

## Chapter 1

# Is a Reptile or Amphibian for You?

### *In This Chapter*

- ▶ Understanding the differences between reptiles and amphibians
- ▶ Getting used to herpetology lingo
- ▶ Figuring out whether you want a reptile or an amphibian

**R**eptiles and amphibians make unique pets. And although caring for reptiles and amphibians is going to take *some* time, it won't take *much* of your time — at least not nearly the time a warm-blooded animal would take.

Reptiles and amphibians have few emotional demands (at least on their part), but they do have occasionally exacting physical needs. Because they're in cages and can't go and get what they need in terms of clean caging, the correct temperature, clean drinking and bathing water, and the right food, they depend on you.

The type of animal you select will determine how much of a *pet* you have, in the classic, "stroke me, I like you" definition of a pet. People who have owned a tortoise for 50 years will tell you that their tortoise *is* a pet, walking up to be near them when they walk past the enclosure, standing high on his legs, and extending his head to be petted. Some iguanas hurl themselves off their perches and lumber up to you in the morning, and they seem to enjoy being rubbed on their neck and tickled. But once fed, they tend to ignore you. On the other hand, a poison-dart frog, although brightly colored and unquestionably beautiful, isn't going to recognize you and hop over to be held.

But if you're the type of person who appreciates things that are a little bit out of the mainstream, or who has always admired snakes, or if you simply have an insatiable curiosity (What does *snout-vent length* mean? How is a lizard different from a snake, and do any snakes have legs?), the chapters in this book will make you an expert — well, almost an expert — on all things related to reptiles and amphibians.

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### What is this subphylum thing?

All plants and animals are classified and named through a series of steps called taxonomy. The process takes a life form through Kingdom, Phylum, Class, Order, Family, Genus and Species, with prefixes adding more points of definition. There used to be just two kingdoms (yes, that old-fashioned term is still used in taxonomy): plant and animal. Now there are five, with bacteria, protozoans, and other minute life forms filling the additional kingdoms.

Each kingdom is subdivided again into phylums (about 20 phylums divvy up the animal kingdom). Reptiles and amphibians are placed with other animals in the phylum Chordata, animals that have some form of a spinal cord. Animals with a bony covering to the spinal cord are placed in a subphylum called Vertebrata. Humans are winnowed out of Vertebrata and placed in the Class Mammalia; reptiles are in the Class Reptilia, and amphibians are placed in the Class Amphibia.

## Exploring the Differences Between Reptiles and Amphibians

Reptiles and amphibians are alike in some ways and different in some ways. Reptiles and amphibians are both members of the subphylum Vertebrata (see the related sidebar in this chapter for an explanation of subphylum). They share the subphylum with fishes, birds, and mammals. They're *ectothermic*, which means they're dependent on ambient (the encompassing atmosphere) temperatures for their own body temperature. They do, however, have some significant differences:

- ✓ **Skin:** Reptile skin is dry and has scales, which are actually small folds in the skin, while amphibians have moist skin laden with mucous glands.
- ✓ **Eggs:** Reptiles lay dry eggs on land, or they retain the eggs in their bodies until they hatch. Amphibians lay gel-surrounded eggs in water, in damp places under logs. A few high-altitude amphibian types also retain their eggs until they hatch.
- ✓ **Life cycle:** Newly hatched reptiles look like miniatures of their adult parents. Amphibians, with a few exceptions, go through metamorphosis — breathing water through gills when they're young and then developing lungs and becoming land-dwelling adults.
- ✓ **Defense:** Reptiles can defend themselves with claws and whipping tails, and they can bite. (Some snakes and two lizards, the Gila monster and bearded lizard, toss in a little extra by having venom. Although venom was designed to aid in food acquisition, not for defense, spitting cobras have upped the ante by developing the ability to spit their venom.) Amphibians have toxic skin secretions, which are used for defense, not for food acquisition, and they can bite. They do not have true claws or nails.

## What's in a Name?

Collectively, reptiles and amphibians are referred to as *herps*. You may wonder what the term *herp* means — if you've spent any time with someone who likes reptiles or amphibians, you're certain to have heard this term. *Herp* comes from the Greek word *herpes*, which literally means crawling things. The term is applied equally to reptiles and amphibians. From *herp* comes *herpetology*, the study of crawling things. A person with formal training in herpetology is a *herpetologist*. Someone who likes herps, keeps them, and works with them but lacks the formal training is a *herper*.

