

Scallop Cleaning, Archive, Ageing and Resilia Protocol

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Scallops brought back from Boat

1. Bags of scallops are placed in a freezer in Andrews Lab 125 until ready to clean.

Cleaning of Scallop Shells

1. Scallops are placed in large bin with water and 1 capful of bleach and left over night. The waterproof label can be placed on top of the closed bin or can be left in the solution overnight with the shells in order to keep them identified.
 - a. Each bin contains the contents of 1 bag (shells from 1 station).
2. The next day the bottom (ventral) shell portions are disposed and the top (dorsal) shell portions are cleaned.



3. Scallops are cleaned by hand with a brush (plastic bristles in order to not scratch each shell). All fouling is removed including worms, barnacles, algae, etc.
4. Scallops and their corresponding labels are placed in Nestier Trays and set to dry overnight in the lab.



5. Scallops are placed in bags with their labels and are ready to be aged or archived. Labels with tow numbers, date, etc. are also written on outside of bag for easier identification.

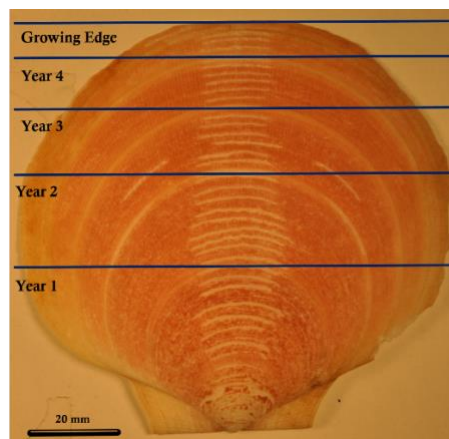
Archiving of Scallop Shells

1. Scallop bags are placed in appropriate size tubs based on their year and project.
2. Each tub is given a sequential identification number. See Molluscan Collection Manager for this number.
3. The tub (with identification number) is then placed on the “Scallop Shelves” (shelves in the middle of the room) in the Molluscan Ecology Collection Room (Andrews 116). Each position on the shelves has a letter and number to identify them. The scallop shelf positions are K1-6 (top rows), L1 -6 (2nd rows), M1 – 6 (3rd rows), N1 – 6 (4th rows), and O1 – 6 (bottom rows). These shelf letter and number combinations help determine the location of each tub in the archive.
4. When removing and returning contents from each tub, each bag/item must be noted on the “Sign in/out Form” in the “Molluscan Ecology Collection Binder” as well as a form located inside the tub within a sheet protector.
5. In order to find scallops, each bag of scallops is labeled with a tow number (ex. 201805001). This tow number can be looked up in the “Molluscan Ecology Collection Binder” that is located in the archive room. Each tub is labeled on the outside and inside with the tow numbers from the samples that are contained in that tub. Below is an example of how the binder is set up. If we are looking for Tow Number 201805001, we can find it in location L3 in the collection room. Its tub number is 145.

Tub Number	Collection Location	Shell Type	Project	Year/Date	Contents
145	L3	Placopecten magellanicus	Scallop Density Survey	2018	Tows: 201805001, 201805002, 201805003, 201805004, 201805005, 201805006, 201805007, 201805008, 201805009, 201805010, 201805011, 201805012, 201805013, 201805014, 201805015, 201805017, 201805018, 201805019, 201805020, 201805021, 201805022

Scallop Shell Aging

1. Aging is done in Andrews 316.
2. Each bag of shells is aged individually. Depending on the project, the number of shells aged from each bag can vary.
3. Roger Mann and assistant will age the scallops together. They will mark the year lines with a pencil and agree/discuss all potential age lines. Once the age of the shell is agreed on, the aged shell will be labeled with tow number and shell identification number. Once labeled, the shells from one bag are set on a tray and measured.



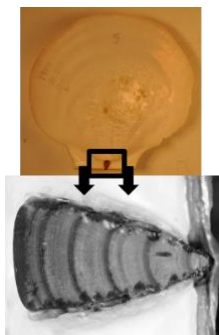
4. Measurements are performed using Microsoft Surface Pro with Digital Calipers. Each growth line increment and total height are measured for each scallop shell.
- These measurements were previously recorded in EXCEL (see below for color coded info). Please note that the **height (mm)** is the total height of the shell. Also, the **last increment number** taken of each shell is the same as the **height (mm)**. Slight discrepancies between the two are due to the precision of the calipers.

date of examination	Aug 1 2018				
investigator	TR, ST, RM				
CRUISE	201801				
YEAR	2018				
DATE					
STATION	15005				
TOW	201801038				
SAMPLE#	1	2	3	4	5
height (mm)	118.17	112.5	117.91	119.11	118.82
1	55.1	48.49	58.67	52.81	53.49
2	90.96	83.67	90.02	84.11	92.02
3	110.47	100.25	113.07	102.81	104.41
4	117.91	110.33	117.92	116.03	111.18
5		112.41		119.05	118.74

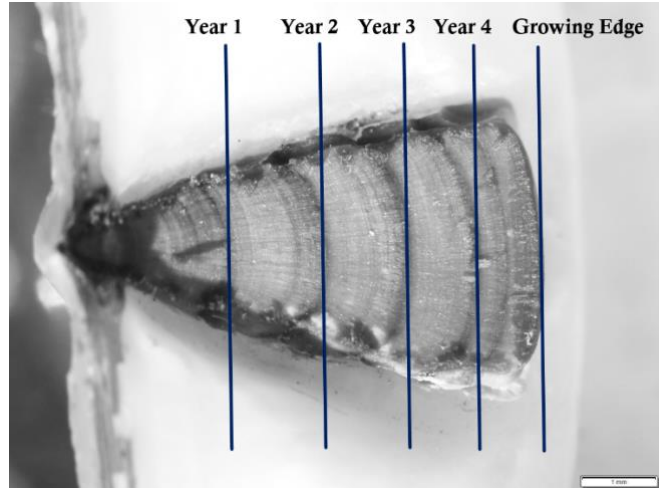
- Now, we use the FEED app for data collection. Information similar to the above example is entered into the appropriate fields. Date of examination, investigator, cruise, and station are now omitted. The tow number is entered as the station ID. The total shell height of each scallop is only measured once before measuring any increments. The data from FEED is automatically updated in a corresponding Access database. Please enter "E" when entering external lines data.
5. Once all shells are aged and measured, they are placed back in their bag and the bag is replaced into the appropriate tub in order to be placed back in the Molluscan Ecology Collection.

Scallop Resilia (internal portion of the ligament) Protocol

- Resilia Ageing is done in Andrews 316.
- Each bag of shells is resilia aged one at a time. Depending on the project, the number of shells resilia aged from each bag can vary.
- All shells are placed in water and allowed to soak overnight. The soaking of the hinge sections allows for easy removal of the ligament tissue.
- Scrub ligament using toothbrush or similar brush to remove ligament tissue from the inner surface of the resilia. Be careful not to abrade the delicate surface of the resilia beneath the ligament. Larger pieces of ligament can be removed with a fingernail to shorten the time needed to scrub the remaining ligament off of the resilia.



- Count resilia lines using a dissecting scope, hand glass, or microscope camera.



- Record resilia line count in conjunction with total shell height. Please enter "R" when entering resilia line data.
- Once all shells are aged and measured, they are placed back in their bag and in their appropriate tub in order to be placed back in the Molluscan Ecology Collection.