



Apr 5th, 10:30 AM - 10:45 AM

## Which factors influence Manila clam survival on Lummi Nation tidal flats?

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Quesada, Andrés J.; Thurber, Andrew; Peacock, Misty; Hunter, Rosa; and Hatch, Marco, "Which factors influence Manila clam survival on Lummi Nation tidal flats?" (2018). *Salish Sea Ecosystem Conference*. 143.

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# Which factors influence Manila clam survival on Lummi Nation tidal flats?

Marco Hatch, Andrew Thurber, Misty Peacock, Rosa Hunter

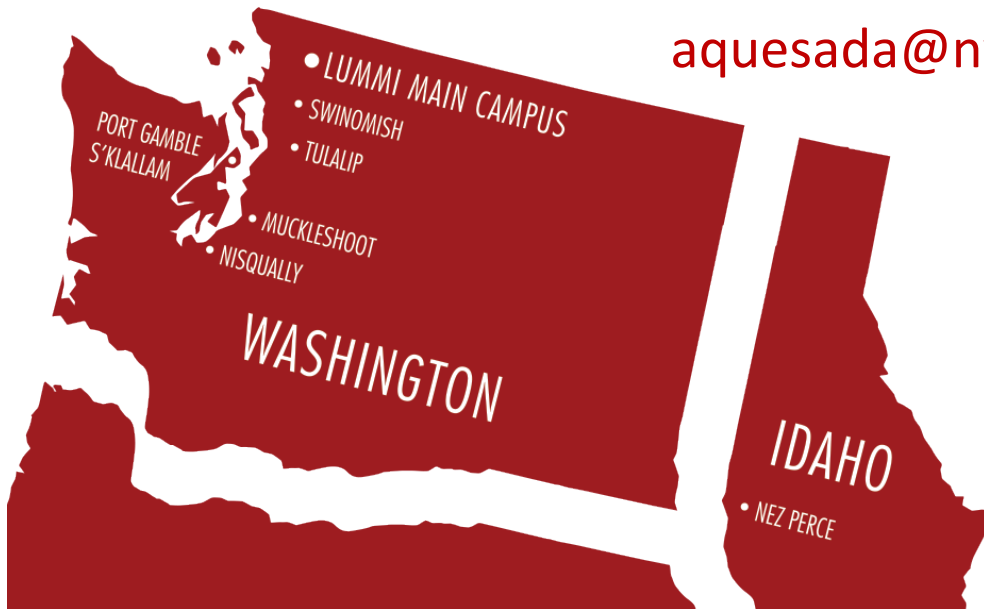
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INDIAN COLLEGE  
*Xwlemi Elh>Tal>Nexw Squl*

