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*Canary Rockfish Project – 2005 Activity Report*

The Canary Rockfish Project during 2005 focused on collecting data from untrawlable fishing locations on the sex ratios of canary rockfish. After canary rockfish reach the age of maturity males are much more prevalent in the trawl catches, with males outnumbering females by as much as 3:1 or more. Recent stock assessments have modeled this data feature by allowing females to have an elevated rate of natural mortality. The fate of the older females, whether they are dead or only less available to trawl gear, has always been a major source of uncertainty in the stock assessments of canary rockfish. Although our results are geographically limited and thus cannot be extrapolated to provide a reliable estimate of the overall numbers of female canary rockfish, our finding that 63% of the canary rockfish were female suggests that there may be a much higher female-to-male sex ratio than predicted by the most recent stock assessment.

During 2005 we used hook and line gear to capture 427 canary rockfish from untrawlable, high-relief locations off Washington, Oregon, and California. We relied on the fishing expertise of 11 charter boat captains to locate high-density canary rockfish grounds. Sampling trips originated from eight ports and sampled 10 distinct sites (Fig. 1). Sport fishing boats, ranging in length from 43-56 feet, were chartered on our behalf by the Pacific Groundfish Conservation Trust on 13 separate occasions, from early May until late October of 2005 (Table 1). Most of the fish were caught using normal deep-water sport rockfish gear, provided by the chartered boat, but a few fish were caught using vertical long-line gear during one trip.

The female canary rockfish taken during these 13 sampling trips had an average fork-length of 50.0 cm and an average weight of 2.29 kg; (Table 2); the male fish had an average fork-length of 46.6 cm and an average weight of 1.83 kg. The females had a much wider distribution of lengths than the males and were more skewed (Fig. 2).

To date, 342 of the otoliths collected from the sampled canary rockfish have been read to determine the ages of the fish. These fish ranged in age from 4 to 25 years with an overall average age of 13.4 yr for the females and 12.6 yr for the males.

We thank PGCT for supporting this project and for assisting us in making connections with members of the fishing industry. Numerous other groups also contributed. Financial support for chartering the fishing boats was provided by the Central California Joint Cable Committee, the Pacific States Marine Fisheries Commission, and the Bandon Cable Committee. Also, the Port Liaison Project provided travel funds so that fishers could come to our workshops and educate us about canary rockfish.

Sincerely

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CC:    Dr. Elizabeth Clarke, Northwest Fisheries Science Center  
       Dr. Steven Freese, Northwest Regional Office  
       Dr. Donald McIsacc, Pacific Fishery Management Council

Table 1. Fishing industry collaborators for the 2005 Canary Rockfish Project field sampling.

<i>Skipper</i>	<i>Boat</i>	<i>Port</i>	<i>Date</i>
Dave Camp	Discovery	Neah Bay, WA	06/21/05
David Driver	Windsong	Neah Bay, WA	08/17/05
Rhett Weber	Slammer	Westport, WA	05/04/05
Ken Culver	Tequila Too	Westport, WA	06/15/05
Chuck Custer	Freedom	Westport, WA	07/29/05
Mick Buell	Norwester	Garibaldi, OR	09/28/05 & 10/11/05
Jergen Turner	Tackle Buster	Depoe Bay, OR	05/17/05
Al Pazar	Delma Ann	Newport, OR	07/21/05
Wayne Butler	Mis-Chief	Bandon, OR	07/06/05 & 08/25/05
Bob Ingles	Queen of Hearts	Half Moon Bay, CA	10/18/05
Roger Thomas	Salty Lady	Sausalito, CA	10/20/05

Table 2. Summary of canary rockfish catch by fishing locations during 2005.

