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

Skagit River System Cooperative Research Program

January 2013

Beach seine sampling for fish was conducted at Parks Bay 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*.

Parks Bay N is located on the west side of Shaw Island within the San Juan Islands (Figure 1). Small net beach seines were used at Parks Bay N 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 both 2008 and 2009.

The beach seine site at Parks Bay N varied from mud to sand to mixed coarse substrate. Vegetative cover varied from mixed algae and eelgrass (21% of the time) to detritus (16% of the time); there was no vegetative cover 63% of the time. The average maximum water depth was 0.80 meters and the average salinity was 30.8 parts per thousand within the area seined. The water temperature varied by month, ranging from a low of 6.3 °C in March 2009 to a high of 13.6 °C in July 2008.

At Parks Bay N we caught a total of 516 fish from 18 different species or species groupings over the two-year study period, including one species of forage fish (Table 1). Juvenile salmon were not caught. The most abundant fish species was Pacific staghorn sculpin with a catch of 163 fish, present in 63.2% of beach seine sets. They accounted for 31.6% of the total catch. We kept count of Dungeness crab (9) 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

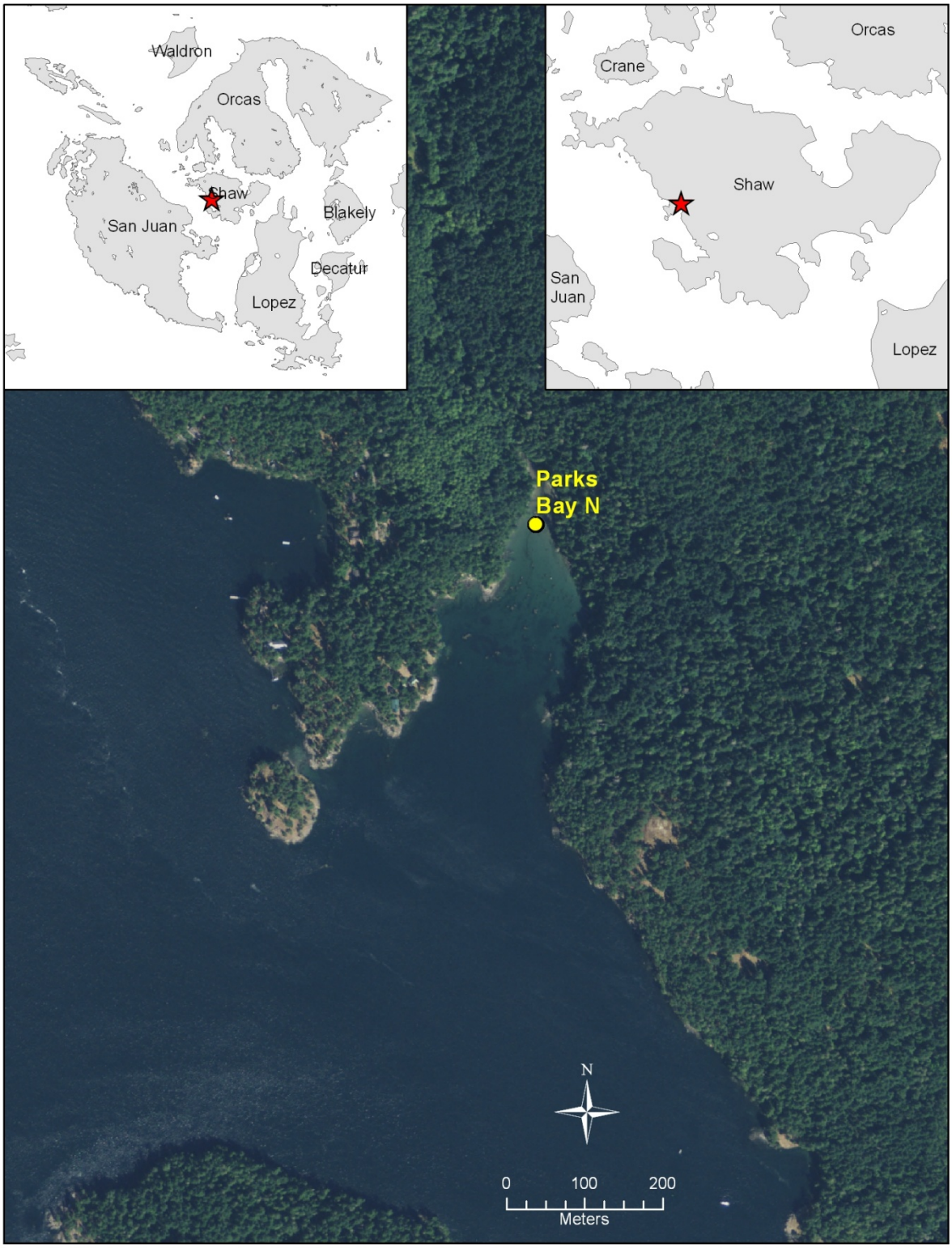

Figure 1. Location of Parks Bay N beach seine site.

Table 1. Fish catch summary for Parks Bay 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	9	0.47	15.8%
Flatfish	Bothidae	Psettichthys melanostictus	Sand sole	SAND SOLE	1	0.05	5.3%
	Pleuronecti-formes	Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	5	0.26	5.3%
		Parophrys vetulus	English sole	ENG SOLE	7	0.37	15.8%
Forage fishes	Osmeridae	Hypomesus pretiosus post larval	Surf smelt, post larval juvenile	SMELT pl	29	1.53	5.3%
Greenlings/ lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	O/U GREENLING	2	0.11	5.3%
		Hexagrammos stelleri	Whitespot greenling	WHITESPOT GR	17	0.89	31.6%
Gunnels and Pricklebacks	Pholidae	Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	1	0.05	5.3%
		Pholis laeta	Crescent gunnel	CRES GUNL	5	0.26	15.8%
		Pholis ornata	Saddleback gunnel	SADLBCK GUNL	35	1.84	42.1%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	83	4.37	21.1%
	Stichaeidae	Lumpenus sagitta	Snake prickleback	SNAKE	1	0.05	5.3%
Sculpins	Cottidae	Artedius fenestralis	Padded sculpin	PADD SCULP	2	0.11	10.5%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	7	0.37	26.3%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	32	1.68	21.1%
		Clinocottus acuticeps	Sharpnose sculpin	SHARPNOSE	108	5.68	73.7%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	163	8.58	63.2%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	1	0.05	5.3%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	17	0.89	15.8%