

32. *Symplocostoma hexabulba* n.sp.
(Table 5, Figure 32)

♀	0.6 0.3	6.3 1.1	15.0 1.2	41	49	60 1.7	66	71	97.5 0.8	5300
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$\alpha = 60, \beta = 6,6; \gamma = 40.$

Dimensions ♀	Cephalic bristles	End of oral cavity	Excretory pore	Nerve ring	End of esophagus
Length	8	22	60	325	720
Width	15	21		57	62

The **body** narrows greatly to the anterior end, being at the cephalic bristles $1/4$ of the width at the beginning of the esophagus. From this point it widens an additional $1 1/2$ times to midbody and then narrows twofold to the anus. Anteriorly, most of the narrowing occurs in the preneurial region (Figure 32a), while posteriorly it is quite gradual. The **cuticle** is smooth, not thick, about $1 1/2 \mu$. Bristles are present only on the head.

The **head** is rounded, and the extreme anterior end is somewhat truncated (Figure 32c). Lips are absent. The margins of the mouth are beset with six labial papillae which project slightly, and a small chitinized canal connected to the sensory organ runs posteriorly from them. Six cephalic bristles are present; they are fairly long— 10μ , or $2/3$ of the head width. The lateral organ is shifted somewhat posteriorly; it is cyathiform, with a perfectly round orifice $3 1/2 \mu$ in diameter. Its posterior pouch is very shallow (o. l. —Figure 32c). At the level of the posterior $1/3$ of the oral cavity the inner layer of the cuticle parts from the outer and is attached separately to the cephalic capsule (cut.—Figure 32c). The mouth is widely open, 5μ in diameter. The entire wall of the **oral cavity** is thick, more notably posteriorly than anteriorly. Anteriorly, three cuticular rings are noted: the anterior lies almost at the extreme front, the posterior approximately at $1/5$ of the length of the oral cavity; the central ring is nearer the anterior. Three immovable teeth are set on the lateral walls of the oral cavity, the largest of them being the right subventral (d. subv. d. —Figure 32b); the other subventral is of almost equal size, and the dorsal (d. d. —Figure 32b) is smaller. The oral cavity narrows slightly at the level of the teeth. The movable spear that is characteristic for *Symplocostoma* (d. mob. —Figure 32b) rises from the bottom of the oral cavity adjacent to the large right subventral tooth. The bottom of the oral cavity is also provided with cuticular thickenings (a—Figure 32b). The overall length of the oral cavity is 26μ , maximum width is 16μ , and the movable tooth stands 20μ from the bottom. The esophagus is attached to the bottom of the oral cavity as usual, and extends more anteriorly opposite the sectors than between them. A transversely oval cuticular body is located immediately behind the oral cavity (c. cut. —Figure 32b), and a pigment spot lies behind the body, but is shifted from it so that the cuticular body cannot be considered as the lens of an eye. The **esophagus** (Figure 32a) is narrow anteriorly, as in all *Symplocostoma*, and lacks muscle fibers; the thick chitinized tube only just fits into it (oes. —Figure 32b); more posteriorly, a weak development of the muscle fibers is noted first, and then a strong development. In the posterior part, however, there are **six distinct bulbs**, although they are not greatly developed (Figure 32a). Externally, their presence is indicated by annular depressions on the surface of the esophagus, while internally, the rays of the tube form hollows at the center of each bulb, thus producing a distinctly lenticular cavity (Figure 32a). The posterior bulbs are somewhat

longer than the anterior. The internal structure of the esophagus within the bulbs is the same as in the other forms of *Symplocostoma*; the interstratification of the granular tissue with the muscle fibers is also the same. Anteriorly, the esophagus is 12μ thick (48% of the body width); at the nerve ring it is 20μ (38%), and posteriorly it is 55μ (73%). The esophageal glands discharge through special elevations at the beginning of the oral cavity (gl. oes. — Figure 32b). The preneurial region accounts for 45% of the length of the esophagus, the portion from the nerve ring to the bulbs accounts for 20%, and the six bulbs take up the remaining 35%.

The **intestine** consists of large cells which narrow its lumen and make it irregular. There are numerous fat droplets in the cells. The **nerve ring** is very flat and wide. The elongate, pyriform **cervical gland** ($80 \times 25\mu$) is located some distance behind the end of the esophagus. The excretory pore is shifted greatly anteriorly (see dimensions). The **ovaries** are paired, reflexed, and short. The uterus is thin-walled and uninterrupted, i.e., not divided into two lumina; the eggs measure $100 \times 70\mu$, with a thin shell. The vagina is well developed but its walls are not thick; it traverses 0.4 of the body width internally.

Males were not found. The **tail** is quite long, pointing gradually to the end, making a perfectly conical shape (Figure 32c). The tubular caudal glands are located within the tail; the cuticle thickens at the end of the tail so that the caudal pore is long, while the cone, as in the other species, is inserted into the cuticle. The proportions of the tail are: length 4, width at the level of the cone 0.25.

This species was found in fairly large quantities, but only as females: phyllophores 5.12; oxeas sand of Georgievskii Monastery 7.12; Kruglaya Bay 6.12.

The characteristic structure of the esophagus differentiates this species from the other forms of *Symplocostoma*, but the structure of the oral cavity is similar to that of the other species; therefore, I do not isolate it in a new genus.

32. *Symplocostoma hexabulba* n. sp.

- Figure 32a. Anterior end of body of female, six bulbs with cavities visible; obj. 7, oc. 0.
Figure 32b. Anterior end of female; obj. Zeiss apochr. 2mm, comp. oc. 12 (magnification about 2,000); d. subv. d. — right subventral tooth (immovable); d. mob. — adjacent spine of buccal cavity; cut. — cuticular thickening on bottom of buccal cavity; oc. — eyes; p. lab. — labial papilla (its chitinized canal); d. d. — dorsal tooth; cut. — internal layer of cuticle attached separately to buccal capsule; o. 1. — lateral organ; gl. oes. — esophageal gland; c. cut. — cuticular body; oes. — internal chitinized tube of esophagus.
Figure 32c. Tail of female; obj. 7, oc. 1.

