



# Gopher Tortoise Burrow Identification



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# Objective

- Learn to properly identify gopher tortoise burrows from other animal burrows.

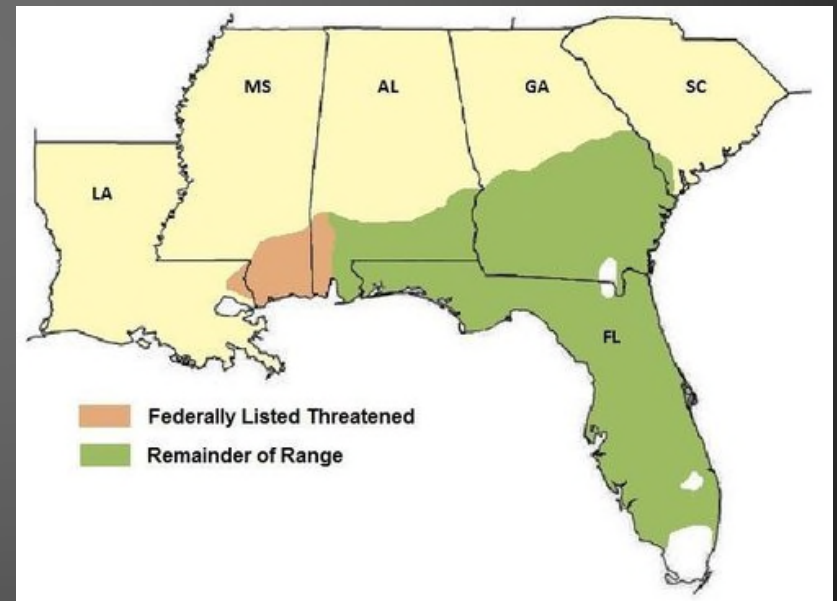




# Gopher Tortoise (*Gopherus polyphemus*)

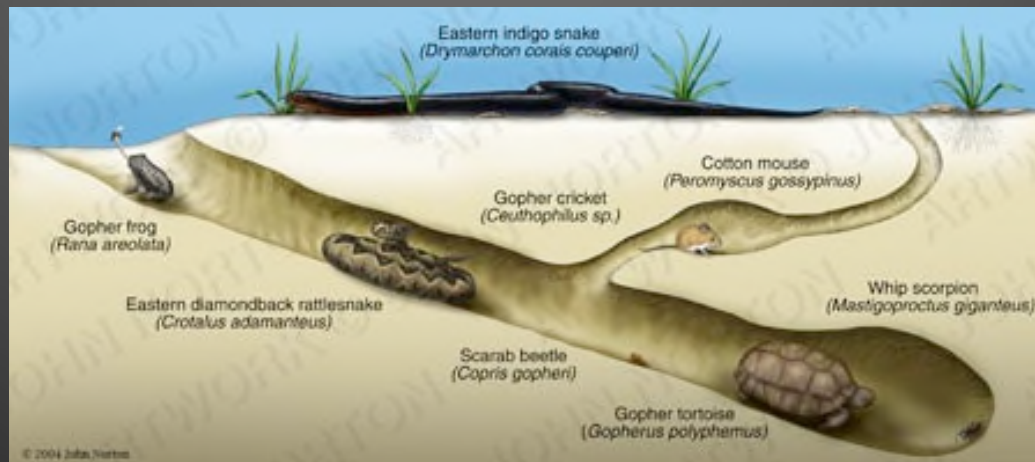
- Found in the southern 1/3 of Alabama in 23 counties.
- Uniquely adapted to digging burrows in well drained sandy soils.

<https://wixwirx.wordpress.com/2013/04/22/gopher-tortoises-at-buckingham/>



# Gopher Tortoise (*Gopherus polyphemus*)

- Considered a Keystone species of the Longleaf Pine Ecosystem
  - Burrow provides shelter for the tortoise as well as other species including Eastern indigo snake, gopher frog, and Eastern diamondback rattlesnake, and others.
- Over 350 animals (invertebrates and vertebrates) are known to utilize the gopher tortoise burrow.





# Gopher tortoise burrows are unique

- 1 entrance (most of the time)
- Dome shaped with a flat bottom
- Apron - the dirt mound in front of the entrance
- 6-8 feet in length
- 15-20 feet in length



# Typical Gopher Tortoise Burrow

Half moon shape  
and flat bottom  
opening.

Usually, a defined  
apron. The apron is  
the dirt mound in  
front of the opening.



