

Molluscs in pelagic realm: general characteristics in morphology and ecology

SASAKI, Takenori^{1*}

¹The University Museum, The University of Tokyo

Molluscs are the most thriving living animals in the ocean, and their fossil records are rich and continuous from the Cambrian to Holocene. The majority of molluscan groups are benthic, but part of them have adapted to a planktonic or pelagic life. Notable examples include pteropods, heteropods, janthiniids and several genera of nudibranchs in gastropods. In cephalopods, many species are pelagic or actively swim. These non-benthic molluscs segregate their habitats from the epipelagic to abyssopelagic zones, and a large number of species are known to migrate vertically. Their life habit is regulated by numerous environmental factors such as light, nutrients, temperature and water pressure. A specialized mode of life often has severe constraints in morphological diversity: species in pelagic realm are characterized by a thin-shelled or shellless body, a limited spectrum of coloration, sensitivity to illumination, and buoyancy control. These general characteristics are manifested particularly by comparison with those of benthic species.

Keywords: pelagic realm, Mollusca