

Summary of Fish Catch Results for Decatur NW, 2008 and 2009

Skagit River System Cooperative Research Program

December 2012

Beach seine sampling for fish was conducted at Decatur NW 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*.

Decatur NW is located in Sylvan Cove on the northwest side of Decatur Island within the San Juan Islands (Figure 1). Large net beach seines were used at Decatur NW after methods described in Skagit System Cooperative Research Department (2003). We made 19 beach seine sets over the two-year study period. Beach seining occurred monthly March through September in 2008 and April through October in 2009, with the exception of no sampling in June.

The beach seine site within Decatur NW consisted of gravel to mixed coarse substrate. Vegetative cover consisted of a mixture of eelgrass, kelp or other macro algae (42% of the time) or was without any cover (58% of the time). Average maximum water depth was 3.08 meters deep and average salinity was 30.6 parts per thousand within the area seined. Water temperature varied by month, but ranged from a low of 8.0 °C in March 2008 to a high of 13.8 °C in September 2008.

We caught a total of 9,204 fish from 40 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 sand lance with a catch of 6,989 fish, present in 84.2 % of the beach seine sets. We kept count of Dungeness crab (91) and red rock crab (1) 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>

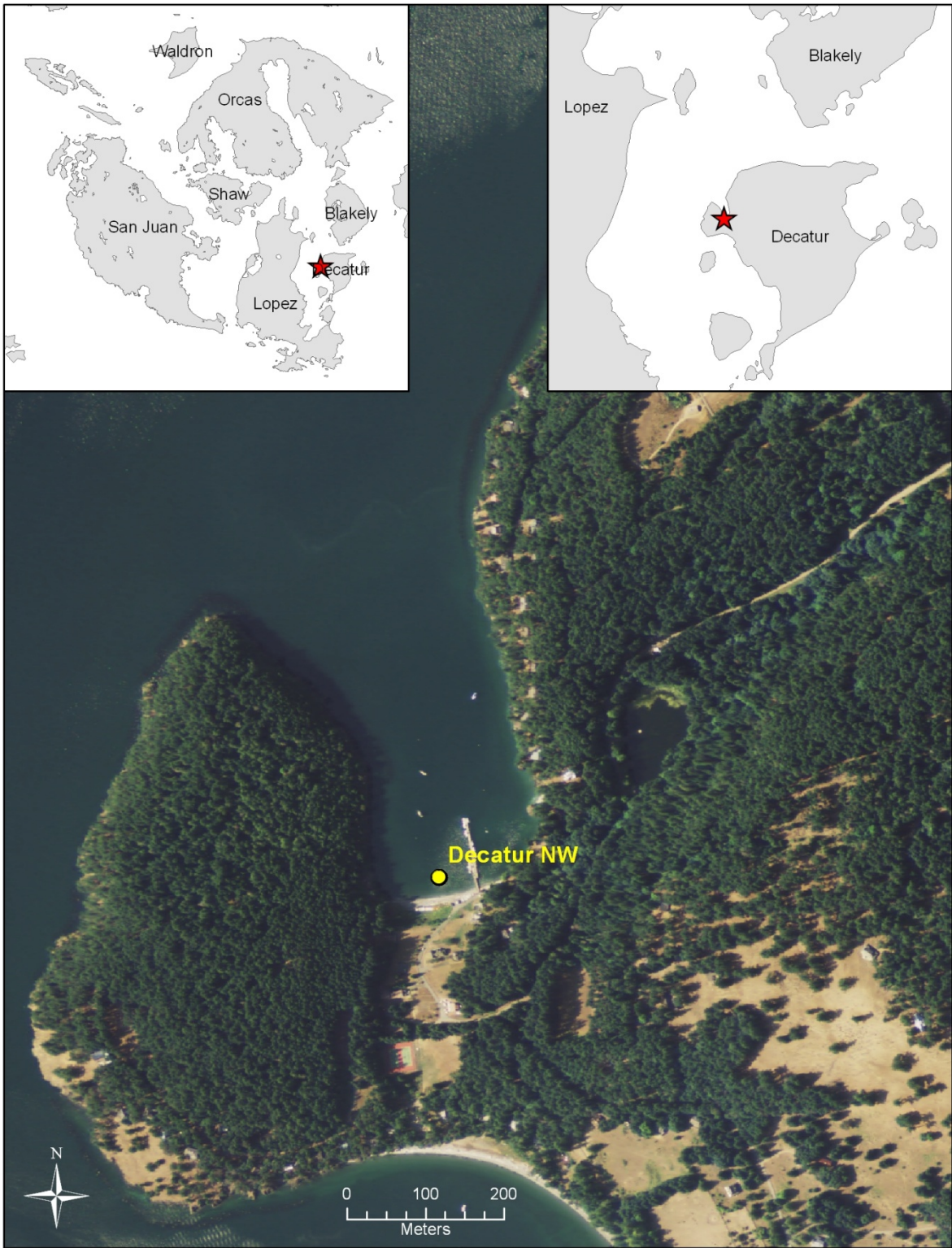


Figure 1. Location of Decatur NW beach seine site.

