

Olympia's Second Street Sheet Midden: Shellfish Analysis of an Early Euro-America Site

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Abstract

Beneath 3 feet of fill on Olympia's precolonial shoreline lies the terminus of the Cowlitz Trail, where archaeological sites record the history of St'áƛčas people and Indigenous people of the region who traveled this trail or camped on the Deschutes estuary shoreline. This ancient meeting place became the residence of Levi Smith in 1846 and as Olympia developed the northeast corner of Main Street and Second Street became one of Olympia's first mercantile in 1853. During construction of a mixed-use building in 2020, the Second Street Midden (45TTN519) was encountered beneath historic fill. Initially the site was thought to be a precolonial St'áƛčas shell midden because the assemblage included lithic artifacts and shellfish species typically observed in precolonial shell midden sites in the region. Further investigation yielded features associated with the circa 1846-1909 Euro-American settlement of Olympia. 45TN519 provides information on the history of Olympia and evidence of trade between settlers and Steh-chass people. In this poster, we present the results of shellfish analysis from the Second Street Sheet Midden (45TN519).

Discovery of the Second Street Midden

Antiquity Consulting provided archaeological services for a downtown Olympia development beginning in 2019 (Mathews 2020). Prior to this project, little was known about the depth of historic dredge fill on the natural shoreline of the Budd Inlet estuary and archaeological monitoring was considered a reasonable level of effort of the anticipated risk here. Project construction began in March 2020 with an archaeological monitor present, and an archaeological midden was encountered on the first day of construction. Because midden was observed in very small amounts and within existing utility alignments, archaeologists and consulting parties were not certain of the origin of the deposit until a thin layer of intact shell midden was observed beneath fill and on top of a native sand (Figure 2).



Figure 2. 45TN519 midden profile at base of utility trench.

After testing and data recovery in 2020, archaeological monitoring continued through 2023. Shell midden samples were collected throughout all phases of the project. Site 45TN519 is a sheet midden that contains lithic artifacts as well as artifacts associated with early American settlement beginning in the 1840s. The site was capped with dredge fill in 1909.

Midden Analysis Methods



Figure 3. Midden analysis in process.

Four midden samples were processed for this study. Samples were screened using 1/2", 1/4", and 1/8" sieves, and shellfish were sorted by species from the 1/2" and 1/4" samples, and tallies for weight and fragment size were collected (Figure 3). The minimum number of individuals (MNI) was calculated from hinges with 51% or more intact umbo and hinge. Whole valves were calculated if 90% or more was present. Fragments were counted if they were larger than one centimeter. Samples were weighed by species in grams on a high precision digital scale.

Shellfish Species Identified

Eight shellfish species were identified in the analyzed samples (Table 1). Taxa were identified as Olympia oyster (*Ostrea lurida*), butter clam (*Saxidomus gigantea*), littleneck clam (*Leukoma staminea*), Nuttall's cockle (*Clostridium nuttallii*), blue mussel (*Mytilus edulis*), barnacle (*Balanus* spp.), Lewis's moon snail (*Neverita lewisii*), and slipper snail (*Crepidula* spp.).

Table 1. Weight of identified species from 45TN519 samples in grams.

Species	Sample 1		Sample 2		Sample 3		Sample 4		Total	
	Weight (g)	%	Weight (g)	%	Weight (g)	%	Weight (g)	%	Weight (g)	%
Olympia oyster	683	94	45	70	3	0.7	517	90	1247	71
Butter clam	32	5	10	15	314	80	44	8	401	23
Littleneck clam	9	1	5	7	55	14	9	2	77	4
Nuttall's cockle	-	-	0.6	0.9	8	2	1	0.2	10	0.6
Blue mussel	-	-	0.3	0.5	0.1	<0.1	2	0.3	2	0.1
Barnacle	0.1	<0.1	0.3	0.4	0.3	<0.1	0.7	0.1	1	0.1
Lewis's moon snail	-	-	0.8	1	-	-	-	-	0.8	0.1
Slipper snail	-	-	-	-	-	-	0.1	<0.1	0.1	0.1
Unidentified	3	0.4	4	6	13	3	1	0.2	21	1

Table 2. Fragments of identified species from 45TN519.

