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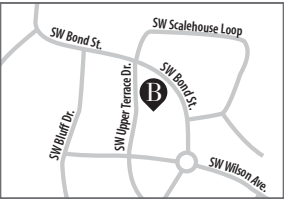
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LOCAL, STATE & REGION

An example of fishery management under climate change: THE SHORTBELLY ROCKFISH

BY KATIE FRANKOWICZ
The Astorian

A small, spiny fish no one wants to catch has started to appear in trawl nets off the Oregon Coast.

Shortbelly rockfish are common off California but were rare in Oregon until recently. Boosted by several strong reproductive years, their apparent expansion into new territory triggered a discussion among West Coast fishery regulators and raised concerns for conservation groups.

It has also provided a working example of exactly how tricky it could be to manage fisheries as species and ocean conditions shift under climate change.

Shortbelly rockfish — a relatively shorter-lived type of groundfish that travels in large schools — has little market value. It has been decades since anyone even seemed interested in developing a fishery around them and they are not in danger of being overfished, state biologists say.

When the shortbelly rockfish is caught by accident in other fisheries, its only commercial use is as fishmeal or fish oil, products made from fish byproducts, low-value fish and fishery bycatch that are used as fertilizers and animal feed and in aquaculture.

But shortbelly rockfish is a critical source of food for many seabirds, which face challenging overall population declines, as well as for Chinook salmon and other marine species.

The shortbelly's expansion north puts them in the path of the state's midwater trawl fisheries. The Pacific whiting fishery began to record increased encounters with shortbelly rockfish beginning in 2017.

Most tows that snag shortbelly may only land around 10 pounds of the rockfish, but every once in a while there will be a big tow — a lightning strike — of over 100,000 pounds.

Triggered a review

The rising number of shortbelly landings triggered a review by the Pacific Fishery Management Council.

The council, which recommends fishery management measures in federal waters off California, Oregon and Washington state, took several interim steps in 2019 and 2020 to protect the fish. They raised the annual catch limit and designated the rockfish as an ecosystem component species, a title that recognizes shortbelly's value in the ecosystem as a forage fish but does not come with specific fishery management measures.

Conservation groups argued that more proactive protection was needed.

The Audubon Society and Oceana urged for a prohibition that would prevent the creation of a fishery targeting shortbelly rockfish.

Right now, shortbelly is nearly useless to fishermen. Vessels in the Pacific whiting fishery actively try to avoid them. When a vessel does hit a school of shortbelly, the spiny fish tangle in the net, creating frustrating work for crew and sometimes damaging more valuable fish around them.

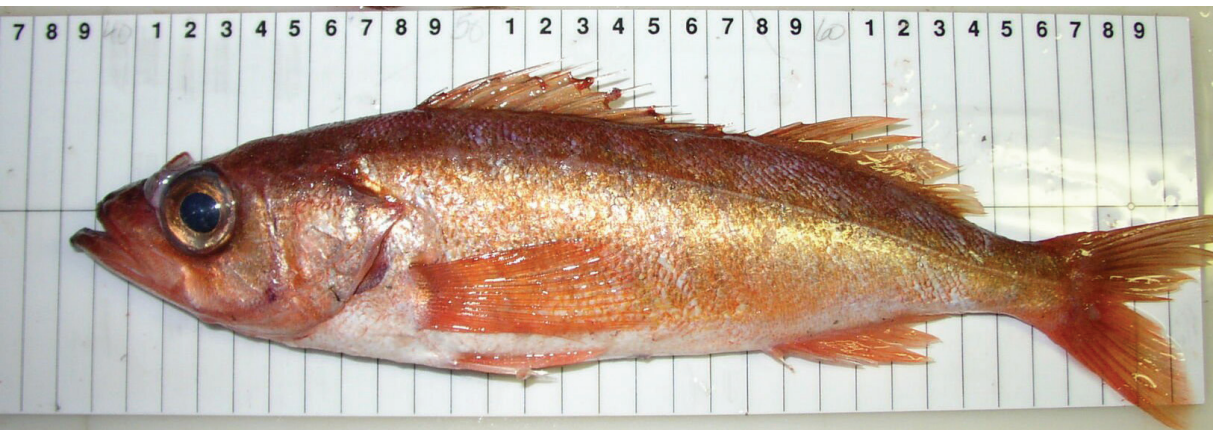
But as interest in aquaculture opportunities and demand for fishmeal and fish oil grows, conservation groups worry about what the future could hold.

In November, the council further limited catch of the fish



Keri Barber/NOAA Fisheries

Vessels in the Pacific whiting, or hake, fishery snag other species in their nets, including, occasionally, a chili-pepper rockfish. Shortbelly rockfish, rarely seen in Oregon but abundant in California, have also started showing up in whiting landings — frequently enough and in large enough amounts to raise concerns.



NOAA Fisheries

Recent discussions around shortbelly rockfish highlight some of the challenges states could face when it comes to regulating fisheries under climate change.

and could consider examining a prohibition on a directed fishery for shortbelly next year.

It's a partial win, said Joe Liebezeit, a scientist and avian conservation manager for Portland Audubon.

Anna Weinstein, the director of marine conservation with the National Audubon Society, agrees. She said the council's action provides some truly meaningful safeguards and breaks.

But in light of climate change, "It's just more important than ever to be proactive about the foundation of the food chain that supports all the species we care about," Weinstein said.

The council does not want to see targeted fishing on shortbelly rockfish either. However, a prohibition takes work and would require extensive analysis of data, some of which is not readily available for shortbelly. There has not been a stock assessment of the fish since 2007.

"It seems like we should just be able to say, 'Thou shalt not go out and target shortbelly rockfish,'" said Maggie Sommer, with the Oregon Department of Fish and Wildlife, and a Pacific Fishery Management Council member.

It's not that easy. Fishery managers need to be clear

about what they are requiring and what they are enforcing. They need to understand how changing management for one species might impact and impede other fisheries.

It isn't clear yet why shortbelly rockfish are so abundant off the Oregon Coast now — though warmer ocean waters associated with a marine heat wave that began in 2015 are likely a factor. What is obvious is that shortbelly rockfish have experienced several very good reproductive years and expanded north of their historical range.

Caren Braby, the marine program manager with the Oregon Department of Fish and

"The question really becomes are we prepared with our management to lose species?"

— Caren Braby, marine program manager with the Oregon Department of Fish and Wildlife

Wildlife, has been involved in council discussions about various climate change scenarios for West Coast fisheries.

With shortbelly, she sees parallels to Oregon's emerging market squid fishery.

Landings of market squid surged off Oregon in the past five years after decades of being almost nonexistent. Boats that fish for the squid in the animals' more typical range off the California coast have headed north to take advantage of the boom.

The situation caught regulators off guard. Oregon had no established quota and no set season for market squid. Suddenly, as landings continued to come in strong and the number of participating vessels increased,

fishery managers needed to discuss a whole new suite of management details.

As with shortbelly, there are gaps in the data and uncertainty about how new management could impact fisheries or benefit the animals in question.

Dilemma
It is the kind of dilemma council members like Braby

expect to see more of under climate change and it further highlights the need to be nimble and flexible, she said. With climate change and shifting ocean conditions, some species will thrive and others will fail. Many are expected to move into new areas.

There is one really easy question, Braby says: "Are we going to see new species emerge in our landings?"

"And the answer," she said, "is, 'Certainly.' This is an example."

"So the question really becomes are we prepared with our management to lose species?" she added. "Are we prepared with our management to gain species? And the answer is, 'Not yet,' but we're thinking really hard about it."



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