

The special topic for the 2009 State Marine Ecology Event is:

## Florida's Marvelous Marine Arthropods

Arthropods are animals that have a segmented exoskeleton and jointed appendages. Arthropods include insects, crustaceans, arachnids, and a some other groups. Most marine arthropods are crustaceans. This group includes shrimps, crabs, and lobsters. These animals are not just cool to look at or catch but play a very important role in Florida's economy. Although the horseshoe crab is an arthropod, it is NOT a crustacean and is in a group by itself.

**This set of study questions is for Intermediate and Senior 4-H youth only.** Approximately 8-10 questions will be added to the Section 5 - Multiple Choice Test for the 2009 State Marine Ecology. Multiple choice questions will be based on the answers to the questions below. To find the answers to these questions (plus view helpful photos of these animals) - visit the Florida Fish and Wildlife website on marine arthropods at:

[http://research.myfwc.com/features/category\\_main.asp?id=1255](http://research.myfwc.com/features/category_main.asp?id=1255)

### A. Blue Crabs

1. What is the scientific name of the blue crab? What does it mean?
2. Can blue crabs swim? Why or why not?
3. How do blue crabs breathe, and how long can they stay out of water?
4. How long do blue crabs live?
5. What is the difference between soft- and hard-shelled crabs?
6. Why does a crab molt?
7. What is a zoea? What is a megalopa?
8. Where do blue crabs live?
9. When can a male blue crab mate with female blue crab?



Photo credit - S. Mills

### B. Stone Crabs

1. Can both claws of a stone crab be harvested?
2. Can a person take claws from female stone crabs?
3. Can stone crabs survive after their claws are removed?
4. How long does it take a stone crab to regenerate a claw?



Photo credit - K. Blyler

### C. Spiny Lobsters



Photo credit - C. Simoniello

1. Where do spiny lobsters live?
2. What are their long antennae used for? What are their smaller antennae used for?
3. When are spiny lobsters more likely to feed (day or night)? What do they eat?
4. How long does it take for a lobster to grow to legal harvesting size? What is this size?
5. Which part of a lobster do people eat?

## D. Shrimp



*Photo credit - M. McGuire*

1. Give the common names of the 3 types of shrimp harvested for food in Florida.
2. Are the shrimp we use for bait the same as the shrimp we buy to eat?
3. Why do people go out at night to catch shrimp (and not the day)?
4. What is “by-catch” and how is it related to a BRD?
5. How do shrimp swim? Do they go forward or backward?

## E. Horseshoe Crab

1. Are horseshoe crabs really crabs? What are they more related to?
2. Why are they called “living fossils”?
3. Horseshoe crabs have a sharp spike-like tail. What is it used for?
4. Where and when do horseshoe crabs “nest”? (Give location, season, tide, and moon).
5. Why are horseshoe crabs important to shorebirds?
6. Why are they important to medicine?
7. Horseshoe crab numbers are declining. Do scientists know why? (If so, why?)



*Photo credit - K. Blyler*

### **Suggestions for field experiences/projects to help you learn this material.**

1. Visit a salt marsh or beach area. Look for blue crabs or horseshoe crabs along the shoreline. See if you can catch one and observe it in a tub or bucket for awhile, then release it! Share with others what you saw.
2. Visit a seafood market and see what marine crustaceans they are selling. Can they help you answer any of these questions? Careful though, they may not have all the right answers. Perhaps, you could test them!
3. As a club, visit a marine lab or aquarium. Contact their marine education person and ask for assistance in learning about these animals (and others on the MEE list).
4. Develop a short presentation or illustrated talk on the importance of one of these marine animals. For example – Develop a talk about the blue crab and demonstrate to others why it is an important fishery in Florida, where it lives, how to catch it, hold it properly (without getting pinched!), determine its sex, cook it, clean it, and eat it!
5. Conduct additional research on one of the animals above and share what you discovered. Example: Develop a display showing the life cycle of the horseshoe crab or lobster and present this to others at an event. (Even at the 2009 MEE!)