Species	Sample 1	Sample 2	Sample 3	Sample 4	Total
Olympia oyster	1869	145	10	1258	3282
Butter clam	47	27	393	135	602
Littleneck clam	14	10	141	29	194
Nuttall's cockle	0	2	23	4	29
Blue mussel	0	3	1	22	26
Barnacle	1	3	2	13	19
Lewis's moon snail	0	1	0	0	1
Slipper snail	0	0	0	1	1
Unidentified	9	5	30	1	45

Taxa distribution in the samples was uneven, with Olympia oyster comprising the majority of samples (71% of the total weight, 78% of fragments). Butter clam was also well represented within the samples (23% of the total weight, 14% of fragments). Littleneck clams comprised a minority of the sample (4% of the total weight, 5% of fragments).

Figure 4. Ratios of shellfish species by weight for all samples combined.

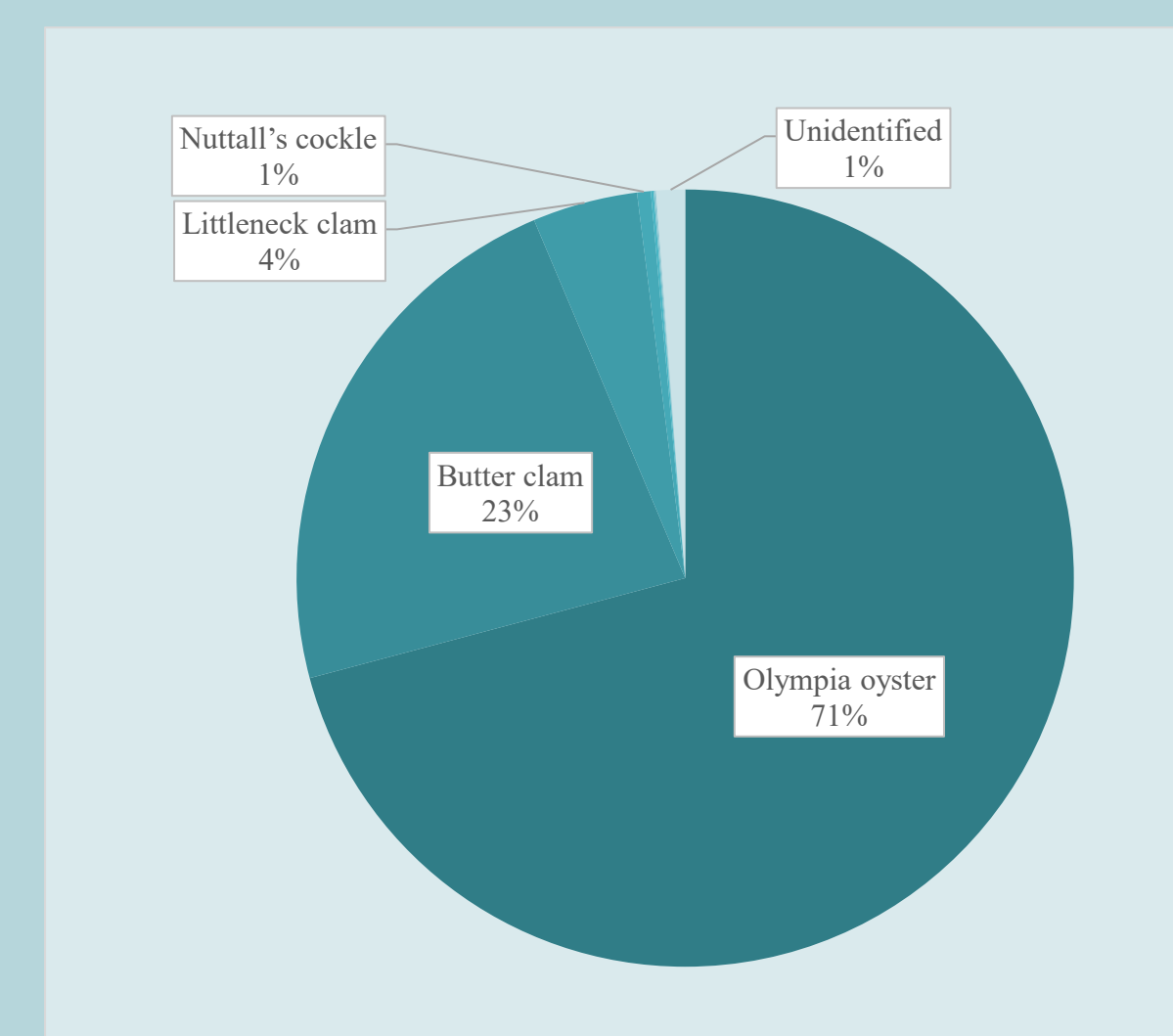


Figure 5. Ratios of shellfish fragment counts for all samples combined.

