

Summary of Bronzespotted rockfish (*Sebastes gilli*) conservation concerns

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Bronzespotted rockfish (*Sebastes gilli*) are a large, relatively rare species that occur mainly in Southern California waters, in deep rocky habitats similar to those for cowcod (*S. levis*). During a review of methods for estimating California fish landings being conducted by the SWFSC and CDFG Marine Division, it was noted that commercial landings of bronzespotted rockfish, after rising to an estimated peak of 94 tons in 1982, dropped rapidly in the late 1980s and remained at very low levels (generally less than 1 ton per year) from 1990 to the present (Figure 1). When plotted relative to the Minor shelf south complex within which this species is managed, this suggests that the decline in landings of bronzespotted preceded the decline in both minor shelf and overall landings of rockfish over recent decades. Very limited information is available from recreational fisheries, however what little information does exist suggests that most of the recreational catch comes from rare trips that catch large numbers of bronzespotted rockfish (Figure 2). Anecdotal information suggests that there are distinctive fishing strategies that were used historically to target bronzespotted.

Port sampling data for southern California from 1984 through 1990 is among the most comprehensive in the historical period, suggesting that landings for the period of greatest observed decline were reliably estimated. Bronzespotted are easily identifiable and it is unlikely that they would be mistaken for a different species. Additionally, a metric currently underdevelopment by NMFS and CDFG staff for evaluating the reliability of species-specific landings estimates of rockfish suggests that bronzespotted are one of the 12 top species with respect to the reliability of landings estimates based on a range of criteria (ease of identification, number of market categories that it occurs in). In his comprehensive review of the life history characteristics for 10 species of commercially important or abundant California rockfish, Phillips (1964) cited both cowcod and bronzespotted as two of the species of commercial importance that should be the subject of future studies.

Despite this recommendation, very little is known about the life history of this species. The spatial distribution is described as ranging from Monterey Bay, CA to Punta Colnett (northern Baja California), with a depth distribution ranging from 75 to 413 meters. Preliminary results from a total of 38 aged fish, of sizes ranging from 35 to 70 cm, suggested slow growth and high longevity. Ages ranged from 17-89 years (Figure 3), considerably older than the oldest ages estimated for cowcod. This would indicate that both the natural mortality rate (M) and the Von-Bertalanffy growth coefficient (K) are considerably lower than those estimated for cowcod, suggesting a life history pattern associated with high vulnerability to fishing.

As a result of data limitations, it may be difficult to conduct a quantitative assessment for this stock. Although the protection already provided by Southern California’s Cowcod Conservation Area and existing Rockfish Conservation Areas should be sufficient to protect the stock, there may be other measures that would increase protection considerably with only modest impacts to fisheries. For example, imposing a limit of zero fish on recreational and/or commercial fishermen could ensure that targeting does not take place, and would encourage vessels move when they encounter this species. It is unlikely that the measures necessary to provide greater protection to this stock would result in significant impacts on fisheries under the current management regime.

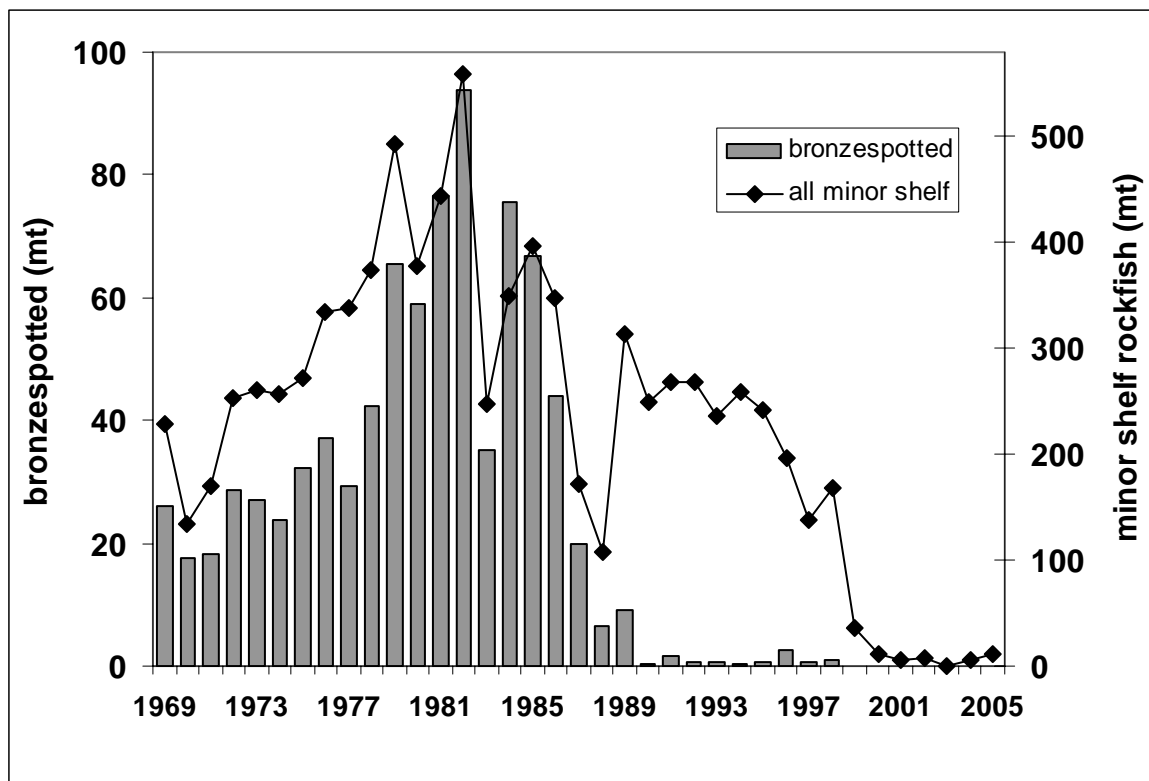


Figure 1. Estimates of commercial landings of bronzespotted rockfish relative to landings of all “Minor shelf” rockfish in the San Diego, Los Angeles and Santa Barbara port groups (CalCOM, January 2007).

