OCEANA | Protecting The World's Oceans

99 Pacific Street, Suite 155C
Monterey, CA 93940

831.643.9266
www.oceana.org

June 12, 2010

Mr. David Ortmann, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

RE: Agenda Item B.3: Tentative Adoption of Harvest Specifications, Rebuilding Plan Revisions, and Management Measures for 2011-2012 Fisheries

Dear Chairman Ortmann and Council Members,

Shortbelly rockfish (*Sebastes jordani*) are a critically important forage species in the California Current ecosystem, as prey for many species including for Chinook salmon. It has come to our attention that the management of shortbelly rockfish, however, does not recognize and account for the important ecosystem services they provide. We are writing to urge the Council to prohibit a directed fishery and prevent any increases in bycatch of this species unless and until a full ecosystem analysis can be completed through the Ecosystem Fishery Management Plan, and it can be demonstrated that current allowable catch levels are not impacting ecosystem health and the services shortbelly rockfish provide. Such an action would build on and have a similar scientific and management rationale to the Council's precautionary precedent-setting action to protect krill from directed harvest.

Shortbelly rockfish have been recognized for decades as a primary prey item for marine mammals, seabirds, Chinook salmon, and other commercially important fishes (Markel 1957, Chess 1988, Lowry and Carretta 1999, Sydeman et al. 2001; Field et al. 2007; Roth et al. 2008). Yet its importance as forage is not currently taken into account in the setting of Optimum Yield (OY). Shortbelly rockfish are currently designated as a Category 2 species in the Groundfish FMP and the 2010 OY and ABC were set at 6,950 metric tons.[1] While there is no directed fishery for shortbelly rockfish, there is a potential for one to evolve in the future (Love et al. 2002).

Shortbelly have been the most abundant juvenile rockfish on the West Coast for several decades, though have been declining in recent years (see Attachment). Merkel (1957) reported that juvenile shortbelly rockfish were an important prey for Chinook salmon along the central California coast in late spring and summer, accounting for more than 60% of their prey identified to the species level. What is more, juvenile rockfishes and northern anchovy are the two most important prey items for Chinook salmon in the San Francisco Bay region (Healey 1991). For many breeding California seabirds, as much as 90% of their diet is composed of pelagic stages of juvenile (age 0) rockfish during the late spring and early summer breeding seasons, and unexploited species (such as shortbelly) generally account for more than two thirds of the juvenile rockfish identified (Ainley et al. 1993; Sydeman et al. 2001; Miller and Sydeman 2004). Shortbelly rockfish are described as important prey to thresher sharks (Preti 2004), longnose skate (Robinson et al. in press), and jumbo squid (Field et al. in review), among others. They are also eaten by other rockfish species, including boccacio and chilipeppers (Love 1996). Furthermore, a forthcoming analysis (Field et al., in press) confirms a significant relationship between juvenile rockfish

[1] Agenda Item B.3.a, Attachment 2. Description of Harvest Specifications Alternatives, Rebuilding Alternatives, and 2011-2012 Management Measures. June 2010 Briefing Book.

abundance (particularly shortbelly rockfish) and seabird breeding productivity. Consequently, shortbelly rockfish are an important forage species to a wide range of predators throughout the California Current ecosystem, and generally have a trophic position and life history traits more similar to forage fishes than most other *Sebastes*.

In recent years (from 2007-2010), the OY has been set equal to the ABC, which does not account its value as a forage species. The ABC (and OY) was lowered (from 13,900 mt to 6,950 mt) in 2009 based on a new stock assessment showing a declining stock (PFMC 2009). In terms of catch and bycatch, based on total mortality reports from the West Coast Groundfish Observer Program (2005-2008), the mortality ranged from 1-12 mt per year, almost all discarded (Hastie and Bellman 2006, 2007; Bellman et al. 2008, 2009). Therefore, less than 1% of the OFL is currently being taken.

Given the documented importance of shortbelly rockfish as a forage species, our limited understanding of this species, and lack of a directed fishery, we propose the Council "freeze the catch" of this species, which would both prevent a directed fishery and ensure the bycatch of this species does not increase. We recommend the Council do this by setting the 2011-2012 ACLs less than or equal to the maximum catch of this species over the last 5 years, and maintaining this ACL unless and until a comprehensive analysis of the ecosystem services rendered by shortbelly rockfish that could inform the ACL is completed within the Ecosystem FMP process.

