

Rockfish Habitat in Alaska (416)

Determining the Ecological Value of Habitat to Juvenile Rockfish in the Aleutian Islands

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What are rockfish?

Rockfish are a large family of long-lived, slow growing fish that inhabit rocky reefs, sea walls, slopes and pinnacles from Japan to Alaska to northern Baja California. Thirty four species of rockfish are found in Alaska waters and several species contribute to commercial fisheries. Rockfish tend to have large heads, big mouths, spiny fins, and are often red in color. Rockfish are unusual among the commercially harvested species in Alaska, in that female rockfish have internal fertilization of eggs and they give birth to live young. The young drift in the water column for an extended period and then settle to the seafloor, so the settlement habitat is thought to be important to their survival.



Photo by Valeria Teloni

Can fishing impact rockfish populations in Alaska?

Evidence from fishing trawls capturing rockfish suggests that juvenile rockfish are using habitats that are vulnerable to fishing gear and relatively uncommon throughout the Aleutian Islands, Alaska. Rockfish of many species are often found in association with large rocks and boulders, oil platforms, sponge or floating and submerged vegetation. This type of habitat provides them with space to hide from predators and a high degree of prey food. Juvenile stages of rockfish species are particularly vulnerable to predation when suitable refuge habitat is not present.

What are we studying and what have we found?

This study calculates the value of habitat in the Aleutian Islands to juvenile rockfish by examining abundance, condition and growth of rockfish in five study areas. By examining the use of the habitats observed by juvenile Pacific Ocean perch, with particular reference to the abundance of sponge and coral, researchers will gain a better understanding of the rockfish juvenile habitat requirements. In 2004 juvenile Pacific Ocean perch were collected from three study areas. Sponge and coral were found at 85% of the sites where bottom trawls were conducted. Juvenile Pacific Ocean perch were observed to be most abundant in boulder fields

The long term objectives of the research team are to develop cost effective techniques for mapping fish habitat in Alaska, to develop methods to estimate the significance of different types of habitat to rockfish species and to measure the effects of fishing on fisheries habitat, with the ultimate goal of integrating this information into fisheries management.