Anemones As Refuge For a Temperate Fish

Scientists studied an association between the temperate zone fish *Oxylebius pictus*, the painted greenling, and sea anemones in Barkley Sound, Vancouver Island, British Columbia, Canada. Fish were observed swimming and resting unharmed among the tentacles, or next to a column of the anemone *Urticina lofotensis* (98% of all observations) and the anemone *U. piscivora* (2% of all observations). These associations were most commonly observed at moderately exposed sites where there were relatively high densities of the fish and anemones. Most associations occurred at night when the fish were inactive. Small juvenile (< 6 cm total length) associated closely with sea anemones, larger individuals spent less time with their hosts, and most adults sheltered in rock holes and crevices. Experiments demonstrated that small greenlings were more vulnerable to predators than large individuals. The two anemones were large, persistent structures in the study habitats that provided effective refuge for the fish from predators. Anemone size, shape, and presence of copepod associates influenced the fish in their choice of anemone. The greenling fed on copepods and other crustaceans that associated with the anemone and host sea anemones served as both refuges and feeding habitats for the fish. The sea anemones did not appear to receive any significant benefit from the relationship and the fish was considered to be a facultative commensal.

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