# Atypical Looking Burrows

- Gopher tortoise burrows will sometimes not have a “typical” or “classic” look that could be due to:
  - Water washed out the burrow entrance changing the typical shape or washed out the apron making it non-existent.
  - Soil type (loose sandy soils v/s those with a little more clay substrate or gravel) can sometimes alter the shape of the opening.
  - Mammals can excavate the burrow entrance changing the shape of the opening.
  - Abandoned burrow that through time has begun to erode and or filled in with leaves or debris and no longer looks like a typical gopher tortoise burrow.
  - Part of or the entire opening has been collapsed by tractor or other type of mechanized vehicle / equipment and no longer looks like a typical gopher tortoise burrow.
  - Or it may not be a gopher tortoise burrow at all!



# Gopher Tortoise Burrow Review



Active gopher tortoise burrow. Typical shape with a good apron. Note plastron slide.





Active juvenile gopher tortoise burrow.





# Gopher tortoise burrow dug in almost pure gravel soil.





# Gopher tortoise burrow dug in almost pure gravel soil.





Active gopher tortoise burrow. Apron  
sort of washed away.





Active gopher tortoise burrow. Note, not much of an apron and where water has eroded away soil in front of burrow





# Abandoned gopher tortoise burrow.





# Abandoned gopher tortoise burrow.





# Juvenile gopher tortoise burrow.





Active burrow. Note plastron slide in front.





Active juvenile burrow. Note no distinct apron but classic opening shape.





This was a burrow that was plowed under in a food plot the previous year.





Burrow opening has been run over by tractor but still has a distinct apron.





Active burrow. Apron size and shape varies.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





Classic burrow opening shape but not  
much of an apron.





Active gopher tortoise burrow. Opening shape a little distorted due to the root in front.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow.





Active gopher tortoise burrow. Not much of an apron. Located in an old food plot.





This burrow was plowed under the previous year and tortoise dug out. Burrow opening distorted due to equipment too close to opening and weather.