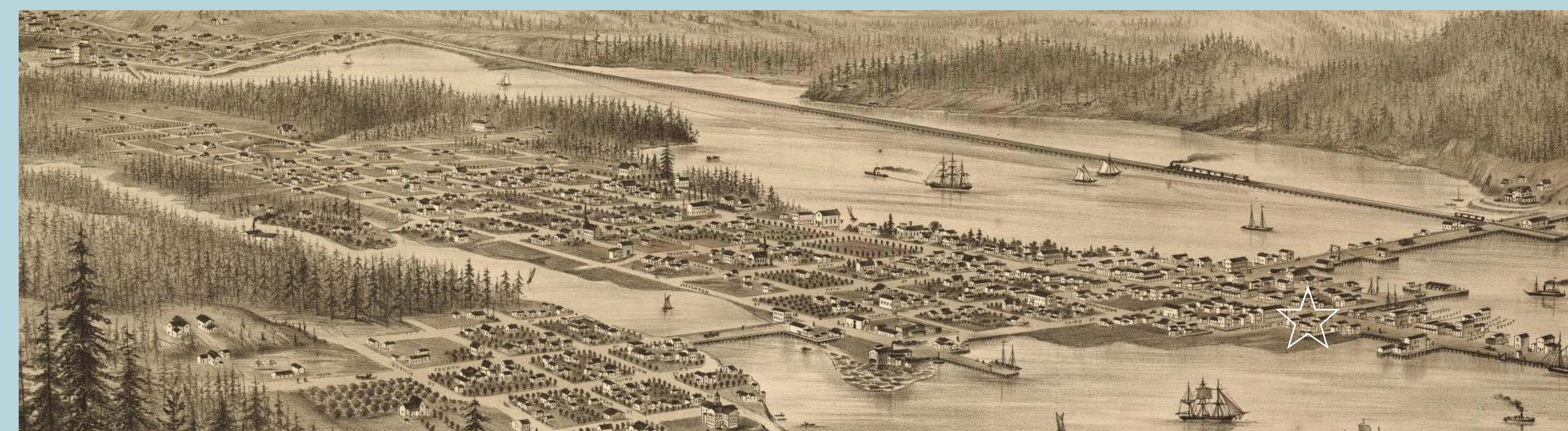
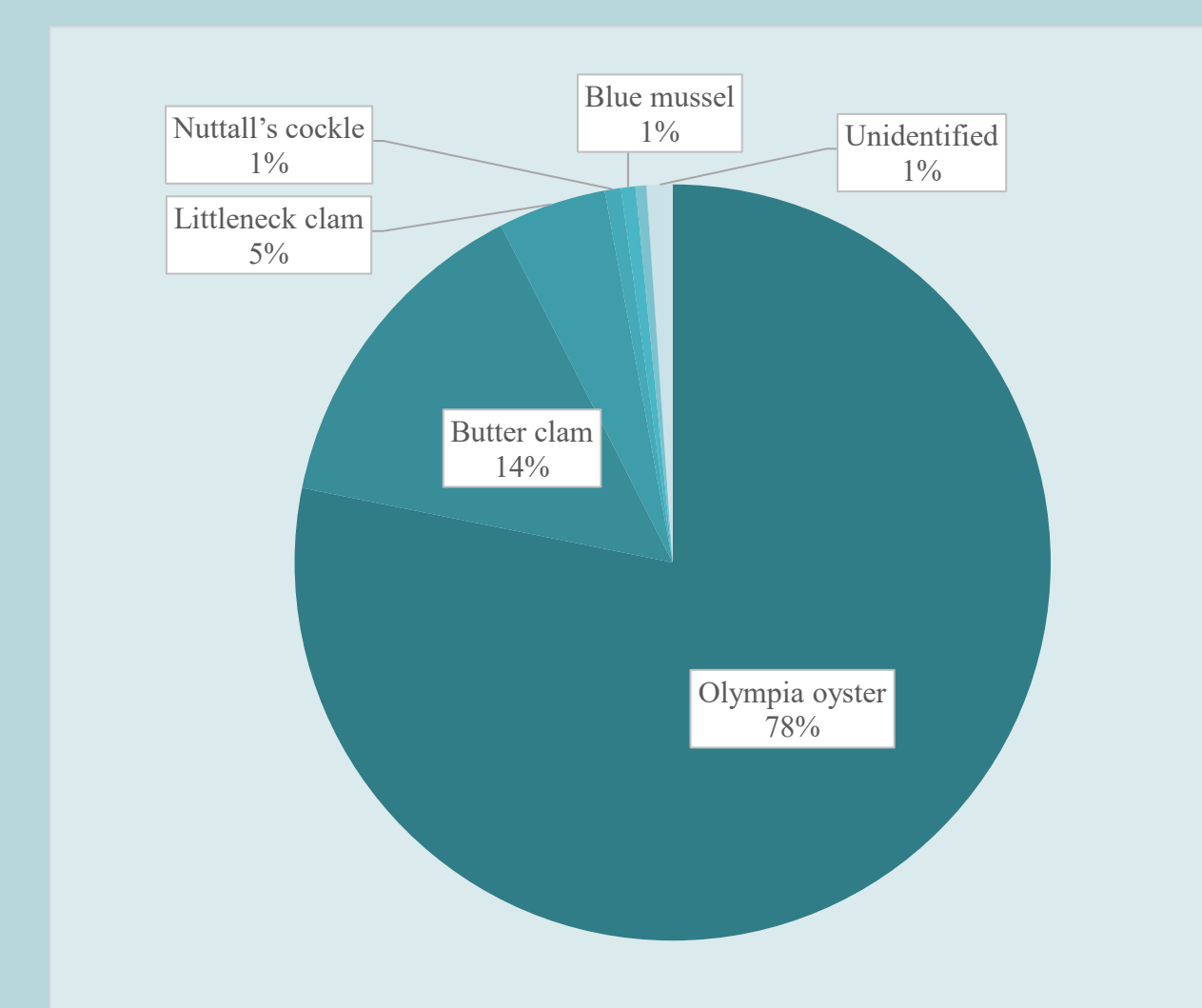


