Summary of Fish Catch Results for Kaiser Beach, 2008 and 2009

Skagit River System Cooperative Research Program

May 2012

Beach seine sampling for fish was conducted at Kaiser Beach 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*.

Kaiser Beach is located on eastern side of Deer Harbor on Orcas Island within the San Juan Islands (Figure 1). Small net beach seines were used at Kaiser Beach after methods described in Skagit System Cooperative Research Department (2003). We made 26 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 Kaiser Beach consisted of sand to mixed fines substrate, usually without vegetative cover (such as eelgrass, kelp or other macro algae). Average maximum water depth was 0.7 meters and average salinity was 30.4 parts per thousand within the area seined. Water temperatures varied by month, ranging from a low of 5.3 °C in March 2009 to a high of 20.1 °C in June 2009. Water temperatures remained high after June and into September of both years, averaging 15.1 °C and 14.6 °C in 2008 and 2009, respectively.

We caught a total of 1,620 fish from 14 different species or species groupings over the two-year study period, including one species of juvenile salmon (pink salmon) but no forage fish species (Table 1). The most abundant fish species was Pacific staghorn sculpin, present in all beach seine sets. We kept count of Dungeness crab (1) 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

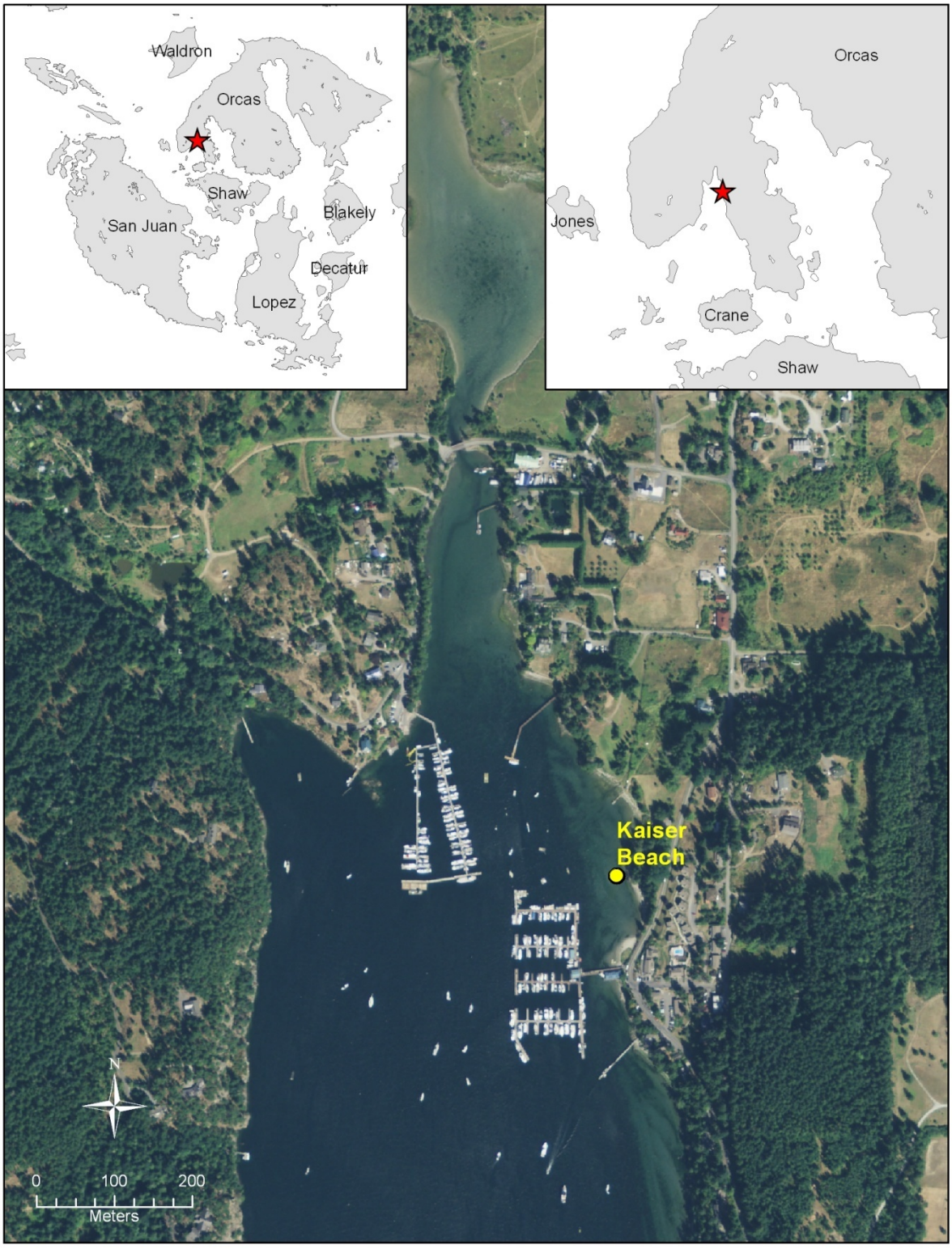

Figure 1. Location of Kaiser Beach beach seine site.

Table 1. Fish catch summary for Kaiser Beach beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic group	Genus species, age & mark	Common name	Total catch	Catch per set	Frequency in catch
Crabs	Cancridae	Cancer magister <6.5"	Dungeness crab, sublegal size	1	0.04	3.8%
Flatfish	Pleuronectiformes	Parophrys vetulus	English sole	47	1.81	38.5%
		Other or unknown flatfish	Unidentified flatfish species	1	0.04	3.8%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	2	0.08	7.7%
Gunnels and Pricklebacks	Pholidae	Pholis ornata	Saddleback gunnel	10	0.38	7.7%
		Apodichthys flavidus	Penpoint gunnel	7	0.27	7.7%
		Pholis laeta	Crescent gunnel	3	0.12	7.7%
		Unidentified Gunnel Species	Unidentified gunnel species	1	0.04	3.8%
Other - marine	Gobiidae	Clevelandia ios	Arrow goby	1	0.04	3.8%
Other - unknown	Unclassified Larval Fish	Larval Fish	Unidentified larval fish	1	0.04	3.8%
Pacific salmon	Salmonidae	Oncorhynchus gorbuscha 0+	Pink salmon, subyearling	3	0.12	3.8%
Sculpins	Cottidae	Leptocottus armatus	Pacific staghorn sculpin	1318	50.69	100.0%
		Clinocottus acuticeps	Sharpnose sculpin	8	0.31	26.9%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	214	8.23	30.8%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	4	0.15	15.4%