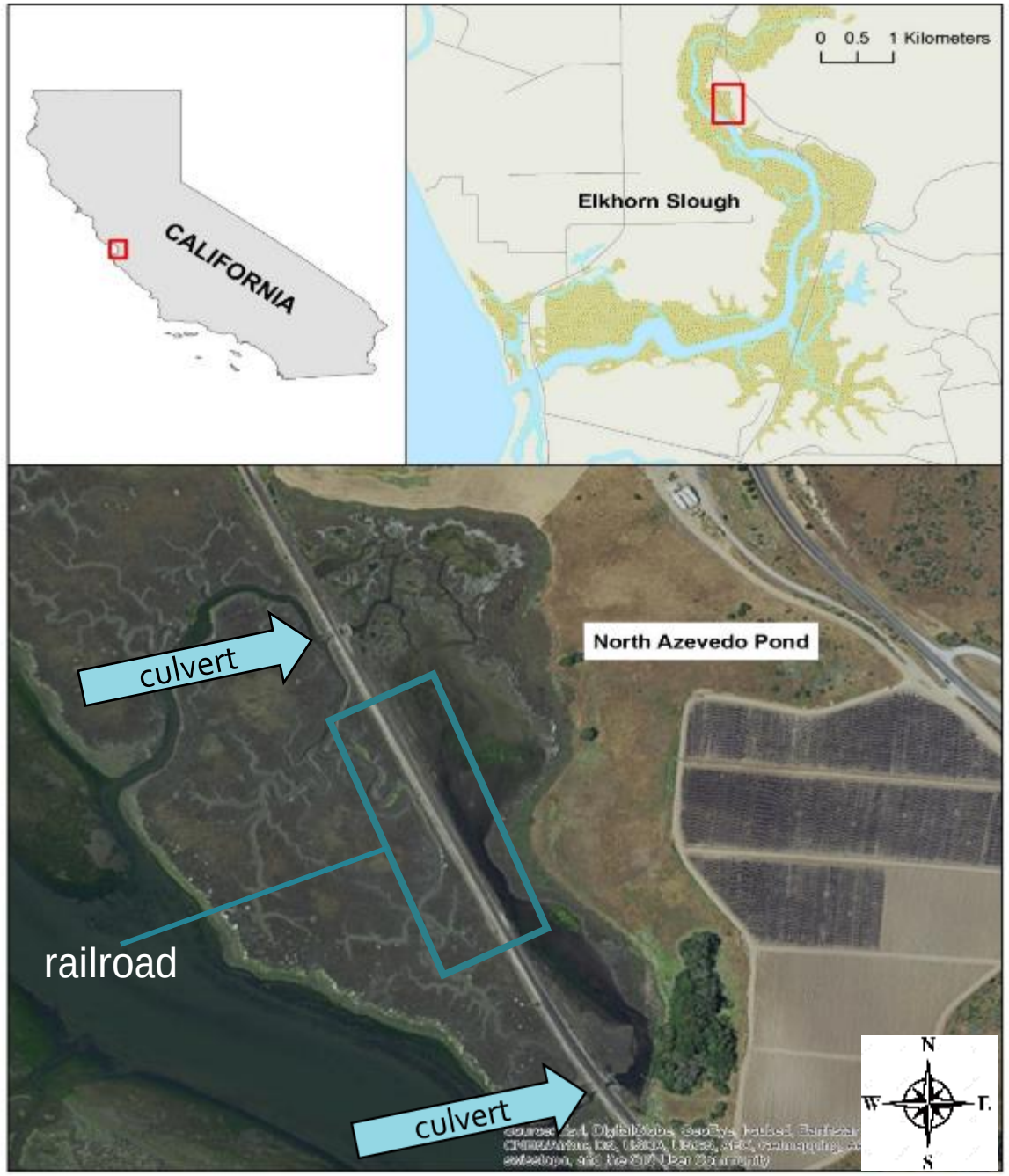
Impacts of water control structures on the infauna of a tidally restricted wetland by Christine Mann

- Elkhorn Slough-many tidally restricted wetlands
- Water control structures: culverts, dikes, levees, tidal gates → poor WQ & restrict flow

