

Genuses *Sebastes* and *Sebastolobus*

There are 36 separate species of rockfish in our waters, and to confuse matters more, they go by a number of common names. Many coastal residents know them as “rock cod” or “bass”, though in reality they’re neither a cod nor a bass. They have been known over the years by a wide variety of other names, including red snapper, black bass, black snapper, gopher, green snapper, brown bomber, fantail and many other imaginative monikers.

Rockfish are actually part of a large family of fish known as “scorpionfishes”, so named (as any fisherman knows who’s been jabbed by the sharp spines along the dorsal fin) for the venom which causes pain and temporary numbness in their victims.

They live in depths that range from three feet, all the way down to over 2000 feet deep on the outer coast and about 600 feet in Georgia Strait, with juveniles in shallower water. Their swim bladder serves as a buoyancy compensator, allowing the fish to maintain its position in the water column without expending energy—an important adaptation for fish that hang out on rock faces.

Though some species school, most rockfish are solitary and territorial. They’re built stoutly, with up to 17 long, heavy spines in their dorsal fin, smaller spines on their head and gill-cover, and a large mouth and eyes. Their colours range from black, to drab green, to an amazing array of brilliant orange, crimson and other colours.

There are two stages in a rockfish’s life. During the larval stage, which can last up to 18 months, it moves passively, floating on ocean currents, and only a small number survive. During the juvenile and adult stage, the fish becomes a bottom-dweller, usually settling on one rocky reef for most of its life. And this can mean a lot of years. Yelloweye rockfish (“red snapper”) up to 117 years old and quillback rockfish up to 76 years have been found in BC coastal waters. Rockfish grow slowly, are long-lived, have low rates of natural mortality, and low rates of reproduction—which is a problem for a tasty fish that has been valuable for both commercial and sport fishermen over the past century. The Department of Fisheries and Oceans describes rockfish as “over-utilized” in the Strait of Georgia.

Most rockfish must be well into their teens before they are able to reproduce (for example, at 18 years, only half of yelloweye rockfish are sexually mature). Over the years, we have removed mature fish from localized areas, reducing the breeding population to dangerously low numbers. As a result, we’ve tended to catch younger and younger rockfish, often before they have had much chance to reproduce.

Today, the population of some species has plummeted to an all-time low in Georgia Strait and Puget Sound. The black rockfish (*Sebastes melanops*, “black bass”), which used to be extremely plentiful, has virtually disappeared. Quillback, copper and yelloweye rockfish populations are severely depleted.

The state of rockfish populations shows we need to make some fundamental changes in way we manage fisheries. Science is starting to show that setting aside marine reserves (no-take zones), where these fish can grow to maturity and reproduce, is effective in helping to restore long-lived, territorial animals like rockfish. Researcher Scott Wallace states that the difference between rockfish populations within the

protected waters of Porteau Cove and Whytcliffe Park is “black and white” compared to areas outside the reserves. Edmonds Underwater Park in Washington, in existence for almost 30 years, has more and bigger rockfish and a resulting reproductive capacity much greater than nearby control sites. Hopkins and Point Lobos Marine Reserves in California both have larger and more abundant rockfish than control sites. These areas are all relatively tiny, but science is starting to show that a network of small no-take zones can be extremely helpful in restoring rockfish, even across an area as large as the Strait of Georgia.

Fortunately some efforts are underway to stem the loss of rockfish. In the US, the National Marine Fisheries Service is considering listing Puget Sound rockfish and several other species under the Endangered Species Act; if listing occurs, a strict conservation and recovery plan would be required. In the meantime, San Juan County has established a number of “bottom fish recovery zones”. Though voluntary, public awareness is mounting and the County is hopeful that these areas can serve as successful rockfish nursery areas.

On Canada’s west coast, Fisheries and Oceans have implemented a network of 164 Rockfish Conservation Areas (RCAs) coastwide, in which fishing impacting on rock (including those resulting in bycatch of these species) are prohibited. The RCAs include 86 in the Strait of Georgia and its northern reaches (from Wellbourne Pass to Sidney).

It’s too early to tell whether these efforts will be enough to allow rockfish populations to rebuild, but we certainly hope for the recovery of these remarkable fish.

WHAT YOU CAN DO:

- Respect Rockfish Conservation Areas, and support efforts to establish long-term marine protected areas, particularly around rocky reefs that are prime habitat for rockfish.
- Respect voluntary no-take zones (such as those in San Juan County and the pilot marine protected area at Gabriola Pass), and refrain from fishing there.
- When you fish, don’t practice catch-and-release with rockfish – it doesn’t work. When a rockfish is brought to the surface, the gases inside its swim bladder expand and the bladder balloons, bursting and sometimes being expelled through the mouth. Even when the fish appears unharmed and swims away, its swim bladder has been damaged and an infection will set in, killing it within a few weeks.