

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

Skagit River System Cooperative Research Program

January 2013

Beach seine sampling for fish was conducted at Parks Bay S 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 S is located on the southwest side of Shaw Island within the San Juan Islands (Figure 1). Small net beach seines were used at Parks Bay S after methods described in Skagit System Cooperative Research Department (2003). We made 20 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 S varied from mud to gravel to mixed coarse substrate. The dominant vegetative cover varied from detritus (25% of the time) to green algae (15% of the time); there was no vegetative cover 60% of the time. The average maximum water depth was 0.97 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 6.7 °C in March 2009 to a high of 13.5 °C in September 2009.

At Parks Bay S we caught a total of 571 fish from 26 different species or species groupings over the two-year study period, including two species of juvenile salmon and one species of forage fish (Table 1). The most abundant fish species was Pacific staghorn sculpin with a catch of 191 fish, present in 70.0% of the beach seine sets. They accounted for 33.5% of the total catch. We kept count of Dungeness crab (23) 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>

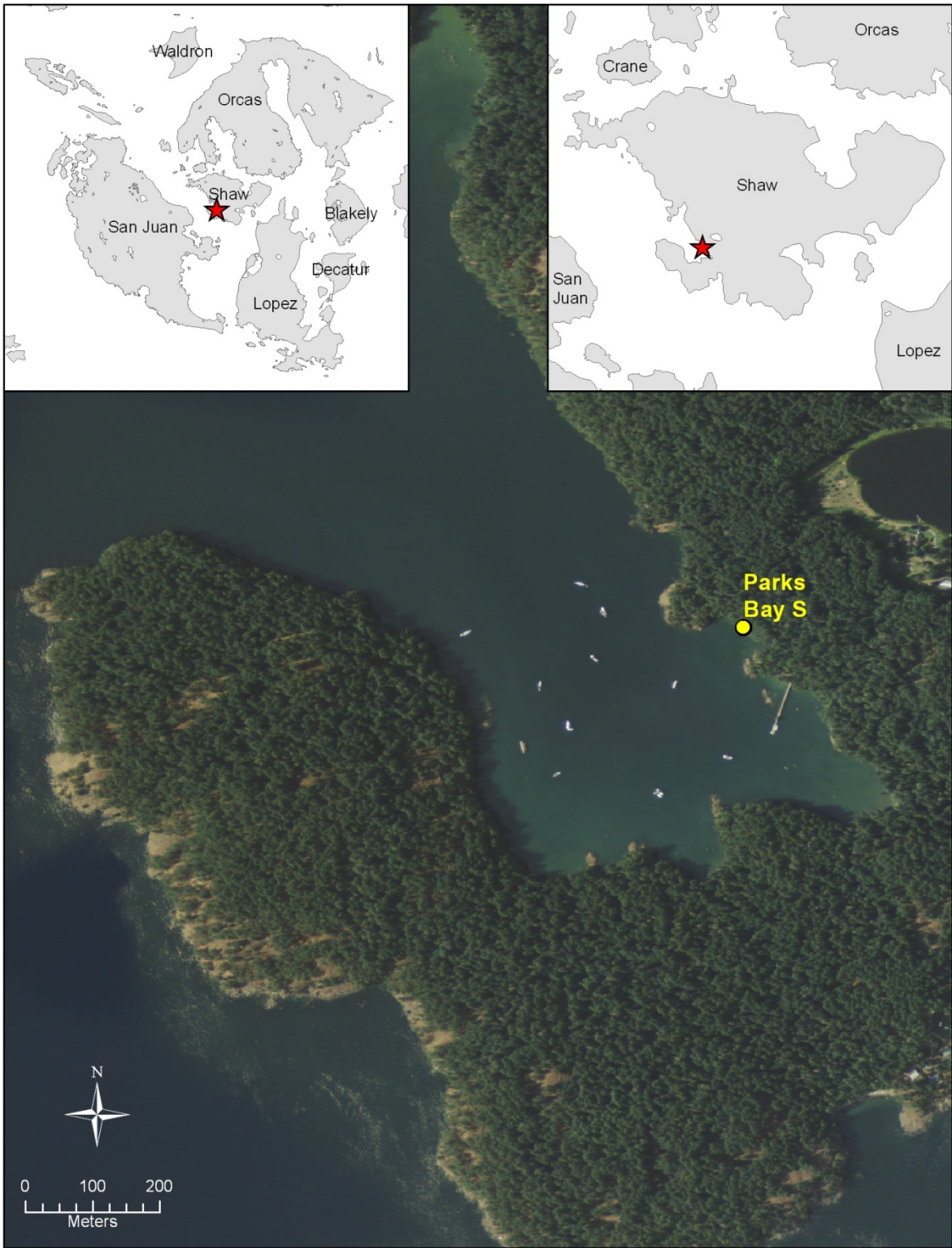


Figure 1. Location of Parks Bay S beach seine site.

Table 1. Fish catch summary for Parks Bay S 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	23	1.15	20.0%
		Parophrys vetulus	English sole	ENG SOLE	3	0.15	10.0%
Flatfish	Pleuronectiformes	Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	5	0.25	15.0%
		Ammodytes hexapterus adult body form	Pacific sand lance, adult body form	LANCE a	1	0.05	5.0%
Forage fishes	Ammodytidae	Hexagrammos stelleri	Whitespot greenling	WHITESPOT GR	6	0.30	15.0%
		Hexagrammos spp	Unidentified greenling species	O/U GREENLING	7	0.35	15.0%
Gunnels and Pricklebacks	Pholidae	Apodichthys flavidus	Penpoint gunnel	PENPT GUNL	5	0.25	15.0%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	13	0.65	15.0%
		Pholis laeta	Crescent gunnel	CRES GUNL	17	0.85	20.0%
		Pholis ornata	Saddleback gunnel	SADLBCK GUNL	122	6.10	45.0%
	Stichaeidae	Lumpenus sagitta	Snake prickleback	SNAKE	6	0.30	10.0%
		Xiphister atropurpureus	Black prickleback	BLK PRICKLE	8	0.40	10.0%
Pacific salmon	Salmonidae	Oncorhynchus keta age 0+	Chum salmon, subyearling	CH 0+	1	0.05	5.0%
		Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	PK 0+	14	0.70	15.0%
Rockfish	Scorpaenidae	Other or unknown Scorpaenids	Unidentified rockfish species	O/U ROCKFISH	1	0.05	5.0%
Sculpins	Cottidae	Artedius fenestralis	Padded sculpin	PADD SCULP	1	0.05	5.0%
		Blepsias cirrhosus	Silverspotted sculpin	SILVER SPOT SC	1	0.05	5.0%
		Gilbertidia sigalutes	Soft sculpin	SOFT SCULP	4	0.20	15.0%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	21	1.05	40.0%
		Clinocottus acuticeps	Sharpnose sculpin	SHARPNOSE	43	2.15	50.0%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	73	3.65	45.0%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	191	9.55	70.0%
	Hemitripteridae	Nautichthys oculofasciatus	Sailfin sculpin	SAILFIN	5	0.25	5.0%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	2	0.10	10.0%

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Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	STICKL	11	0.55	20.0%
True cods	Gadidae	Other or unknown Cod	Unidentified true cod species	O/U COD	1	0.05	5.0%
		Microgadus proximus	Pacific tomcod	TOMCOD	9	0.45	15.0%