

# Get The Facts About Gopher Tortoises:

## Commensal Species



### A Keystone Species

More than 350 species benefit from the gopher tortoises' extensive burrows that average 15 feet long and 6.5 feet deep. Because gopher tortoises alter their environment in a way that helps other species, they are recognized as a keystone species. The animals obtaining food, refuge and other benefits from its burrows are known as gopher tortoise commensal species. A healthy, widespread gopher tortoise population is necessary for commensal species populations to thrive.

### Vertebrate Commensals

There are currently four vertebrate priority commensals listed as Endangered, Threatened, or Of Special Concern at the state or federal level. These include the gopher frog, Florida mouse, Florida pine snake, and eastern indigo snake. The eastern diamondback rattlesnake is also a priority commensal, although it is not presently listed.

- The gopher frog is a stout-bodied frog whose presence is closely linked to that of gopher tortoises. This species relies extensively on gopher tortoise burrows for shelter and, to some degree, food. The survival of newly metamorphosed gopher frogs is dependent on their ability to locate and use gopher tortoise burrows and other underground refuges.
- The Florida mouse is a rodent that depends on gopher tortoise burrows as sites for excavation of their own burrows. Florida mice typically construct their burrows as small, U-shaped tunnels off the sides of the main tortoise burrow. The burrow provides shelter and protection during dispersal and from fire and adverse weather conditions.
- The Florida pine snake is a large, nonvenomous snake that uses gopher tortoise burrows to forage, nest, and escape adverse weather conditions or fire. It is estimated that they spend up to 80% of their time underground.

- The eastern indigo snake is a large, nonvenomous snake that depends on gopher tortoise burrows as refuge from extreme temperatures and to prevent desiccation. They also have been known to prey on juvenile gopher tortoises and other commensals.
- The eastern diamondback rattlesnake is the largest venomous snake in North America. In addition to stump holes and other underground shelter sites, they use gopher tortoise burrows as seasonal refuge.

### Invertebrate Commensals

Over 300 invertebrate species have been observed in gopher tortoise burrows. These include moths, beetles, crickets, flies and other species. Many of those included in the Gopher Tortoise Management Plan are obligate commensals which depend on the gopher tortoise burrow for survival (e.g., Gopher Tortoise Burrow Fly), and some may have a mutualistic relationship with the tortoise by providing sanitation or pest control services to the tortoise while benefiting from food and shelter provided by the gopher tortoise and its burrow (e.g., Gopher Tortoise Rove Beetle).



Kevin Engle/FWC

For more information on the gopher tortoise and commensals, contact the gopher tortoise management plan office at 850-921-1030 or visit [MyFWC.com/GopherTortoise](http://MyFWC.com/GopherTortoise).



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