Summary of Fish Catch Results for Blakely Island Beach N, 2008 and 2009

Skagit River System Cooperative Research Program

December 2012

Beach seine sampling for fish was conducted at Blakely Island Beach 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*.

Blakely Island Beach N is located on the north side of Blakely Island within the San Juan Islands (Figure 1). Large net beach seines were used at Blakely Island Beach N after methods described in Skagit System Cooperative Research Department (2003). We made 22 beach seine sets over the two-year study period. Beach seining occurred monthly from March through September in 2008 and March through October in 2009.

The beach seine site within Blakely Island Beach N consisted of mixed coarse and cobble substrate, without vegetative cover 60 % of the time and with eelgrass and kelp mixture 40% of the time. Average maximum water depth was 2.67 meters deep and average salinity was 30.4 parts per thousand within the area seined. Water temperature varied by month, but ranged from a low of 7.7 °C in April 2008 to a high of 14.5 °C in September 2008.

We caught a total of 1,542 fish from 35 different species or species groupings over the two-year study period, including three species of juvenile salmon and two species of forage fish (Table 1). The most abundant fish species was an "unidentified sculpin" with a catch of 325 fish, present in 53.3 % of the beach seine sets. The most abundant fish identified was a great sculpin (a catch of 275 fish) that was caught in 60.0% of the beach seine sets. We kept count of Dungeness crab (10) caught by seines, as these species are 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

