



Journal of Student Research on Puget Sound

The collected reports of the student scientific explorations aboard the *SV Carlyn*

Salish Sea Expeditions is a catalyst for students in their inquiry of Puget Sound through boat based-scientific exploration.

**Bainbridge Island High School--Grades 10-12
Bainbridge Island, Washington**

Fall 2007

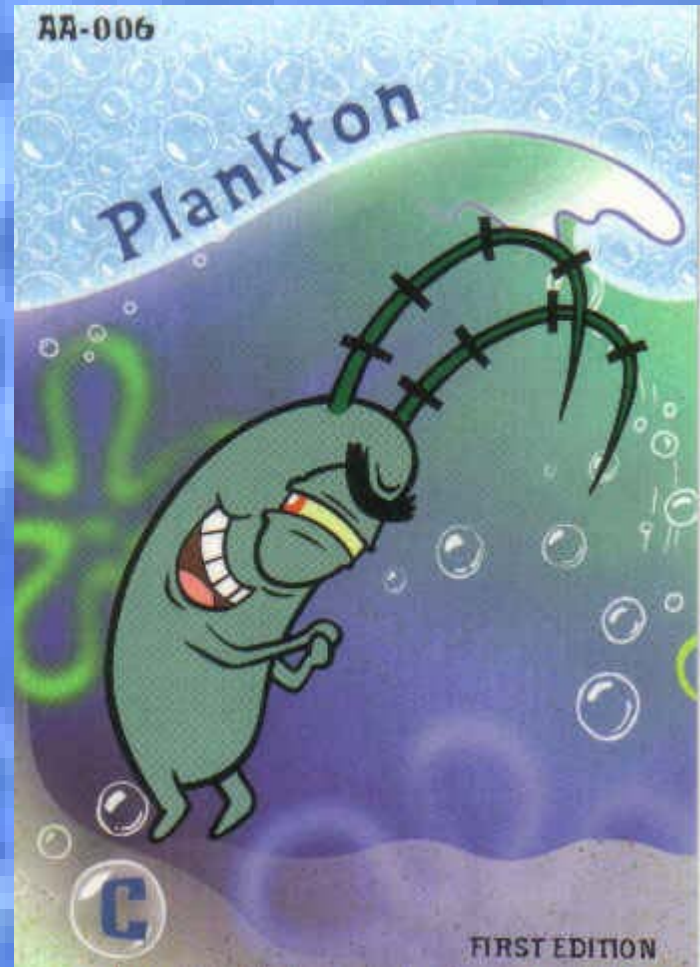
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Our Prediction

- If we collect plankton at various geographic locations
- Then we will find more plankton in shoaley shallow areas than in deep open water
- Because of upwelling.



How We Did It...



- We went to different locations to compare shallow vs. deep water with the number of plankton.
- We deployed the zoo and phytoplankton nets for 5 minutes at 5 meters.
- then we strained the plankton into a graduated cylinder so we could measure the volume of plankton at each depth.
- we also used the refractometer and the Niskin bottle to calculate the salinity and dissolved oxygen.

How We Did It... (continued)



- then we labelled our data.
- we transferred our labelled data onto the mother board. AKA we recorded our data.
- and in our last scientific location we were able to operate the Sonde, which provided us with a depth, temperature, DOC, salinity and PH.
- then we presented our findings to each other in order to create a cohesive conclusion.

Problems and Solutions

- Air bubbles in plankton nets
 - Put weights on nets
- Knot failure
 - Practice makes perfect!
- Simple human mistakes
 - Pay close attention!



Setting the sails!



- On board Carlyn we have 4 sails, Mizzen, Main, Jib and the Stay.
- essential to moving, cause it catches the wind to make us move forward. such a beautiful thing.
- (we got to 8.4 knots!)
- how we did it--pulled the lines and wrapped clockwise around the winch then tightened over the thumb and through the jaws until the sails filled correctly.

Striking the sails!

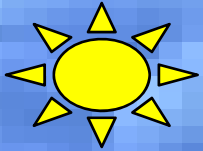


- Basically, taking the sails down in order to furl the sails.
- Slowly let the line lose (make sure your thumb isn't facing the winch.)
- At the end coil your rope and hang it up!



The Helm





What is the Helm?



- It is the latest fashion accessory!
- AKA the amazing thing that makes the difference between Titanic and Triumph
- The Helm is the device similar to a steering wheel on a car that controls the rudder.



Helm Masta Flex

By
Cody "Very Nice"
Jacobsen
Gary "Too much"
Koller
Tyler "Main" Sheets
Al "Almighty"
Medina
Joshia Jones AKA
The Bone Daddy



CRUISE TRACK



- Thursday Morning-- Shipping channels (deep area)
- Thursday Afternoon-- Restoration Point (shallow area)
- Friday Morning-- Bainbridge Reef (shallow)
- Friday Afternoon-- Open water (deep)
- Saturday Morning-- Blakely Rock (shallow)
- Saturday Afternoon-- Open water (deep)

LETS FURL THE SAILS!



- Furling- wrapping up the sails and putting them away.
- Why? so the sails don't get tangled and messed up. also so you can raise them later

Anchor Time

- This is what we did when we were not sailing or science.....ing
- Without life jackets because we are cool like that and not moving.



