

## FRESH-WATER AMPHIPODS FROM PERU.

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The single species of fresh-water Amphipod was taken in vast abundance at Lake Titicaca, July 30, 1908, underneath small rocks along shore of Isla Blanca (near Puno).

### HYALELLA KNICKERBOCKERI (Bate).

*Allorchestes knickerbockeri* BATE, Cat. Amph. Crust. Brit. Mus., 1862, p. 36, pl. 6.  
*Hyaella knickerbockeri* WECKEL, Proc. U. S. Nat. Mus., vol. 32, 1907, p. 54, text fig. 15, and synonymy.

Eyes round or nearly so; interspace slightly greater than their diameter. First antennæ shorter than second; first two segments of peduncle about equal, slightly longer than third; flagellum about twice as long as peduncle and composed of seven to nine segments; second antennæ about half as long as body; peduncle exceeding that of first pair, the two distal segments elongated and nearly equal; flagellum usually but little longer than in first pair, composed of eight to fifteen segments.

First gnathopods in male more than half as broad as long; lateral margins strongly curved and furnished with minute spinules; palm transverse, concave at middle, provided with a few small teeth and short hairs at posterior angle and a tuft of long stiff hairs at anterior one; dactyl strongly curved, shorter than palm. First gnathopods in female closely resemble those in male.

Second gnathopods of male much longer than first ones; carpus not longer than broad, a long, narrow lobe along posterior margin of propodus; propodus stout, more than half as broad as long, much broadened distally, especially in mature specimens; anterior margin convex; posterior one straight, oblique, and unarmed; palm oblique, middle portion slightly arcuate, with a notch near middle and one or two slight emarginations at posterior angle; provided with a submarginal row of spines; palm in immature specimens transverse, emarginations very slight, dactyl not so strongly curved as in adult.

Second gnathopods of female slender and weak; carpus and propodus elongated and much narrower than in male; carpus more than twice as long as broad, posterior projection proportionally not so great as in male; propodus more than twice as long as broad; palm forming less than a right angle with posterior margin, furnished with fewer submarginal spines than in male; dactyl not strongly curved and fitting palm closely.

Posterior margins of coxal plates of third, fourth, and fifth peræopods serrate.

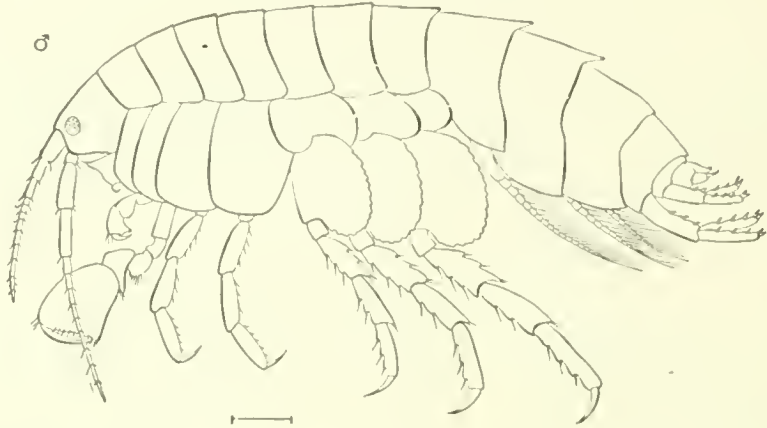


FIG. 1.—HYALELLA KNICKERBOCKERI, MALE  $\times 12$ . MADISON, WISCONSIN. AFTER SMITH.

Postero-lateral angles of first two abdominal segments slightly produced, forming less than a right angle; first two or three segments usually produced dorsally, forming a well-marked median posterior tooth. Telson short, entire, as broad as long, furnished distally with a slender seta at each side.

First uropods almost twice as long as second pair; third pair very short, not exceeding basal segment of second pair in length; peduncle short, nearly as broad as long, furnished distally with a few hairs; the single ramus slender, tapering, about equal in length to peduncle and provided with a few slender setae at tip.