

## Red-Footed Tortoise (*Chelonoidis carbonaria*)

### Difficulty: Intermediate

Red-footed tortoises are medium-sized, omnivorous, tropical tortoises which generally grow between 12-18" / 30-46cm long, although up to 24" / 61cm is possible. They have a rectangular body shape with a highly domed shell, enlarged scales on the legs and tail, a rounded head profile, and large dark eyes. As suggested by their name, red-footed tortoises are generally characterized by orange to red scales on their limbs and head, although yellow is also possible. The shell and skin are dark brown, gray, or almost black, with a pale to yellow spot on each scute. The plastron (underside) is typically pale with some kind of dark pattern.

Red-footed tortoises have a broad native range throughout southern Central America and the northern half of South America east of the Andes mountain range. As a result, they can be found in a variety of habitats, including rainforest, temperate forest, dry forest, and savanna.

If you pay attention to providing excellent red-footed tortoise care, this pet may well live 50 years or longer, so plan accordingly!

### Shopping List

The following recommendations are for housing a small red-footed tortoise indoors. Please note that it is best practice to house red-footed tortoises primarily outdoors. (Adjustments and recommendations for outdoor housing will be specified in each section of this care sheet.)

- 8'L x 4'W x 2'H enclosure, or larger (taller if no mesh top)
- 75w Arcadia Halogen Heat Bulb, x4
- Zoo Med Combo Deep Dome Dual Lamp Fixture x2 OR Arcadia Lamp Holder Pro x4
- Vivarium Electronics 200w Rheostat, x2
- Vivarium Electronics 80w Radiant Heat Panel
- Herpstat 1 Proportional Thermostat
- 46" T5 HO Arcadia 12% OR Zoo Med Reptisun 10.0 UVB bulb
- 48" Arcadia ProT5 OR Vivarium Electronics T5 HO fixture
- 34" Arcadia Jungle Dawn LED Bar, x2
- Zilla 24/7 Digital Power Center
- Zoo Med Digital Combo Thermometer Humidity Gauge, x2
- Pressure sprayer, 2 gallon capacity
- Leap Habitats Programmable Fogger
- 16 ft<sup>3</sup> coconut fiber/coir substrate
- Exo Terra Tortoise Cave, x2
- Misc. décor (cork flats, flagstone, edible, tropical live plants)
- Exo Terra Feeding Dish, X-Large
- steel baking sheet (for water)
- Repashy Superveggie
- Repashy Superpig
- Exo Terra Sepia Bones
- F10SC Veterinary Disinfectant
- Spray bottle (for disinfectant)

### Housing

Red-footed tortoises, like other reptiles, require an enclosure that is large enough to give them adequate opportunity to explore, forage, thermoregulate, and generally exercise natural behaviors. And this species is very active! They will use however much space you can give them. They are also terrestrial, which means that they are a ground-dwelling species, so floor space is more important than vertical space.

A good rule of thumb for housing tortoises is to use the following formula from the German Society for Herpetology & Terrariums, based on the animal's expected adult length:

Length = 8x adult length, Width = 4x adult length, Height = 2x adult length

Considering that red-footed tortoises average 12-18"/30-46cm, the minimum recommended enclosure size for one red-footed tortoise looks like: **Length > 8-12' / 2.4-3.7m, Width > 4-6' / 1.2-1.8m, Height > 2-3' / 0.6-0.9m.** That amounts to at least 32-72 sq ft (3-6.7 sq m) of floor space.

The best way to get an idea of how large your tortoise is likely to grow, and therefore what size enclosure you're going to need, is to buy from a breeder and ask about the size of the parents. If you don't have access to that information, then it's best to err on the side of caution and act on the assumption that your pet will grow larger rather than smaller.

### Indoors or Outdoors?

The general consensus from experts is that it's best to house your red-footed tortoise outdoors whenever possible. The pen should be placed in a location which has access to both shade and sunshine at all times of day, and it should have well-draining soil. The wall must be at least 2' tall and smooth enough to discourage climbing (concrete blocks work well), sunk at least 12" into the soil to discourage burrowing escapes, and the top of the pen should be covered with wide mesh (ex: chicken wire) to keep out potential predators.

If you live in an area where it's not appropriate to house your red-footed tortoise outdoors year-round, you will need to have an appropriately-sized enclosure at the ready indoors. Given that it's temporary housing, you can get away with a smaller enclosure for the sake of convenience — 8x4 is a fairly standard size that will still meet your pet's needs while it waits for the weather to warm up again.

If you're handy and would rather build your own indoor tortoise enclosure, I recommend checking out the Facebook group [DIY Reptile & Amphibian Enclosures](#) for guidance.

### Can multiple red-footed tortoises be housed in the same enclosure?

Red-footed tortoises can do well when housed solo or when housed as part of a group. They don't necessarily need "friends" to be happy!

## Lighting & UVB

Red-footed tortoises are diurnal, which means that they are most active during the day. This also means that they need exposure to visible light and UVB during the day to maintain good mental and physical health. **Light sources should be left on for 13 hours/day during summer and 11 hours/day during winter** to replicate natural seasonal rhythms and encourage associated hormonal cycling.

