

### **Mutualism with sea anemones triggered the adaptive radiation of clownfishes**

Adaptive radiation is the process by which a single ancestral species diversifies into many descendants adapted to exploit a wide range of habitats. The appearance of ecological opportunities, or the colonization or adaptation to novel ecological resources, has been documented to promote adaptive radiation in many classic examples. Mutualistic interactions – a relationship that benefits both organisms – allow species to access resources untapped by competitors, and enable species diversification.

Scientists showed that clownfishes exhibit patterns that are likely diagnostic of an ecological adaptive radiation following the acquisition of the specific ability to interact and live with sea anemones. The obligate mutualism with sea anemones is thought to be the key innovation that allowed clownfishes to radiate rapidly in untapped ecological niches. And as the clownfishes spread, they diversified into new, isolated species.