and Beaver Counties, Utah. Figure 1 depicts the known distribution.

The specimens are housed in the collection at the Museum of Northern Arizona, Flagstaff, under #DIPL 1.0003. They were taken during an ecological inventory of the site conducted by the Grand Canyon Wildlands Council under National Park Service permit #GRCA-2000-SCI-0018.

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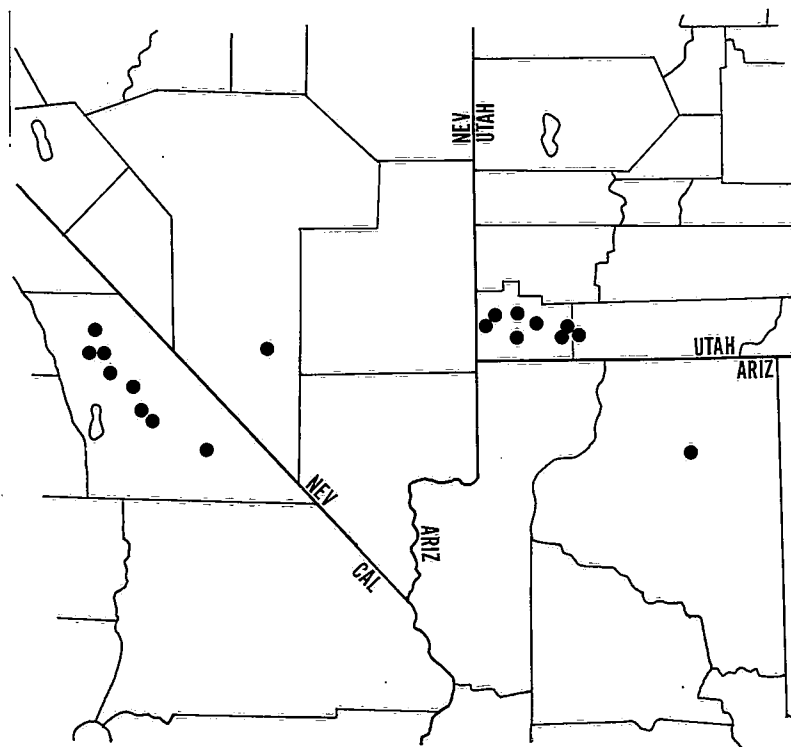


Fig. 1. Distribution of *Tylobolus utahensis*.

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