Raimondi, P., R. Sagarin, R. Ambrose, C. Bell, M. George, S. F. Lee, D. Lohse, C.M. Miner, and S.N. Murray. 2007. Consistent frequency of color morphs in the sea star *Pisaster ochraceus* (Echinodermata: Asteriidae) across open-coast habitats in the northeastern Pacific. *Pacific Science* 61:201-210.

Abstract: The sea star *Pisaster ochraceus* (Brandt, 1835) is among the most conspicuous members of northeastern Pacific rocky-shore fauna due to its dramatic color variation, ranging from bright yellowish orange to brown to deep purple. Despite a large body of ecological and developmental biology information on *P. ochraceus*, few studies have rigorously examined color patterns or their causes across its geographic range. We used thousands of observations of sea star color and size taken from southern California to northern Oregon to show that the frequency of orange sea stars is approximately 20% with little variation across a broad latitudinal band. However, the frequency of orange sea stars in a population increases with the size of the animals in most populations. We consider several alternative hypotheses for these color patterns but find that the most parsimonious explanation is that adult color is a selectively neutral genetic trait that expresses itself ontogenetically. These novel findings point to the need for renewed study of the basic biology of this key ecological species.