

## Chapter 1

# Choosing Crustaceans: All About Hermit Crabs

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### *In This Chapter*

- ▶ Using this book effectively
  - ▶ Defining a hermit crab
  - ▶ Understanding the different types of crabs
  - ▶ Checking out hermit crab anatomy
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**W**elcome to the world of hermit crabs! Although they are unusual pets, hermit crabs (or *hermies*, as their keepers affectionately call them) are very popular with people of all ages. Maybe you're a parent buying this book for your child or a kid buying it with your hard-earned cash. Maybe you just bought a hermit crab and need the essential scoop on getting set up as well as some general care info, or you've had one for a while but want a refresher on the best way to care for your hermie. No matter what your reason, this book gives you all the information you need to choose the right crab and take care of its every need, without bogging you down in lots of technical stuff. Although several hundred types of hermit crabs live around the world (including marine hermit crabs), this book focuses on six land hermit crabs that are commonly kept as pets in the United States.

## *First Things First: Using This Book*

*Hermit Crabs For Dummies* is designed so you can find the answer to a specific question easily, without reading through lots of information you don't want at that particular moment. Begin with Chapter 4 if you need basic setup information, flip to Chapter 5 if you need to know what to do with a molting crab, or head to Chapter 2 if you're still on the fence about adding hermit crabs to your family. Or if you prefer, start at the beginning and read until you hit the back cover.

As you read, keep an eye out for text in *italics*, which indicates a new term and a nearby definition — so there's no need to spend time hunting through a glossary. The `monofont` points out Web addresses worth checking out for additional information. You also run into a few sidebars (the occasional gray box); although the information in the sidebars is good, it's not essential to the discussion at hand, so skip 'em if you want to.

Be on the lookout for the following icons sprinkled throughout the text that point out important information:



This symbol draws attention to dangerous situations or common mistakes hermit crab owners can make.



This icon points out helpful hints or tips that make your life (and hermit crab keeping) easier.



You see this icon whenever there is crucial information to keep in mind.



This icon highlights technical information. If you're in a hurry, you can skip this material and come back to it later.



This icon highlights hermit crab care or behavior unique to a certain type or species of hermit crab.

You can find any other information you need in either the table of contents or the index. Have fun with your hermits!

## *What Is a Hermit Crab Anyway?*

So just what is a hermit crab? You may be surprised to learn that the term *hermit crab* is a misnomer. Hermit crabs aren't hermits, and they aren't crabs either (at least not in the true sense).

Thoroughly confused? Not a problem. This section sorts the mystery out by taking a look at both true crabs and hermit crabs.

## *True or false? Hermit crabs are not crabs*

True crabs, like the one in Figure 1-1, are commonly found along seashores and are related to lobsters and shrimp. They have five pairs of legs (four of which are used for walking) and a hard shell that protects their short abdomens.

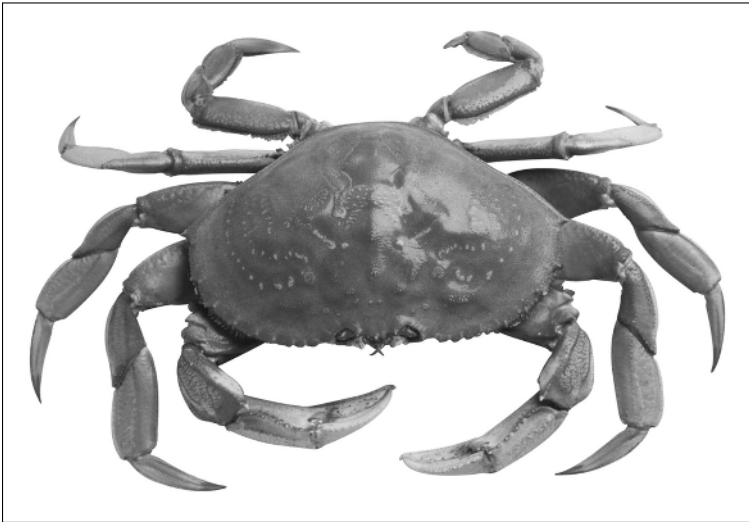


Photo credit: PhotoDisc, Inc.

