

DIET

The striped hermit is an opportunistic feeder and uses its claws to capture and break open small bivalve molluscs. Striped hermits are also scavengers and will feed on dead plants and animals.

REPRODUCTION

Striped hermits reproduce during the warmer months. Their northward distribution appears to be limited on the Atlantic coast by the cooler waters north of Virginia. The species requires temperatures of 77 F (25 C) for the two-month period of larval development.

MIGRATION

Striped hermits leave the shore and move to deeper waters during the colder months. They come together and remain offshore through the winter. In the spring they return to the shallows where they mate.

~By Harriet Perry

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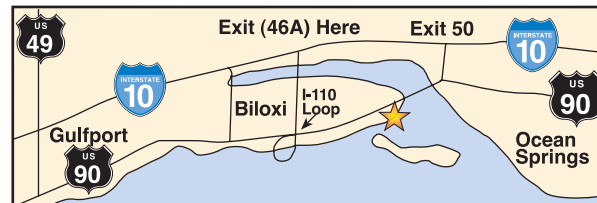
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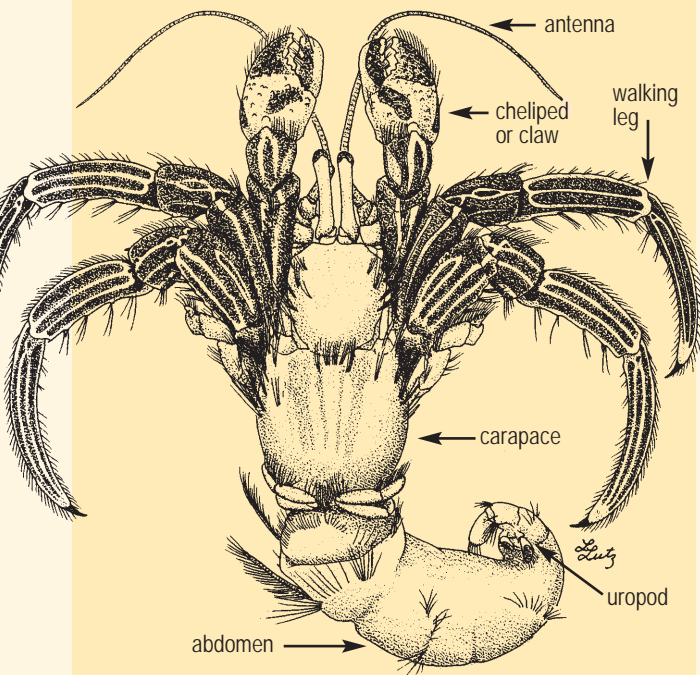
The Striped Hermit Crab



THE STRIPED HERMIT CRAB (*Clibanarius vittatus*)

DISTRIBUTION

The striped hermit crab, *Clibanarius vittatus*, is one of the most conspicuous summer inhabitants of shallow, saline waters in northern Gulf of Mexico estuaries. These crabs occur widely along the Atlantic and Gulf coasts of North America and are found in Central and South America as far south as Brazil.



Clibanarius vittatus
removed from a snail shell

CLASSIFICATION

Like shrimp and lobsters, hermit crabs are decapod crustaceans: They have 10 legs. The first legs are modified into claws or chelipeds. In hermit crabs, the second and third pair of legs extend outside of their shell home and are used for walking. *Clibanarius* gets its common name from the light-colored stripes that run along the walking legs. The fourth and fifth legs are much smaller and are not visible when the crab is in its shell. These small legs are used to grip the inside of the shell to hold the soft abdomen in place. They also remove sand and waste from the shell.

Hermit crabs are further classified as anomurans. The anomurans are not "true crabs." True crabs (like the blue crab) belong to a different decapod group, the Brachyura. Brachyurans have well-developed fifth legs and lack the anomurans' distinct uropods, appendages at the end of the abdomen.

ADAPTATIONS

Some anomuran decapods, like the hermit crabs, have evolved the habit of protecting their soft, vulnerable abdomens by borrowing the shells of gastropods (snails). The soft abdomen of the striped hermit is twisted to fit around the central spire of the snail shell. The uropods at the end of the abdomen anchor it in place. The uropods have gripping surfaces. Along with the fourth and fifth legs, they hold the hermit crab firmly in its shell.

The striped hermit is highly resistant to drying out, an adaptation that allows it to survive in the intertidal zone during the warm months. Hermit crab gills are located above the legs and beneath the

carapace, the shield-like plate that covers the front part of the body.

GROWTH

Like other crustaceans, the striped hermit has an exoskeleton composed of a protein called chitin. The chitin of the carapace and walking legs is impregnated with calcium salts which make these structures hard. The chitin of the abdomen is not calcified and is soft and elastic. Hermit crabs must shed their old exoskeleton to grow. With growth comes the need for a new and larger home.

Hermits are always on the lookout for a new shell. When they see a prospective shell, they inspect it with their claws. If the new shell is acceptable, the crab quickly leaves its old shell and tries out the new one. Hermit crabs always use empty shells and never kill the original snail occupant. In some areas, the shortage of empty shells limits crab growth and may limit population size. The number of eggs produced by females is related to crab size. Females who cannot find larger shells grow more slowly and produce fewer eggs.

Striped hermits occupy a variety of shells depending upon the hermits' life stage and their location in the estuary. Shells of the oyster drill, *Thais*, the moon snail, *Neverita duplicata*, and whelks of the genus *Busycon* are commonly occupied by adult hermit crabs along the barrier island beaches. Juvenile striped hermits are common in salt marshes and usually occupy the shells of marsh periwinkles, *Littoraria irrorata*, and the olive nerite, *Neritina usnea*.