Hellberg, M. E. 1998. Sympatric sea shells along the sea's shore: the geography of speciation in the marine gastropod *Tegula.* Evolution 52: 1311-1324.

Uncertainty and controversy surround the geographical and ecological circumstances that create genetic differences between populations that eventually lead to reproductive isolation. Two aspects of marine organisms further complicate this situation: (1) many species possess planktonic larvae capable of great dispersal; and (2) obvious barriers to movement between populations are rare. Past studies of speciation in the sea have focussed on identifying the effects of past land barriers and on biogeographical breakpoints. However, assessing the role such undeniable barriers actually play in the initial divergence leading to reproductive isolation requires phylogenetic studies of recent radiations living in varying degrees of sympatry and allopatry to see which barriers (if any) tend to separate sister species. Here I infer phylogenetic relationship between 23 species of the marine snail *Tegula* using DNA sequences from two regions of the mitochondrial genome: cytochrome *c* oxidase I (COI) and the small ribosomal subunit (12S). These snails possess planktonic larvae with moderate dispersal capabilities and have speciated rapidly, with over 40 extant species arising since the genus first appeared in the mid-Miocene (about 15 M.Y.B.P.). Trees constructed from the COI and 12S regions (which yielded 205 and 137 phylogenetically informative sites, respectively) were robust with respect to tree-building method, bootstrapping, and the relative weightings of transitions, transversions, and gaps. Within clades where all extant species have been sampled, five of six identified sister species pairs broadly coexist on the same side of biogeographical boundaries. These data suggest strong geographical barriers to gene flow may not always be required for speciation in the sea; transient allopatry or even ecological barriers may suffice. A survey of the geographic distributions of marine radiations suggests that coastal distributions may favor the sympatry of sister taxa more than island distributions do.