

this specimen had been kept in alcohol in a tube instead of being mounted upon a slide, the *thoracic appendages* are very much damaged, and in no one instance complete; the basal joints, however, entirely resemble those of *Ischnosoma bacillus*, so that there is little reason to doubt that the appendages were not widely different.

The present species being, unlike the last, a male, I am able to describe the modifications of the abdominal appendages in this sex, which has not yet been done for any species of the genus *Ischnosoma*. I am therefore anxious to discuss them as accurately as possible, seeing that in all probability the following description will be of the genus and not of the species only.

The first pair of abdominal appendages are shown in fig. 11 of Pl. VI.<sup>1</sup> from the inferior surface; these appendages are somewhat narrow and do not of course entirely roof in the cavity of the abdomen, the covering of which is completed by part of the next pair of appendages. At the upper extremity of the operculum are two minute calcified plates which seem to me to represent respectively the basipodite and endopodite of the limb, the outermost piece being the former. The operculum itself, comprising the two exopodites which fit close together but are separated by a distinct groove, is convex on its outer surface; the inner border where each piece comes into contact with its fellow is straight, the outer border curved; the lower margin is slightly incised and on the under surface as shown in the figure there is a transversely elongated aperture.

The second pair of appendages (fig. 10) are modified into a copulatory organ, which is similar in its general appearance to the same appendage in other Asellidæ (*cf. Acanthomunna*, Pl. XII. fig. 13); the penial filament, which is swollen at its base and furnished with an aperture, no doubt serving to conduct the semen, is of very great length, and is attached by a short and narrow curved joint to a large plate which probably represents the protopodite of the limb; attached to the protopodite is a delicate plate which possibly represents the exopodite (*cf. Acanthomunna proteus*, p. 50).

The penial filament and the joint by which it articulates with the rest of the limb represent the endopodite; the exopodite is a thick stout plate which lies in the natural position at the side of the central operculum, it terminates posteriorly in two longish spines of a yellow colour, one arising from the ventral the other from the dorsal side of the joint.

The third pair of appendages consist of a triangular basal joint with which are articulated a long delicate plate terminating in a filament and a thin gill lamella; I have not succeeded in separating the latter, so I have only figured (fig. 12) the basal joint and the filament, which probably corresponds to the exopodite; the latter is of very peculiar shape; it is expanded at its proximal part into an oval widish plate fringed along the outer margin with short slender hairs; it terminates in an excessively attenuated filament which is not so long as the penial filament.

<sup>1</sup> The figure has been inadvertently placed upside down.