

THE AMERICAN LOBSTER



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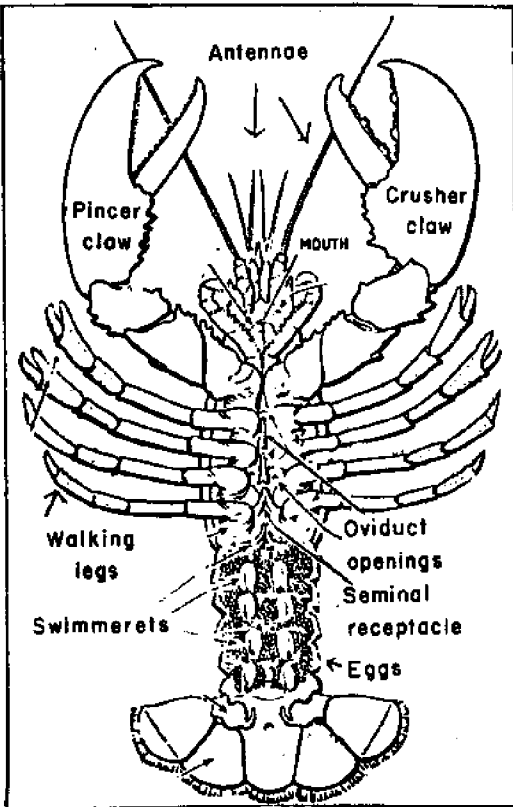
Homarus americanus

MAINE SEA GRANT

The American Lobster is known as the "King of Seafood". It can be found along the Atlantic Coast from Cape Hatteras to the shores of Labrador; however, the largest numbers of inshore lobsters are caught along the coast of Maine, southwestern Nova Scotia and along the southern Gulf of the St. Lawrence. Offshore lobsters are found in abundance in the southern region of the Georges Bank.

The lobster is usually found on rocky, hard bottom. It avoids direct light, lives in a burrow and is sensitive to temperature, becoming sluggish in very cold water. It's feeding habits are primarily nocturnal and omnivorous. Remains of mussels, brine shrimp, crabs, clams, other lobsters, sea worms, fish, eel grass and sea urchins have been found in its stomach. During the soft-shelled stage, the lobsters eat a lot of mussel shells and crab cuticle, probably using the calcium to grow new shells.

Generally, lobsters are dark greenish-blue, but infrequently the color can vary to bright blue, sea green, red and yellow due to genetic differences. The only way you can tell the difference between a female and male lobster is to turn them on their backs. The first pair of swimmerets on the male are hard and bony while on the female they are soft and feathery.



Tagging experiments have shown that lobsters generally do not migrate great distances, moving mostly from two to ten miles, from deep to shallow water and back again depending on water temperature. An occasional tagged lobster has been found to travel a considerable distance, from 50 to 150 miles, but there seems to be no pattern.

What is molting? As the lobster grows, it occasionally must shed its hard shell for a new and larger one so that its growth may continue. An entire new shell--carapace, claws, antennae, mouth parts, gills, stomach and eye casing--grows under the old one. As soon as this shell is completely formed, nutrients are cut off to the outer shell, and it becomes brittle and cracks under the pressure of additional growth. While lying on its side in a "V" position, the lobster pulls itself out of the old shell as splitting occurs between the carapace and tail and at the top of the carapace. The size of the claws must be reduced by one-fourth in order for the lobster to pull them through the joints. After molting the lobster absorbs water and bloats itself to normal size; consequently, its meat is watery for at least two weeks or more. Growth varies, but it's estimated lobsters grow about 14% in carapace length and 50% in weight after each molt.

The lobster is very vulnerable during and immediately following molting; it moves very little and hides under rocks or in its burrow. As a result, the lobsterman's catch is small during a period of peak molting which usually occurs during July through September in Maine waters. Mature male lobsters usually molt once a year, unless they are very old and slow growing. Mature females carrying eggs do not molt, skipping a year, since the shedding would discard the eggs. A SHEDDER or SOFT SHELL is a recently molted lobster while a HARD SHELL has not molted recently.

Life History: Lobsters mate shortly after the female lobster has molted; the male is hard-shelled. The female holds the sperm in the seminal receptacle in her body until spawning--

from three to eleven months later. As the eggs are laid, they pass over the seminal receptacle where they are fertilized. The eggs are covered with an adhesive material causing them to stick together and to the swimmerets where they remain until they hatch the following spring or early summer. Almost two years can pass between mating and hatching. Depending on her size, the female will lay between 9,000 and 50,000 eggs.

At first the larval lobster does not resemble the adult. It swims near the surface of the water and is prey to many birds and fish. The mortality of this free-swimming state is estimated to be 99.9%. The first molt occurs on the second day of the lobster's life; two more molts take place while it lives near the surface over a period of 15 to 30 days. Then, about 6 mm to 14 mm long and resembling a lobster, it sinks to the bottom and adopts an adult existence. It takes about six to seven years for a lobster to grow to legal size.

The legal catch size of a lobster in Maine is 81 mm (3 3/16") when measuring from eye socket to the end of the carapace. The lobsterman carries a gauge with him, and he measures each lobster as he takes it from his trap. All undersized lobsters are thrown back. It is also illegal to take lobsters measuring 127 mm (5") or more, egg-bearing females and V-notched females. The lobsterman usually notches the tail of a berried female so that other lobstermen know immediately that she is a producer.

All female lobsters are potential egg producers; however, most females do not become sexually mature until they are at least 90 mm in carapace length. Since about 80% of the lobsters caught are between 81 mm (3 3/16") and 90 mm (3 9/16"), most females do not have a chance to reproduce.

A CULL is a lobster that has lost one or both claws. Usually the claw will be completely regrown after three molts. It takes about one molt for the lobster to replace a broken antenna. A CHICKEN lobster is the smallest of the legal lobsters, weighing about one pound at 81 mm; a JUMBO lobster weighs over three pounds while a SELECT weighs under three pounds. A SHORT is a lobster which is under the legal size limit. Claws are PLUGGED by the lobsterman to prevent the lobsters from injuring each other.

Traveling Instructions for Lobsters: If you plan to take live lobsters on a one-day car trip, pack the lobsters in cold seaweed in an insulated iced container. Canned refrigerants are easiest, but if you use ice, remember to keep the ice in a separate container so that the melting ice does not get on the lobsters. Fresh water kills lobsters. If your trip will last longer than a day, boil the lobsters for 10 to 12 minutes, then cool them quickly in cold water. Carry them in an iced container. Before eating, place them in a pot of boiling water; when it boils again, boil for five minutes. Do not overcook as it makes the meat tough.

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