

Summary of Fish Catch Results for Mucklestone, 2008 and 2009

Skagit River System Cooperative Research Program

January 2013

Beach seine sampling for fish was conducted at Mucklestone 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*.

Mucklestone is located on the north side of the spit on the south end of Decatur Island within the San Juan Islands (Figure 1). Small and large net beach seines were used at Mucklestone after methods described in Skagit System Cooperative Research Department (2003). We made 23 beach seine sets (22 small net and 1 large net sets) over the two-year study period. Beach seining occurred monthly from March through September in both 2008 and 2009.

The beach seine site at Mucklestone varied from mixed fines to fines with gravel to mixed coarse substrate, without vegetative cover 52% of the time and with detritus as the dominant cover 26% of the time. Average maximum water depth was 0.75 meters. The average salinity was 31.5 parts per thousand within the area seined. The water temperature varied by month, and ranged from a low of 7.6 °C in March 2009 to a high of 13.6 °C in September 2008.

At Mucklestone we caught a total of 2,569 fish from 20 different species or species groupings over the two-year study period, including two species of juvenile salmon (Table 1). Forage fish were not caught at this site. The most abundant fish species was sharpnose sculpin with a catch of 1,255 fish, present in 69.6% of beach seine sets. They accounted for 48.9% of the total catch. We kept count of Dungeness crab (5) 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>.

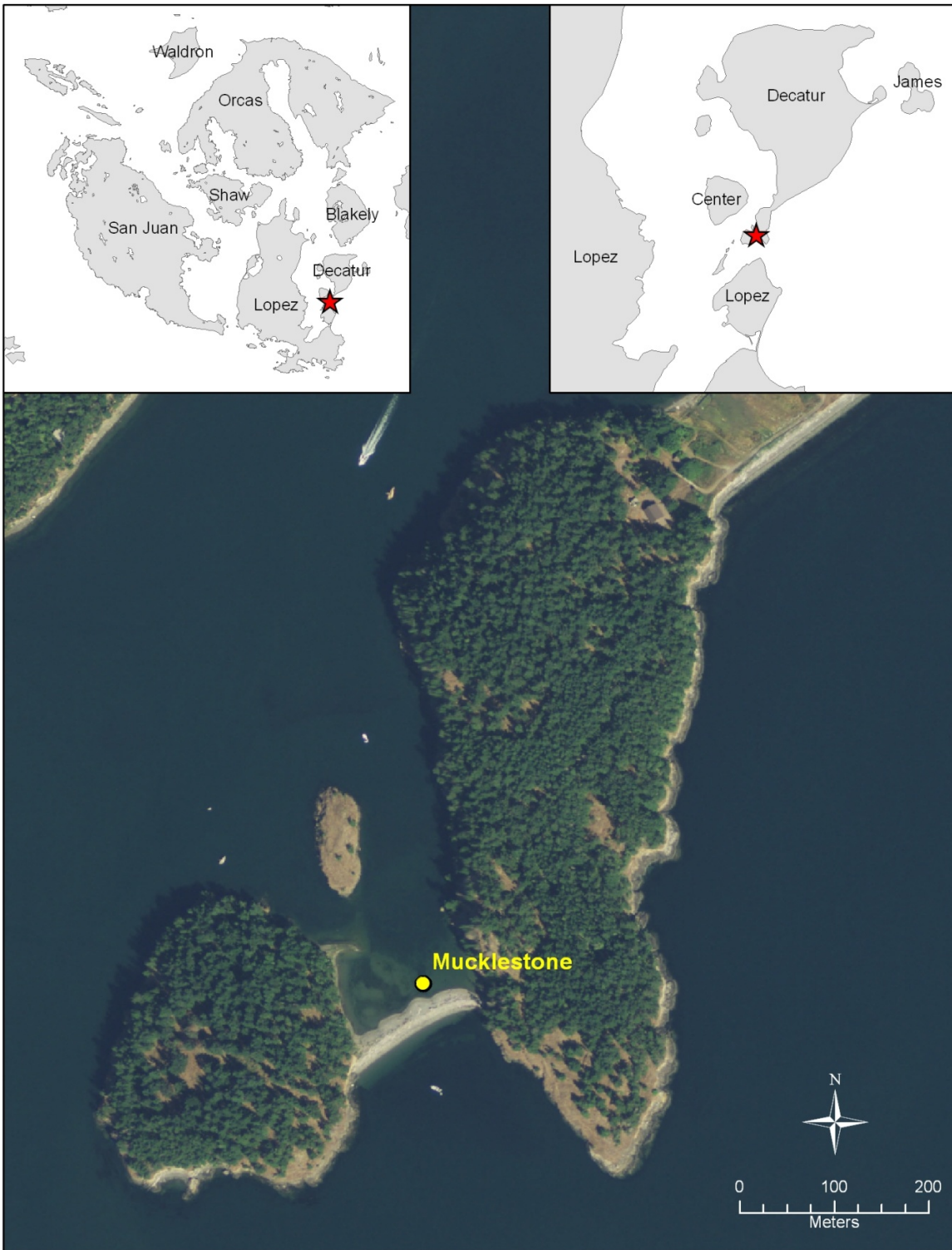


Figure 1. Location of Mucklestone beach seine site.

Table 1. Fish catch summary for Mucklestone 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	5	0.22	13.0%
Flatfish	Bothidae	Psettichthys melanostictus	Sand sole	SAND SOLE	13	0.57	8.7%
	Pleuronectiformes	Other or unknown flatfish	Unidentified flatfish species	O/U FLAT	1	0.04	4.3%
		Platichthys stellatus	Starry flounder	STARRY	16	0.70	26.1%
		Parophrys vetulus	English sole	ENG SOLE	18	0.78	21.7%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	O/U GREENLING	3	0.13	8.7%
Gunnels and Pricklebacks	Pholidae	Pholis ornata	Saddleback gunnel	SADLBCK GUNL	2	0.09	4.3%
		Pholis laeta	Crescent gunnel	CRES GUNL	7	0.30	8.7%
		Unidentified Gunnel Species	Unidentified gunnel species	GUNNEL	7	0.30	17.4%
	Stichaeidae	Lumpenus sagitta	Snake prickleback	SNAKE	234	10.17	17.4%
Other - unknown	Unclassified Larval Fish	Larval Fish	Unidentified larval fish	O/U LARVAL FISH	1	0.04	4.3%
Pacific salmon	Salmonidae	Oncorhynchus keta age 0+	Chum salmon, subyearling	CH 0+	31	1.35	4.3%
		Oncorhynchus gorbuscha age 0+	Pink salmon, subyearling	PK 0+	56	2.43	4.3%
Sculpins	Cottidae	Enophrys bison	Buffalo sculpin	BUFF	1	0.04	4.3%
		Myoxocephalus polyacanthocephalus	Great sculpin	GRT SCULP	12	0.52	8.7%
		Other or unknown Cottid	Unidentified sculpin species	O/U SCULP	147	6.39	17.4%
		Leptocottus armatus	Pacific staghorn sculpin	STAG	728	31.65	87.0%
		Clinocottus acuticeps	Sharpnose sculpin	SHARPNOSE	1255	54.57	69.6%
	Liparidae	Snailfish spp	Unidentified snailfish species	SNAILFISH	2	0.09	4.3%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	SHINER	31	1.35	8.7%
True cods	Gadidae	Microgadus proximus	Pacific tomcod	TOMCOD	4	0.17	8.7%