Manila clam, Japanese littleneck  
*Venerupis philippinarum*



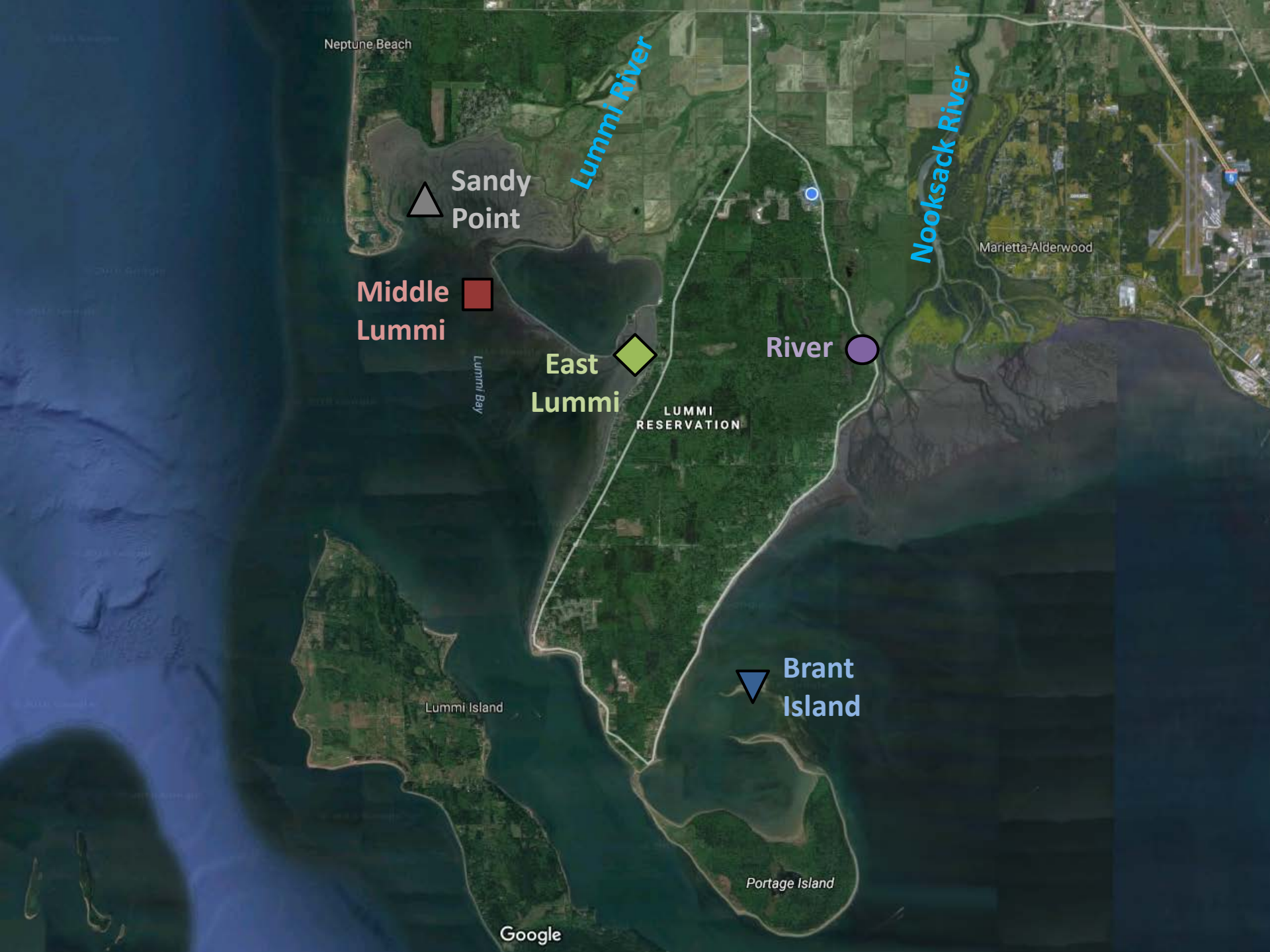




## Potential causes for population decline:

- Unreported or unregulated harvesting
- Winter freezing
- Hydrogen sulfide in sediments
- Changes in diet and food availability





