# Sexual reproduction of the orange dendrophylliid coral *Astroides calycularis* in the Mediterranean Sea

Goffredo Stefano, Marconi Giulia, Gasparini Gabriella, Zaccanti Francesco

**ABSTRACT:** This study examines the sexual reproduction in a scleractinian coral living in temperate waters, in the southern part of the western Mediterranean Sea. *Astroides calycularis* is an azooxanthellate coral that colonizes vertical walls, overhangs, cave entrances, and sea caverns with strong water movement, from the surface to 30m in depth. The colonies have been collected monthly, from April 2004 to September 2005 at Palinuro (Salerno, Campania, Italy) in the Southern Tyrrhenian Sea. This is the first in-depth investigation of the reproductive biology of this species. As expected for a member of the family Dendrophylliidae, *A. calycularis* was a gonochoric coral: colonies were sex separated, with all mature polyps in the same colony showing the same sex. Morphological aspects of male gametogenesis were similar to those described in other dendrophylliids coral. Female gametogenesis was characterized by the conspicuous presence of lipid droplets in the oocyte cytoplasm, which were of phagocytic origin. Preliminary quantitative data on the annual reproductive cycle indicate spring fertilization.