

Summary of Fish Catch Results for Fisherman Bay Spit N, 2008 and 2009

Skagit River System Cooperative Research Program

May 2012

Beach seine sampling for fish was conducted at Fisherman Bay Spit N as part of Washington State's Salmon Recovery Funding Board Project # 07-1863 N: *WRIA2 Habitat Based Assessment of Juvenile Salmon*, also locally known as the *Big Picture Project*.

Fisherman Bay Spit N is located on the west side of Lopez Island near the entrance to Fisherman Bay, within the San Juan Islands (Figure 1). Large and small net beach seines were used at Fisherman Bay Spit N after methods described in Skagit System Cooperative Research Department (2003). We made 25 beach seine sets over the two-year study period. Beach seining occurred monthly from March through September 2008 and March through October 2009.

The beach seine site at Fisherman Bay Spit N consisted of gravel to mixed coarse substrate; eelgrass or macro algae were present on 40% of sampling days. Average maximum water depth was 2.3 meters and average salinity was 31.4 parts per thousand within the area seined. Water temperatures varied by month, ranging from a low of 7.5 °C in March 2008 to a high of 12.7 °C in July 2008. In both years, water temperatures remained high after July through the end of the sampling periods, averaging slightly more than 11 °C.

We caught a total of 2,291 fish from 43 different species or species groupings over the two-year study period, including three species of juvenile salmon and three species of forage fish (Table 1). We kept count of Dungeness crab (136) caught by seines, as this species is of commercial and recreational interest.

Please refer to Beamer and Fresh (2012) for more information regarding timing, abundance, and habitat selection of focal fish species for the Big Picture Project. The focal species are: Chinook salmon, chum salmon, pink salmon, Pacific herring, surf smelt, Pacific sand lance, and hexagrammids (greenlings and lingcod).

References

Beamer, EM and KL Fresh. 2012. Juvenile Salmon and Forage Fish Presence and Abundance in Shoreline Habitats of the San Juan Islands, 2008-2009: Map Applications for selected fish species. Report to San Juan County Department of Community Development and Planning and San Juan County Marine Resources Committee. Friday Harbor, WA.

Skagit System Cooperative Research Department. 2003. Estuarine fish sampling methods. Skagit River System Cooperative. LaConner, WA. Available: <http://www.skagitcoop.org/documents>



Figure 1. Location of Fisherman Bay Spit N beach seine site.

Table 1. Fish catch summary for Fisherman Bay Spit N beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Total catch	Catch per set	Frequency in catch
Crabs	Cancridae	Cancer magister <6.5"	Dungeness crab, sublegal size	136	5.44	36.0%
Flatfish	Pleuronectiformes	Parophrys vetulus	English sole	15	0.60	32.0%
		Other or unknown flatfish post larval	Unidentified post larval flatfish species	7	0.28	4.0%
		Other or unknown flatfish	Unidentified flatfish species	5	0.20	12.0%
		Isopsetta isolepis	Butter sole	2	0.08	4.0%
		Platichthys stellatus	Starry flounder	2	0.08	8.0%
Forage fishes	Osmeridae	Hypomesus pretiosus adult body form	Surf smelt, adult body form	286	11.44	20.0%
	Ammodytidae	Ammodytes hexapterus adult body form	Pacific sand lance, adult body form	38	1.52	20.0%
		Ammodytes hexapterus post larval	Pacific sand lance, post larval juvenile	4	0.16	8.0%
	Clupeidae	Clupea pallasii adult body form	Pacific herring, adult body form	3	0.12	4.0%
	Osmeridae	Hypomesus pretiosus post larval	Surf smelt, post larval juvenile	1	0.04	4.0%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	39	1.56	40.0%
		Hexagrammos stelleri	Whitespot greenling	39	1.56	36.0%
		Hexagrammos decagrammus	Kelp greenling	9	0.36	12.0%
		Ophiodon elongatus	Lingcod	6	0.24	12.0%
Gunnels and Pricklebacks	Stichaeidae	Lumpenus sagitta	Snake prickleback	90	3.60	32.0%
	Pholidae	Apodichthys flavidus	Penpoint gunnel	57	2.28	32.0%
		Pholis laeta	Crescent gunnel	56	2.24	24.0%
		Unidentified Gunnel Species	Unidentified gunnel species	43	1.72	28.0%
		Pholis ornata	Saddleback gunnel	35	1.40	36.0%
Other – marine	Aulorhynchidae	Aulorhynchus flavidus	Tubesnout	11	0.44	12.0%
	Myctophidae	Myctophid spp.	Lanternfish species	1	0.04	4.0%
	Cyclopteridae	Eumicrotremus orbis	Pacific spiny lumpsucker	1	0.04	4.0%
	Agonidae	Other or unknown Agonid	Unidentified poacher species	1	0.04	4.0%
Other - unknown	Unclassified Larval Fish	Larval Fish	Unidentified larval fish	1	0.04	4.0%
Pacific salmon	Salmonidae	Oncorhynchus gorbuscha 0+	Pink salmon, subyearling	19	0.76	16.0%
		Oncorhynchus tshawytscha age 0+ no external mark	Chinook salmon, wild subyearling	3	0.12	12.0%
		Oncorhynchus keta age 0+	Chum salmon, subyearling	2	0.08	8.0%
		Oncorhynchus tshawytscha age 0+ external mark	Chinook salmon, hatchery marked subyearling	2	0.08	8.0%
Sculpins	Cottidae	Gilbertidia sigalutes	Soft sculpin	482	19.28	56.0%
		Leptocottus armatus	Pacific staghorn sculpin	433	17.32	68.0%
		Myoxocephalus polyacanthocephalus	Great sculpin	181	7.24	56.0%
		Other or unknown Cottid	Unidentified sculpin species	146	5.84	44.0%
		Enophrys bison	Buffalo sculpin	28	1.12	48.0%
	Liparidae	Snailfish spp	Unidentified snailfish species	13	0.52	20.0%
	Cottidae	Artemius fenestralis	Padded sculpin	11	0.44	20.0%
		Hemilepidotus hemilepidotus	Red Irish lord	10	0.40	24.0%
		Clinocottus acuticeps	Sharpnose sculpin	9	0.36	20.0%
		Blepsias cirrhosus	Silverspotted sculpin	7	0.28	12.0%
		Artemius corallinus	Coralline sculpin	2	0.08	4.0%
		Hemilepidotus spinosus	Brown Irish lord	1	0.04	4.0%
Cottus asper		Prickly sculpin	1	0.04	4.0%	
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	3	0.12	12.0%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	49	1.96	40.0%
True cods	Gadidae	Other or unknown Cod	Unidentified true cod species	98	3.92	16.0%
		Microgadus proximus	Pacific tomcod	33	1.32	28.0%
		Gadus macrocephalus	Pacific cod	3	0.12	8.0%
		Theragra chalcogramma	Alaska pollock	3	0.12	4.0%