

## Background

The blue crab's Latin name, *Callinectes sapidus*, means "beautiful savory swimmer". Along the Hudson River Estuary, where it can be found from Troy to New York Harbor, it is often called blue-claw crab.

The blue crab is one of the largest crustaceans. It has five pairs of legs. The first pair are claws modified for eating and defense and the last pair are modified for use as swimming paddles.

Adults will eat mollusks and bivalves, using their claws to manipulate them. Other food items include dead fish or living fish that come close enough to be captured. Blue crabs can be herbivorous as well, feeding on aquatic plants. Cannibalism also occurs amongst crabs. Crabs can become food themselves for striped bass, black bass, blue fish, and a whole host of other predators. To avoid predation, blue crabs will seek cover in aquatic plants and other bottom structure.

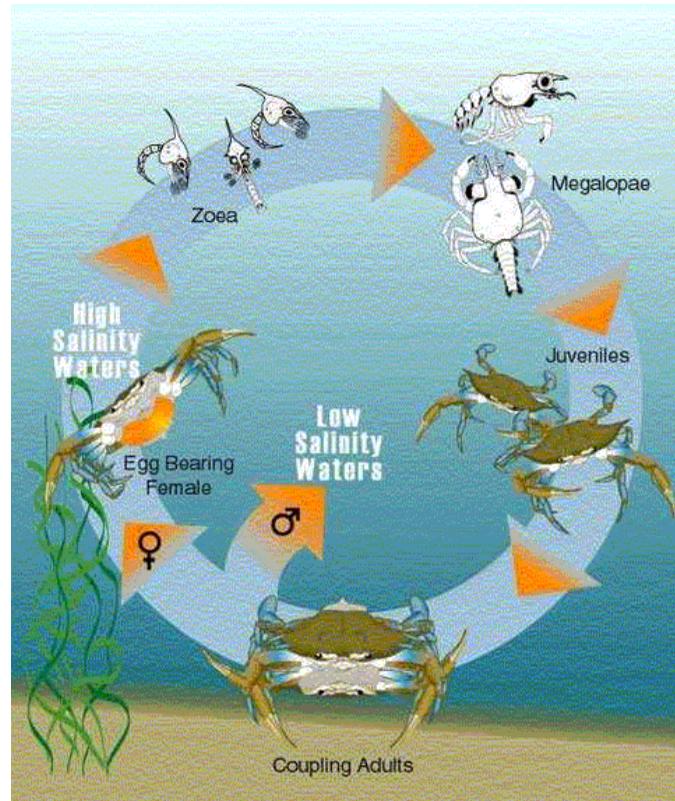
## Growth

Blue crabs have an exoskeleton, a hard outer covering which they must shed in order to grow. When ready to shed or molt, the crabs find a place to hide, such as shallows or a submerged aquatic vegetation (SAV) bed. The old shell splits along the back and the crab begins the task of backing out of its shell. Once free, the crab expands its new soft shell by inflating it with water. As the creature grows, it expels the water to make room for itself. The new shell hardens in 2-3 days. Soft shell crabs are rare crabs with a fresh new shell on their bodies that has not yet hardened, not another species of crab.

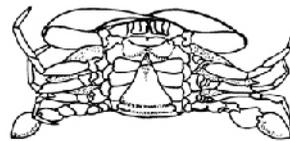


Female crab that just molted. The old shell is on the right. The crab increases its size by 1/3 each time it molts.

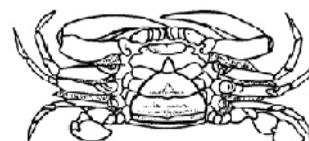
## Life Cycle



Immature female (She-crab or sally)



Mature female (Sook)

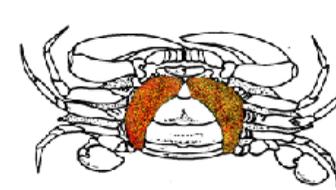


Coupling adults ready to mate.

