Shrimping in Louisiana

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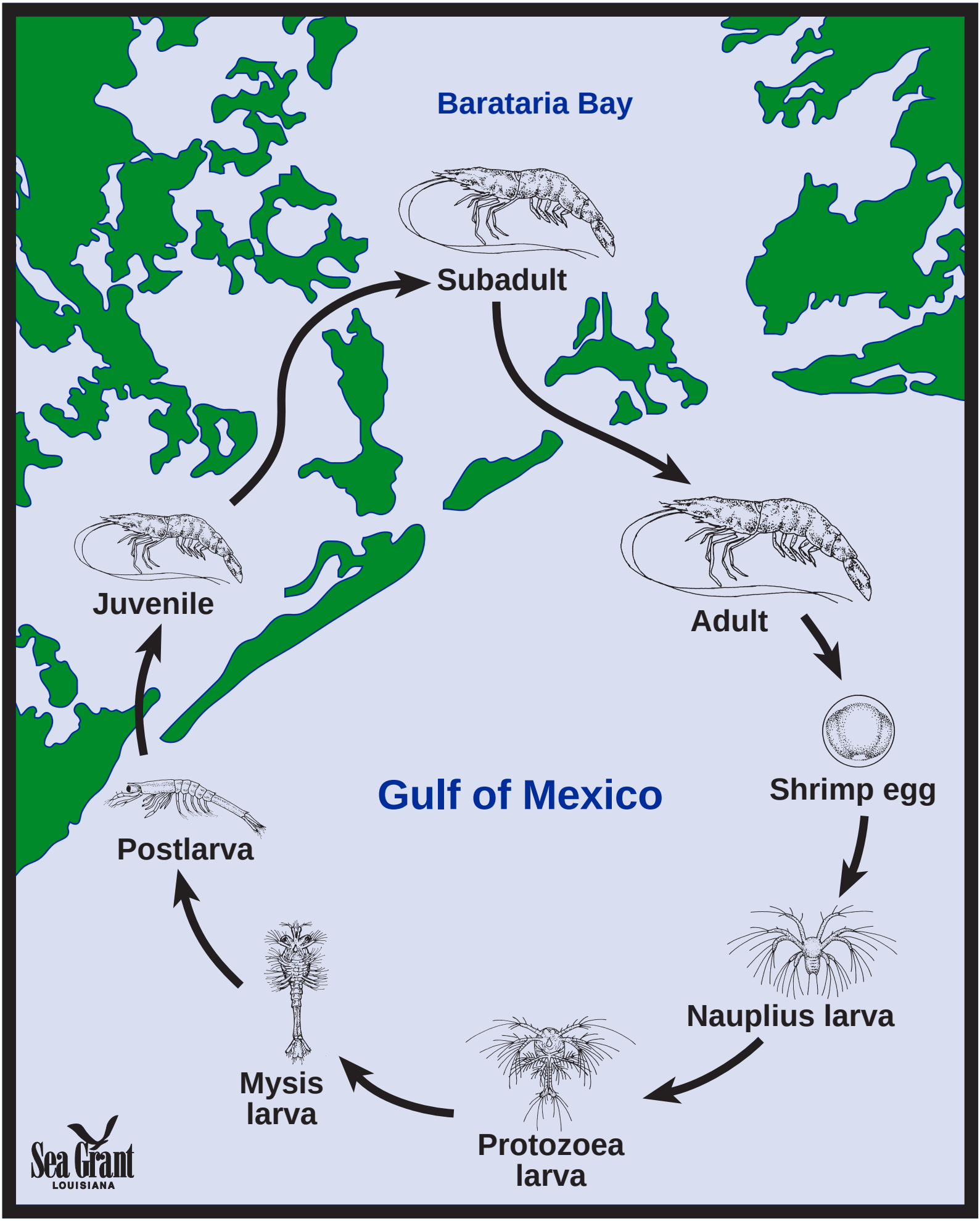

THE LIFE CYCLE OF A SHRIMP

SHRIMPING IN LOUISIANA

The shrimp is one of the world's most popular shellfish and is a part of almost every ethnic cuisine. Because its coastal marshes, estuaries, and shallow bays provide such nurturing habitat for shrimp, Louisiana has the nation's most productive commercial shrimp fishery, landing about 100 million pounds a year at a dockside value of $150 million. In many communities shrimping is the major industry, and coastal waterways are usually crowded with shrimp boats of all sizes, jostling for space at the docks or surging gulfward during shrimping season.

