

GOPHER TORTOISE CONSERVATION INITIATIVE
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FACT SHEET
GOPHER TORTOISE EGGS AND NESTS



EGGS ON THE GROUND OR HAVING TO MOVE A NEST

Female tortoises will occasionally drop their eggs on the ground or make nests in bad places. As an example, we receive calls about tortoises laying eggs in the tire ruts in front of mailboxes each spring. Despite the fact that you should have a permit from the Florida Game and Freshwater Fish Commission to touch the eggs, most people want to save the eggs and hopefully be successful in hatching the eggs themselves so the young can be released in the wild.

Tortoise eggs are nearly round and are about as big as a ping-pong ball. They are hard (they harden shortly after being laid), not soft or rubbery like a snake or lizard's egg. In late spring or early summer, the female tortoise digs a nest in the ground. It is the shape of a vase with the mouth just large enough for the eggs to drop into it. The nest may be placed near the mouth of the burrow in the front sand mound or some other place within the home range (or containment area) of the tortoise. Once the female tortoise has constructed the nest with her hind legs, she will lay 5-7 eggs. Sometimes there are more eggs and sometimes she may lay more than one nest in a year. Once the eggs are laid, the tortoise fills the top of the nest with soil. It is almost impossible to see most nests after they are completed.

If you find a nest in harms' way, there are some steps you may take. Female gopher tortoises will often move away from the burrow to lay their eggs, particularly if the burrow mouth is under vegetative cover or in a semi-shaded area. Sometimes they do not pick good locations to make their nests. They will lay their eggs in dirt or sand roads or trails, in gardens that will be tilled up, or they may be uncovered when you are planting a tree or other vegetation. Here are the steps on how to move the nest and eggs:

1. Get a pencil and a container that will hold some soil and the eggs.
2. Fill to one third the depth of the container (or $\frac{1}{2}$ the width of the egg) with sand or sandy soil. Do not use heavy potting soil.
3. Use your fingers to remove the soil very carefully from around the eggs in the nest.
4. As the tops of the eggs appear take the pencil and very carefully put an "X" on the very top of each egg.
5. As you need too, carefully remove the top egg that has an "X" keeping it upright at all times and move it to the container you have prepared. Use your finger to make a depression in the sand and place the egg in it with the "X" up. It is best if the eggs are not directly touching each other.
6. Do this with all the eggs.
7. After the eggs are all collected, note the depth of the nest from its bottom to the top of the first egg.
8. Take the eggs to a suitable site that has the same type of soil and sunlight as the nest and dig a hole as deep as the nest.
9. Place the eggs in the hole, one by one with the "X" facing upward.
10. Once the eggs are in the hole (usually two rows deep) carefully cover the eggs and fill to the surface of the soil.
11. You may wish to mark the area with a ring of fence or tape or flagging.
12. If there is no suitable environment in which to relocate the eggs, then you may wish to artificially incubate them. The simplest way to incubate tortoise and turtle eggs is get a large coffee can (the two pound type.) Poke 4-6 small drainage holes in the bottom of the can. Fill it half full of sand or sandy soil. Do not use potting or clay based soils. Carefully place the eggs on the surface of the sand. Keep the mark up and do not shake the eggs. Fill the rest of the can with sand to about an inch from the top. Give the soil in the can a good soaking so water is dripping from the drain holes. Set the can so that the drain holes will work. Place paper towel over the top with a rubber band. Airflow should be allowed by the covering, which helps keep the soil from drying too fast. Once each week take the top off and fill the 1-inch space with water and recover. An outside porch or garage is a good place to keep the eggs so they keep the right temperature (see above). The eggs are not likely to develop or hatch properly in air-conditioned rooms.
13. OTHER INCUBATORS- There are several kinds of incubators; there are home-made ones using a box or Styrofoam container, a light bulb, a thermometer and a dish of water for humidity, and there is the automated kind we use which is designed for a lab and can hold many, many eggs. Incubators come in all sizes from table to room-sized. Check with a farm or laboratory supply company for one that suits your needs. Eggs should be incubated at a temperature of 29 to 31 Celsius (84-88 F) and usually hatch in 60-90 days. Maintaining proper humidity in the egg chamber as well as temperature is vital. Eggs should be sprayed daily with a fine mist. Too high a humidity can cause mold to form so be careful about how often and how much you spray.
14. Be sure to count ahead 60 days on your calendar and mark it as the days to watch for hatching. The young may hatch all at once or there may be delays in hatching in some of the clutch.

HATCHLINGS

Sometimes when the hatchlings appear, they will have a yolk sack attached to the underside or plastron. BE VERY CAREFUL WITH THIS. If it gets punctured the hatchling may die. Wash the hatchling off with tepid water and then place it on wet paper towels in a plastic shoebox or small aquarium. Spray or mist the hatchling with water at least twice a day but not too much. Keep the lid on the box and make sure the paper towel in the bottom is always damp but with no standing water. Usually in three or four days the yolk which has been supplying the hatchling with food and moisture will be totally absorbed into a belly button like opening on the plastron. When this happens, it is safe leave the hatchlings on dry towels and begin to feed them.

Care of hatchling tortoises involves daily maintenance of their environment and feeding of appropriate foods. Hatchlings should be placed (after yolk sac is absorbed) into a plastic holding tank or an aquarium deep enough to prevent their climbing out. The bottom may be covered with barely damp (not dry) sand or paper towels. Tortoises need direct light (full spectrum UV bulb is best) and a shallow watering dish that they can easily climb into and out-of. Some dried leaves or additional paper towels may be used to provide hiding places to give the hatchlings a sense of security. Food can be provided daily in a shallow dish or spread about the container so they have to begin to forage. Be sure to clean out the water dish and any uneaten food daily. Feed hatchlings a mix of organic "spring" mix, which has several species of leafy plants that are good for them. Be sure to soak the hatchlings in room temperature bottled or well water (do not use chlorinated tap water) once a day for about 20 minutes.

RELEASE OF THE HATCHLINGS

We recommend that hatchlings be released about 10 days after they begin to feed and have defecated at least once. The best place to release the hatchlings is in an abandoned burrow in an area where there is good forage, particularly lots of grass and very small weeds. Abandoned burrows are those that have a half circle or pie shape and appear to be gopher tortoise burrows. The apron may not be very open and there are no signs of a big tortoise going in or out of the burrow. This habitat will give the hatchlings cover from heat and provide high relative humidity and is the common place where hatchlings live before making their own burrows. Once they have gone off, leave them alone so they do not panic and can go about doing what hatchling tortoises do.

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