Summary of Fish Catch Results for Davis Bay, 2008 and 2009

Skagit River System Cooperative Research Program

October 2012

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

Davis Bay is located on the south side of Lopez Island within the San Juan Islands (Figure 1). Small net beach seines were used at three locations within Davis Bay after methods described in Skagit System Cooperative Research Department (2003). We made 38 beach seine sets over the two-year study period. Beach seining occurred monthly April through September 2008 and March through September 2009.

The beach seine sites within Davis Bay consisted of gravel to mixed coarse substrate, usually without vegetative cover (such as eelgrass, kelp or other macro algae). Average maximum water depth was 0.66 meters and average salinity was 28.1 parts per thousand within the area seined. Water temperatures varied by month, ranging from a low of 7.8 °C in March 2009 to a high of 19.4 °C in June 2009. Water temperatures declined after the month of June in 2008 and 2009, reaching about 14 °C by September in both years.

We caught a total of 3,273 fish from 10 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). We kept count of Dungeness (5) and red rock crab (1) caught by seines, as these species are 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 sandlance, 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

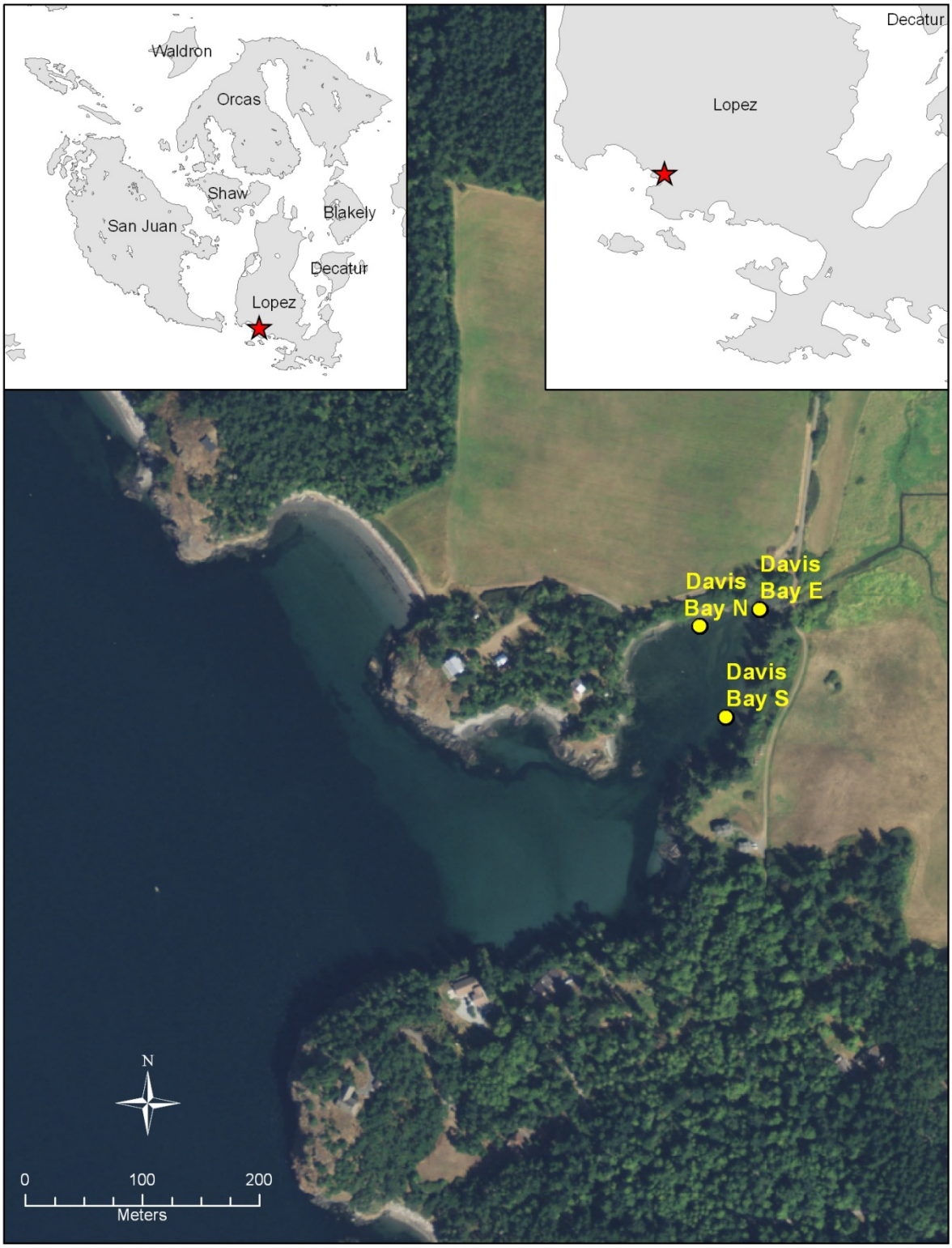

Figure 1. Location of Davis Bay beach seine sites.

Table 1. Fish catch summary for Davis Bay beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic family	Genus species, age & mark	Common name	Total catch	Catch per set	Frequency in catch
Crabs	Cancridae	*Cancer magister* <6.5"	Dungeness crab, sublegal size	5	0.13	2.6%
		Cancer productus	Red rock crab	1	0.03	2.6%
Flatfish	Pleuronectiformes	*Parophrys vetulus*	English sole	1	0.03	2.6%
		Platichthys stellatus	Starry flounder	2	0.05	5.3%
Forage fishes	Osmeridae	*Hypomesus pretiosus* post larval juvenile	Surf smelt, post larval juvenile	775	20.39	13.2%
Gunnels and Pricklebacks	Pholidae	*Pholis laeta*	Crescent gunnel	9	0.24	2.6%
		Pholis ornata	Saddleback gunnel	5	0.13	5.3%
Pacific salmon	Salmonidae	*Oncorhynchus keta* age 0+	Chum salmon, subyearling	2	0.05	5.3%
		Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	6	0.16	7.9%
Sculpins	Cottidae	*Leptocottus armatus*	Pacific staghorn sculpin	1433	37.71	97.4%
Sea perches	Embiotocidae	*Cymatogaster aggregata*	Shiner perch	1007	26.50	42.1%
Sticklebacks	Gasterosteidae	*Gasterosteus aculeatus*	Three spined stickleback	33	0.87	36.8%