

the latter noted on the minute male the presence of two hooks behind the mouth opening. Vejdovsky¹ investigated anew the structure of the male *Bonellia*, and discovered the central nerve-cord, which had till then been overlooked. I then² described for the first time the œsophageal nerve-ring, the alimentary canal without mouth or anus, and the two rudiments of the anal vesicles. In a very exhaustive memoir Spengel³ has given figures and description of the structure of the male *Bonellia*, yet both this naturalist and Greeff have overlooked the rudimentary anal vesicles which I have here figured in Pl. II. fig. 10. After Spengel's excellent description it seems to me unnecessary to enter further into the discussion of the anatomical details, and I therefore simply refer to the figures.

B. GEPHYREA ACHÆTA.

A. *Gephyrea* without setæ.

Genus 5. *Phascolosoma*, F. S. Leuckart.

The longitudinal musculature is continuous and not divided into distinct bands. There are numerous tentacles arranged in a circle or in groups round about the mouth. The intestine is spirally coiled. The "intestinal spiral" (Darmspira) in the posterior portion of the body quite unattached. Hooks may be absent. There are two free segmental organs. Eggs spherical. Two to four retractors of the proboscis. Found in all seas.

6. *Phascolosoma vulgare*,⁴ de Blainville.

Sipunculus vulgaris, de Blainville, Dict. d. Sci. Nat., t. xlix., 1827, pp. 312, 313, Vers., pl. xxxiii. fig. 3.

Syrinx harveyi, Forbes, A History of British Starfishes, London, 1841, p. 249, with woodcut.

Phascolosoma vulgare, Keferstein, Beiträge zur Kenntniss der Gattung *Phascolosoma*, F. S. Leuckart, Zeitschr. f. wiss. Zool., Bd. xii. p. 39, Taf. iii. fig. 3, 1862; *Ibid.*, Bd. xv. p. 429, Taf. xxxi. fig. 5, 1865.

Phascolosoma margaritaceum, Keferstein, Beiträge zur anatomischen und systematischen Kenntniss der Sipunculiden, Zeitschr. f. wiss. Zool., Bd. xv. p. 530, Taf. xxxi. fig. 9, Taf. xxxii. figs. 28, 29, 1865.

¹ F. Vejdovsky, Ueber die Eibildung und Männchen von *Bonellia viridis*, Rol., Zeitschr. f. wiss. Zool., Bd. xxx. pp. 487-500, pl. xxx., 1878.

² Em. Selenka, Das Männchen d. *Bonellia*, Zool. Anzeiger, No. 6, p. 120, 1878.

³ G. W. Spengel, Beiträge zur Kenntniss der Gephyreen, I. Die Eibildung, die Entwicklung und das Männchen der *Bonellia*, Mitteilungen aus der Zoolog. Station zu Neapel, Bd. i. Heft. iii. Taf. viii.-xii., 1879.

⁴ Strictly speaking the setæ are not always absent. In the young larva of *Phascolosoma vulgare*, for instance, I found three pairs of setæ. These are, however, subsequently thrown off. In the adult animals true setæ seem to be entirely absent. Vide Eifurchung und Larvenbildung von *Phascolosoma elongatum*, Zeitschr. f. wiss. Zool., Bd. xxv. p. 446, Taf. xxx. figs. 14, 15, 18, 1875.