

ON A COLLECTION OF COPEPODA FROM FLORIDA,
WITH A DESCRIPTION OF DIAPTOMUS FLORIDANUS,
NEW SPECIES

By C. DWIGHT MARSH

Of the United States Department of Agriculture

Among collections made by F. J. Myers in Polk County, Fla., in 1918 and given me by H. K. Harring were three vials, numbered 1, 3, and 4, containing copepods. The following species were represented:

Diaptomus floridanus, new species.

Cyclops viridis Jurine.

Cyclops leuckarti Claus.

Cyclops albidus Jurine.

Cyclops fuscus Jurine.

Cyclops serrulatus Fischer.

Cyclops phaleratus Koch.

Canthocamptus northumbrius Brady.

Other than the discovery of an hitherto undescribed species of *Diaptomus*, which here is given the name *floridanus*, no especial importance attaches to the occurrence of *Canthocamptus northumbrius* or the species of *Cyclops*, with the exception of *Cyclops viridis*, as they are forms which are practically world-wide in distribution.

The presence of *Cyclops viridis*, however, is of considerable interest. While this species has been reported from many American localities, the evidence of the distribution of the true European *viridis* in America is very meager, and many of the identifications are very doubtful.

Chambers¹ states clearly the distinctive characteristics of *C. viridis* Jurine, *C. parvus* Herrick, and *C. americanus* Marsh. Marsh² verifying Chambers's findings, not only has reexamined and compared these three species, but also *Cyclops brevispinosus* Herrick and *Cyclops magnus* Marsh.

¹ Chambers, Robert, jr. A discussion of *Cyclops viridis* Jurine. Biol. Bull. 22, pp. 291-296, 1912.

² Marsh, C. Dwight. Rep. Can. Arc. Exped., vol. 7. Crustacea, Part J. Freshwater Copepoda, pp. 3 J-25 J, 1920.

In both papers the characteristics of the European *viridis* are stated as being the concave anterior margin of the receptaculum seminis, the ciliated furca, the lack of joint in the spine of the terminal segment of the fifth foot, and the spinal formula for the terminal segment of the swimming feet, 2, 3, 3, 3. Apparently authentic collections of this form in America are very few. As mentioned by Marsh in the paper of the Canadian Arctic Expedition, the only certain identifications are of a collection from Edgewater, N. J., by Chambers, one from Green Bay, Wis., by Marsh, and this collection made by Myers in Florida. Presumably the species is found at least in the intervening regions, but it appears to be somewhat rare.

DIAPTOMUS FLORIDANUS, new species

A small form. The last cephalothoracic segment is somewhat expanded laterally and each side bears two pronounced spines (fig. 1). The fifth segment of the female bears a blunt spine, projecting backward, on the dorsal side (fig. 2).

The first segment of the female abdomen (fig. 3) much exceeds in length the rest of the abdomen. It is much dilated in front and moderately so laterally. It bears on each side, well forward, a rather large acute spine. The second segment is very short and is nearly or quite covered by the overlapping posterior margin of the first segment. The third segment and the furca are nearly equal in length. The branches of the furca are ciliated on both interior and exterior margins.

The antennae reach beyond the furca. The right antenna of the male is much swollen anterior to the geniculating joint; the antepenultimate segment bears a stout recurved hook which is about one-half the length of the penultimate segment (fig. 4).

In the fifth feet of the female (fig. 5) the spines of the first basal segments are prominent and acute. The lateral hairs of the second basal segments are slender. The length of the first segment of the exopodite is more than twice its width. The second segment of the exopodite is a rather stout hook, of slight curvature, and is denticulate on both margins. The third segment is distinct and armed with two spines, the inner being long and slender. The endopodite is one segmented, shorter than the first segment of the exopodite, and with the tip armed with two slender spines. The tip is setose.

The basal segments of the male fifth feet (fig. 6) are armed with the customary spines which are rather prominent and acute. The second basal segment of the right foot is slightly longer than wide and has the lateral hair near the distal end of the segment. The first segment of the exopodite is short, its length being about two-thirds of its width. The second segment is nearly quadrangular in

outline and longer than wide. The lateral spine springs from the outer distal angle, is straight, and equals in length the two segments of the exopodite. The terminal hook rises from the inner distal angle, is sharply curved, the two parts being nearly at right angles with each other, and exceeds in length the whole right foot. There

