1970
Driftwood Logging on Camano Island began in 1855 and continued until 1952, however most notable logging occurred seasonally. We had insufficient imagery to test the seasonality but were able to test the primary hypothesis.

2.4002 years.

Elger
Bay, Camano Island, WA. No freshwater streams enter the marsh, so driftwood is consistently being lost from the easternmost lobe, while the westernmost lobe and center lobe contain no stored driftwood. Our model had a maximum of drifted wood at 1976.3022 ± 2.4136 years. This gives us a maximum between 1970.5064 and 1982.4980. This gives us a maximum between 1970.4754 and 1980.2768 when seasonality is accounted for.

Discussion and Results
Qualitative analysis of the driftwood revealed that (Fig 3):
- Driftwood is consistently being lost from the easternmost lobe, while the westernmost lobe and center lobe contain no stored driftwood.
- Driftwood was lost from the back of the marsh, suggesting that the driftwood is mobile throughout the marsh, not only in the front as we expected.

Qualitative analysis of the data revealed that (Fig. 2; 4):
- A parabola was the best fit for the data. This suggests that the total area of drifted wood increased, reached a maximum, and has decreased since. Our model had a maximum of drifted wood at 1976.3022 ± 2.4136 years. This gives us a maximum between 1970.5064 and 1982.4980.
- A parabola was also the best fit for the data when seasonality was taken into consideration by only using data from July imagery. This model had a maximum of drifted wood at 1977.8766 ± 2.4082 years. This gives us a maximum between 1975.4754 and 1980.2768 when seasonality is accounted for.

4.8548 years. This gives us a maximum between 1970.5064 and 1980.2768 when seasonality is accounted for.

Figure 2
Figure 3
Figure 4

Figure 5

Acknowledgements
We would like to extend our thanks to our advisor Dr. Breany MacInnes of the CWU Geology Department for getting us started on this project and helping every step of the way. Also, to Dr. Walter Sullivan Minor Marsh, Padilla Bay. Unpublished master’s thesis, Western Washington University, Bellingham, Washington, 2005. 191. MacLennan, A. (2005). An Analysis of Large Woody Debris in two Puget Sound Salt Marshes; a Qualitative analysis of the driftwood.

References


Driftwood Area
0.1 0.11 0.12 0.13 0.14 0.15 0.16 0.17 0.18

Field Methods
We chose four transects running north-south and east-west across the bay.

Lab Methods
Data analysis was done primarily in ArcGIS, Google Earth Pro, and Matlab. We compiled historic aerial images (see timeline below), imported them into ArcGIS and traced polygons representing the area covered by drifted wood (Fig. 2). For more images we used Google Earth Pro to create polygons and then imported them into ArcGIS. We then graphed our data and used Matlab to determine best-fit models showing how drifted wood extent changed through time.

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Methods

Field Methods
We chose four north-south running transects along the bay and made observations along them. We recorded log characteristics that suggested anthropogenic or natural origins, marked a GPS point where we noticed a change in drifted wood density, coloration, and sturdiness, measured log size, and recorded vegetation type. This preliminary field work did not ultimately impact the results shown here, but provided us with a context for our work and hypotheses.

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