North Azevedo Pond, Elkhorn Slough, CA-Tidally restricted system



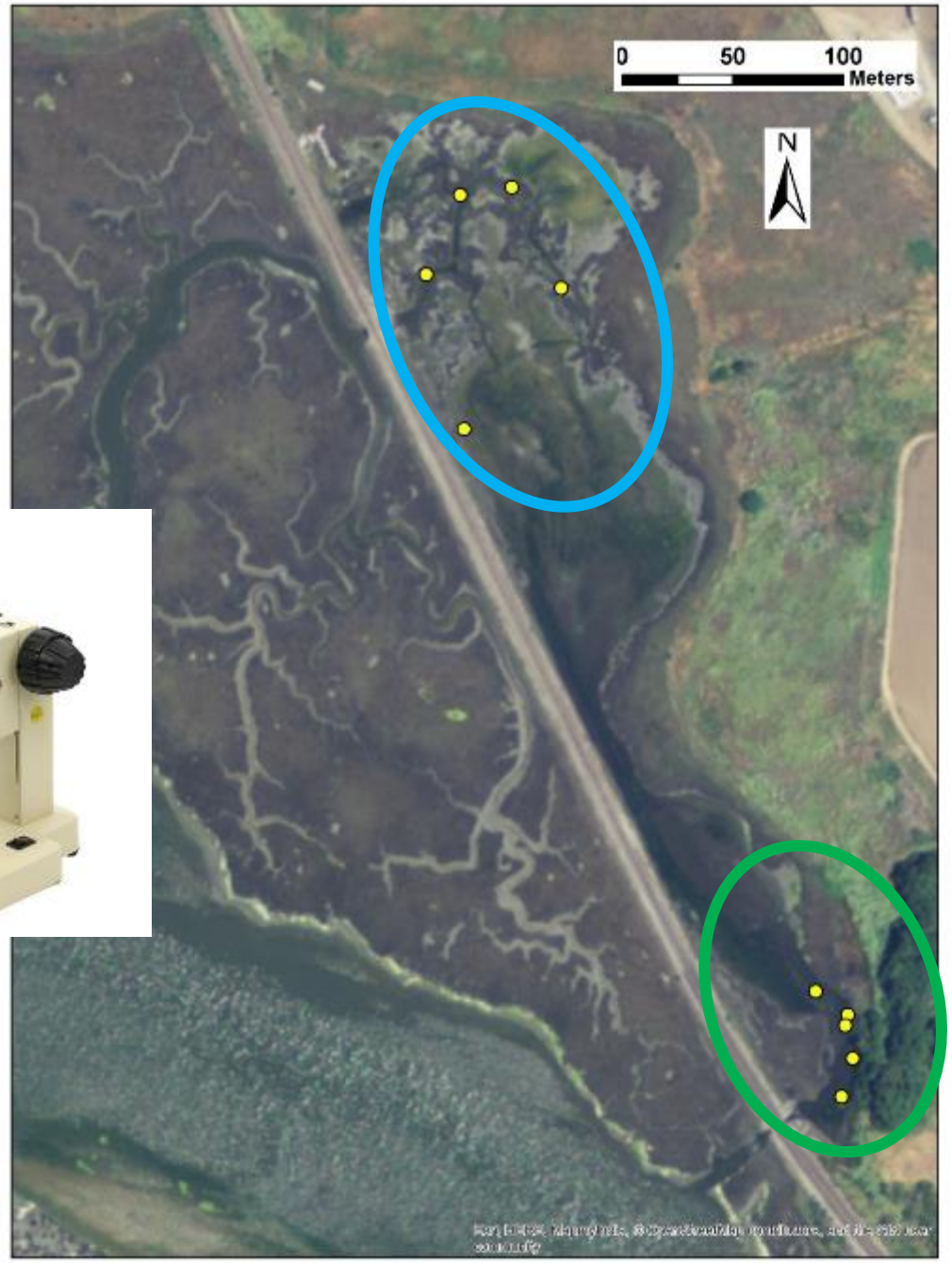
After Water Control Structures	
South	North
↑ Inundation	↑ Inundation
↓ Tidal Range	↓ Tidal range