**Figure 1-1:** True crabs have hard shells covering their entire bodies.

Although hermit crabs have many features similar to true crabs (they both live by the seashore and have five pairs of legs, for example), they look quite different, as you can tell from Figure 1-2. Here is a short list of some differences between the two:

- ✓ Hermit crabs have long abdomens that curl under their bodies.
- ✓ Hermit crabs have no protective shell on their abdomen (like true crabs do), so they live in “borrowed” snail shells.
- ✓ Hermit crabs use only three pairs of legs for walking.
- ✓ Hermit crabs have longer antennae.

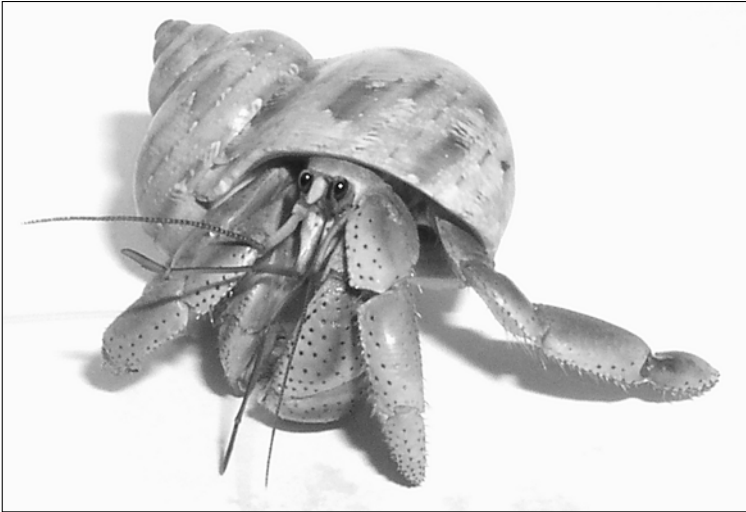


Photo credit: [HaveCrabs.com](http://HaveCrabs.com)/Andrew Lewis

**Figure 1-2:** Hermit crabs spend their lives in borrowed snail shells.

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## ***Hardly hermits: The life of a hermit crab***

Hermit crabs are actually quite sociable creatures. In the wild, they live in colonies and often travel in packs of up to 100 crabs. They got the misleading “hermit” label by carrying their homes around on their backs and retreating into their shells when they sense danger.

Hermit crabs are *nocturnal* (which means they are most active at night), so during the day they conceal themselves from the harsh sun (and predators) by hiding out under trees, driftwood, leaves, and rocks or by burying themselves in the sand. But during the cooler evening hours, they wander the beach looking for food, searching for new shells, and mating. They are quite adventurous and have been known to travel a mile or two from the ocean.

Hermit crabs are scavengers, and they eat whatever they find. They like meat, fruits, and vegetables, and they also enjoy munching on bark and decaying driftwood they find along the seashore.

Although not picky about their diet, hermit crabs are very particular about their shells (actually snail shells), which offer them much-needed protection in the wild. The crabs always seem to be on the lookout for a newer, bigger, or better shell to move in to (it’s keeping up with the Joneses, hermit crab style).



If you find a hermit crab in the wild, don't disturb it or collect it for a pet. It could be a female crab making her way to the ocean to lay eggs and continue the life cycle of these creatures. Hermit crabs collected in this way usually die quickly because of the stress of being removed from the wild. In some areas, it's illegal to collect wild hermit crabs.

## *Pick Me, Pick Me! Exploring the Six Types of Land Hermit Crabs*

Although there are hundreds of types of hermit crabs in the wild around the world, only six are commonly kept as pets in the United States. Many hermit crab hobbyists use the technical or scientific names when discussing the different hermit crabs, which are all in the genus *Coenobita*. However, most of these hermit crabs also have plain English (or common) names, so you don't have to worry about understanding Latin to read about your pets. I give you both the common and the scientific names, however. (If you want to know where the technical names come from, check out the sidebar "Where does hermie get his scientific name?")



### **Where does hermie get his scientific name?**

Scientists have divided all living things into different classifications, each with a specific scientific (or *taxonomic*) name. Without delving into too much technical detail, here's what you need to know to understand the scientific naming of hermit crabs.

