

Summary of Fish Catch Results for Bakerview Bluff Beach, 2008 and 2009

Skagit River System Cooperative Research Program

December 2012

Beach seine sampling for fish was conducted at Bakerview Bluff Beach 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*.

Bakerview Bluff Beach is located on the east side of Lopez Island (Figure 1). Large and small net beach seines were used at Bakerview Bluff Beach after methods described in Skagit System Cooperative Research Department (2003). We made 15 beach seine sets over the two-year study period. Beach seining occurred monthly from March through September in 2008 and April through October in 2009.

The beach seine site within Bakerview Bluff Beach consisted of mixed coarse substrate, usually without vegetative cover (53 % of the time) or with eel grass as the cover (40% of the time). Average maximum water depth was 1.6 meters deep and average salinity was 29.5 parts per thousand within the area seined. Water temperature varied by month, but ranged from a low of 8.7 °C in March 2008 to a high of 16.3 °C in August 2009. Temperatures were cooler in early 2008 but averaged 14.2 °C during May through September. Water temperatures recorded in 2009 were always above 12.2 °C.

We caught a total of 1,927 fish from 33 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). The most abundant fish species was Pacific herring “adult body form” with a catch of 487 fish, present in 26.7 % of the beach seine sets. We kept count of Dungeness crab (163) 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 Bakerview Bluff Beach beach seine site.

Table 1. Fish catch summary for Bakerview Bluff Beach beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Species abbreviation	Total catch	Catch per set	Frequency in catch
Crabs and shrimp	Canceridae	Cancer magister <6.5"	Dungeness crab, sublegal size	DUNGI small	163	10.87	40.0%
Flatfish	Pleuronectiformes	Platichthys stellatus	Starry flounder	STARRY	1	0.07	6.7%
		Other or unknown flatfish post larval	Unidentified post larval flatfish species	O/U FLAT pl	4	0.27	6.7%
		Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	16	1.07	20.0%
		Isopsetta isolepis	Butter sole	BUTTER SOLE	24	1.60	13.3%
		Parophrys vetulus	English sole	ENG SOLE	25	1.67	33.3%
Forage fishes	Ammodytidae	Ammodytes hexapterus adult body form	Pacific sand lance, adult body form	LANCE a	8	0.53	20.0%
	Clupeidae	Clupea pallasii post larval	Pacific herring, post larval juvenile	HERR pl	3	0.20	13.3%
		Clupea pallasii adult body form	Pacific herring, adult body form	HERR a	487	32.47	26.7%
	Osmeridae	Hypomesus pretiosus post larval	Surf smelt, post larval juvenile	SMELT pl	4	0.27	13.3%
		Hypomesus pretiosus adult body form	Surf smelt, adult body form	SMELT a	244	16.27	13.3%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	O/U GREEN-LING	8	0.53	33.3%
		Hexagrammos stelleri	Whitespot greenling	WHITE-SPOT GR	12	0.80	20.0%
Gunnels and Pricklebacks	Pholidae	Pholis laeta	Crescent gunnel	CRES GUNL	43	2.87	33.3%
		Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	58	3.87	40.0%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	103	6.87	33.3%
		Pholis ornata	Saddleback gunnel	SADLBCK GUNL	164	10.93	20.0%
	Stichaeidae	Xiphister atropurpureus	Black prickleback	BLK PRICKLE	1	0.07	6.7%
		Lumpenus sagitta	Snake prickleback	SNAKE	239	15.93	46.7%
Other - marine	Aulorhynchidae	Aulorhynchus flavidus	Tubesnout	TUBESNT	1	0.07	6.7%
	Syngnathidae	Syngnathus griseolineatus	Bay pipefish	PIPEFISH	6	0.40	26.7%
Pacific salmon	Salmonidae	Oncorhynchus tshawytscha age 0+ external mark	Chinook salmon, hatchery marked subyearling	CK 0+ em	1	0.07	6.7%
		Oncorhynchus keta age 0+	Chum salmon, subyearling	CH 0+	5	0.33	6.7%

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Species abbreviation	Total catch	Catch per set	Frequency in catch
		Oncorhynchus gorbuscha 0+	Pink salmon, subyearling	PK 0+	30	2.00	6.7%
Sculpins	Cottidae	Arteidius fenestralis	Padded sculpin	PADD SCULP	9	0.60	26.7%
		Enophrys bison	Buffalo sculpin	BUFF	10	0.67	20.0%
		Clinocottus acuticeps	Sharpnose sculpin	SHARP-NOSE	27	1.80	46.7%
		Gilbertidia sigalutes	Soft sculpin	SOFT SCULP	30	2.00	26.7%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	33	2.20	40.0%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	108	7.20	60.0%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	135	9.00	46.7%
	Hemipteridae	Nautichthys oculofasciatus	Sailfin sculpin	SAILFIN	3	0.20	13.3%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	1	0.07	6.7%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	SHINER	36	2.40	46.7%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	37	2.47	26.7%
True cods	Gadidae	Other or unknown Cod	Unidentified true cod species	O/U COD	1	0.07	6.7%
		Microgadus proximus	Pacific tomcod	TOMCOD	10	0.67	13.3%