

# Summary of Fish Catch Results for Neck Pt Spit, 2008 and 2009

Skagit River System Cooperative Research Program

January 2013

Beach seine sampling for fish was conducted at Neck Pt Spit 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*.

Neck Pt Spit is located on the west side of Shaw Island within the San Juan Islands (Figure 1). Small net beach seines were used at Neck Pt Spit 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 in April, and then monthly June through September of 2008, and monthly March through September in 2009.

The beach seine site at Neck Pt Spit varied from gravel to mixed coarse substrate, usually with mixed algae as the dominant cover (53% of the time). Average maximum water depth was 0.81 meters and the average salinity was 31.5 parts per thousand within the area seined. The water temperature varied by month, ranging from a low of 10.5 °C in both July 2008 and May 2009, to a high of 12.9 °C in July 2009.

At Neck Pt Spit we caught a total of 473 fish from 26 different species or species groupings over the two-year study period, including three species of juvenile salmon (Table 1). Forage fish were not caught. The most abundant fish species was saddleback gunnel with a catch of 80 fish, present in 46.7% of beach seine sets. They accounted for 16.9% of the total catch. We kept count of Dungeness crab (5) 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>

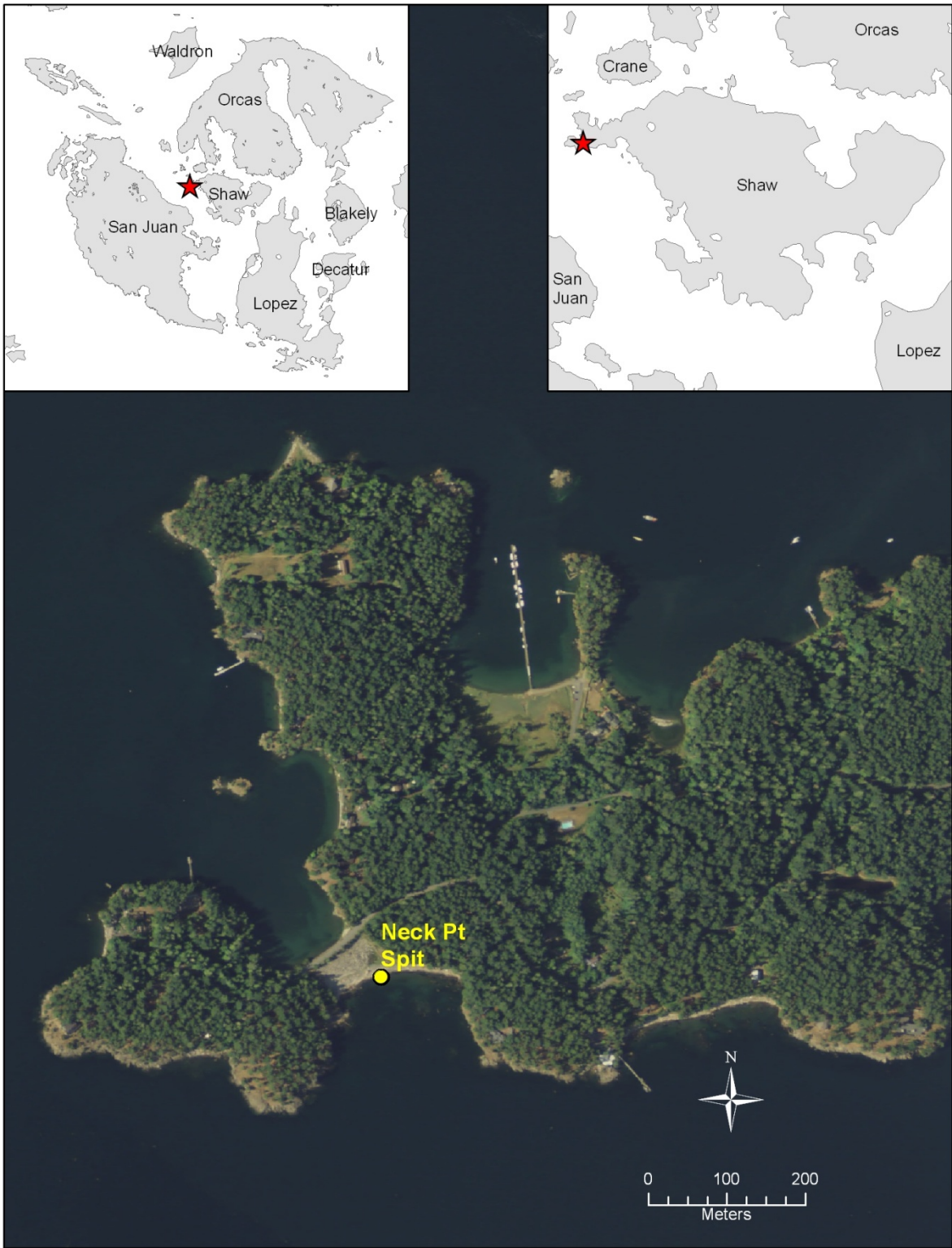


Figure 1. Location of Neck Pt Spit beach seine site.

Table 1. Fish catch summary for Neck Pt Spit 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	5	0.33	13.3%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	O/U GREENLING	6	0.40	20.0%
		Hexagrammos stelleri	Whitespot greenling	WHITESPOT GR	8	0.53	20.0%
Gunnels and Pricklebacks	Pholidae	Pholis laeta	Crescent gunnel	CRES GUNL	18	1.20	33.3%
		Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	19	1.27	46.7%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	52	3.47	33.3%
		Pholis ornata	Saddleback gunnel	SADLBCK GUNL	80	5.33	46.7%
	Stichaeidae	Xiphister atropurpureus	Black prickleback	BLK PRICKLE	2	0.13	13.3%
	Stichaeidae	Lumpenus sagitta	Snake prickleback	SNAKE	5	0.33	6.7%
Other - marine	Syngnathidae	Syngnathus griseolineatus	Bay pipefish	PIPEFISH	1	0.07	6.7%
Pacific salmon	Salmonidae	Oncorhynchus tshawytscha age 0+ no external mark	Chinook salmon, wild subyearling	CK 0+ nem	6	0.40	6.7%
		Oncorhynchus keta age 0+	Chum salmon, subyearling	CH 0+	4	0.27	6.7%
		Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	PK 0+	73	4.87	26.7%
Rockfish	Scorpaenidae	Other or unknown Scorpaenids	Unidentified rockfish species	O/U ROCKFISH	2	0.13	6.7%
Sculpins	Cottidae	Hemilepidotus spinosus	Brown Irish lord	BROWN IR LORD	1	0.07	6.7%
		Artedius fenestralis	Padded sculpin	PADD SCULP	1	0.07	6.7%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	8	0.53	20.0%
		Blepsias cirrhosus	Silverspotted sculpin	SILVER SPOT SC	11	0.73	20.0%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	31	2.07	40.0%
		Clinocottus acuticeps	Sharpnose sculpin	SHARPNOSE	32	2.13	13.3%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	33	2.20	66.7%
	Hemitripterae	Nautichthys oculofasciatus	Sailfin sculpin	SAILFIN	1	0.07	6.7%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	2	0.13	13.3%
	Sea perches	Embiotocidae	Embiotoca lateralis	Striped seaperch	STRIPED	3	0.20
Cymatogaster aggregata			Shiner perch	SHINER	50	3.33	20.0%

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Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	19	1.27	26.7%
True cods	Gadidae	Microgadus proximus	Pacific tomcod	TOMCOD	5	0.33	6.7%