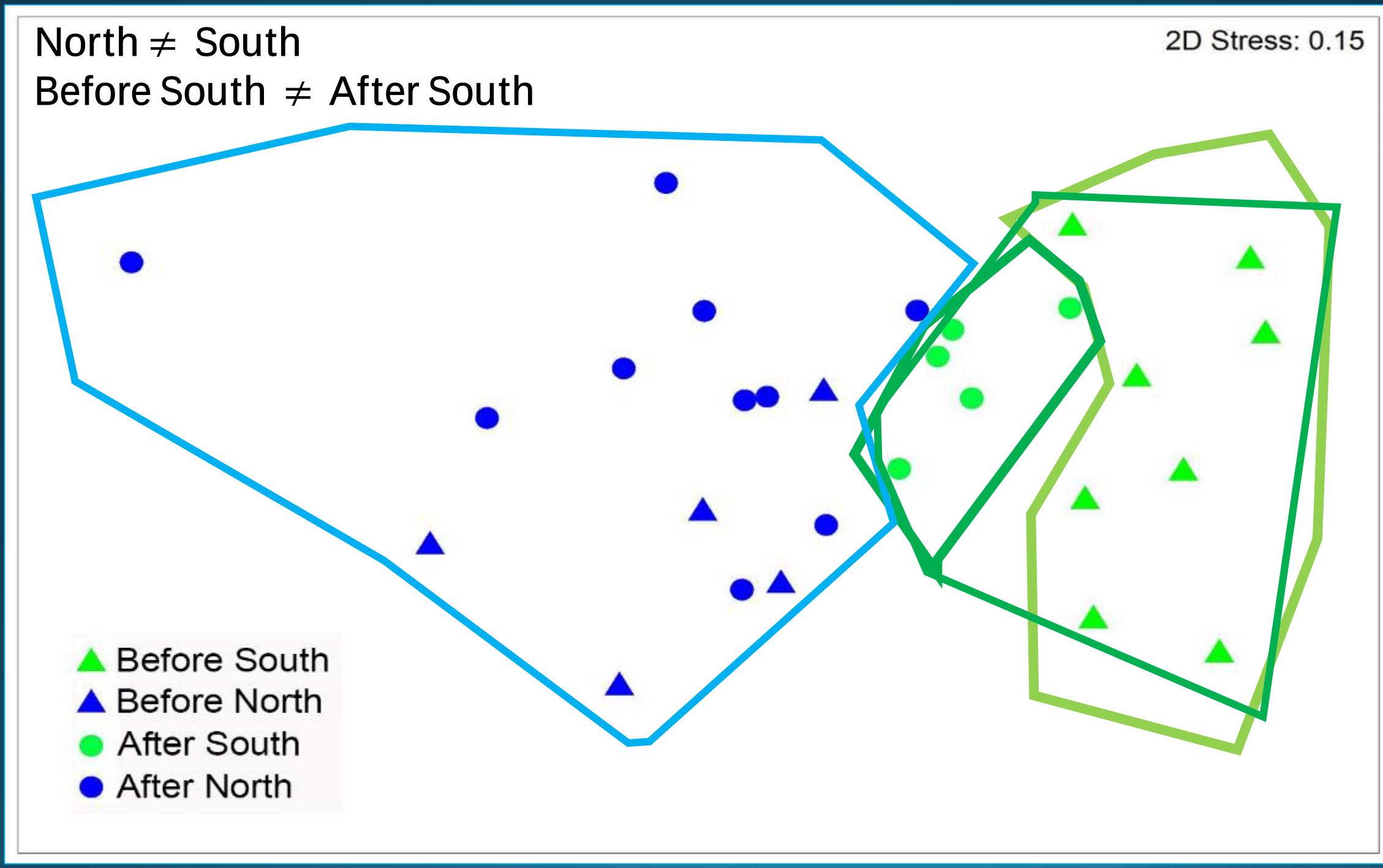

NORTH


SOUTH

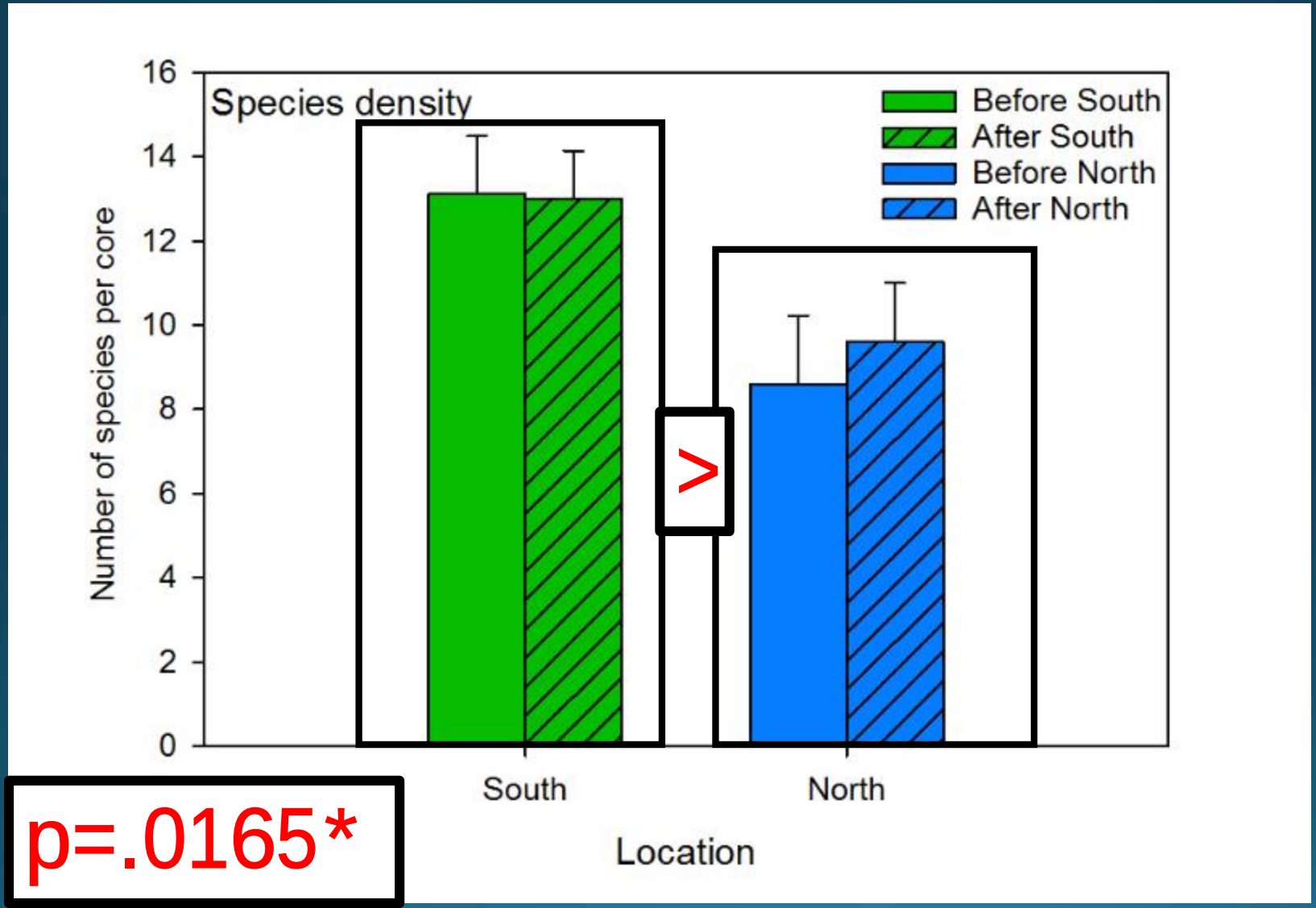
Benthic Sampling

- Before and After Infaunal Sampling
- North and South areas of North Azevedo Pond

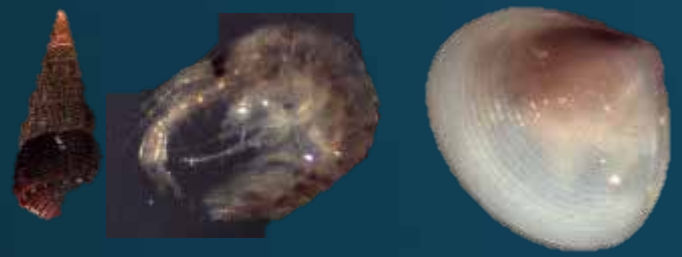



North ≠ South
Before South ≠ After South
2D Stress: 0.15
Before South
Before North
After South
After North