What Kinds of Shrimp Are Caught in Louisiana?

Two saltwater species, white shrimp (formerly *Penaeus setiferus,* now *Litopenaeus setiferus*) and brown shrimp (formerly *Penaeus aztecus,* now *Farfante penaeus aztecus*), comprise most of the shrimp harvested in Louisiana waters. Pink shrimp (*Farfante duorarum*) and seabobs (*Xiphopeneus kroyeri)* are also caught and sold but in much smaller quantities. Though they are similar in taste and texture when cooked, the brown and white shrimp differ in appearance and are plentiful at different times of the year. Abundant in spring and early summer, brown shrimp are brownish, with medium-length antennae and grooves down both sides of the spine on head and tail. White shrimp, predominant from summer to late December, are white to gray, with long black antennae. They have no grooves on head or tail. Because Louisiana shrimpers normally harvest brown shrimp at a smaller size than white shrimp, brown shrimp average 70 to 80 whole shrimp per pound, whereas white shrimp average 30 to 40 per pound.

Pink shrimp are brownish-red, have grooves on the head but not the tail, and have a dark spot on either side of the tail. Their antennae are short. They appear in late winter and early spring.

Seabobs are small brownish shrimp with many antennae and a long curved head spine. They are found primarily in the waters off Louisiana's southwestern coast during the fall and winter. Seabobs burrow in the mud and are so small that a pound contains over 100 whole shrimp.

How Are Shrimp Harvested?

Shrimp are harvested with various kinds of nets. A *trawl* is usually funnel-shaped and is pulled by a boat through the water or along the bottom. The trawl's mouth is held open by "doors," so that it can capture shrimp while it moves through the water. Laws regulate how many trawls may be pulled by one boat, how big they can be, and even how long they may be pulled at one time. Other kinds of nets are butterfly nets, skimmer nets, and cast nets. Butterfly and skimmer nets are mounted on frames, suspended from the sides of a boat, and used near the surface of the water. Cast nets, popular with recreational shrimpers, are thrown on the water and then slowly drawn up, trapping the catch as they close.

A commercial shrimper must have a valid commercial license and may sell shrimp at Louisiana docks only to Louisiana-licensed buyers. In addition, a commercial shrimper using certain kinds of nets larger than 8 feet 6 inches must have a commercial gear license for each type of net in use or possession. The boat must also be licensed if the shrimper is engaged in shrimping or possessing shrimp for sale and this license must be kept on board at all times. To save endangered sea turtles that might become entrapped in the nets, shrimpers are required to equip their trawls with turtle excluder devices, which allow entangled turtles to escape. They must also use bycatch reduction devices, which prevent unwanted fish from being hauled in with the shrimp.

Many people enjoy recreational shrimp trawling, but even though they consume rather than sell their catches, they must also be licensed. Besides a basic fishing license, they must have a saltwater fishing license and a recreational gear license. They aren't allowed to pull a trawl larger than 16 feet and they may not take more than 100 pounds of shrimp per day, per boat no matter how many people are aboard.

Shrimpers are subject to rules governing the size of the white shrimp in their catches. The general

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size rule is called a "count restriction," and it means that the white shrimp in a catch may not average more than 100 whole shrimp per pound. This restriction applies when the shrimp are onboard the vessel, unless the shrimper can prove that the catch was imported from another state. Brown shrimp, seabobs, and other species are not subject to the count restriction and white shrimp catches are exempt from mid-October through December.

When Can Louisiana Shrimp Be Caught?

To ensure that sufficient mature shrimp survive to reproduce and sustain the fishery, shrimpers may not fish at just any time of the year. The Louisiana Wildlife and Fisheries Commission (LWFC) determines the periods of time, or seasons, when shrimp may be caught, choosing the dates according to the annual life cycles and growth rates of the two primary species, brown and white. Brown shrimp are mainly harvested in the spring, usually from May to July, and white shrimp mainly in the fall, from late August into December. Seabobs are caught from October through December.