Figure 1. Portion of "Bird's eye view of the city of Olympia, East Olympia and Tumwater, Puget Sound, Washington Territory from Glover 1879. Site location marked on Second Street.

St'áƛčas Village on the Deschutes Estuary

The St'áƛčas village was located on the Olympia peninsula on the eastern shore of the Deschutes estuary on Budd Inlet, a land now occupied by downtown Olympia (Figure 1). This site was the terminus of the Cowlitz Trail, and early American settler reports confirm that St'áƛčas remained on the Olympia peninsula as the American settlement developed in the 1840s and 1850s (Mathews 2020). Lurana Percival reported that canoes and huts lined the shoreline in 1853. "Chinook Street," the location of a longhouse near Columbia and Fourth Streets, was frequented by American settlers for trading. A poem includes a verse describing the sights and smells of the St'áƛčas "part of town," including a reference to clam-drying which appeared to be a commercial enterprise. In 1854 Isaac Stevens described a camp consisting of "a number of

Indian lodges with canoes drawn up on the beach, and Indians and dogs lounging about" along the shore on Columbia Street between Third and Fourth Streets. Levi Lathrop Smith, who kept a journal while at his claim between 1847 and 1848, reported that Coast Salish regularly came to Olympia to trade with each other and often traded with or worked for Smith as well. During the Puget Sound War (1855-1856), St'áƛčas were confined on Squaxin Island and Olympia's settlers constructed a 20 foot high wooden plank palisade on the Olympia peninsula to barricade the American settlement. Soon after the war, some St'áƛčas returned to the Olympia peninsula and resumed business with Olympia settlers. In March 1859, Olympia passed an ordinance prohibiting "Indians" from residing on streets, highways, lanes, or vacant lots.

Conclusions

When the 45TN19 shell midden was first observed, it was initially thought to be a precolonial site due to the shellfish species observed and the presence of lithic artifacts and thermally affected rock. No site in Olympia had yet documented native shellfish species within a sheet midden that was also rich with circa 1840s to 1900s refuse and structural features. The sheet midden is not stratified, and historic-age artifacts were found at the base of the midden deposit, indicating the site likely dates to the earliest American settlement of Olympia.

Situated on a corner that hosted one of Olympia's first mercantiles, the site provides insights into Indigenous shellfish commerce from the 1840s through the early development of large scale American commercial shellfishing in the 1900s. Our observation of a slipper snail, a species that was imported in the late 1800s with the introduction of non-native oyster species for commercial aquaculture, as well as very minor amounts of other non-native oysters in other unanalyzed samples. It is unclear from this limited analysis whether Olympia oysters and butter clams were preferred by Americans in the ratios observed here, or if these species thrived in the shallow waters of the Deschutes estuary. Continued analysis of the Second Street Shell midden will provide us with opportunities to better understand Indigenous shellfish commerce, American preferences, and the development of the regional shellfish industry.

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