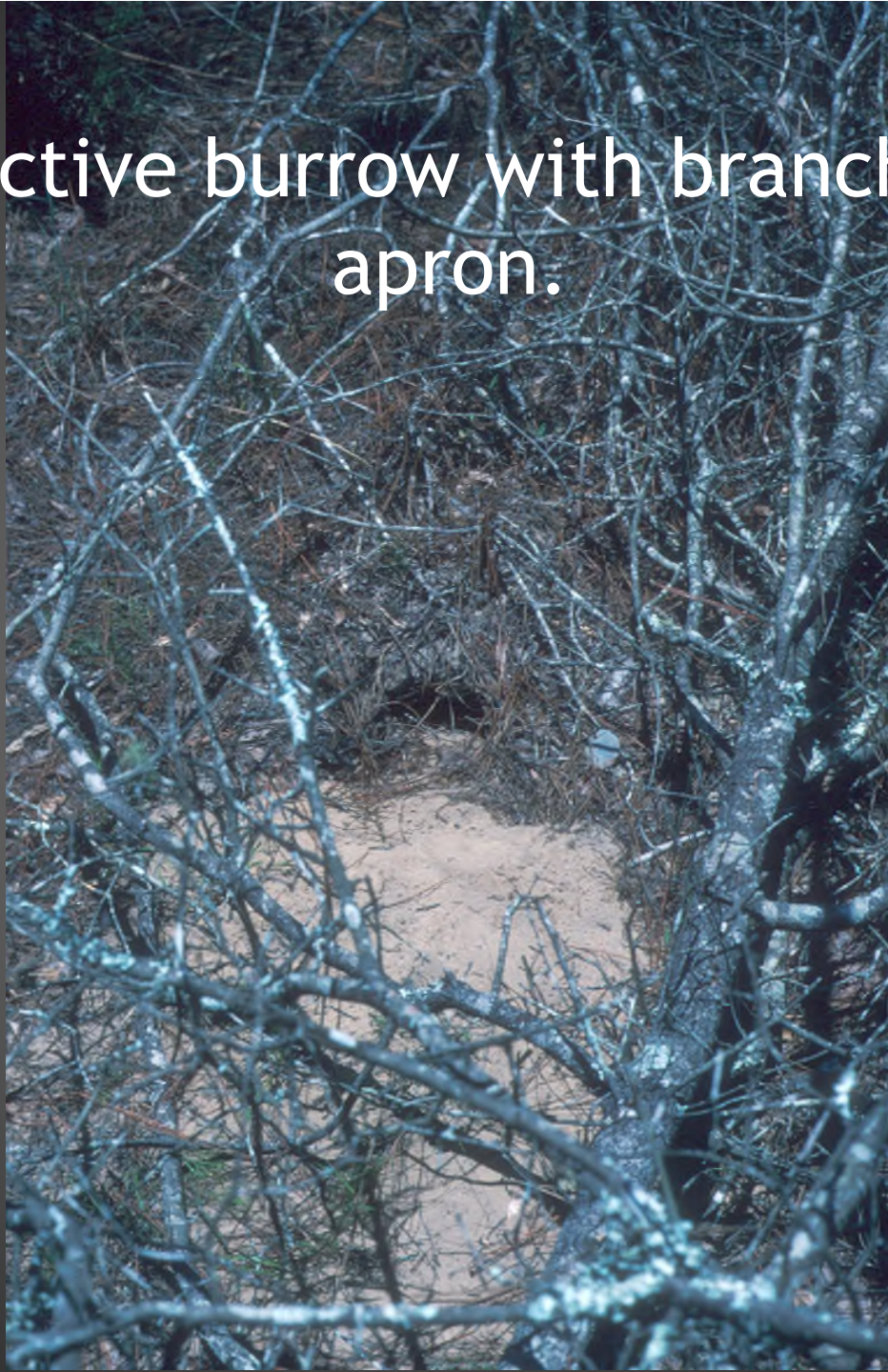


Active gopher tortoise burrow. Opening distorted but still has apron.





Small active burrow with branch across  
apron.





# Filled in gopher tortoise burrow.





# Abandoned gopher tortoise burrow.





# Active gopher tortoise burrow.





# Eggs in apron of active gopher tortoise burrow.





Active gopher tortoise burrow.





# Active juvenile gopher tortoise burrow.





# Active gopher tortoise burrow.





# Active gopher tortoise burrow. Tortoise seen in the burrow.





# Active gopher tortoise burrow. In old food plot.





# Gopher tortoise burrow collapsed by mower.







# Gopher Tortoise Burrow ID Quiz





*Is this a gopher tortoise burrow?*

TRUE or FALSE?





# Ask yourself...

- Does it have a half moon or domed shaped top and flat bottom? No
- Does it have an apron (the soil mound in front of the hole)? No







Look at shape of hole and presence of an apron

Gopher Tortoise Burrow



Apron present

Armadillo Burrow



No Apron present





*Is this a gopher tortoise burrow?*

TRUE or FALSE?





# Ask yourself...

- Does it have a half moon or domed shaped top and flat bottom? No
- Does it have an apron (the soil mound in front of the hole)? No





Look at shape and structure of the hole

Gopher Tortoise Burrow



Apron present

Crayfish Burrow



This looks more like a chimney





*Is this a gopher tortoise burrow?*

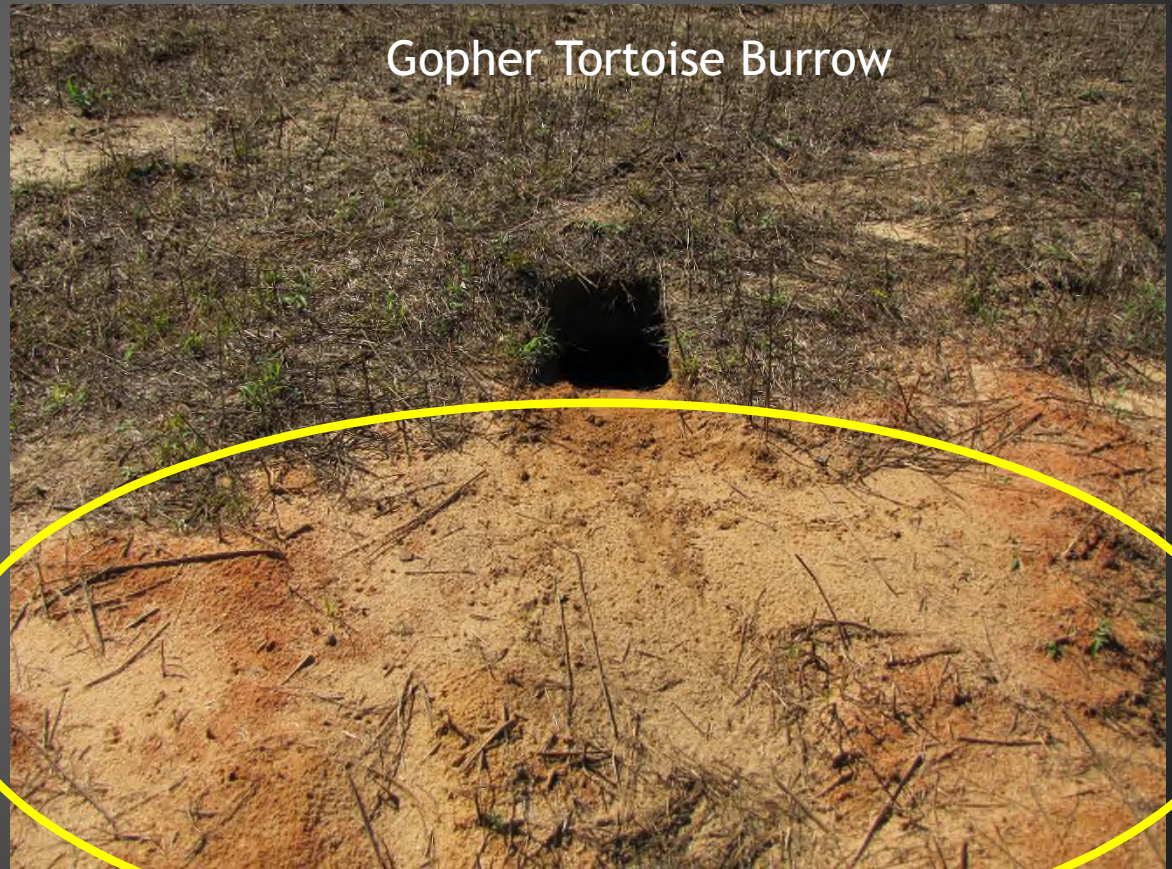
**TRUE** or FALSE?