Neptune Beach

Sandy Point

Middle Lummi

East Lummi

River

Brant Island

Lummi Island

Portage Island

Marietta-Alderwood

Lummi River

Nooksack River

LUMMI RESERVATION

Lummi Bay

Google



















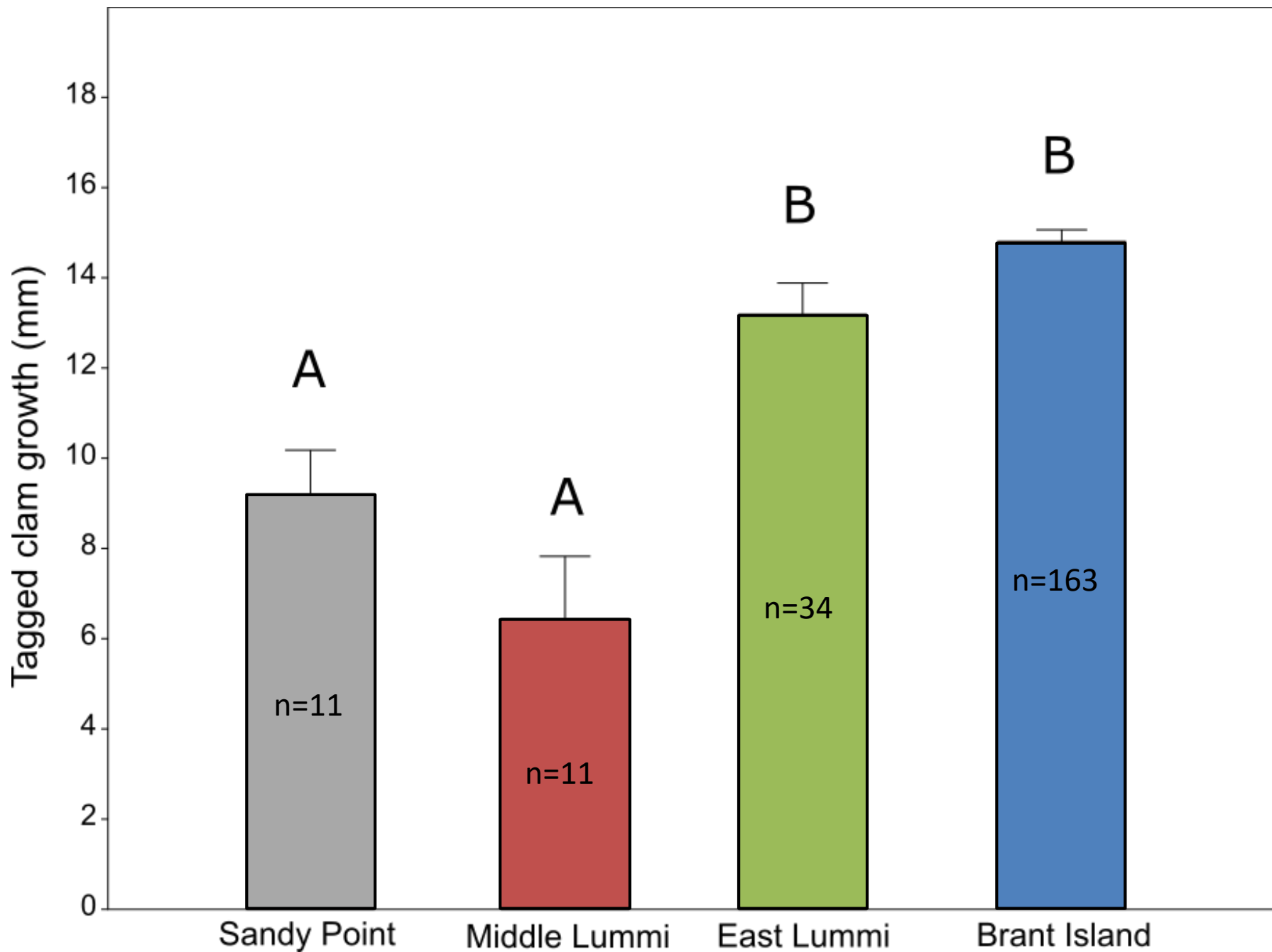




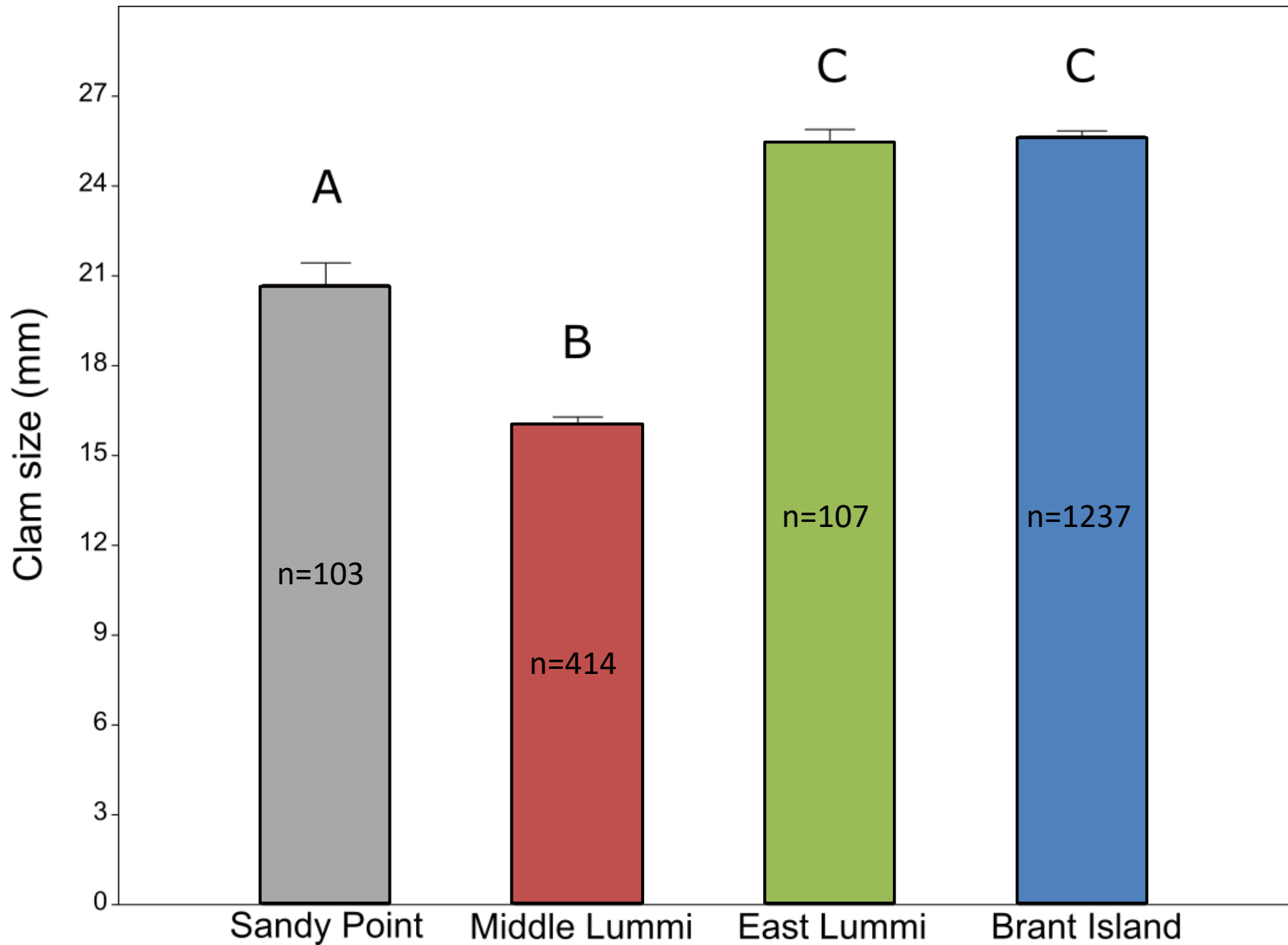
6 months later...