Shrimping areas in Louisiana are divided into *inside* waters, or those within bays and estuaries, and *outside* waters, which in most areas extend three miles from the shoreline into the Gulf of Mexico and are referred to as Louisiana's "territorial sea." The boundary between the state's inside and outside waters is called the "shrimp line." Louisiana claims ownership of all shrimp in outside as well as inside waters, and the LWFC regulates shrimping. Beyond the state's territorial sea, extending for 200 miles, is the Exclusive Economic Zone, sometimes called "federal outside waters," where the U.S. government has jurisdiction over shrimping.

Brown shrimp feed and grow in the estuaries and shallow bays from late winter until early summer, when they migrate back to the Gulf of Mexico to *spawn*, or shed their eggs. When 50 percent of the brown shrimp in inshore waters are 100 count—that is, big enough so that a pound contains no more than 100 whole shrimp—the LWFC opens the spring shrimping season in inside waters.

White shrimp feed and grow in the estuaries and bays from July to December. Once the shrimp have reached a marketable size, inside waters are opened for the white shrimp fishing season. Outside waters usually remain open for shrimping year-round.

The Life of a Shrimp

Whether brown or white, shrimp reproduce in the offshore waters of the Gulf of Mexico. After fertilized shrimp eggs hatch, the resulting *nauplius* larvae are released into the water. There they grow into the second major stage, the *protozoea* larvae, and begin to develop more shrimp-like features. The third larval stage is the *mysis* and by now the recognizable tiny shrimp are being carried shoreward by wind-driven currents. As *postlarvae*, the shrimp reach nearshore waters and are pushed farther inland. There they settle into the marsh-fringed shallow bays and estuaries to feed and grow toward adulthood. The inland coastal wetlands form a critically important nursery for juvenile shrimp, offering abundant food and some protection from predators. Marine shrimp are omnivorous scavengers, their diet including such items as polychaetes, nematodes, fish tissue, algae, and vegetable matter.

Young brown shrimp move into the estuaries during the late winter and spend several months feeding and growing before beginning their return journey to the gulf to spawn. They normally reach harvestable size and congregate in the open bays during May. White shrimp behave similarly but the postlarvae don't reach inshore waters until early summer, when brown shrimp are moving out. White shrimp feed and grow inshore until they are large enough to move offshore or until fall, when cooling water temperatures trigger their return migration to the gulf.

A GLOSSARY OF TERMS

Bycatch The harvest of fish or shellfish other than the species for which the fishing gear was used. Examples are blue crabs caught in shrimp trawls or sharks caught on a tuna line. Bycatch is also often called incidental catch. Some bycatch is kept for sale.

Catch The total number or poundage of fish captured from an area over some period of time. This includes fish that are caught but released or discarded instead of being landed. The catch may take place in an area different from where the fish are landed.

Commercial Fishery A term referring to the whole process of catching and selling fish and shellfish.

Crustacean A group of freshwater and saltwater animals having no backbone, with jointed legs and a hard shell made of chitin. Includes shrimp, crabs, lobsters, and crawfish.

Fishery All the activities involved in catching a species of fish or shellfish.

Growth Usually an individual fish or shellfish's increase in length or weight with time. May also refer to the increase in number of fish in a population with time.

Harvest The total number or poundage of fish caught and kept from an area over a period of time.

Juvenile A young fish or shellfish that has not reached sexual maturity.

Landings The number or poundage of fish unloaded at a dock by commercial fishermen or brought to shore by recreational fishermen for personal use. Landings are reported at the points at which fish are brought to shore.

Larva The newly hatched, earliest stage of growth, which is markedly different in size and form from the adult stage.

Nursery The part of a fish's or animal's habitat where the young grow up.

Possession Limit The number and size of a species that a commercial or recreational fisherman can legally have at any one time.

Predator A species that feeds on other species.

Recreational Harvesting Harvesting fish for personal use, fun, and challenge. Recreational fishing does not include sale of catch.

Species A group of similar fish or shellfish that can freely interbreed.

