PLATE II.

Figs. 4–6. *Bonellia suhmii*, n. sp.

Fig. 4. The internal structure of the very imperfect specimen represented in fig. 3; natural size.

i, *i*. Intestine.
n, *n*. Nerve-cord.
o. Mouth.
ΣΣ. The two anal vesicles.
U. Uterus.
Y. Torn loop of the intestine.

Fig. 5. The uterus, with low power.

T. Ciliated funnel.
m. Efferent aperture.

Fig. 6. The anterior half of an anal vesicle, with medium power.

Figs. 7–10. Male of *Bonellia viridis*, Rol., from Trieste.

Fig. 7. Adult male 1½ mm. long, with high power. The two hooks had fallen off. The nervous system could not be demonstrated.

b. Anterior blind end of the intestine, attached to the parenchymatous tissue by means of contractile muscle-fibres.
b'. Posterior blind end of the intestine, kept *in situ* by means of isolated muscular fibres.
c. Green wandering cells, containing chlorophyll.
d. Connective substance.
e. Ciliated epithelium.
f. Vesicular cells.
g. Generative opening, and near it some expelled spermatozoa.
i. Intestine.
l. Body-cavity.
m. Musculature.
o. Contractile fibres.
p. Nuclei of the peritoneal epithelium.
r. Spermatozoa.
s. The right anal vesicle (Analkieme)—segmental organ.
s'. The left anal vesicle (Analkieme)—segmental organ.
vd. Vas deferens.
y, *y*. External apertures of the segmental organs.
z. Contents of the intestine.

Fig. 8. Cross section in the region A of fig. 7, drawn with the aid of the camera lucida from a chrom-osmic acid preparation.

n. The inferior swelling of the œsophageal ring (the first pair of ventral ganglia).
The other letters are as in fig. 7.

Fig. 9. Cross section in the region B of fig. 7. Letters as above.

Fig. 10. One of the so-called anal vesicles (segmental organs), with very low power. The right is always somewhat smaller, and lies somewhat further back than the left. Each of these segmental organs opens separately to the exterior, ventrally and laterally. By the contractions of the body-wall the blood of the body-cavity and with it the free funnels of the segmental organs are driven backwards and forwards. The rim of the funnel is formed of from five to seven ciliated cells. The lumen of the segmental duct is ciliated, but only interruptedly, not continuously.

v. Wall.
u. Lumen with lash-like cilia.
x. Funnel opening.
s. Exterior opening.