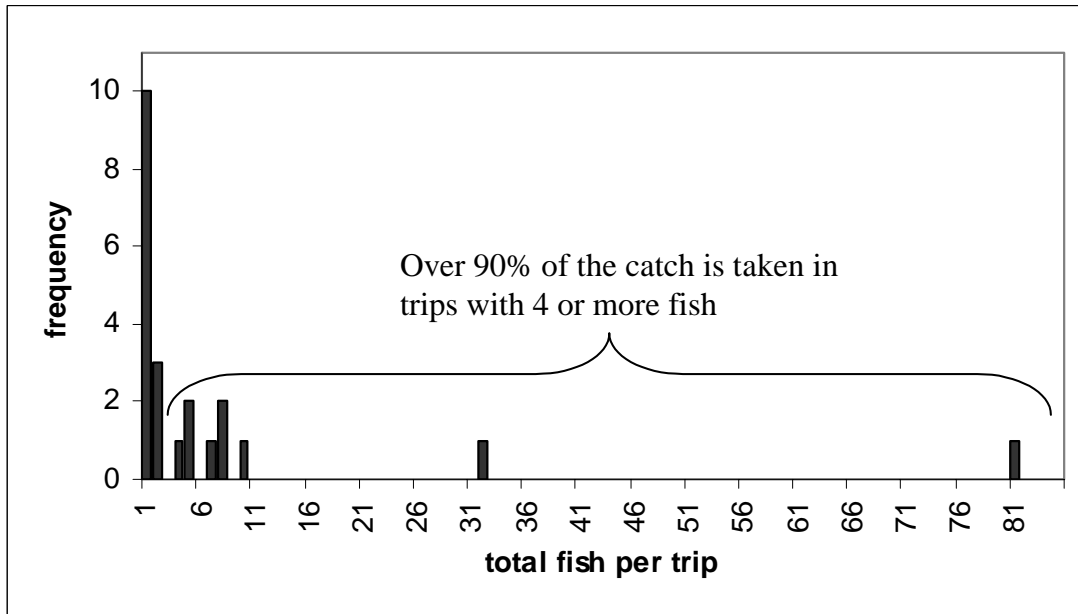


Figure 2: Catch frequency distribution (number of fish per trip) for CPFV trips, suggesting that when bronzespotted rockfish are encountered, they tend to be in clusters.

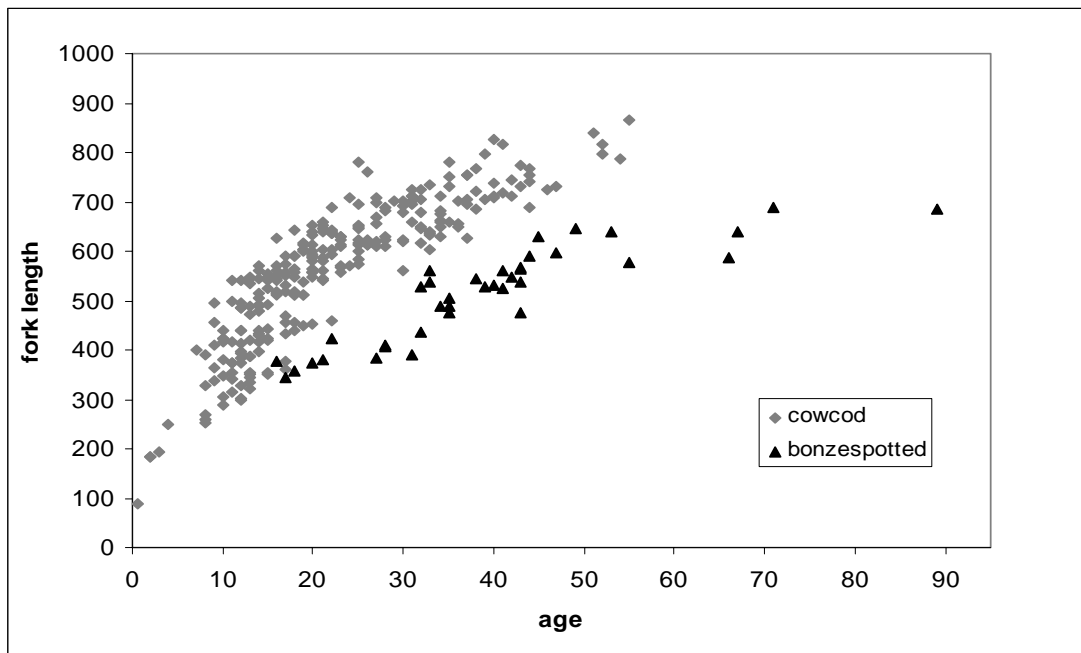


Figure 3: Preliminary age and growth data for bronzespotted rockfish, relative to age and length data used in the most recent (2006) cowcod assessment.