

Following the Antarctic Circumpolar Current: patterns and processes in the biogeography of the limpet *Nacella* (Mollusca: Patellogastropoda) across the Southern Ocean

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© 2016 John Wiley & Sons Ltd Aim: We use an integrative biogeographical approach to further understand the evolution of an important Southern Ocean marine benthic element, the limpet genus *Nacella* (Mollusca: Patellogastropoda). Location: Southern Ocean. Methods: We used multi-locus time-calibrated phylogeny of *Nacella* at the scale of the whole Southern Ocean to elucidate the underlying processes involved in the origin and diversification of the genus. Results: Divergence-time estimates suggest that soon after its origin during the mid-Miocene (c. 12.5 Ma), *Nacella* separated into two main lineages currently distributed in (1) South America and (2) Antarctica and the sub-Antarctic islands. We identified two pulses of diversification, during the late Miocene (8 to 5.5 Ma) and the Pleistocene (< 1 Ma). Main conclusions: Major periods of climatic and oceanographical change strongly affected the biogeography of *Nacella* and demonstrate both the long- and short-term influence of the Antarctic