The nervous system of cheilostome bryozoans

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Bryozoans are sessile aquatic suspension feeders in mainly marine, but also freshwater habitats. They form colonies composed of numerous individuals called zooids. The majority of extant species is present in the taxon Cheilostomata that, among other characters, have a calcified body wall. The nervous system of this clade is very little investigated, particularly with more recent morphological tools. Consequently, the main focus of this study lies in the analysis and characterization of the cheilostome nervous system employing a range of complementary traditional and modern techniques. In order to gain a clearer reconstruction of the ground pattern of the cheilostome nervous system, a range of different species of various clades are studied. First results show that the brain/cerebral ganglion is located at the base of the lophophore, wherefrom neurite bundles innervate the tentacle crown and peripheral areas such as the digestive tract and towards the body wall via the tentacle sheath. Preliminary observations show that the cheilostome nervous system is similar to other myolaemate bryozoans, in particular ctenostome ones.