Species Richness



Community drivers



Stress Sensitive Stress Tolerant

South=Mollusks & Crustaceans

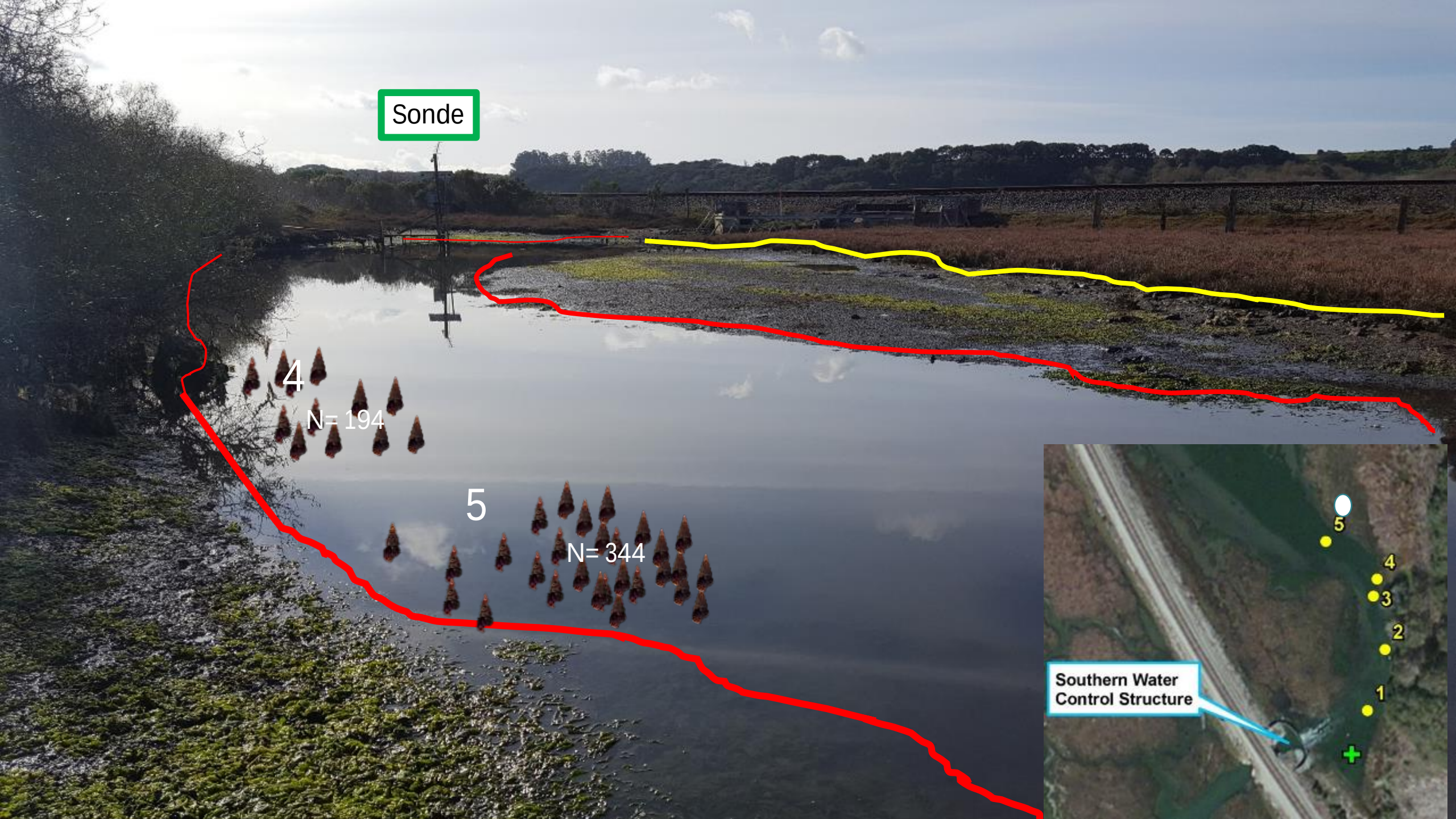
Batillaria- invasive snail

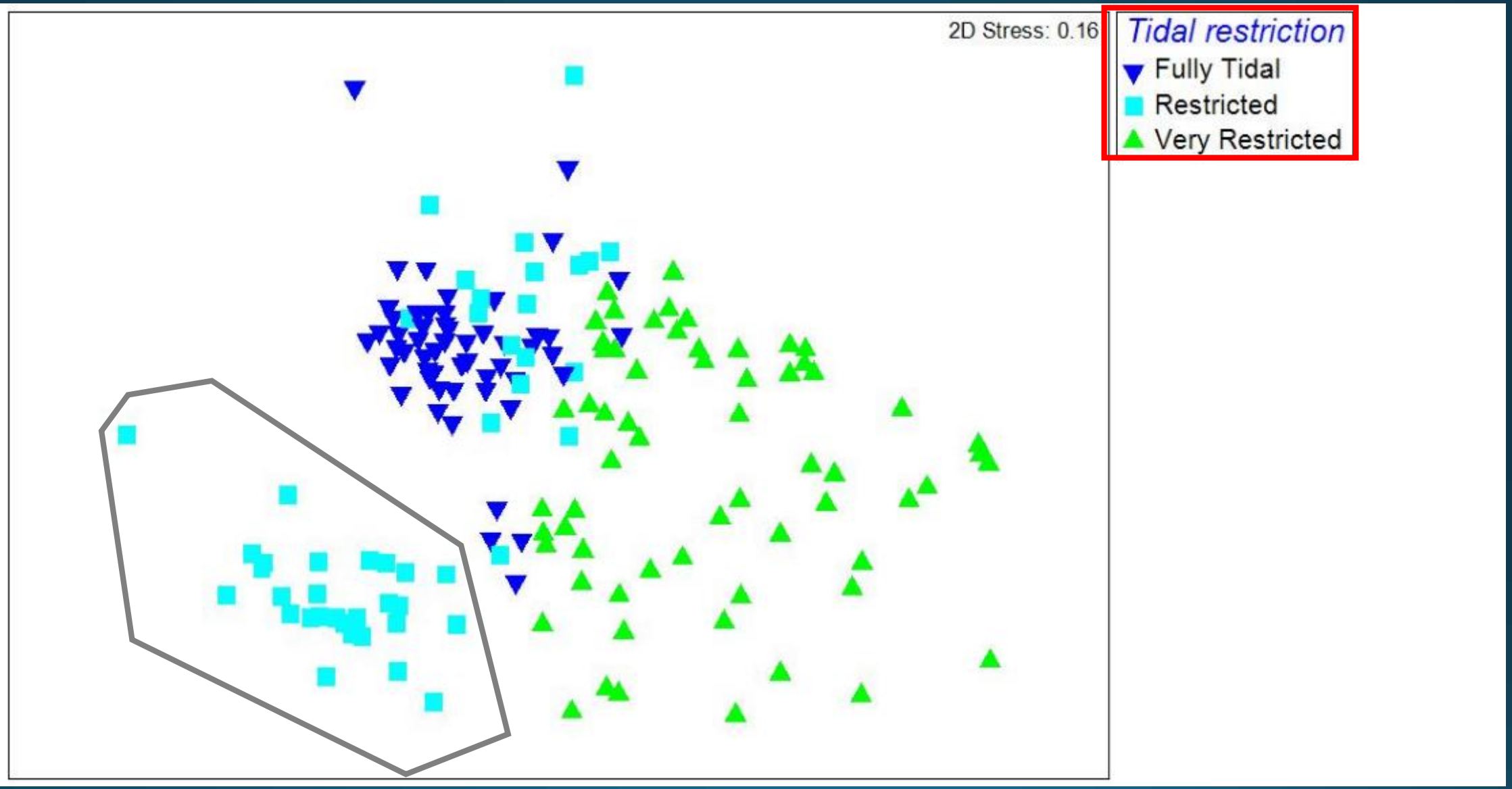
Annelids

North= Annelids

More stress tolerant worm

Less stress tolerant worm


Sonde
4
N= 194
5
N= 344
Southern Water
Control Structure
5
4
3
2
1



North Azevedo Overall ≠ Other Tidal wetlands in Slough

Management implications

- Model of ponding restoration, other places might benefit
- High marsh-limitations
- Continue to monitor *Batillaria* populations to further explore what about the habitat makes it a unique refuge for it

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