Such a proactive measure by the Council, while having little to no economic impact on existing fisheries, would be a great continued step toward meeting NMFS' stated intents for the Councils to incorporate ecosystem considerations and maintain adequate forage for all components of the ecosystem, as indicated in the NS1 Final Rule[2]. In particular, it could help ensure adequate forage for Sacramento River Chinook salmon, which have historically relied heavily on shortbelly rockfish as forage (Merkel 1957; Healey 1991). We urge the Council to use the 2011-2012 biennial specifications process as an opportunity to take a bold step toward ecosystem-based management by recognizing the importance of shortbelly rockfish as a forage species in the California Current.

Thank you for considering these comments.

Sincerely,

Geoffrey G. Shester, Ph.D.
California Program Director

Attachments

[2] 74 FR 11 at 3207 and 3185 (January 16, 2009).

Attachments:

Figure 1: Standardized relative abundance (in log scale) of the ten most frequently encountered species of juvenile rockfish (Sebastes) from the juvenile rockfish survey, 1983-2007. From Field, JC, MacCall, A.D., Bradley, R.W., and Sydeman, W.J. 2010. Estimating the impacts of fishing on dependent predators: a case study in the California Current. Ecological Applications (in press).

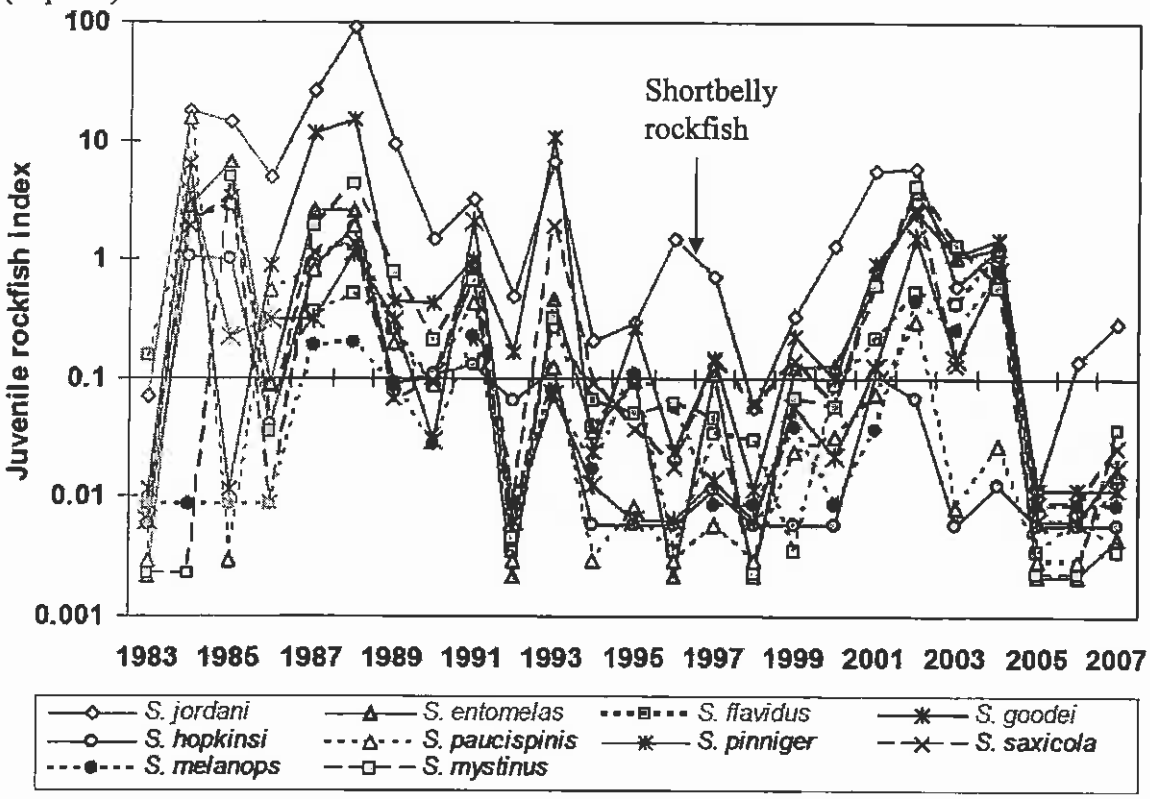
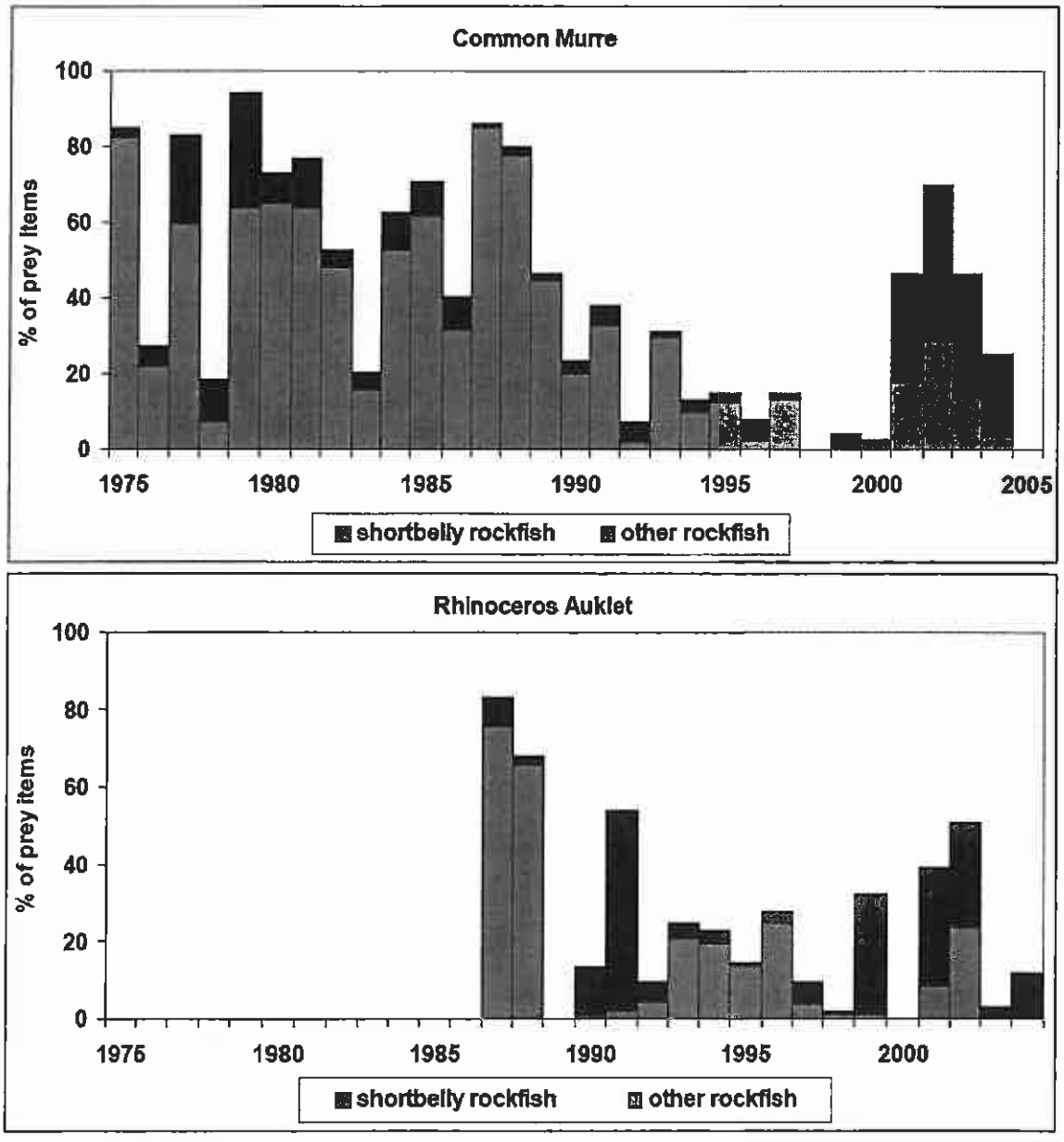


Figure 2. Proportion of juvenile shortbelly rockfish in the diets of Common Murres (1975-2004) and Rhinoceros Auklets (1987-2004) on the Southeast Farrallon Islands, data courtesy of Point Reyes Bird Observatory. The R2 for the proportion of shortbelly rockfish (following treatment by binomial GLM) among the two time series is 0.70. From NOAA Tech Memo: NOAA-TM-NMFS-SWFSC-405. April 2007.



