What's in the Clam Bag?

A guide to marine organisms found in, on, and around a clam culture bag

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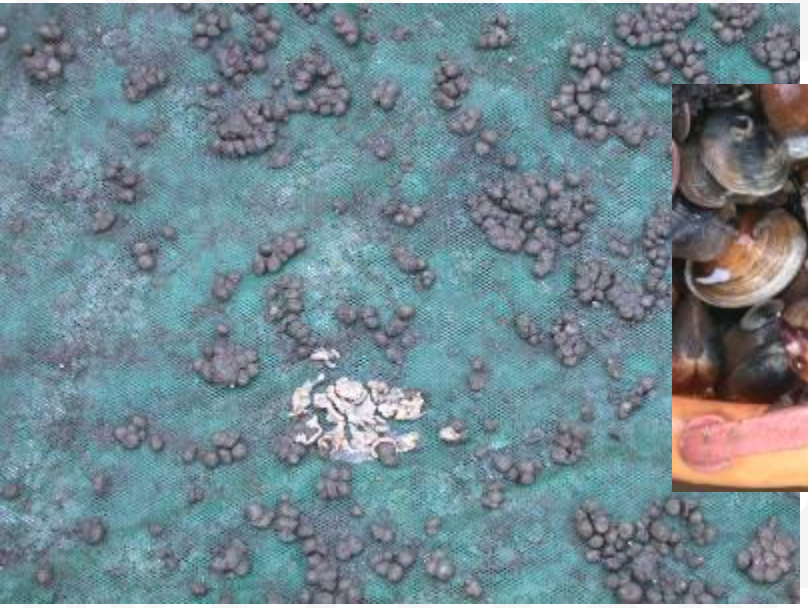
Sea Grant Florida

- Clam bag creates favorable environment, provides habitat and protection for many plants and animals
- Pictorial guide set up to assist clam farmers identify these marine organisms
- Limited to those “critters” commonly found in Suwannee Sound, leases in Levy and Dixie Counties
- Over 150 marine organisms included in guide



How do I use this pictorial guide?

- Divided into easily recognizable, but not taxonomic, categories
- Click first on identification category that most resembles organism you want to identify
- Link will take you to a category page which features several species and their pictures
- From there, you navigate to pages that provide Biological Sketch Pages that describe the organism

Biological Sketch Page?

- Provides taxonomy / Describes organism
- Defines whether it is a
  - **FRIEND**: An organisms that is friendly, or positive, to clam farming
    - Consumes predators of clams
    - Consume organisms that foul clams or bags
    - Burrow and aerate the sediment
    - Consumes clam wastes
  - **FOE:** Predator / Fouler / Competitor
  - **NEIGHBOR:** An organism that has neither positive or negative effects on clam farming
- Describes effects on clam farming
- Provides information on what a clam farmer can do

What does it look like?

- Blob or Sponge-like
- Plant-like
- Starfish-like
- Shrimp-like

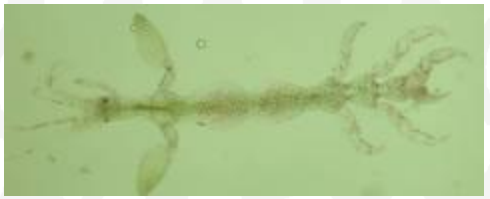




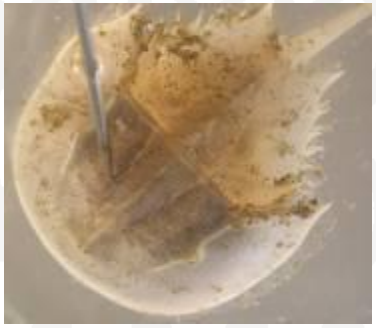







- Crab-like
- Worm-like
- **Snail-like**
- Clam-like
- Fish-like












Snail-like?

- Oyster drill

- Lace murex

- Banded tulip

- Pear whelk

Snail-like?

- Lightening whelk

- Crown conch

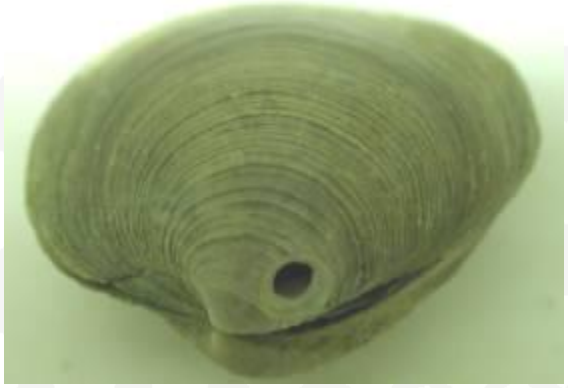
- **Moon snail**

- Channel whelk

Moon snail

- Taxonomy
  - *Neverita duplicata*
- Description
  - The moon snail is a common predatory gastropod along the Gulf of Mexico and Atlantic coasts, the shell reaching 3 inches in length. So called due to the blue at the center of the spherical shell apex, the moon snail is found along intertidal sand flats. The animal, when extended, nearly covers its glossy shell, and produces protective mucus to easily slide through the coarse, abrasive sand. They are predators of other mollusks, using their foot to dig up bivalves. Their calling card can be seen among many dead shells washed up on the beach — a perfectly round, beveled hole near the umbo (pointed portion, or “beak,” of a bivalve shell) produced by the moon snail's file-like radula to reach the soft animal inside. Another common sight around shallow sand flats is the moon snail's egg case, the sand collar, which is a 3-4 inch case that looks like a wide, inverted funnel made of sand grains

- **FOE - Predator**
- What are the effects on clams?
  - The moon snail is found frequently buried in nursery and growout bags, entering the mesh openings as small juvenile snails and growing with the clams. This snail attacks clams in the bag by holding them in place with a large muscular foot. It gains access to the clam shell by means of a flexible proboscis (snout), which extends well beyond its mouth. Attached to the proboscis is a radula, which looks like a file, and an accessory boring organ resembling a soft pad. When the pad is applied to the clam shell, secretions soften the shell to allow the radula to scrape out a hole in the shell. Once the shell is penetrated, the clam meat is consumed. A beveled hole, often found near the shell hinge, is evidence of moon snail predation.
- What can a clam farmer do?
  - Since moon snails are burrowers and typically found inside the bag, control is limited. Removal of large adults and their egg cases, which look like a sand collar, by hand or by trapping may reduce snail numbers on the lease.



Other information?

- What to watch out for?
  - Non-native species that may have negative impacts on clam culture
  - Where to report

- Where can I find more information?

COMING SOON!

Web-based linked to
http://shellfish.ifas.ufl.edu