The most general classification is the *Kingdom Animalia*, which contains all the animals on Earth. Hermit crabs belong to one of the largest groups of animals — the arthropods (known as *Phylum Arthropoda*). Simply put, arthropods are invertebrates that have jointed legs and a hard outer covering called an *exoskeleton*.

The *Phylum Arthropoda* is further broken down and includes the *Class Crustacea*. (This is where we get the name crustacean, which refers to crabs.) The crustaceans are divided into Orders. Crabs, lobsters, and shrimp are all in the *Order Decapoda* (which means ten-legged).

The decapods are divided into specific Families. Hermit crabs are members of the *Family Coenobitidae*. This Family is divided down once again, and our pet hermit crabs are grouped in the *Genus Coenobita*. Although there are many different species of hermit crabs, the six found in the U.S. hobby are called *clypeatus*, *compressus*, *brevimanus*, *rugosus*, *cavipes*, and *perlatus*. Now wasn't that easy?

The *purple pincher* or *Caribbean crabs* (*Coenobita clypeatus*) are the most common (see the purple pincher crab back in Figure 1-2). You can find them in red, brown, and purple color variations. Their left front claw is larger than the right and is usually purple (thus the name purple pincher crab), and their eyes are round. These crabs are found throughout the Caribbean, the Florida Keys, the Virgin Islands, Venezuela, and the West Indies.

The *Ecuadorian hermit crabs* or *E-crabs* (*Coenobita compressus*) are the second most common hermie pet. They are varying shades of tan, gray, yellow, and orange. Sometimes their walking legs are a darker shade than the rest of their body. They have striping on the sides of their heads, teardrop-shaped eyes, a large left claw, and a wide, flat body. (See the E-crab in Figure 1-3.) Overall, they are more active than their purple pincher cousins and run a lot faster. Ecuadorians live on the Pacific coast from Baja California south to Argentina.

The other four types of hermit crabs are less common but are growing in popularity:

- ✔ The *Indonesian purple hermit crab* (*Coenobita brevimanus*) is the largest hermit crab of the species and is usually lilac purple or brown in color. It's often considered the most relaxed of the hermit crabs. It hails from the Pacific rim.
- ✔ *Coenobita cavipes* doesn't have a common name and usually just goes by "cavipes." This shy crab has red antennae and a black, bluish, or red body. It is found off the east coast of Africa and in Indonesian and West Pacific areas.
- ✔ *Coenobita rugosus* doesn't have a common name either, but is affectionately called "rugs" or ruggies." It's also known as the "crying" hermit crab because of the strange sounds that it makes when it's upset. It comes in all the colors of the rainbow — chocolate, peach, white, blue, brown, tan, and even bright red — and is native to the West Pacific and Indonesian areas.
- ✔ The *strawberry* or *red hermit crab* (*Coenobita perlatus*) is the rarest of the six. It's a bright red-orange with white bumps all over the legs and claws, which makes it look like a strawberry (hence the name). It has very unique eyes that look like polished hematite. Its native range is from the Red Sea to the West Pacific.

Unfortunately, if you go to a pet store and ask for one of these hermit crabs specifically, you may have some difficulty. Most pet store employees, while they'll do their best to help you out, probably aren't hermit crab experts and may not be able to tell you which species they sell.

