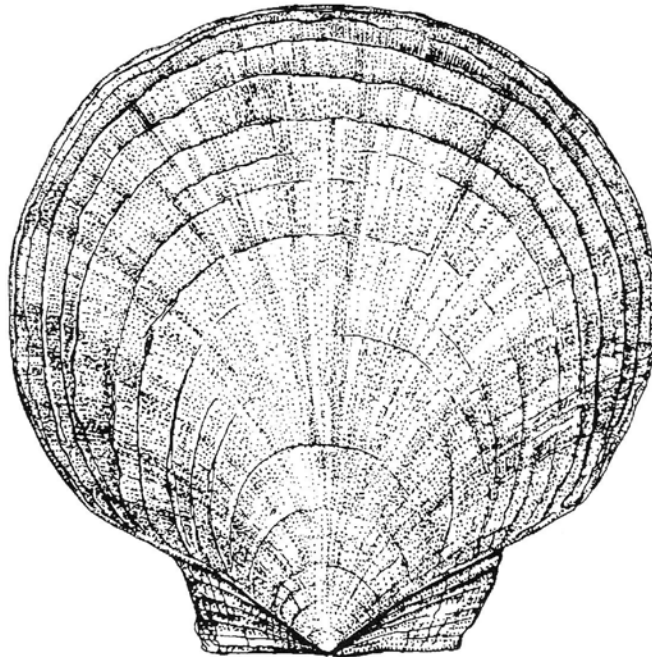


Name _____



Sea Scallop Shell Lab

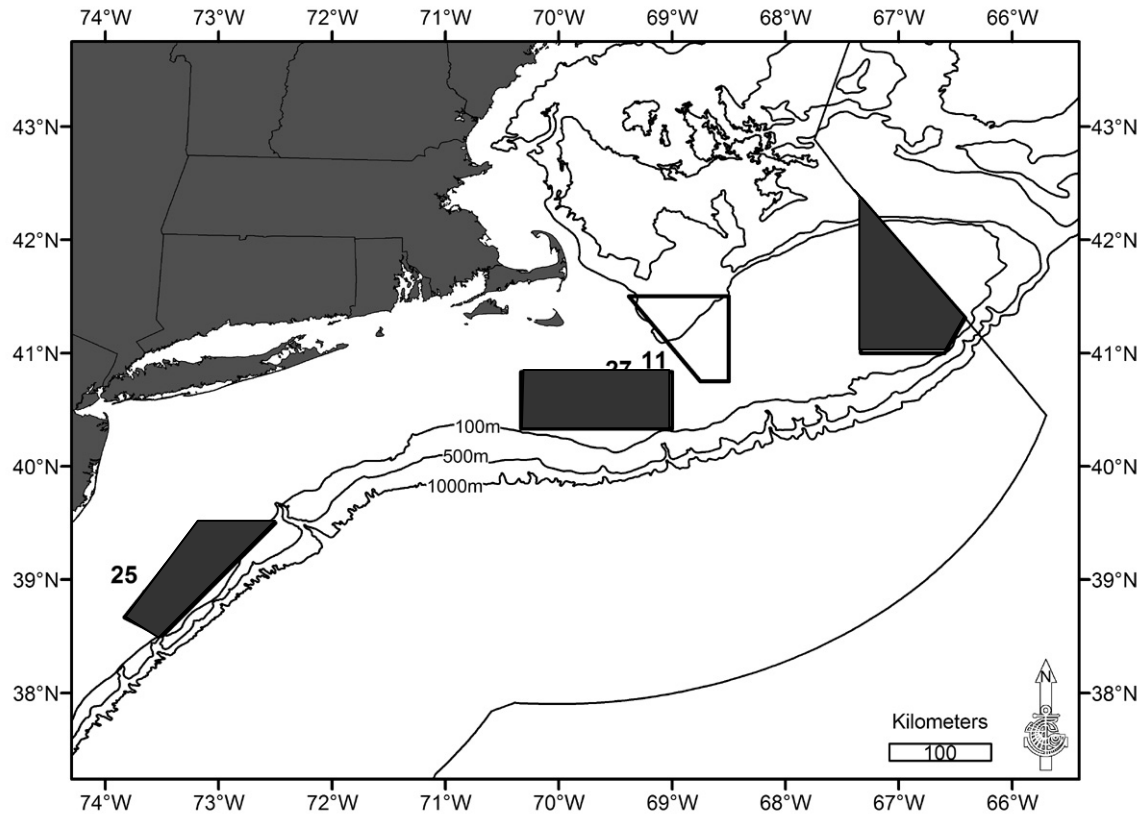
During this lab we will think about how the features of a scallop shell that are easy to measure can be used to determine things about the live scallop that are difficult to measure.



Name _____

What's the point?

You are a marine biologist, and your job is to use a scallop's shell to figure out as much as possible about the scallops living on the sea floor in one of 3 important areas (NLCA, CAII and HC are shaded).