If you are housing your pet outdoors, artificial lighting of any kind is not necessary.

### UVB Lighting

UVB lighting can be tricky, because in order to get the right strength of UVB (measured by UV Index, or UVI), distance must be considered. To provide appropriate UVB to a red-footed tortoise housed indoors, you will need one of the following:

- Arcadia T5 HO Desert 12% — 13-15" / 33-38cm (mesh), 17-18" / 43-45cm (no mesh)
- Zoo Med T5 HO ReptiSun 10.0 — 13-15" / 33-38cm (mesh), 17-18" / 43-45cm (no mesh)
- Arcadia T5 HO Dragon 14% — 14-16" / 36-40cm (mesh), 20-24" / 51-61cm (no mesh)

*(This recommendation is an approximation. It is strongly recommended to use a Solarmeter 6.5 to determine the best placement to achieve a UVI of around 3.0 – 4.0 in the basking area.)*

Whichever bulb you use, you will need a reflective T5 HO fixture ([Arcadia](#) or [Vivarium Electronics brand](#) for best performance). I DO NOT RECOMMEND ANY OTHER BRAND OR STYLE OF UVB LAMP AT THIS TIME.

Your UVB lamp should be roughly **half the length of the enclosure** and **placed on the warm side**, close to the heat lamp(s).

### Daylight Lighting

As a forest-dwelling species, red-footed tortoises don't need extremely bright light in their environment, but a UVB bulb alone isn't going to quite do the job, either. To get a little closer to this goal, you will need to supplement with a ~6500K T5 HO fluorescent grow lamp, long enough to span 3/4 to the full length of the enclosure. This is particularly important if you are using live plants, but it is also valuable for supporting your tortoise's general wellbeing.

The Bio Dude Solar Grow T5 HO Light Strip and Durolux T5 HO Grow Light are my preferred choices for this purpose. However, if you are using live plants as part of your setup, you are going to see better results with a brighter, LED grow lamp such as the Arcadia JungleDawn LED Bar or Bio Dude Glo & Grow.

### Heating

Humans are *warm-blooded*, which means that our body temperature is regulated automatically. Tortoises, however, are *cold-blooded (poikilothermic)*, which means that they have to move between areas of different temperatures to regulate their body temperature. In the wild, red-footed tortoises warm up by basking in a sunny spot.

These are the temperatures you will need to maintain a red-footed tortoise indoors:

- **Basking area temperature:** 90-95°F / 32-35°C
- **Ambient/cool zone temperature:** 75-85°F / 24-29°C
- **Nighttime temperature:** 68-75°F / 20- 23°C

Juveniles should be kept warmer at night than adults.

To create an evenly-heated basking area and help maintain appropriate temperatures in the rest of the enclosure, you will need a cluster of 2-4 75w Arcadia Halogen Bulbs or similar mounted in ceramic sockets such as the Arcadia Lamp Holder Pro or Zoo Med Combo Deep Dome Dual Lamp Fixture. There should be a distance of at least 12" between the lens of the heat bulbs and your tortoise's shell in order to prevent burns from occurring. If you notice that the basking area is too warm, dial it down with a rheostat. If your basking area is too cool, you will need higher-wattage bulbs.

**Nighttime heat:** For a large enclosure such as an 8x4, you may need a supplementary heat source to help maintain appropriate ambient temperatures. A Vivarium Electronics radiant heat panel will do the job well, and connecting it to a proportional thermostat set to 75°F will prevent it from getting too hot. Note that radiant heat panels (RHPs) must be mounted inside the enclosure to be effective. If you don't wish to use a RHP, you can also use a pair of heat projectors.

**Measuring temperature:** To measure the temperature of the basking area, you will need a digital probe thermometer with the probe placed on the basking surface. There should be another digital probe thermometer on the other side of the enclosure to monitor the cool end of the temperature gradient. Most reptile-branded digital probe thermometers work well for this purpose.

**Heating for outdoor red-footed tortoises:** If you are housing your pet in an outdoor pen, artificial heating should not be necessary. However, if nighttime temperatures dip below 50°F/10°C, you will need to provide a shelter with lightless heating such as a ceramic heat emitter or radiant heat panel set to 70-75°F/21-24°C. A chicken or dog house can work well for this purpose. Alternatively, you can simply bring your tortoise inside for the night.

**You will need to bring your tortoise indoors for part of the year if you live in an area with winter daytime temperatures below 65°F/18°C.**

## Humidity

As a tropical species, red-footed tortoises do best in an environment with high humidity levels and plenty of moisture. Indoor conditions should remain **between 70-90%**, although spikes up to 100% are acceptable. You can monitor humidity levels with a digital hygrometer with the probe placed in the middle of the enclosure.

First, you will need to **mist the enclosure** regularly. To increase general humidity levels in indoor enclosures, use a large manual or electric pressure sprayer to moisten the substrate and other surfaces 2-3x/daily. For a more hands-off solution, you can install an automatic misting system such as the Mistking Starter to take care of that for you. In outdoor pens, misting/spraying half of the setup with a garden hose and nozzle attachment is good practice. In both cases, avoid spraying the tortoise directly.