## Look at shape of hole and presence of an apron

The shape of the opening appears square though, it used to be domed or half moon shaped. This burrow is in a food plot and due to equipment getting too close to the opening and water eroding the sides the opening shape has been changed.



Apron present



*Is this a gopher tortoise burrow?*

TRUE or FALSE?



This hole is 1-2 inches in diameter.





Look at shape of hole and presence of an apron

Both are roughly the same size holes

Gopher Tortoise Burrow



Apron present

Vole / field mouse hole



No Apron present



*Is this a gopher tortoise burrow?*

**TRUE** or FALSE?





# Yes, this is an old abandoned gopher tortoise burrow

- You can still see that the opening has a dome shape and you can see the remnants of the apron.
- These “abandoned” burrows are important as they provide shelter for other species and can easily be re-excavated by a tortoise and used.





*Is this a gopher tortoise burrow?*

TRUE or FALSE?



1-2 inch hole



# Ask yourself...

- Does it have a half moon or domed shaped top and flat bottom? No
- Does it have an apron (the soil mound in front of the hole)? Yes





Look at shape and structure of the hole



Gopher Tortoise Burrow



Apron present

Oldfield Mouse Burrow



This was tricky, it does look like it has a defined apron. But hole is circular and goes straight down.





*What animal(s) may use a gopher tortoise burrow?*

- A. Eastern Indigo Snake
- B. Quail
- C. Gopher Frog
- D. Eastern Diamondback Rattlesnake
- E. All of the above.





*What animal(s) may use a gopher tortoise burrow?*

- A. Eastern Indigo Snake
- B. Quail
- C. Gopher Frog
- D. Eastern Diamondback Rattlesnake
- E. All of the above.





*Is this a gopher tortoise burrow?*

TRUE or FALSE?





# Ask yourself...

- Does it have a half moon or domed shaped top and flat bottom? No
- Does it have an apron (the soil mound in front of the hole)? No





Look at shape and structure of the hole

Gopher Tortoise Burrow



Apron present

Fox Den



No Apron present. More of a beaten down path





*Is this a gopher tortoise burrow?*

TRUE or FALSE?





# Ask yourself...

- Does it have a half moon or domed shaped top and flat bottom? No
- Does it have an apron (the soil mound in front of the hole)? No





Look at shape and structure of the hole

Gopher Tortoise Burrow



Apron present

Coyote Den



No Apron present. More of a beaten down path





*Are these gopher tortoise burrows?*

TRUE or FALSE?





# No, these are Southeastern pocket gopher mounds (SEPG)

Roger Birkhead



- SEPG share the same habitat as gopher tortoises
  - Open pine habitats with well drained sandy soils and an abundance and diversity of forbes, grasses and legumes
- Mounds do not usually have an opening like a gopher tortoise burrow or other dens made by mammals.
- SEPG tunnel under ground and push the soil up into the mounds seen below.
- Mounds are also fairly close together.





# *Typical identifying characteristics of gopher tortoise burrows include:*

- A. Domed or half moon shape with flat bottom
- B. No presence of an apron
- C. Presence of an apron
- D. A and C
- E. All of the above





# *Typical identifying characteristics of gopher tortoise burrows include:*

- A. Domed or half moon shape with flat bottom
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*Is this a gopher tortoise burrow?*

TRUE or FALSE?