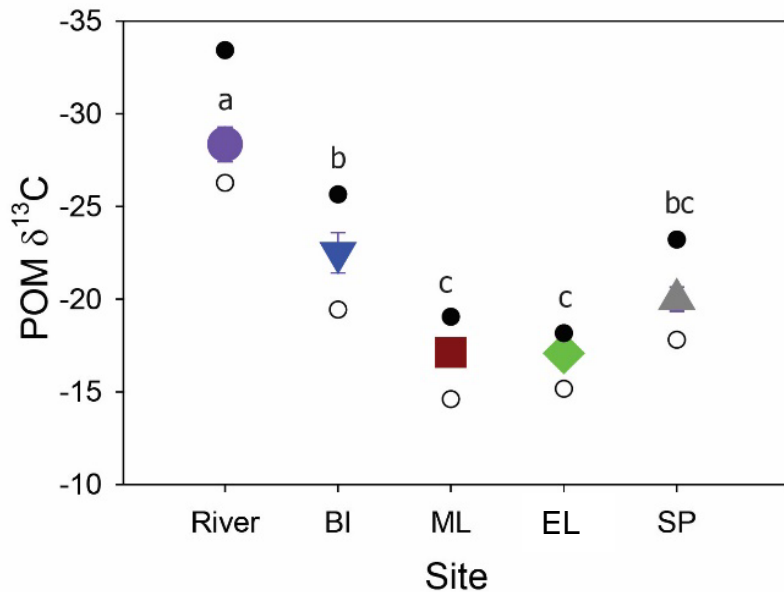
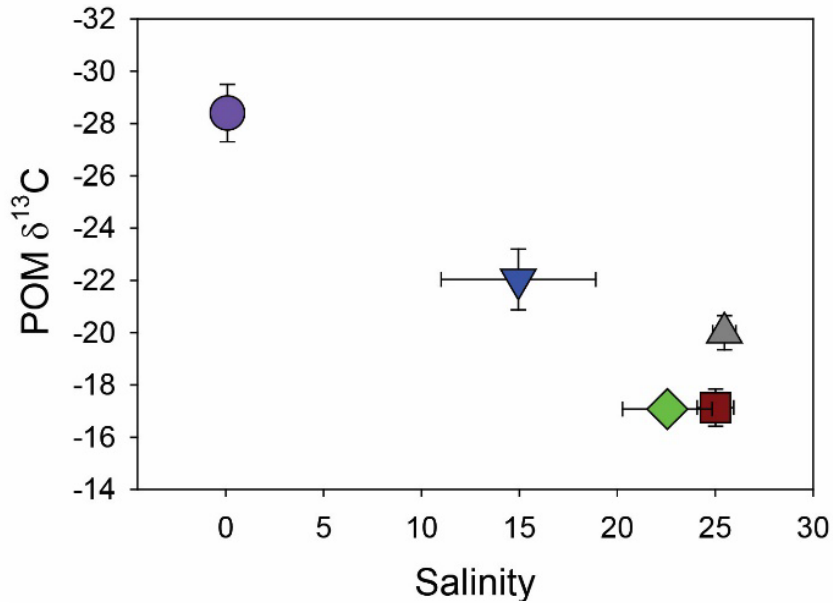








