

abdomen into a single plate which covers the gills; the extreme length of the thoracic appendages, which are modified to form clawed ambulatory limbs, as well as the gradual decrease in size of the three posterior thoracic segments, are quite in harmony with this identification, which appears to me to be the only one possible.

The fact that in both cases the body had been broken off at the fourth segment of the thorax, suggests that the anterior segments of the thorax were in all probability broader and shorter than those which follow; if this suggestion prove to be correct the species only presents us with an exaggeration of the form of body characteristic of such species as *Ischnosoma spinosum*.

I do not wish to deny that both *Ischnosoma bacillus* and *Ischnosoma bacilloides* may ultimately be shown to be in reality identical; they however present sufficient differences to warrant their distinction as two species, supposing of course that these differences do not prove to be sexual. I am not aware of any other allied form in which such secondary sexual characters are developed.

The single specimen of *Ischnosoma bacillus* has been mounted in Canada balsam on a slide; it measures 10 mm. in length by 1 to 2 mm. in breadth. The length of the several segments which compose the fragment is as follows:—Fourth thoracic 2.5 mm., fifth thoracic 4 mm., sixth and seventh together 1.25 mm., caudal shield 1.25 mm., the above measurements give, at any rate, the right proportion between the several segments.

The fourth segment of the thorax (which unfortunately is the anterior end of the specimen) is like the rest cylindrical in form, widening out somewhat both at its anterior and posterior extremities; more particularly is this the case with the anterior region of the segment which, as shown in the figure (Pl. VI. fig. 6) is of considerable breadth, nearly as broad in fact as the segment is long; the whole segment has, therefore, the shape of a T; the two "arms" of the T are broad at their bases, where the limbs are articulated, beyond the articulation of the limbs they suddenly narrow into a long spine slightly curved forwards; these no doubt represent the epimera.

The fifth segment of the thorax is, as the above measurements imply, considerably the longest; the comparative elongation of this segment is not remarkable, because in the other species (e.g., *Ischnosoma spinosum*, Pl. VI. fig. 1) the fifth segment of the thorax is also the longest. Its form resembles that of the preceding segment, only reversed; the "arms" of the T are at the posterior instead of the anterior extremity of the segment, they are equally long with those of the fourth segment, but the epimeral spine appeared to me to be straighter and not so bent as in that segment; at the point where the fourth and fifth segments articulate with each other the diameter of each is slightly wider than in the middle of the segment.

The sixth and seventh segments of the thorax are very short indeed, and together about equal the caudal shield in length. The sixth segment is the longer of the two;