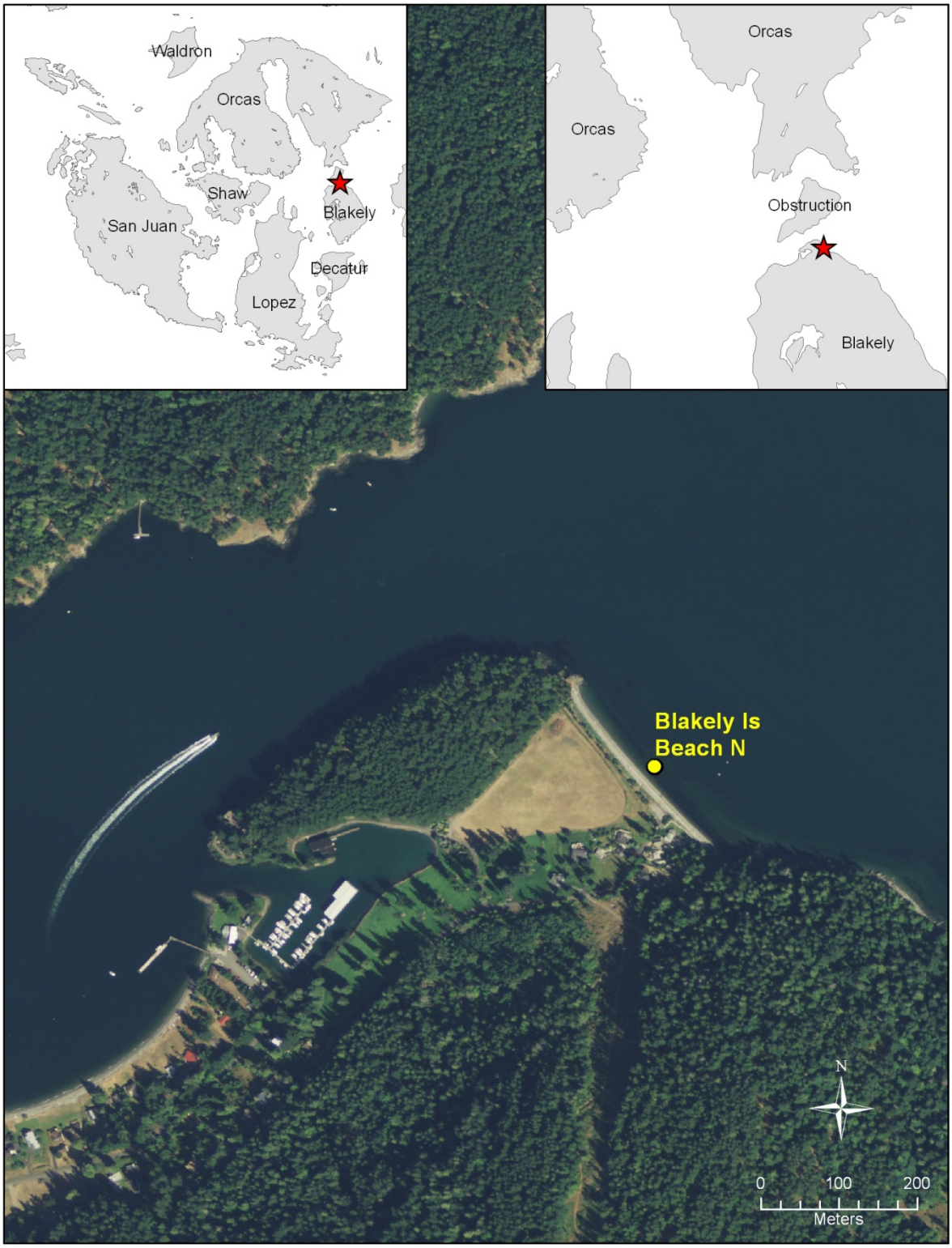

Figure 1. Location of Blakely Island Beach N beach seine site.

Table 1. Fish catch summary for Blakely Island Beach N 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	Cancridae	Cancer magister <6.5"	Dungeness crab, sublegal size	DUNGI small	10	0.67	26.7%
Flatfish	Bothidae	Psettichthys melanostictus	Sand sole	SAND SOLE	2	0.13	13.3%
	Pleuronecti-formes	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	2	0.13	6.7%
		Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	10	0.67	20.0%
		Isopsetta isolepis	Butter sole	BUTTER SOLE	14	0.93	13.3%
		Parophrys vetulus	English sole	ENG SOLE	20	1.33	33.3%
Forage fishes	Ammodytidae	Ammodytes hexapterus adult body form	Pacific sand lance, adult body form	LANCE a	23	1.53	26.7%
	Osmeridae	Hypomesus pretiosus adult body form	Surf smelt, adult body form	SMELT a	2	0.13	13.3%
Greenlings/ lingcod	Hexagrammidae	Hexagrammos stelleri	Whitespot greenling	WHITESPOT GR	20	1.33	26.7%
		Hexagrammos spp	Unidentified greenling species	O/U GREENLING	21	1.40	40.0%
Gunnels and Pricklebacks	Pholidae	Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	13	0.87	6.7%
		Pholis laeta	Crescent gunnel	CRES GUNL	16	1.07	13.3%
		Pholis ornata	Saddleback gunnel	SADLBCK GUNL	39	2.60	33.3%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	241	16.07	33.3%
	Stichaeidae	Lumpenus sagitta	Snake prickleback	SNAKE	123	8.20	26.7%
Other - marine	Aulorhynchidae	Aulorhynchus flavidus	Tubesnout	TUBESNT	1	0.07	6.7%
Pacific salmon	Salmonidae	Oncorhynchus tshawytscha age 0+ no external mark	Chinook salmon, wild subyearling	CK 0+ nem	1	0.07	6.7%
		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+	69	4.60	13.3%
		Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	PK 0+	27	1.80	6.7%
Sculpins	Cottidae	Icelinus borealis	Northern sculpin	NORTH SCULP	2	0.13	6.7%
		Blepsias cirrhosus	Silverspotted sculpin	SILVER SPOT SC	13	0.87	33.3%
		Artedius fenestralis	Padded sculpin	PADD SCULP	16	1.07	13.3%
		Enophrys bison	Buffalo sculpin	BUFF	21	1.40	26.7%

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Sculpins	Cottidae	Leptocottus armatus	Pacific staghorn sculpin	STAG	31	2.07	53.3%
		Clinocottus acuticeps	Sharpnose sculpin	SHARPNOSE	45	3.00	66.7%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	275	18.33	60.0%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	325	21.67	53.3%
	Hemitripteridae	Nautichthys oculofasciatus	Sailfin sculpin	SAILFIN	6	0.40	6.7%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	4	0.27	26.7%
Sea perches	Embiotocidae	Brachyistius frenatus	Kelp perch	KELP PERCH	5	0.33	20.0%
		Embiotoca lateralis	Striped seaperch	STRIPED	49	3.27	26.7%
		Cymatogaster aggregata	Shiner perch	SHINER	75	5.00	33.3%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	3	0.20	13.3%
True cods	Gadidae	Other or unknown Cod	Unidentified true cod species	O/U COD	1	0.07	6.7%
		Theragra chalocogramma	Alaska pollock	POLLOCK	3	0.20	13.3%
		Microgadus proximus	Pacific tomcod	TOMCOD	22	1.47	33.3%