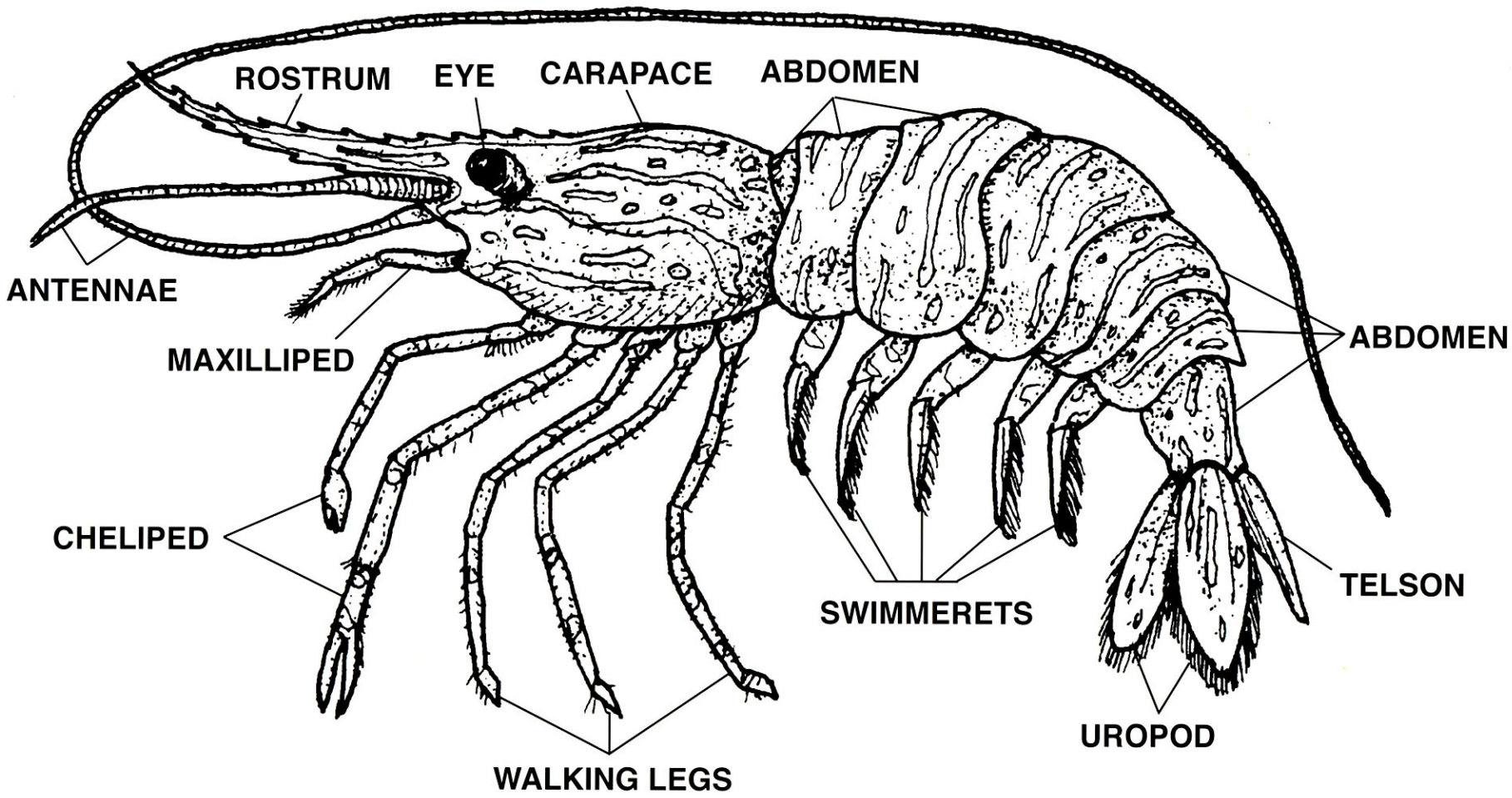
From Defining Fisheries: A User's Glossary,
K.J. Roberts et al., Louisiana Sea Grant College Program.

THINK ABOUT THIS.....

QUESTIONS FOR DISCUSSION

- Why is it important for commercial shrimpers to be licensed by the state? Why do you think a shrimper must have a license for each kind of net used?
- Why must recreational fishers obtain licenses to trawl for shrimp?
- What do you think would happen if people could catch shrimp at any time of the year they wanted to?
- Why do you think postlarval shrimp migrate inshore from the Gulf of Mexico?
- What is a nursery habitat and why is it important for young shrimp?
- What would happen to shrimp if Louisiana's coastal marshes were replaced by open water?

ANATOMY OF A SHRIMP



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