All reptiles and amphibians are assigned a scientific name. This is a two-part Latin name that assigns the animal to a genus and species. This is part of the hierarchy that humans assign to all living things in order to better understand how they relate to each other, for example, how rat snakes are alike as a group as opposed to the kingsnakes. For those of you who are morbidly curious (or just plain serious herpers), I use both the Latin names and the common names for the herps listed in the appendix at the back of this book.

Many herp hobbyists prefer to deal with common names, words they can remember and spell. Common names offer a lot more latitude in describing an animal so we can remember it. But a common name can be as ephemeral as a tax refund.

An old trick, long known in the animal dealer profession, is that a dealer invents a common name when he/she is trying to sell something. For example, a shipment comes in from South America that contains something new — a lizard, one of the ameivas that has blue spots along the side. The dealer looks at the lizard and thinks, "Well, it has blue spots, it's from the jungle, and it runs, so I'll call it the blue spotted jungle runner." The dealer puts the "blue-spotted jungle runner" on his list of animals for sale and hopes that pet stores (retailers) will order from the wholesale list, and hobbyists will order from the retail list, and that all of them will want the "new" blue-spotted jungle runner.

A week goes by, and not many of the lizards have sold. Time is money, so the dealer squinches up his eyes and gives the lizard a more enticing name: the jeweled jungle nipper. Lo and behold, the name change works, and the lizards fly out of the dealer's shop as if they had wings. Six months from now, when a new shipment of the same lizards comes in, if jeweled jungle nippers don't sell, maybe ocellated ameivas will.

That's why scientific names come in handy — they don't change.

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**A herper by any other name is still a herpetologist**

What do herpetologists do, anyway? In a nutshell, herpetologists get to do for money what herpers do for fun, but I hasten to add that herpetologists know far more about reptile and amphibian evolution and function than the herper. Herpetologists find employment at museums,

universities, zoos, and state conservation agencies. Not many jobs are available specifically for herpetologists, which is why so many of them have acquired other professional-level skills, such as administration, fundraising, computer-aided analysis, and wildlife management.

***Take Your Pick: Reptile or Amphibian***

How can you tell which herp you want to buy? If you like creatures that revel in dampness, get an amphibian. If you want an animal that likes life dry, get a reptile. But you need to consider other factors, as I discuss in the following sections.

***Getting acquainted with amphibians***

If you like damp environments (or if you want a pet who likes things wet), you want an amphibian (see Figure 1-1). Because they breathe partially through their skin, amphibians must have moist, clean caging, which requires careful monitoring and frequent cleaning to avoid ammonia buildup or a bacterial bloom, or your pet dies a nasty death. See Chapter 4 for more information on amphibians. The following list explains some factors to consider if you want an amphibian:

**Figure 1-1:**  
The African clawed frog is an undemanding amphibian pet. Here, an albino waits for a meal in an aquarium.



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✓ **Caging:** Amphibians need caging that can hold moisture but can be easily cleaned. In most cases, this means an aquarium, usually a 15- to 20-gallon size. Moisture is provided through water (the tank itself or a container within it is filled with water), or the substrate in the tank (sphagnum moss or dampened paper towels) is moistened. You can supply additional moisture with a hand-held sprayer or a misting system.

You'll want to add a screen top to the terrarium/aquarium, but you don't need to worry about adding lighting or keeping the tank or its inhabitants warm. Amphibians like it cool; the tiger salamanders, for instance, trudge through snow as early as February to reach the ponds where they hope to meet a mate, which says something about amphibians' tolerance of cold temperatures and their sex drive.

Because amphibians are quiet creatures, they won't tear up an elaborately planted terrarium the way a lizard or snake might. The smaller amphibians, like the brightly colored dart frogs, look like animated jewels in a fern- and moss-bedecked tank.

Cleaning an amphibian tank is an important aspect of keeping these creatures alive. The smaller the amphibian, the less waste it produces, and the less work it is to maintain the tank. You have to tear down and reconstruct a 20-gallon dart frog enclosure maybe twice a year (although the water dish will need to be cleaned daily). In contrast, a bullfrog's enclosure needs daily water changes or filtration and twice-a-week partial water changes, and the moist sphagnum in a tiger salamander's cage needs rinsing at least every other day. (See Chapter 7 and 8 for more information on indoor and outdoor caging, and the appendix for specific care tips on amphibian species.)