# Carbon isotopes in water

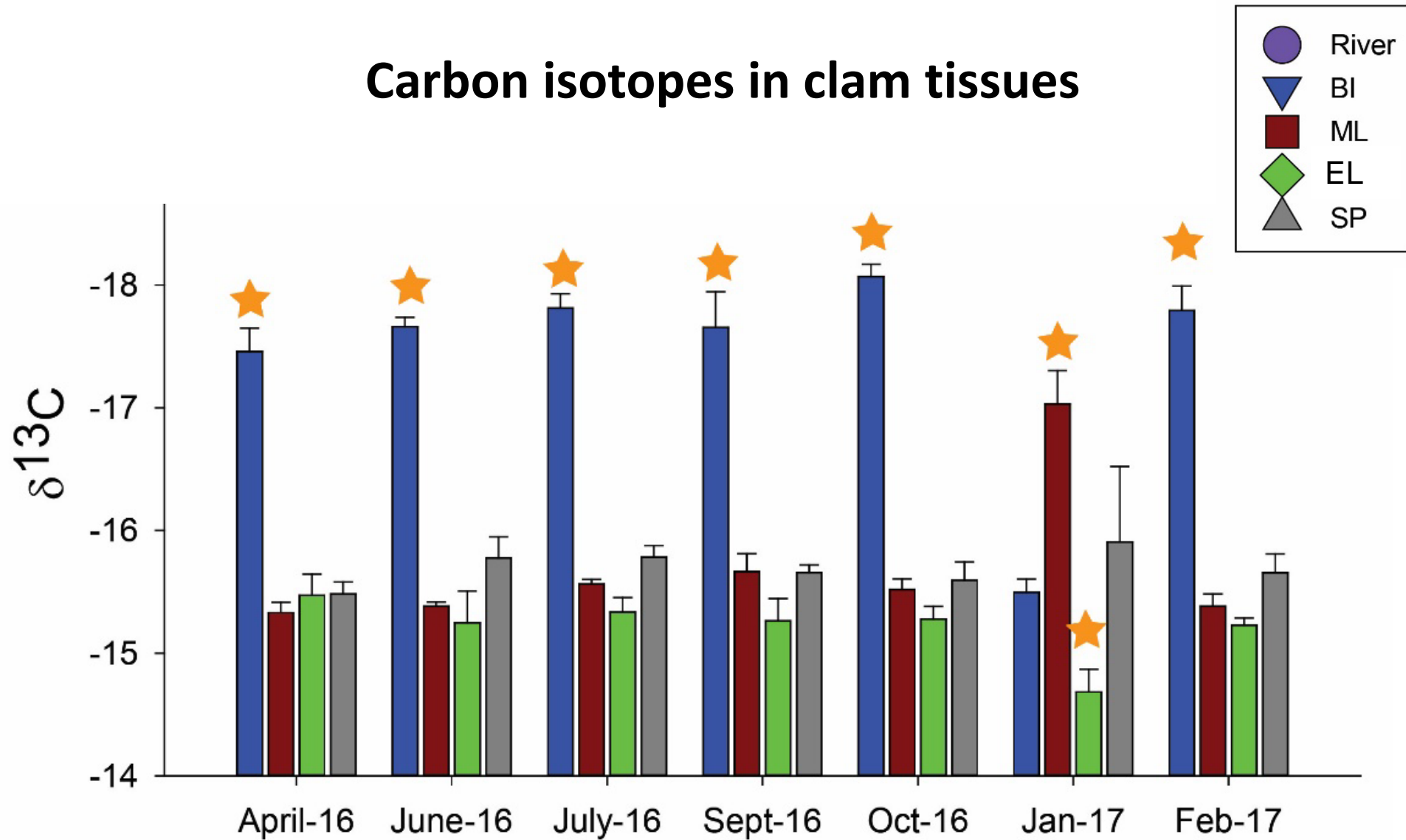


Brant Island (▼) had the lowest and most variable salinity.

Brant Island (▼) and Sandy Point (▲) had highest inputs of terrestrial POM.



# Carbon isotopes in clam tissues



Brant Island ( $\blacktriangledown$ ) had the lowest  $\delta^{13}\text{C}$  throughout the year, except for January.

## Next steps:

- Fatty acid analyses
- Analyze phytoplankton samples





# Acknowledgements

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## Students

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