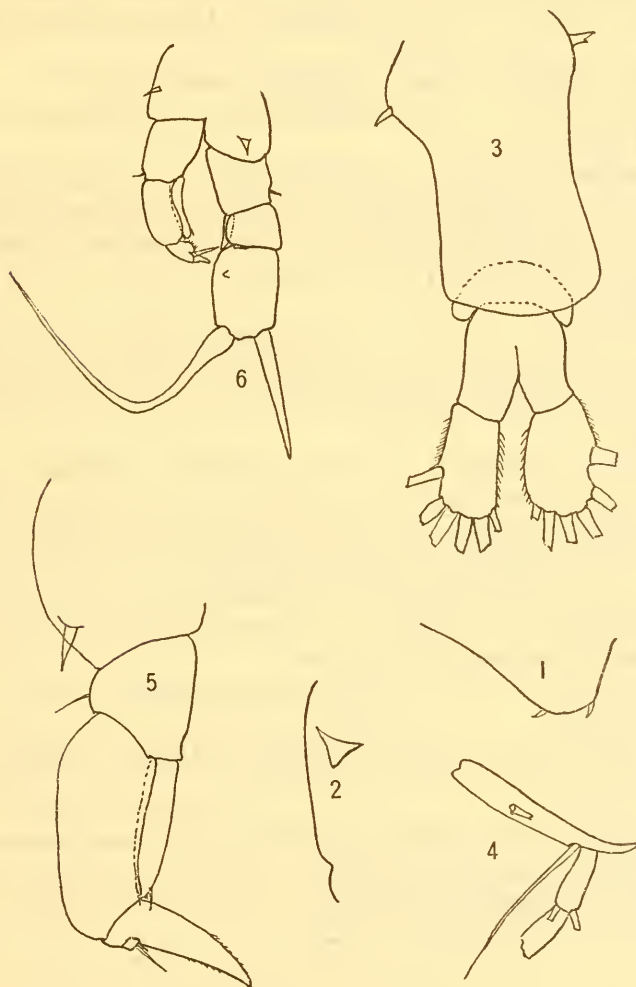


FIG. 1-6.—1, RIGHT WING OF LAST CEPHALOTHORACIC SEGMENT, $\times 223$. 2, PROFILE OF FIFTH SEGMENT OF FEMALE TO SHOW DORSAL SPINE, $\times 223$. 3, ABDOMEN OF FEMALE, $\times 223$. 4, TERMINAL SEGMENTS OF RIGHT MALE ANTENNA, $\times 223$. 5, FIFTH FOOT OF FEMALE, $\times 438$. 6, FIFTH FOOT OF MALE, $\times 223$.

is a small blunt spine on the posterior surface of the second segment of the exopodite, situated on the inner margin at about one-third of its length. The right endopodite is one segmented and equal in length to the first segment of the exopodite. The left foot reaches

to about the middle of the second segment of the right exopodite. The second basal segment is of about the same length as the corresponding segment of the right foot and has the lateral hair near the distal end. The first segment of the exopodite is twice as long as wide. The second segment is short, setose on the inner margin, and armed with a digitiform process and a sharp spine. The endopodite is slender, as long as the first segment of the exopodite, and setose at tip.

Length of female, 1.1 mm. Length of male, 0.9 mm.

Locality.—Ponds in Polk County, Fla., in collections made by Frank J. Myers.

This species resembles *D. saltillinus* Brewer so closely that it is, perhaps, a fair question whether it should be considered more than a variety of that species. It has been considered best, however, to recognize it as distinct. It differs from *D. saltillinus* in the following particulars;

In the male fifth feet there is no projection on the inner margin of the second basal segment of the right foot. There is a small blunt spine on the posterior surface of the second segment of the right exopodite.

In the female abdomen the second segment is covered or nearly covered by the first, while in *D. saltillinus* this segment is distinct. Schacht, 1897,³ describes *D. albuquerquensis* from Florida. It was shown by Marsh, 1907,⁴ that his description did not apply to *D. albuquerquensis* Herrick and the suggestion was made that it was more nearly like *D. saltillinus*. It seems probable, now, that his *D. albuquerquensis* was *D. floridanus*.

Paratype of male deposited in National Museum, slide, Cat. No. 52397, U.S.N.M.

Paratype of female deposited in National Museum, slide, Cat. No. 52398, U.S.N.M.

³ Bull. Ill. State Lab. Nat. Hist., vol. 5, art. 3, The North American Species of Diaptomus, pp. 146-149.

⁴ Trans. Wis. Acad. Sciences, Arts and Letters, vol. 15, pt. 2, A Revision of the North American Species of Diaptomus, pp. 473-474.