Table 1. Fish catch summary for Decatur NW 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 productus	Red rock crab	RED ROCK CRAB	1	0.05	5.3%
		Cancer magister <6.5"	Dungeness crab, sublegal size	DUNGI small	91	4.79	52.6%
Flatfish	Bothidae	Psettichthys melanostictus	Sand sole	SAND SOLE	48	2.53	5.3%
	Pleuronectiformes	Other or unknown flatfish post larval	Unidentified post larval flatfish species	O/U FLAT pl	1	0.05	5.3%
		Lepidopsetta bilineata	Rock sole	ROCK SOLE	1	0.05	5.3%
		Platichthys stellatus	Starry flounder	STARRY	3	0.16	10.5%
		Parophrys vetulus	English sole	ENG SOLE	5	0.26	15.8%
		Isopsetta isolepis	Butter sole	BUTTER SOLE	7	0.37	15.8%
		Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	10	0.53	15.8%
Forage fishes	Ammodytidae	Ammodytes hexapterus post larval	Pacific sand lance, post larval juvenile	LANCE pl	1	0.05	5.3%
		Ammodytes hexapterus adult body form	Pacific sand lance, adult body form	LANCE a	6989	367.84	84.2%
	Clupeidae	Clupea pallasii post larval	Pacific herring, post larval juvenile	HERR pl	3	0.16	5.3%
		Clupea pallasii adult body form	Pacific herring, adult body form	HERR a	157	8.26	26.3%
	Osmeridae	Hypomesus pretiosus post larval	Surf smelt, post larval juvenile	SMELT pl	2	0.11	10.5%
		Hypomesus pretiosus adult body form	Surf smelt, adult body form	SMELT a	125	6.58	31.6%
Greenlings/lingcod	Hexagrammidae	Hexagrammos decagrammus	Kelp greenling	KELP GRNLNG	1	0.05	5.3%
		Ophiodon elongatus	Lingcod	LING-COD	4	0.21	10.5%
		Hexagrammos stelleri	Whitespot greenling	WHITE-SPOT GR	24	1.26	36.8%
		Hexagrammos spp	Unidentified greenling species	O/U GREEN-LING	37	1.95	47.4%
	Pholidae	Pholis ornata	Saddleback gunnel	SADLBCK GUNL	22	1.16	36.8%
		Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	32	1.68	42.1%
		Pholis laeta	Crescent gunnel	CRES GUNL	67	3.53	42.1%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	74	3.89	36.8%
	Stichaeidae	Xiphister atropurpureus	Black prickleback	BLK PRICKLE	2	0.11	5.3%
		Lumpenus sagitta	Snake prickleback	SNAKE	610	32.11	63.2%
Other - marine	Agonidae	Other or unknown Agonid	Unidentified poacher species	O/U POACHER	4	0.21	10.5%

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Species abbreviation	Total catch	Catch per set	Frequency in catch
Pacific salmon	Salmonidae	Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	PK 0+	2	0.11	10.5%
		Oncorhynchus keta age 0+	Chum salmon, subyearling	CH 0+	3	0.16	15.8%
		Oncorhynchus tshawytscha age 0+ external mark	Chinook salmon, hatchery marked subyearling	CK 0+ em	10	0.53	15.8%
		Oncorhynchus tshawytscha age 0+ no external mark	Chinook salmon, wild subyearling	CK 0+ nem	14	0.74	21.1%
Rockfish	Scorpaenidae	Other or unknown Scorpaenids	Unidentified rockfish species	O/U ROCK-FISH	1	0.05	5.3%
Sculpins	Cottidae	Synchirus gilli	Manacled sculpin	MANA-CLED SCULP	1	0.05	5.3%
		Hemilepidotus hemilepidotus	Red Irish lord	RED IRISH LORD	1	0.05	5.3%
		Chitonotus pugetensis	Roughback sculpin	ROUGH-BACK SCULP	1	0.05	5.3%
		Enophrys bison	Buffalo sculpin	BUFF	4	0.21	15.8%
		Blepsias cirrhosus	Silverspotted sculpin	SILVER SPOT SC	6	0.32	10.5%
		Arteidius fenestralis	Padded sculpin	PADD SCULP	9	0.47	26.3%
		Gilbertidia sigalutes	Soft sculpin	SOFT SCULP	35	1.84	42.1%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	51	2.68	68.4%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	94	4.95	78.9%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	659	34.68	42.1%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAIL-FISH	5	0.26	10.5%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	SHINER	16	0.84	21.1%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	7	0.37	21.1%
True cods	Gadidae	Other or unknown Cod	Unidentified true cod species	O/U COD	5	0.26	15.8%
		Theragra chalcogramma	Alaska pollock	POLLOCK	17	0.89	15.8%
		Microgadus proximus	Pacific tomcod	TOMCOD	34	1.79	31.6%