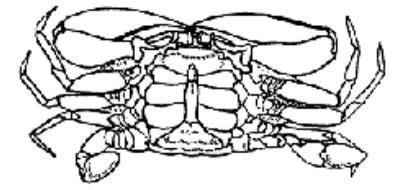
The blue crab begins life in the near shore ocean. A female may release up to 2 million eggs in the very salty water at the mouth of a river. The newly hatched crabs are called zoeae and they grow by molting. The next stage is the megalopae, which resembles a small lobster. They begin to make their way back into the river and molt again into a juvenile crab or "first crab". The whole process from egg to juvenile takes about 2 months.

## Reproduction

The blue crab reached sexual maturity after 18-20 post-larval molts. The male crab, or jimmy, continues to grow larger because he molts continuously throughout his life. Females cease to molt once she reaches sexual maturity.



Egg-bearing female ("Sponge" crab)



Male blue crab (Jimmy)

Just before the immature female (she-crab or sally) makes her final or terminal molt, she sends out an attractant chemical to entice any nearby males. The successful suitor cradles the female as seen to the left. This act is called coupling and is designed to protect the female while she is in her final molt. He stays with her until her shell hardens completely.

During the terminal molt, the bottom of the female's carapace changes from an upside down V to an upside down U shape. (See pictures to the left) The new shape aids in carrying eggs. After this molt the female is now mature. "Pregnant" female blue crabs carry fertilized eggs under their abdomen and from a distance these eggs resemble a sponge, hence the name "sponge" crab. New eggs are bright yellow, and then they darken as they ripen over a period of about 2 weeks. After she releases her eggs into the water to hatch, the female migrates to other areas to feed. She mates only once in her life, but can have 2 or more hatches of eggs using her stores of sperm from her one suitor.

Any questions about blue crabs please contact: Jessica Best, Hudson River Fisheries Unit 845-256-3171 or [r3hrf@gw.dec.state.ny.us](mailto:r3hrf@gw.dec.state.ny.us)

## Fishing Gears

Commercial fishers commonly use crab pots to catch crabs. It is a box with two sections, an upper section and a lower section, with a bait container in the center. It uses the crab's instincts against them. Crabs, when frightened or nervous tend to swim toward the surface. Crabs enter a trap through one of the four holes in the bottom.

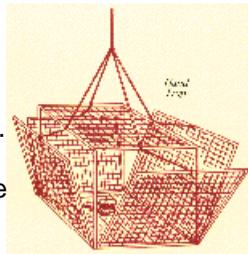
Eventually the crabs feel trapped or uncomfortable and swim toward the surface, entering the upper portion of the trap. This upper section is easy to enter but very difficult to exit. The pots are checked every couple of days, the captured crabs are removed, and the bait is replaced. Fresh fish is the bait of choice, but chicken parts are also used.



Blue crabs are also sought by recreational fishers. You can use fishing line with a piece of bait tied to it. Bring the line to the surface gently and slowly. The crab, eating the bait, is unaware of the movement and can be scooped up with a net as it nears the surface. Fresh fish and chicken parts make good bait.

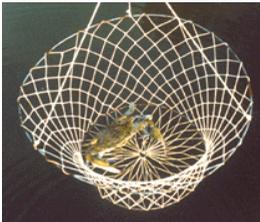


Crab traps work well also. When the trap is resting on the bottom and the line is slack, all four sides are open. Fasten the bait securely to the trap floor. When the line is pulled, the sides should close. Check the trap periodically.



The ring net that is shown below uses the same principle. It is lowered to the bottom and with slack in the line, the net lays flat.

When the line is pulled the net elongates and surrounds the crab. Secure bait in the net and check it periodically.



You are permitted to catch up to 50 crabs a day for your own use. There is a size limit from point to point across the back:

4.5 inches for hard crabs, 3.5 inches for soft crabs, and 3 inches for peeler crabs (a crab that is undergoing a molt). Possession of females with eggs is not permitted. If you take more than 50 crabs or sell them, you are considered a commercial fisher and you'll need a permit.