Port	Fishing Site	Approx. location		No. fish		
		Lat	Long	Female	Male	Immat.
Neah Bay, WA	North Blue Dot	48° 20'	125° 20'	56	28	
Westport, WA	The Barge	47° 00'	124° 45'	28	18	
Westport, WA	S. Gray's Canyon Outside	46° 50'	124° 50'	26	17	
Westport, WA	The Tooth	46° 35'	124° 35'	34	13	
Garibaldi, OR	Garibaldi Reef	45° 40'	124° 20'	25	13	4
Depoe Bay, OR	Off Siletz Bay	44° 50'	124° 10'	1		1
Newport, OR	North of Hecate Bank	44° 25'	124° 35'	7	6	
Bandon, OR	Bandon Reef	43° 15'	124° 30'	42	30	16
Sausalito, CA	Farallon Islands	37° 45'	123° 15'		1	34
Half Moon Bay, CA	The Reef	37° 25'	122° 50'	1	1	25
Totals =				220	127	80

Port	Fishing Site	Av. Fork Length (cm)			Av. Weight (kg)		
		Female	Male	Immat.	Female	Male	Immat.
Neah Bay, WA	North Blue Dot	52.04	49.05		2.542	2.075	
Westport, WA	The Barge	49.76	46.48		2.264	1.806	
Westport, WA	S. Gray's Canyon Outside	50.19	45.45		2.357	1.776	
Westport, WA	The Tooth	49.03	47.26		2.138	1.943	
Garibaldi, OR	Garibaldi Reef	50.24	45.08	43.78	2.317	1.631	1.553
Depoe Bay, OR	Off Siletz Bay	37.52		31.06	0.865		0.502
Newport, OR	North of Hecate Bank	53.08	47.54		2.931	2.113	
Bandon, OR	Bandon Reef	47.92	45.76	34.88	2.018	1.684	0.804
Sausalito, CA	Farallon Islands		36.00	31.06		0.813	0.552
Half Moon Bay, CA	The Reef	34.60	39.80	35.71	0.638	0.935	0.724
Overall		49.96	46.59	33.91	2.293	1.828	0.706