✓ **Feeding:** Amphibians eat insects, small fish, and earthworms. All are readily purchased from bait stores or pet stores; the insects and earthworms can be mail-ordered. Crickets need to be housed in an extra aquarium. You can toss a few into each amphibian's cage as needed. Mealworms come packaged in a plastic container with a snap-on lid; store them in your refrigerator or move them to their own hideaway filled with oat bran and rolled oats — at last there's a way to use up that oatmeal! — with a few slices of apple for moisture. I buy earthworms in lots of 500 from a hunting/fishing supply firm and store them in a refrigerator. (See Chapter 11 for more on diets for amphibians.)

**Size:** Amphibians that are generally seen in pet stores are usually beautifully colored and fairly small in size. You can certainly go out and find big amphibians. Some of the aquatic caecilians, for example, will easily reach a 2-foot length, but few people want a retiring pet with the animation and appearance of a gray rubber hose. The pet store amphibians range in size from the fist-sized horned frog to the 3-inch-long red-spotted newt to the thumbnail-sized dart frog. You can certainly find more exotic amphibians. Your store can order them for you, or you may want to see what an expo can offer (see Chapter 5 for more info on

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finding and buying the amphibian of your dreams). Their easy-to-handle sizes mean the animals require less food. Amphibians don't require the amount of food a larger, more active creature, such as a green iguana, needs.

**Cost:** Amphibians are inexpensive. The dart frogs as a group run about \$40 to \$60 each, but this is at the high end for all amphibians. The more unusual horned or tomato frogs cost around \$50, but the vast majority of amphibians range from \$15 to \$20.



Amphibians breathe, to a lesser or greater degree, through their skin. This is why they need moist, very clean caging, why the cages must be cleaned so frequently, and why you must wash your hands before handling them (see Chapter 6). Most skin diseases in amphibians are fatal (see Chapter 12 for health info). As a rule, amphibians are retiring and nocturnal, which means they won't be as responsive to a human as is a tortoise (see Chapter 4).

Amphibians tend to lay massive numbers of eggs; if you plan to breed your amphibian, you'll need to plan how you'll raise up to a thousand young, or you'll need to dispose of the excess eggs. (See Chapters 14, 15, and 16 for details about breeding and care of the young.)

### *Taking a look at reptiles*

If you like dry environments, you want a reptile (Figures 1-2 and 1-3 show a couple of cuties). Dry caging means that any debris (such as fecal matter or uneaten fruit) won't immediately contaminate the cage. You don't have to change the substrate daily; once a week is enough. You don't have to worry about unseen problems, such as ammonia or bacteria. You do need to heat the cage and provide the equivalent of bright sunlight in terms of lighting. See Chapter 3 for more on reptiles as pets.

**Figure 1-2:**  
The Eastern  
fox snake,  
like all  
snakes, has  
no eyelids,  
and a tail  
that can't be  
regenerated  
if damaged.





**Figure 1-3:**  
The legless  
Eastern  
glass lizard  
has eyelids  
and a tail  
that can be  
readily  
dropped  
and will  
regenerate.



Most people opt for reptiles, and you can understand why. Reptiles are a lot less work than amphibians. The downside, if you want to consider this a downside, is that they're more active than amphibians. They need more food than amphibians, meaning a snake will eat a mouse instead of three crickets. They need bigger cages, and the really big reptiles, such as the green iguanas, need room-sized cages.

On the plus side, reptiles can be handled without fear of wrecking their skins (except for the thin-skinned day geckos, which you can read more about in Chapter 6), and they respond well to gentle handling. The other pluses are the same as the amphibians: They're beautiful, they adapt well to captive conditions, they're easy to feed (unless you go for a big python, which needs to eat bigger prey than mice or rats), and their caging requirements are not elaborate. Even moving them from one apartment or house to another isn't difficult (see Chapter 10).

The following list explains some factors to consider if you want a reptile:

✓ **Caging:** The basic cage for a reptile is a glass aquarium used as a terrarium, topped with a secure lid. You can start with a 20-gallon tank and go up from there.

For tortoises, the cage should be at least 16 times the footprint of a turtle's shell; a 6-inch box turtle needs as a minimum a cage that's four shell-width's wide, or a foot wide, and about four times the shell's *length* in length, or 24 inches. That gives a 6-inch long box turtle a tank the size of a 20-gallon aquarium, which is okay for a month to two. For a longer period, the tortoise needs to go in an outdoor enclosure or into an indoor enclosure that's about 4 feet on a side.