## Cooking and Eating

### **Nutrition Facts**

Serving Size 3oz picked meat (85g - about one large blue crab)

Amount Per Serving

Calories 87 Calories from Fat 14

% Daily Value\*

Total Fat 1.5g 2%

Saturated Fat 0.2g 1%

Polysaturated Fat 0.6g 3%

Monounsaturated Fat 0.2g 1%

Cholesterol 85mg 28%

Sodium 237mg 10%

Potassium 275mg 8%

Total Carbohydrate 0g 0%

Dietary Fiber 0g 0%

Sugars 0g 0%

Protein 17g 34%

Vitamin A 0% • Vitamin C 5%

Calcium 9% • Iron 4%

Magnesium 7% • Phosphorus 18%

Zinc 24% • Copper 27%

Thiamin 6% • Riboflavin 3%

Niacin 14% • Pantothenic Acid 4%

Vitamin B-6 8% • Vitamin B-12 103%

Vitamin E 9%

Not a significant source of saturated fat, dietary fiber, sugars, or vitamin A.

\*Percent Daily Values are based on a 2,000 calorie diet.

Crab meat is an excellent source of protein, vitamins, and minerals and is very low in fat, especially saturated fat. The most common way people prepare crabs is to steam them. Only live crabs should be used. Use a seafood steamer or a pot with a colander inside. Put a couple of inches of water in the bottom of the pot and bring the water to a boil. Layer the crabs, sprinkling each layer with seafood seasoning such as Old Bay seasoning. Cover the pot and allow to steam for 10 minutes.

There are many techniques for picking crab meat and getting the most for your labor. To begin, cover the table with newspaper to make cleanup easy.



First remove all the legs and claws. Using your finger or a knife, peel back the apron (see right). Break it off and discard. Remove the top shell and discard. Next, with your fingers or a knife, scrape off and discard the gills and the yellowish-green viscera (New York State Department of Health recommends that it not be eaten). Rinse the crab off after cleaning it out. Break the body in half to expose the lump meat. To eat the claws, you need a knife and mallet. Place the claw on the table with the inside of the pincers facing up. Place the knife just behind where the pincers meet and hold it steady. Tap the edge of the knife with the mallet, just enough to score the shell. Break apart the shell and the meat should come out whole. The NYS Department of Health recommends that women of child bearing age and children eat no crabs and that others eat no more than 6 crabs per week.



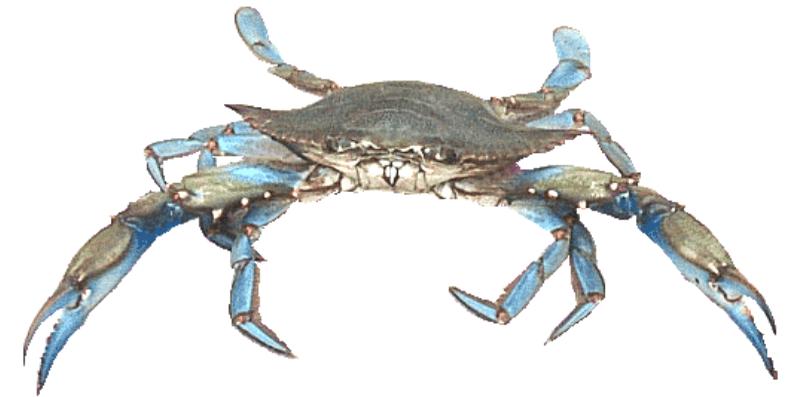
### **Crab Cakes**

1 pound crabmeat  
 ½ cup cracker or bread crumbs  
 2 eggs  
 ¼ cup mayonnaise  
 2 teaspoons Worcestershire sauce  
 1 teaspoon seafood seasoning  
 ¼ teaspoon white pepper (or hot sauce)  
 1 teaspoon dry mustard



Carefully remove all the cartilage from the crabmeat. In a bowl, mix together eggs, mayonnaise, seafood seasoning, white pepper, Worcestershire sauce and dry mustard. Add crabmeat; mix evenly and gently. Add cracker/bread crumbs evenly. Shape into 6 cakes. Deep fry in oil for 2-3 minutes until golden brown or sauté in frying pan with a little oil for 5 minutes on each side. ENJOY!!

# Blue Crabs in the Hudson River

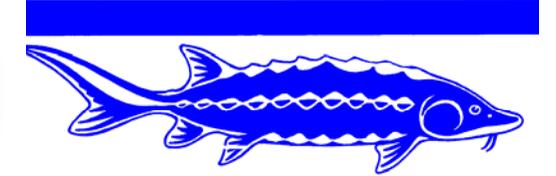


## -Life History

## -Biology

## -Fishing Gears

## -Cooking Methods



Hudson River Estuary