A New Troglobitic Isopod (Asellidae) from Southern Indiana

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Blind, white isopods are common in most of the caves of southern Indiana. For the most part, specimens are easily referable to *Asellus* (=*Caecidotea*) *stygia* (Packard) Steeves (2). During the construction of Jordan Hall, the biology building at Indiana University in Bloomington, a subterranean stream was exposed by the excavation into the surface limestone strata. After the opening of the building in 1955, the stream continued to seep into an unfinished sub-basement room where it formed numerous small pools. Aggregating in these pools at times were large numbers of a very large isopod which subsequently was determined to belong to a new species. It is a pleasure to name this species in honor of David Starr Jordan, famous ichthyologist and early biology teacher at Indiana University, for whom Jordan Hall is also named.

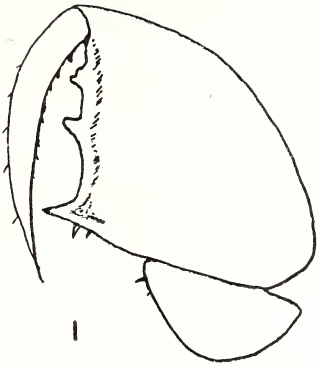
Asellus jordani, nov. spec.

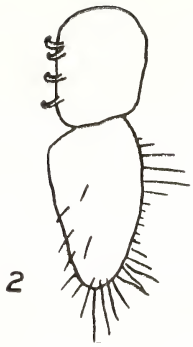
Diagnosis. Albinistic, without eyes. Maximum body length 23 mm. in males, 15 mm. in females. Basal process of palmar margin of male propodus (fig. 1) large and triangular, median process large and not so pointed, located close to distal process, which is bidentate and crowded close to joint with dactyl; propodus of female similar but narrower and less inflated. First pleopod (fig. 2) with four coupling hooks on inner margin of the basal segment; lateral setae on distal segment in two series, longest at tip and near proximal end. Second pleopod of male (fig. 3) with elongate basal segment about ⅗ the total length of appendage; distal joint of expodite fringed with long plumose setae, longest at tip; endopodite with prominent mesial apophysis near base and terminating in three distinct parts (fig. 4): (1) a laterally directed, acutely pointed canula (can), (2) a finger-like caudal process (ca), (3) a much reduced lateral process (la) lying above the caudal process and not extending beyond the slightly crenulate distolateral margin of the endopodite. Uropod up to 1.25 times as long as pleotelson; endopodite about 0.6 times as long as peduncle; exopodite about 0.4 times as long as endopodite.

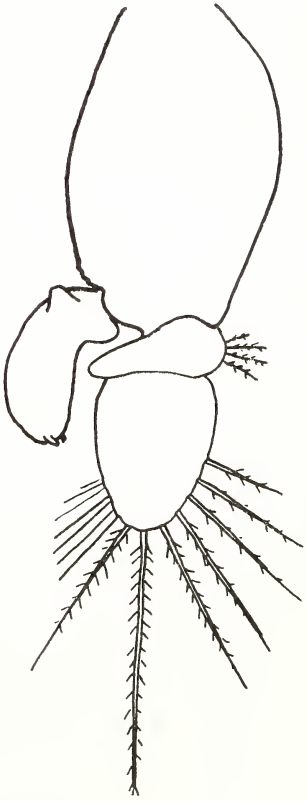
Type locality. Seep in sub-basement of Jordan Hall, Indiana University, Bloomington, Indiana.

Remarks. This species is probably the largest troglobitic asellid known from the United States. It very clearly belongs to the Stygius group of Steeves (2). It can be distinguished from *A. stygius*, the only other albinistic asellid so far known from Indiana, by the massive triangular basal process of the propodus, which is represented by a large spine in *stygius*, the straight instead of recurved tip of the canula, four coupling hooks instead of five on the basal segment of the first pleopod, rounded instead of broadly truncate tip of the distal segment of the first pleopod, etc.

Body proportions, of course, change with age as in all asellids (1). Immature specimens are very compact with the thoracic segments being







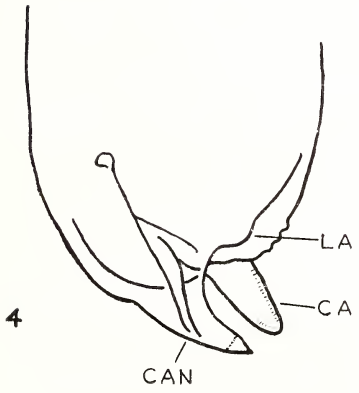


Figure 1. Gnathopod of male.
Figure 2. Cephalic view of first pleopod, male.
Figure 3. Cephalic view of second pleopod, male.
Figure 4. Detail of cephalic aspect of tip of endopodite of male second pleopod. LA—lateral process. CA—caudal process. CAN—canula.

wider than long. In large mature specimens, the dorsal thoracic tergal plates are usually longer than wide and are distinctly separated from each other.

A series of 52 specimens was collected by Mr. John de Costa in March, 1960, and an additional 14 specimens were collected by the writer in February, 1961. The holotype (male), allotype and 15 paratypes are deposited in the United States National Museum, 12 paratypes with Dr. Harrison R. Steeves, III, Department of Anatomy, University of Alabama Medical Center, Birmingham, Alabama, and the remaining paratypes in the collection of the author.

Literature Cited

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2. STEEVES, HARRISON R. III. 1963. The troglobitic asellids of the United States: the Stygius group. Amer. Midland Natur. **69(2)**:470-481.