# Ask yourself...

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- Does it have an apron (the soil mound in front of the hole)? Yes





## Look at shape and structure of the hole

Gopher Tortoise Burrow



Apron present

Oldfield Mouse Burrow



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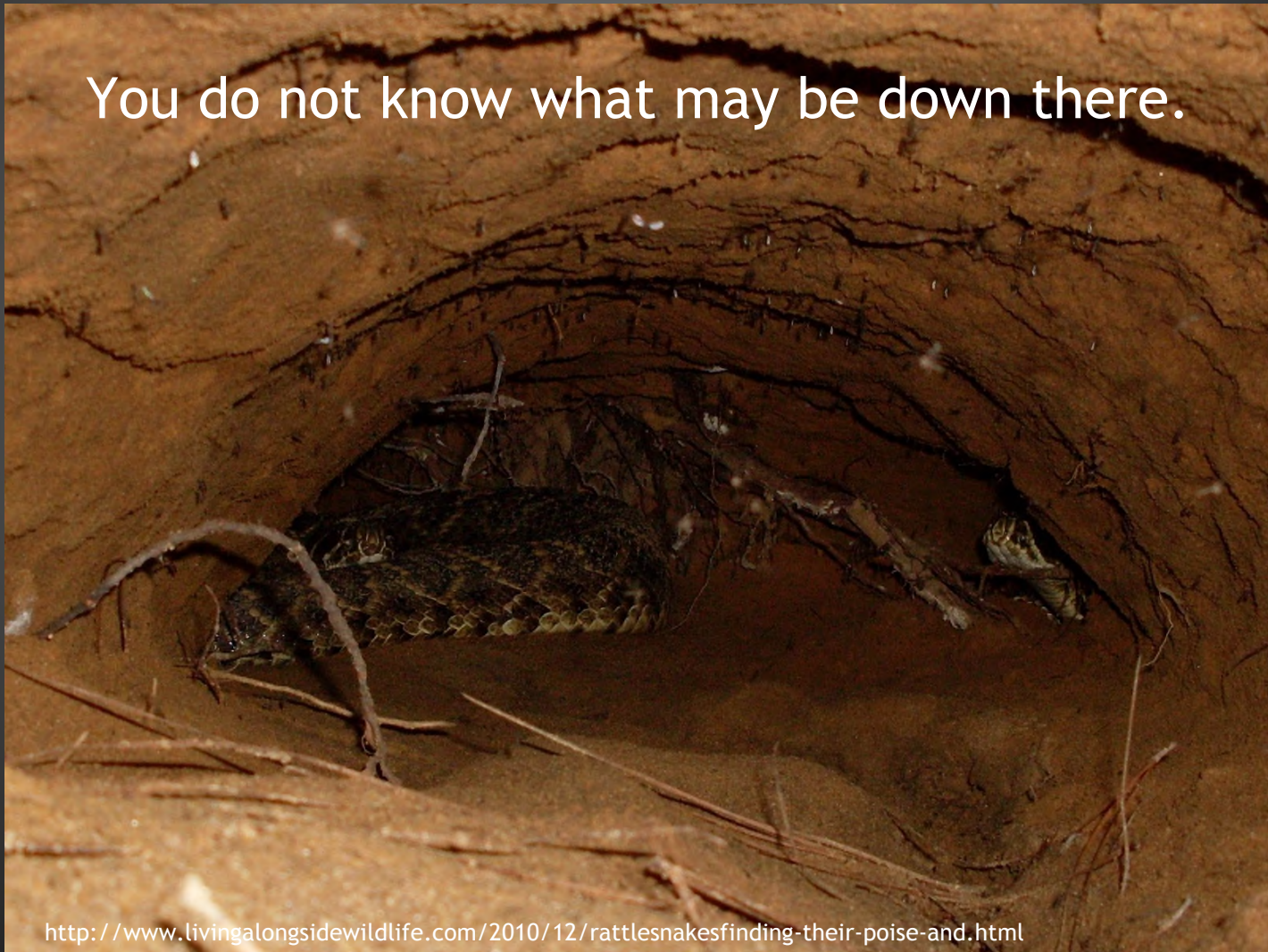




# SAFETY FIRST!

NEVER stick your hand in any sort of burrow or hole in the ground!

You do not know what may be down there.





www.outdooralabama.com

# Thank You for Your Time!



<https://www.earthtouchnews.com/conservation/saving-a-species-one-snake-at-a-time/>



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