General Shenanigans



CAMPING



- Wind and Water watch took turns spending a night on Blake Island

WIND WATCH CAMPING



- arrived ashore
- HIKING through the forests of Blake Island (james died)
- we ate yummy pasta (made by felice, hannah and zoe)
- we played an amazing round of fantasy fun fun
- we stuffed our faces with banana boats

WATER WATCH CAMPING



- arrived ashore
- ate food
- played a round of fantasy fun fun
- killer raccoons ruin the dessert and ran off with the marshmallows
- oh yeah... skipped some rocks AH YEAH



Food



Games



Carlyn Family Fun Fun



Island Fantasy Fun Fun

Tools of the Trade

- By using a Compass, Nautical Chart, Slide Rule, and Dividers,

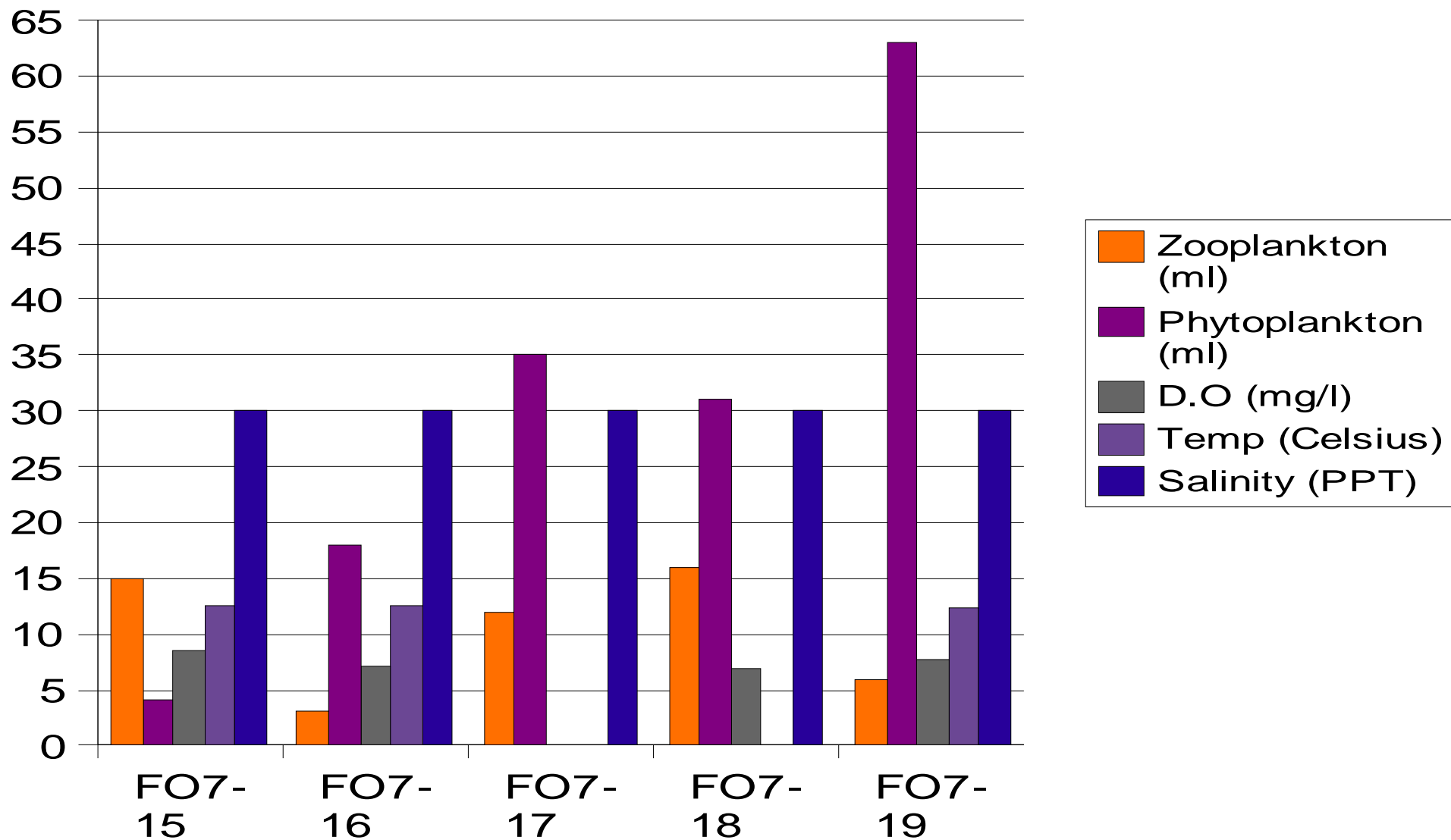


The Final Table!

DATA	Zooplankton	Phytoplankton	D.O	Temp (Celsius)	Salinity
F07-15	15	10 4 5	8.6	12.6	30
F07-16	3	1 18 2	7.02	12.6	30
F07-17		10 2	15	20	30
F07-17	12	14 35 2	N/A	N/A	30
F07-18	16	4 31 2	7.3	N/A	30
F07-19	6		7.7	12.3	30

Handwritten notes on the table:
 - "ZOO PLANKTON" written in blue above the Zooplankton column.
 - "PHYTOPLANKTON" written in blue above the Phytoplankton column.
 - "D.O" written in blue above the D.O column.
 - "Temp" written in blue above the Temp (Celsius) column.
 - "Salinity" written in blue above the Salinity column.
 - "shallow deep" written vertically in blue next to the F07-17 and F07-18 rows.
 - "shallow deep" written vertically in blue next to the F07-19 row.
 - "Plankton vs. Location" written in blue at the bottom of the table.

FALL VOYAGE DATA



Ideas for Future

- Vary depths of testing
- Plan ahead for everything.

