

Gnathopods short and strong. Gnathopod 1; joints 3-6 about as broad as long; 6th joint with sides parallel; palm nearly transverse, slightly convex and provided with a double row of notched spines and a few bristles. Dactyl reaching to end of palm. Gnathopod 2; 6th joint longer than broad and slightly widening distally; palm oblique, evenly convex and provided with a double row of notched spines and a few bristles; dactyl reaching to end of palm.

Pereopods slender; 1st and 2nd shorter than rest; 4th longest, proportionately longer in ♂; 3rd, 4th, and 5th pereopods with 2nd joint moderately expanded and bearing shallow serrations on posterior border; dactyls each bearing a setule on the inner edge near extremity.

Gnathopod 2, and pereopods 1-3 each provided with a single, lamellar branchia; pereopods 4 and 5 each provided with two cylindrical branchia; pleon segment 1 in ♀ with a single, small, cylindrical branchia on each side.

Uropod 1 longest; peduncle a little longer than the subequal rami. Uropod 2 with peduncle as long as the subequal rami. Uropod 3 and telson in their normal position project at right angles to the urosome; uropod 3 in this position not reaching end of telson; peduncle broad and flat, and the single ramus small and triangular with 2 stout spines on outer margin; no spines on peduncle.

Telson as broad as long; the slightly convex sides somewhat converging; end emarginate, depression reaching about one-third length of telson; lobes each provided at apex with 4 or 5 stout spines.

Length.—6 mm.

Remarks.—To the middle of the ventral surface of each of the 2nd, 3rd and 4th thoracic segments is attached an elongated, papilliform process about half the length of the branchia. Appendages probably of a similar nature were first observed and described by G. O. Sars in 1867 in the fresh water species *Gammaracanthus lacustris* Sars and *Pontoporeia affinis* Lindström. S. I. Smith in 1874 also observed them in a species of *Pontoporeia* from the Great Lakes. These appendages, the function of which is not known, have apparently been observed only in fresh water species.

This is the first appearance of the genus *Synurella* in America; the two other species of the genus having been found in Germany and Russia. The closely related genus *Borula* was discovered in Hungary so that in all probability these genera will be found to occur throughout Russia, Siberia and northern North America.

43. *Weyprechtia pinguis* (Kröyer).

1838. *Gammarus pinguis* KRÖYER, Danske Selsk. Afh., vol. 7, p. 252, pl. I, f. 5.

1906. *Weyprechtia pinguis* STEBBING, Tierreich, Amph. I, p. 382, and synonymy.

1909. *Weyprechtia pinguis* BRÜGGEN, Mém. Acad. Imp. Sci. St. Pétersbourg, sér. 8, vol. 18, No. 16, p. 36.

Station 41c: Bernard harbour, Northwest Territories (outer harbour), July 28, 1915, 5 fathoms, sandy mud with many algæ; 1 specimen.

Station 41u: Bernard harbour, Northwest Territories, end of August, 1915, from stomach of *Salvelinus malma* Walb.; 16 specimens.

Colour.—Dorsal parts of head and body segments dark vinaceous-brown. Sides of body segments and side-plates mottled with dark vinaceous brown and light grayish vinaceous. Antennæ striped with bordeaux and light grayish vinaceous. Gnathopods, pereopods, pleopods, uropods, and telson light grayish vinaceous.

Distribution.—Arctic ocean (circumpolar).