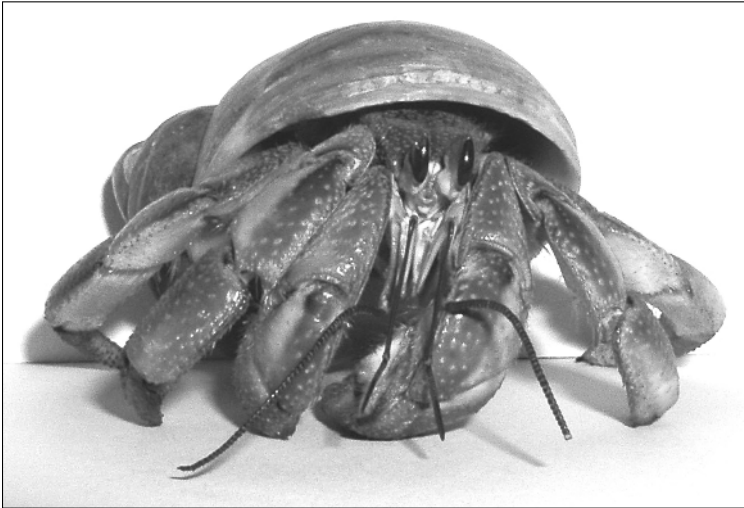


Photo credit: I Have Crabs.com/Andrew Lewis

**Figure 1-3:** Caribbean hermit crabs have round eyes and large left claws.

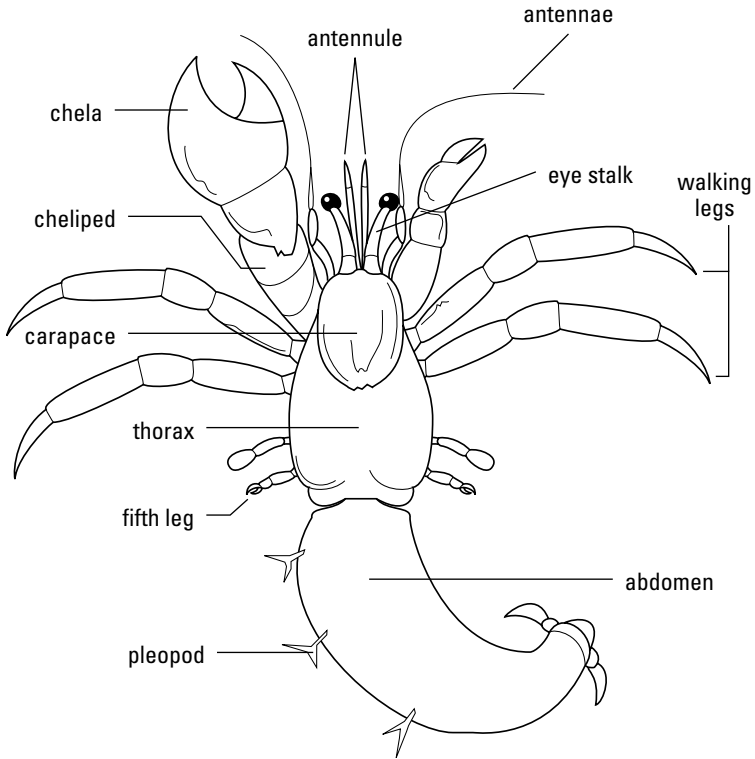
But not to worry — you can take care of all six types the same way (with a few minor exceptions that I'll tell you about), and they all make great pets, so you can just pick out the cutest one in the tank. (Check out Chapter 3 for info on how to pick out a healthy hermie that's right for you.) However, if you want to identify the hermie you just brought home or to take a guess at what kinds are in your local pet store, check out the following Web sites for some great color photos and identifying tips:

- ✔ [www.mrspoppypuff.com/species.htm](http://www.mrspoppypuff.com/species.htm)
- ✔ [www.hermit-crabs.com/exotics.html](http://www.hermit-crabs.com/exotics.html)
- ✔ [www.ihavecrabs.com/crabidentifier.php](http://www.ihavecrabs.com/crabidentifier.php)

## *What's Under That Shell? The Anatomy of a Hermit Crab*

If you are going to keep hermit crabs as pets, familiarizing yourself with their basic anatomy is a good idea. I go through the individual body parts of the crab in plain English in the following sections. The diagram in Figure 1-4 gives you a rough idea of where everything goes.

So now, without further ado, let's take a peek under that shell.



**Figure 1-4:** You can use this diagram of little hermie's anatomy as a reference.

## *The body and exoskeleton*

Hermit crabs are divided into three sections: the head, the *thorax* (main body section), and the abdomen. The hermit crab's body, including its legs and claws, is covered by an *exoskeleton*, a hard, protective covering made of *chitin*, which is primarily calcium. Over the head and back, the exoskeleton forms an especially hard shield called a *carapace*. To grow, a hermit crab has to shed its exoskeleton in a process known as *molting*. (For a detailed discussion on molting and how to care for your hermie during this process, refer to Chapter 5.) A new exoskeleton is constantly being formed underneath the old one. The abdomen, however, is soft and vulnerable, which is why hermits must find other shells to live in. Snail shells are a natural choice for hermie's protective home because they naturally curve to the right, as does hermie's abdomen.



