

# Summary of Fish Catch Results for Judd Cove, 2008 and 2009

Skagit River System Cooperative Research Program

May 2012

Beach seine sampling for fish was conducted at Judd Cove 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*.

Judd Cove is located within East Sound on Orcas Island within the San Juan Islands (Figure 1). Small net beach seines were used at Judd Cove 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 March through September in both 2008 and 2009.

The beach seine site at Judd Cove consisted of mixed fines to mixed coarse substrate with no vegetation (such as eelgrass or macro algae) present. Average maximum water depth was 0.6 meters and average salinity was 30.9 parts per thousand within the area seined. Water temperatures varied by month, ranging from approximately 7 or 8 °C in March to peaks of over 17 °C in June or July of each year.

We caught a total of 4,984 fish from 17 different species or species groupings over the two-year study period, including one species of juvenile salmon and one species of forage fish (Table 1). Pacific staghorn sculpin and arrow goby were the most abundant and most frequently occurring fish species in the catch.

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>

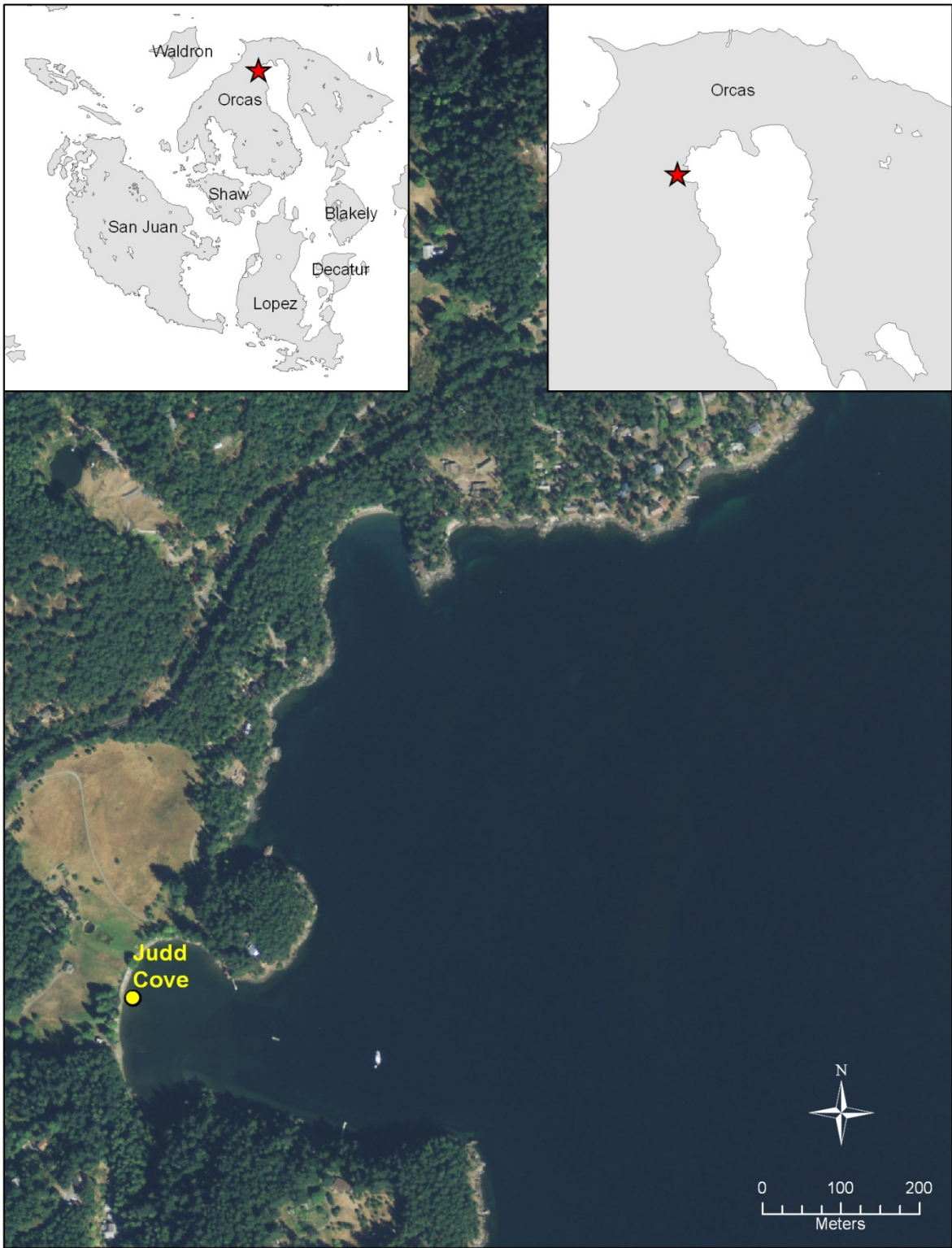


Figure 1. Location of Judd Cove beach seine site.

Table 1. Fish catch summary for Judd Cove beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Total catch	Catch per set	Frequency in catch
Flatfish	Pleuronectiformes	Parophrys vetulus	English sole	79	3.59	31.8%
		Other or unknown flatfish	Unidentified flatfish species	28	1.27	22.7%
		Platichthys stellatus	Starry flounder	16	0.73	22.7%
		Other or unknown flatfish post larval	Unidentified post larval flatfish species	1	0.05	4.5%
Forage fishes	Osmeridae	Hypomesus pretiosus post larval	Surf smelt, post larval juvenile	524	23.82	9.1%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	1	0.05	4.5%
Gunnels and Pricklebacks	Stichaeidae	Lumpenus sagitta	Snake prickleback	8	0.36	9.1%
	Pholidae	Pholis laeta	Crescent gunnel	3	0.14	4.5%
		Pholis ornata	Saddleback gunnel	2	0.09	9.1%
		Apodichthys flavidus	Penpoint gunnel	1	0.05	4.5%
Other – marine	Gobiidae	Clevelandia ios	Arrow goby	1184	53.82	63.6%
	Batrachoididae	Porichthys notatus	Plainfin midshipman	4	0.18	13.6%
	Syngnathidae	Syngnathus griseolineatus	Bay pipefish	1	0.05	4.5%
Pacific salmon	Salmonidae	Oncorhynchus tshawytscha age 0+ external mark	Chinook salmon, hatchery marked subyearling	1	0.05	4.5%
Sculpins	Cottidae	Leptocottus armatus	Pacific staghorn sculpin	2174	98.82	90.9%
		Clinocottus acuticeps	Sharpnose sculpin	368	16.73	54.5%
		Other or unknown Cottid	Unidentified sculpin species	327	14.86	22.7%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	262	11.91	36.4%