New ultrastructural data on crisiid Cyclostomata.

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Our research is focused on ultrastructural details of the sexual reproduction, in particular, embryonic incubation in marine bryozoans. The central group is Cyclostomata, one of the most ancient bryozoan taxa, that is still diverse and abundant in modern seas. Unique combination of their reproductive traits includes intracoelomic incubation of embryos (viviparity), matrotrophic nourishment (via placentation) and polyembryony (multiple clonal development of embryos from a single fertilized egg). Only seven papers have been published on this topic, however, the most recent one being 90 years old. All of them were based on the light-microscopic observations often resulting in unclear, dubious or contradictory statements.
We studied two common boreal species, *Crisia eburnea* and *Crisiella producta* collected at the White Sea. Detailed study of gonozooidal anatomy and embryonic incubation accompanied by matrotrophy provided new interesting data on the embryo and placental ultrastructure. There are still a lot of questions but the information obtained adds greatly to our understanding of cyclostome zooidal structure, functioning of the placental analogue and embryonic development.
These new morphological data are also necessary in the light of current revision of cyclostome phylogeny since many skeletal morphological characters were shown to be homoplasious. Furthter research will include representatives of some other families. We hope that some of the revealed characters will prove to be phylogenetically significant.