Name _____

Step 1:

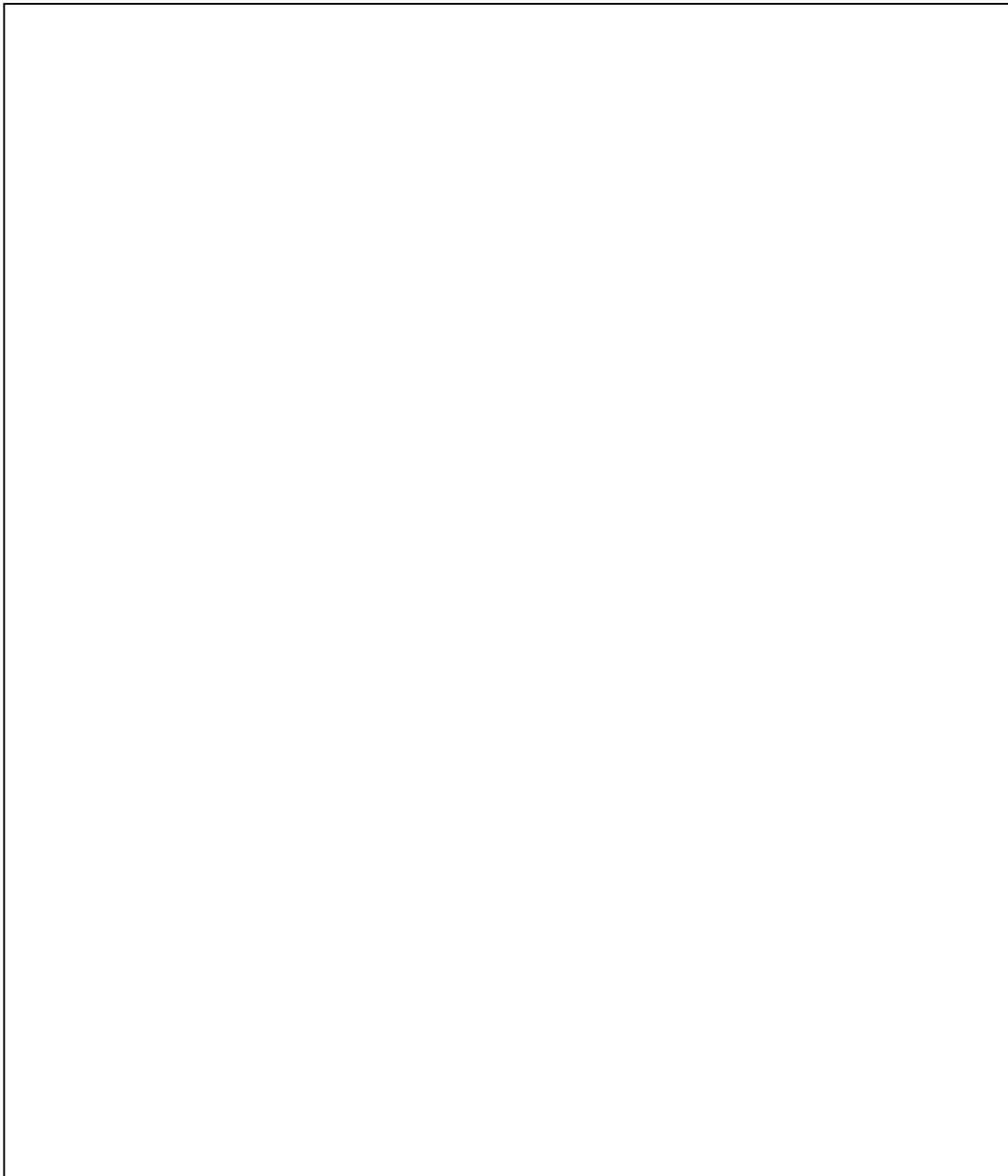
Find your shell ID number. There is a number on the inside of the shell. Write it on your data sheet in the Shell number box.

| | |
|---------------------|-----------------|
| Shell Number | Example: D21-25 |
|---------------------|-----------------|

Step 2:

Use the boxed area to sketch your shell.

Label the features you think are important.



Name _____

Step 3:

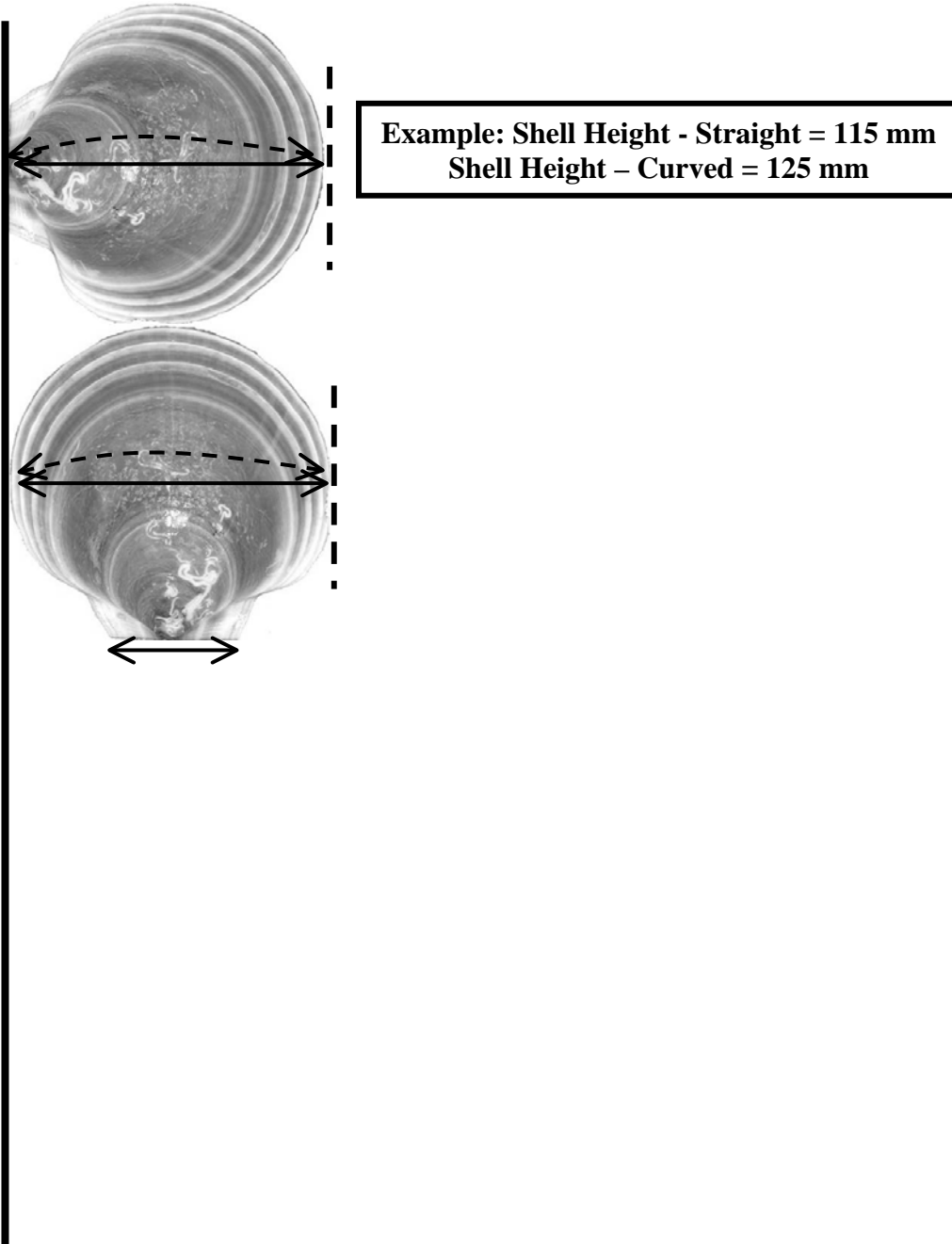
A: Determine where your scallop shell came from using the table below (put and **X** next to the information for your shell). Check the map on page 2 and find the location where your shell was captured.

| X | Dissection # | Fishing Vessel | Area | Number of scallops |
|----------|---------------------|-----------------------|-------------|---------------------------|
| | 11 | Linda | NLCA | 560,000,000 |
| | 21 | Harvester | CAII | 250,000,000 |
| | 25 | Pursuit | HC | 115,000,000 |
| | 27 | Resolute | NLCA | 560,000,000 |

Name _____

Step 4:

Measure you shell. Use the line on the left hand side of the next page to mark the shell measurements. If the shell is too large use the back of the page (make your own line to measure from).



Name _____

Make your shell measurements using the line below



Name _____

Step 5:
Record your data.

| | |
|--|--|
| Scientist Name | |
| Shell Number (for example D11-21) | |
| Shell Height - Straight | |
| Shell Height - Curve | |
| Shell Width - Straight | |
| Shell Width - Curve | |
| Shell Hinge Width | |
| Number of Rings | |
| | |
| | |
| | |
| | |
| | |

Exercises:

1) Collect the shell height data for each area and find the average.

| Dissection # | Area | Average SH | Number of scallops | Area of scallops |
|---------------------|-------------|-------------------|---------------------------|-------------------------|
| 11 | NLCA | | 560,000,000 | |
| 21 | CAII | | 250,000,000 | |
| 25 | HC | | 115,000,000 | |
| 27 | NLCA | | 560,000,000 | |

2) Assume the shell is a perfect circle and find the area using the shell height as the diameter of the circle (hint: Area = $\pi(r)^2$).

3) Use the “number of scallops” for each area from the table to calculate the total area (in square kilometers) of the sea floor covered by scallops in each study area (hint: 1 km = 1,000,000,000,000 mm)