Биология и анатомия семейства Cyartonematidae

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The position of the family Cyartonematidae, together with the related Meyliidae, remains unclear in the nematode systems. The morphology of Cyartonematidae is characterised by distinctive structures: (1) a unique pattern of head sensilla; (2) a pharynx consisting of an anterior muscular part, a narrow isthmus, and a terminal glandular enlargement; (3) the presence of two enormous pseudocoelomocytes in the anterior part of the body; (4) a blind-ended midgut, without any signs of a rectum or anus; (5) female ovaries combining features of the straight and antidromous types.

During work with *Cyartonema zosterae* in the White Sea, we revealed a phenomenon that has not been previously described in nematodes. Live specimens in a calm state appear pink or even dark red due to subcuticular pigment granules distributed in stripes along the nematode's body. If touched, the nematodes bend sharply and release clouds of red pigment that dissolve in seawater. The nematode's body then becomes discoloured. The substance is secreted along the entire body, apparently directly through the cuticle. The functions of the secretion and the method of its release remain unknown. It can be assumed that this reaction is a defensive mechanism and that the active substance in the mixture released is capable of repelling potential predators.

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Biology and anatomy of the family Cyartonematidae

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