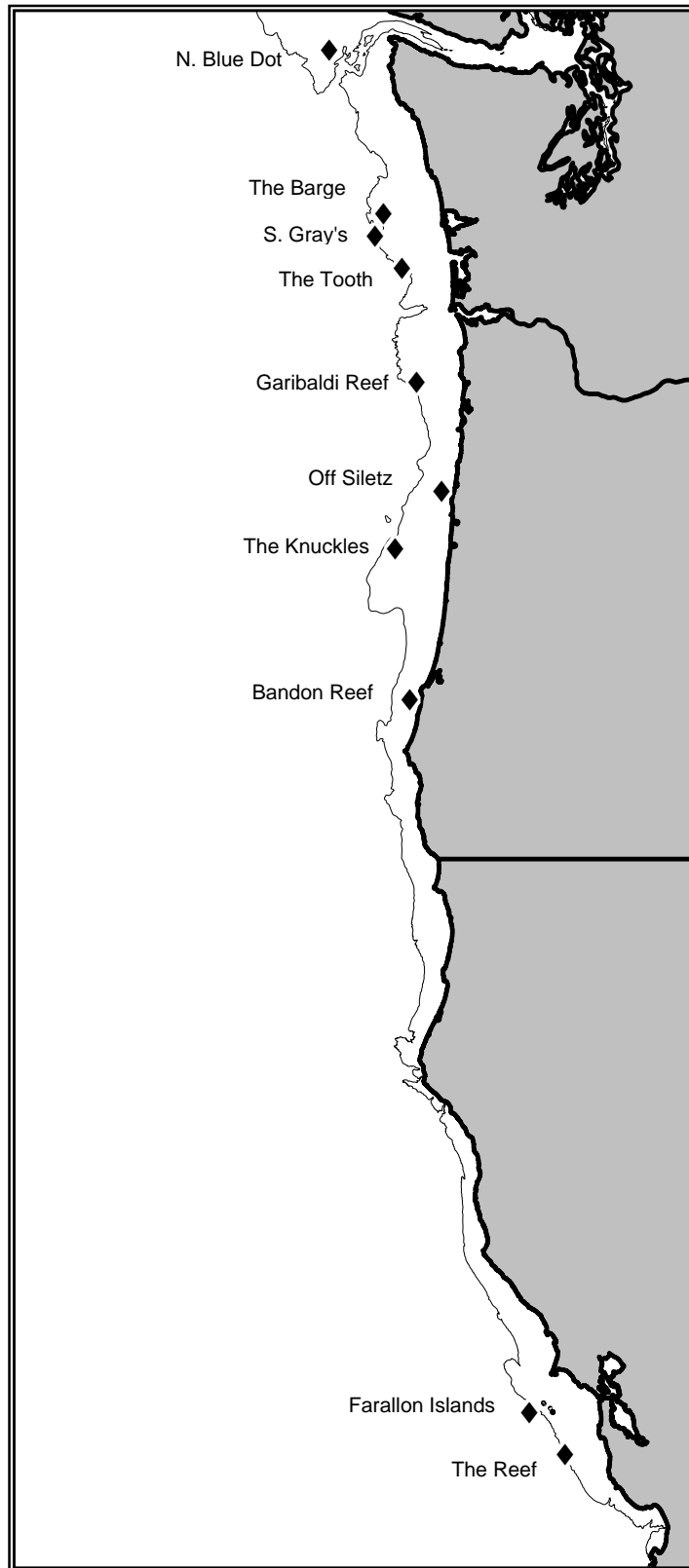


Figure 1. The fishing sites sampled by the Canary Rockfish Project during 2005.

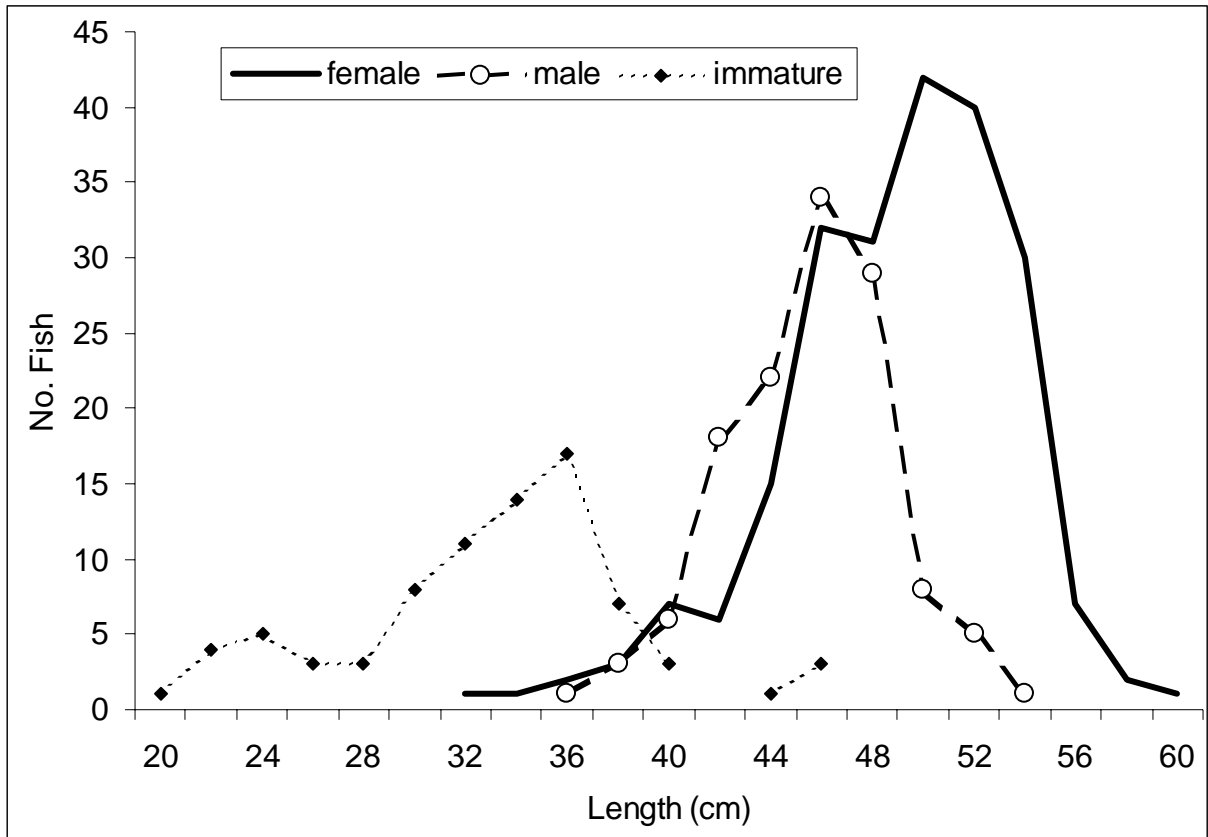


Figure 2. Length composition by sex of the canary rockfish caught during 2005.