Running a **reptile humidifier** intermittently throughout the night, such as the Leap Habitats Programmable Fogging System, is a good idea if you have an indoor enclosure. To maintain good hygiene, you'll need to use distilled water and disinfect the unit 2-4x/month.

### Setting up a humid hide(s)

Whether you are housing your tortoise indoors or outdoors, it must always have access to a **humid hideout**. This should be a cave or hide box placed on the cool end of the enclosure and lined with moistened sphagnum moss or leaf litter. Piles of damp leaf litter, sphagnum, or even hay for the tortoise to burrow into seem to be particularly appreciated in this species!

### Setting up a soaking "pond"/puddle

Red-footed tortoises love to soak! This helps them stay hydrated and also helps keep their digestive tract regular. The easiest way to accommodate this is to provide a shallow dish full of water *that the tortoise can easily enter and exit from*. This dish *must* be easy to clean, because you will be rinsing it out daily — if not multiple times per day! Small baking sheets or flower pot saucers can be used for smaller tortoises, but cat litter trays can be used for when they grow larger.

Because your tortoise will also be drinking out of this pond/puddle, it's especially important to disinfect every single time your tortoise poos in it. I recommend a veterinary-grade disinfectant like F10SC or Rescue. For convenience, it's a good idea to keep at least one spare soaking tray on hand for quick swapping.

## Substrate

For red-footed tortoises, it's best to use a naturalistic substrate that is similar to what is found in their native habitat. In other words, you will need some kind of richly organic, moisture-retentive soil. This substrate should be layered at least 4" deep in indoor enclosures, and 12" deep in outdoor enclosures to accommodate natural burrowing behavior.

Here are a few options: DIY temperate mix: (40% organic topsoil, 40% coconut fiber, 20% play sand), Zoo Med Eco Earth, Zoo Med Reptisoil, Exo Terra Plantation Soil

You will also need at least 1"/2.5cm of leaf litter on top of the substrate to help recreate that forest floor effect. In outdoor pens, grass lawn can make a great "substrate," but access to a leaf litter should still be provided.

New red-footed tortoises should pass *quarantine* before naturalistic substrate is added to their enclosure.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Indoor substrate should be completely replaced once every 3-6 months, depending on how diligent you are about daily cleaning.

## Décor

Decorations play a vital role in your red-footed tortoise's enclosure as *environmental enrichment*. Enrichment items encourage exercise, stimulate your pet's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nicer! Without décor, your tortoise's enclosure is just a big, boring box of dirt.

Aside from at least 2 hideouts/burrows/caves, here are some other items to consider: hollow logs, downed branches, flat stones, dirt mounds, mud holes, and edible plants work well as décor in a red-footed tortoise enclosure. To determine what plants are safe to use in your enclosure, [TheTortoiseTable.org.uk](http://TheTortoiseTable.org.uk) is an excellent resource. Don't be put off by the messy nature of mud holes — red-footed tortoises love them!!

Arrange these items in a way that encourages your pet to explore, and provides a variety of places to sleep or shelter in during the day.

## Food

Red-footed tortoises are *omnivorous*, which means that they eat both plant and animal matter. Generally speaking, a red-footed tortoise's diet should be around **90% plant matter and 10% animal matter**. More specifically, this can be broken down into 55% fruits, flowers, and leaves; 35% grasses and vegetables, and 10% proteins and mushrooms. Young and growing red-footed tortoises should be given as much as they can eat every day. Once they near adulthood, this should be reduced to every other day to prevent obesity.

**Fruits, flowers, and leaves:** apples, bananas, berries, cactus pads and fruit, figs, mango, melons, papaya, tomatoes, collard greens, dandelion greens and flowers, grape leaves, hibiscus leaves and flowers, kale, romaine lettuce, spring mix, turnip greens

**Grasses and vegetables:** hay, [Mazuri Tortoise Diet](#), [Repashy Grassland Grazer](#), [Arcadia Optimized52](#), bell peppers, carrots, peas, squash, sweet potato

**Proteins:** bloodworms, chicks (pre-killed), darkling beetles, discoid roaches, dubia roaches, earthworms, eggs (hard-boiled), hornworms, mice (pre-killed), mealworms, mushrooms (edible), silkworms, snails (captive-bred only), superworms, wet cat food, [Reptilinks](#), [Arcadia OmniGold](#)

The key to providing your pet with balanced nutrition is VARIETY! This is especially important with red-footed tortoises, as they are known to enjoy an extremely variable diet in the wild. So provide as many different kinds of foods to your pet as possible!

Food should always be offered on a plate or tray to prevent excessive ingestion of substrate.

## Supplements

To make sure your tortoise is getting the right nutrients in its diet, it's a good idea to sprinkle its food with [Repashy Superveggie](#) supplement powder. You will also need to provide a [cuttlebone](#) in the enclosure. Aside from being a good source of calcium, it also helps keep your tortoise's beak trimmed!

You may also wish to provide a carotenoid supplement to help maintain and potentially enhance your red-footed tortoise's coloration. [Repashy Superpig](#) works well for this purpose when used as directed by the label.