References:

Ainley, D.G., W.J. Sydeman, R.H. Parrish, and W.H. Lenarz. 1993. Oceanic factors influencing distribution of young rockfish (*Sebastes*) in Central California: a predator's perspective. CalCOFI Reports 34: 133-139.

Bellman, M.A., Heery, E., and J. Majewski. 2009. Estimated discard and total catch of selected groundfish species in the 2008 U.S. west coast fisheries. West Coast Groundfish Observer Program.

Bellman, M.A., Heery, E., and Hastie, J. 2008. Estimated discard and total catch of selected groundfish species in the 2007 U.S. west coast fisheries. West Coast Groundfish Observer Program.

Chess, J.R., S.E. Smith, and P.C. Fischer. 1988. Trophic relationships of the shortbelly rockfish, *Sebastes jordani*, off central California. CalCOFI Reports 29: 129-136.

Field, JC, MacCall, A.D., Bradley, R.W., and Sydeman, W.J. 2010. Estimating the impacts of fishing on dependent predators: a case study in the California Current. Ecological Applications (in press).

Field, J., Dick, E., and MacCall, A. 2007. Stock Assessment Model for the Shortbelly Rockfish, Sebastes jordani, in the California Current.. NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-405, April 2007.

Field, J.C., Dick, E.J., Key, M., Lowry, M., Lucero, Y., MacCall, A., Pearson, D., Ralston, S., Sydeman, W., and Thayer, J. 2007. Population Dynamics of an Unexploited Rockfish (Sebastes jordani) in the California Current, in *Biology, Assessment, and Management of North Pacific Rockfishes*. Alaska Sea Grant College Program • AK-SG-07-01, 2007

Hastie, J., and Bellman, M.A. 2006. Estimated 2005 Discard and Total Catch of Selected Groundfish Species. West Coast Groundfish Observer Program.

Hastie, J., and Bellman, M.A. 2007. Estimated 2006 Discard and Total Catch of Selected Groundfish Species. West Coast Groundfish Observer Program.

Healey, M. C. 1991. Life history of chinook salmon. *In* C. Groot and L. Margolis, (eds.), Pacific salmon life histories, p. 311–393. Univ. British Columbia Press, Vancouver, Canada, 564 p.

Love, M. 1996. Probably more than you want to know about the fishes of the Pacific Coast, Second Edition. Really Big Press, Santa Barbara, CA.

Love, M.S., Yoklavich, M., and Thorsteinson, L. 2002. The Rockfishes of the Northeast Pacific. University of California Press.

Merkel, T.J. 1957. Food habits of the king salmon, *Oncorhynchus tshawytscha* (Walbaum), in the vicinity of San Francisco, California. Calif. Dept. Fish and Game 43: 249-270.

Miller, A.K. and W. Sydeman. 2004. Rockfish response to low-frequency ocean climate change as revealed by the diet of a marine bird over multiple time scales. Marine Ecology Progress Series 281: 207-216.

PFMC, 2009. Proposed ABC and OY Specifications and Management Measures for the 2009-2010 Pacific Coast Groundfish Fishery--Final Environmental Impact Statement.

Preti, A., S.E. Smith and D.A. Ramon. 2004. Diet differences in the thresher shark (*Alopias vulpinus*) during transition from a warm-water regime to a cool-water regime off California-Oregon, 1998–2000. CalCOFI Reports 45:118-125.

Roth, J.E., N. Nur, P. Warzybok and W.J. Sydeman. 2008. Annual prey consumption of a dominant seabird, the common murre, in the California Current system. ICES Journal of Marine Science 65:1046–1056.

Sydeman, W.J., M.M. Hester, J.A. Thayer, F.Gress, P. Martin, J. Buffa. 2001. Climate change, reproductive performance and diet composition of marine birds in the southern California Current system, 1969-1997. Progress in Oceanography 49: 309-329.