## The legs and claws

Hermit crabs are *decapods*, which means they have ten legs (or five pairs of legs). But if you take a look at your average hermit crab, you don't see all ten legs. In fact, the only time you can see all five pairs of legs on a hermit crab is when he (or she) decides to leave the shell.

The first thing you notice about the first pair of legs (called *chelipeds*) are the claws, called *chela*. The left claw is larger than the right, and the crab uses it for climbing and defense. When threatened or to conserve moisture in the shell, your hermie can close off the entrance to his shell with this claw. The smaller right claw is used for climbing and eating.



## All about breeding

Hermit crabs can't reproduce in captivity as they do in the wild. Scientists (with some degree of success) have attempted the process, but overall, it's too complicated for the average hobbyist to consider.

When mating, the hermit crabs extend about  $\frac{1}{2}$  of the way out of their shells. The male uses his flexible fifth pair of legs to place his *spermatophore* into the female's *gonopore*. (These are genital openings located on the first segment of the female's back pair of walking legs.)

After the crabs have mated, the female attaches the eggs to her abdomen inside her shell and carries them around with her until they are ready to hatch. Female hermit crabs can produce thousands of eggs at one time. This is necessary because many of the young crabs don't survive into adulthood.

Hermit crab eggs must be hatched in salt water in order to survive, so when the female crab is ready to release her eggs, she wanders down to the seashore. She uses the tiny pinchers on the end of her fifth pair of legs to snip each cluster of eggs from her body. Then she passes the eggs up her body to her mouthparts, which deposit the eggs onto her pinchers. The crab then quickly flicks the eggs into the ocean. The eggs hatch upon contact with sea water and the little creatures (I'll call them "baby" hermit crabs for now) are released.

"Baby" hermit crabs go through several stages of development before they resemble adult hermit crabs. They swim around in the ocean and feed on small animals. Each little hermit crab goes through several molts (usually three or four) and eventually makes its way to the beach to search for snail shells to call home.

The second and third pairs of legs are called *ambulatory* or walking legs. The fourth and fifth sets of legs (*periopods*) are tucked in the crab's shell. The crab uses these smaller legs to hold himself inside the shell (otherwise he would fall out when he was picked up) and maneuver it as he walks around. The fifth set of legs are very flexible and end in tiny pinchers. Hermie uses these to clean the inside of the shell, groom his abdomen, push feces from the shell, and for reproductive purposes.

## *The gills and mouth*

Although hermit crabs can leave the water's edge and travel miles from the sea, they must keep their gills moist. In fact, the crabs store a small supply of water in their shells just to keep their gills wet. Unlike fish, hermits don't submerge their gills in water to breathe. They can drown if they are trapped in water and can't get out. The gills are quite small and are located above the crab's legs on the sides of the thorax.

Hermit crabs also have three small pairs of feeding appendages around and in their mouth (called *maxillipeds*) that help them hold onto food while they nibble away at it. Hermits also use these appendages to groom themselves.

## *The sensory organs*

Hermit crabs' eyes, which are made up of many lenses, are located on the ends of long eyestalks with a joint at the base. (When the crab retreats into his shell, he tucks his eyestalks down between his two claws so they are completely safe.)

Hermit crabs have two pairs of *antennae*, or feelers, on their heads. The longer pair (*antennae*) are located below the eyestalks to the outside and are very sensitive to touch. The hermit crab uses the long antennae to feel its way around and to touch things it comes in contact with (almost like a cat uses its whiskers). The shorter pair (*antennules*) are located between the crab's eyes and are sensitive to odors and aid the crab in finding food. The crab's first pair of ambulatory legs are also sensitive and serve as back-up antennae if needed.

*Setae* are bristle-like projections on the walking legs that act like touch receptors and allow the hermit crabs to locate food, water, and other crabs. The longer bristles bend when they come into contact with hard surfaces (like rocks, trees, and other objects), while the shorter bristles are sensitive to water currents.