Aquatic turtles need a large tank with a filtration system; add a raised piece of corkbark to one corner and add a basking light over the corkbark so your turtle can "sun" and dry off completely. A 20-gallon tank is

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large enough for an aquatic turtle up to 2 inches in length; as your turtle grows, he'll need a larger filtered tank.

Snakes need a cage that is at least half as long as they are in length, and one-third of their body in width. A yellow rat snake 3 feet long needs a tank that's about 12 inches wide and at least 18 inches in length.

Lizards can go into a glass tank, but some of them (in particular the chameleons) need more air circulation and do better in a nylon or wire mesh cage.

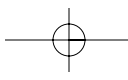
The caging box needs a substrate, a disposable, absorbent flooring. Newspaper was the gold standard for years, but nowadays natural substrates such as mulch or sand (or any of about 15 different commercially produced pelleted or shaved substrates) are preferred because they are more absorbent, look better, provide more traction for the reptile to push against when moving about the cage, and may provide burrowing opportunities for lizards and snakes. The water dish, drip waterer, or misting system is a critical factor in reptile husbandry. Snakes, lizards, and most of the tortoises use a hidebox at night or during the day for seclusion. See Chapters 7 and 8 for more on indoor and outdoor caging, and Chapter 11 for watering tips.

✓ **Feeding:** Snakes usually eat rodents, and for the pet keeper, this means frozen mice or rats purchased from your local pet store. You can buy them in all sizes, from the newborn babies, called pinkies, to the adults. Thaw the rodents in warm water, blot off any moisture, and place them in the cage with the snake. Tortoises are vegetarians, and dine on chopped, fresh, leafy greens and vegetables and a little fruit. Box turtles eat vegetables, fruit, earthworms and, occasionally, crickets (yes, they can stalk and catch a cricket!). Aquatic turtles eat aquarium plants, leafy greens, cat chow, and thin apple slices, along with live minnows and earthworms. My aquatic turtles really liked the freshwater shrimp I could buy seasonally at my bait store, but they tore apart the shrimp so enthusiastically that I had to clean the tank and change the water within 12 hours. See Chapter 11 for feeding information.

✓ **Size:** Reptiles really do come in all sizes, from the 3-inch long sand skink (who spends his time buried in the sand in his cage) to the 8-foot-plus common boa. Bigger snakes are available, such as the Burmese python, but they get too big to be good pets (see Chapter 17). The majority of the snakes in the pet market are captive-bred rat snakes, kingsnakes or house snakes, and these rarely get up to 6 feet in length. Those boas and pythons that make good pets — pets you can easily handle — are those, like the sand boas, that stay less than 4 feet in length.

Aquatic turtles start out small. Some are the size of a half dollar when they're hatched, but they can get to a foot or a bit longer at maturity. Tortoises emerge from the egg at maybe an inch and a half long, and their adult size depends on the type of tortoise. Spurred tortoises get up to 2 feet long, while Greek and hingeback tortoises are adult at 12 inches or less.





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Lizards show the same range in adult sizes. The popular bearded dragons and geckos demonstrate the practical side of owning a placid pet that stays fairly small — 15 inches for the bearded, 14 inches for the biggest gecko types, and 4 inches for the smallest geckos. The gorgeous green iguana, once a very popular pet, grows to a length of 5 feet-plus, far more lizard than most people can house or manage.

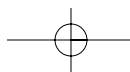
✓ **Cost:** The initial cost of a pet reptile really depends on what you buy. For snakes, the cost ranges from about \$40 for a corn snake to \$65 for a Kenya sand boa. For lizards, geckos run from \$15 to \$150, with chameleons ranging from \$35 to \$125. Turtles cost from \$25 for a painted turtle to \$45 for a box turtle to \$125 for a hingeback. See Chapter 5 for acquisition tips.

Reptiles are easy to keep, because in many ways they need what we need: warmth, sunlight, potable water, and enough space to move around in. If given good housing and proper food, they rarely get sick. They are long lived, far longer than most people would guess.

## *Getting What You Want*

Getting started with herps isn't just deciding that you want a hingeback tortoise. (Where on earth will you find one? Does anyone breed these things in captivity?) Finding and buying the right herp involves more than simply walking into your local pet store. You need to figure out what kind of herp suits your lifestyle.

Some herps can take more time than other herps, and it's always best if you know what you're getting into before you find yourself looking under logs for termites to feed your dart frogs at midnight in midwinter. You may be happier with a herp that will cheerfully eat raw vegetables. Spend some time with Chapter 2. That's where I cover what lifestyle factors (both yours and the herps') you need to consider to find the right herp for you.



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