

Welcome to Virtual
Thursdays Python
Patrol!

The presentation will
begin in a few
moments.



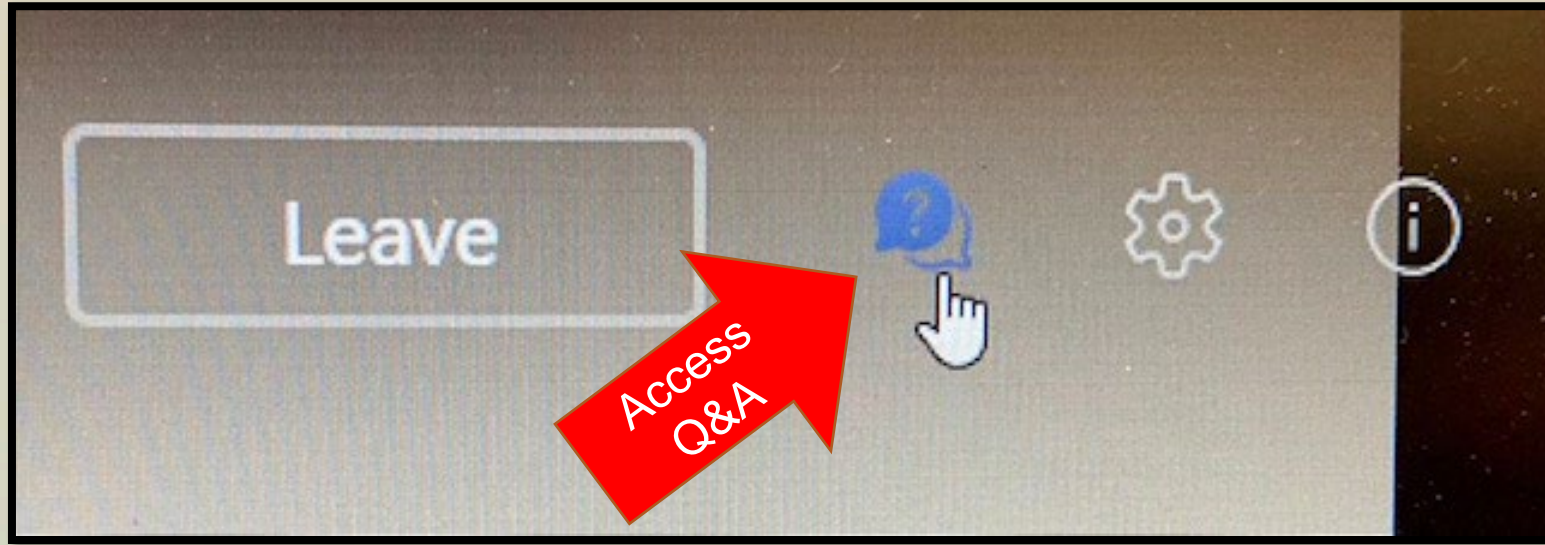


Photo credit: Jenny Novak



Jan Fore & Jessica Clawson
FWC Nonnative Fish and Wildlife Program
Education and Outreach Biologists

FWC Virtual Python Patrol



- Use the Q&A feature to communicate with Jessica
- Useful links provided in the Q&A
- Email questions to: Jan.Fore@MyFWC.com
- PDF and video are available on the Python Patrol webpage



Presentation Outline

- 1) Background Information
- 2) Snake Identification
- 3) How to Search for Pythons
- 4) Safely Handling Pythons
- 5) Wrap-up the Q&A



Photo credit: McKayla Spencer

Burmese pythons

Python molurus bivittatus

- Large constrictor snake native to southeast Asia
 - Over 20' in length and 200lbs
 - Longest in FL: 18' 9"
- Semi-aquatic, generally found near water
- Nocturnal, but an opportunistic hunter
- Generalist predator

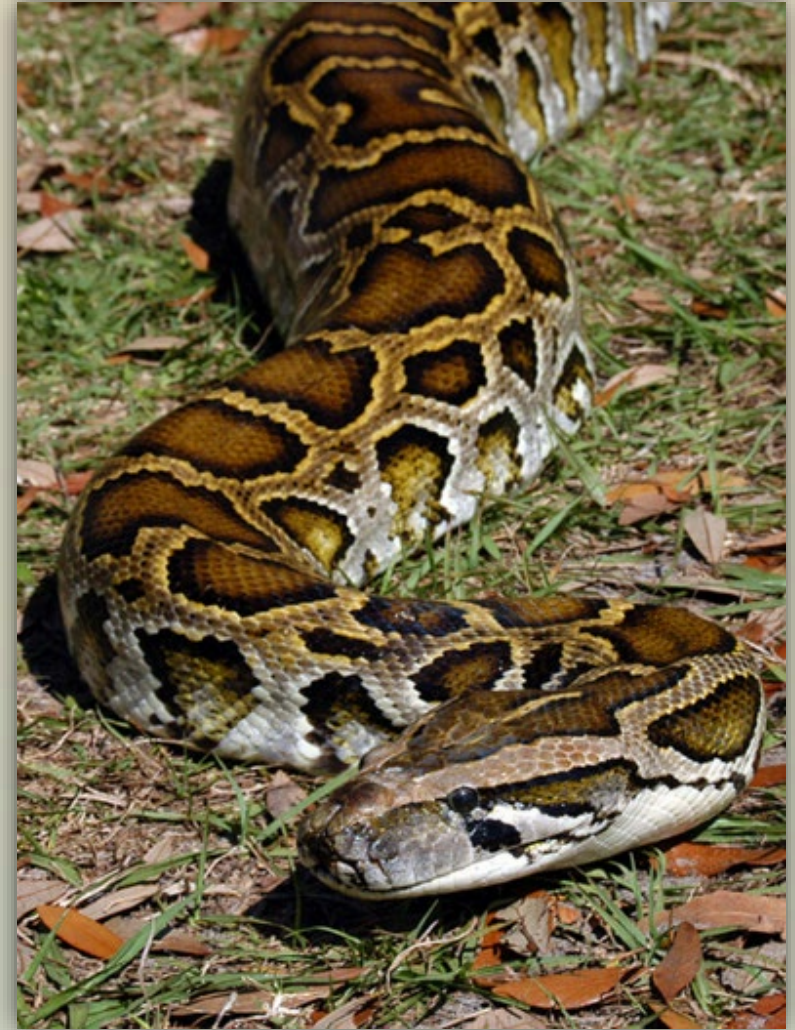


Photo credit: FWC



Burmese pythons in Florida

- Introduction: 1970s
- Pathway: Accidental escape or intentional release from the pet trade
- Status: Established
- Regulated As: **Prohibited**
- Removed: Over 17,000



Map credit: FWC

Why are they so successful?

- Subtropical climate with mild winters
- A variety of prey available
- Can survive without food for long periods of time
- High reproductive output
- Few natural predators



Photo credits: FWC / Lori Oberhofer, National Park Service



Invasive impact: Native species at risk



Python removal = protection for native species



Photo credits: Conservancy of Southwest Florida,
National Park Service, University of Florida

Presentation Outline

- 1) Background Information
- 2) Snake Identification**
- 3) How to Search for Pythons
- 4) Safely Handling Pythons
- 5) Wrap-up



Photo credit: McKayla Spencer

Snake identification



Photo Credit: Everglades National Park



Identify the correct snake species

Be certain you can properly identify a Burmese python.

Burmese python hatchlings are similar in size to many native snake species.

Leave native snakes unharmed while hunting for Burmese pythons.

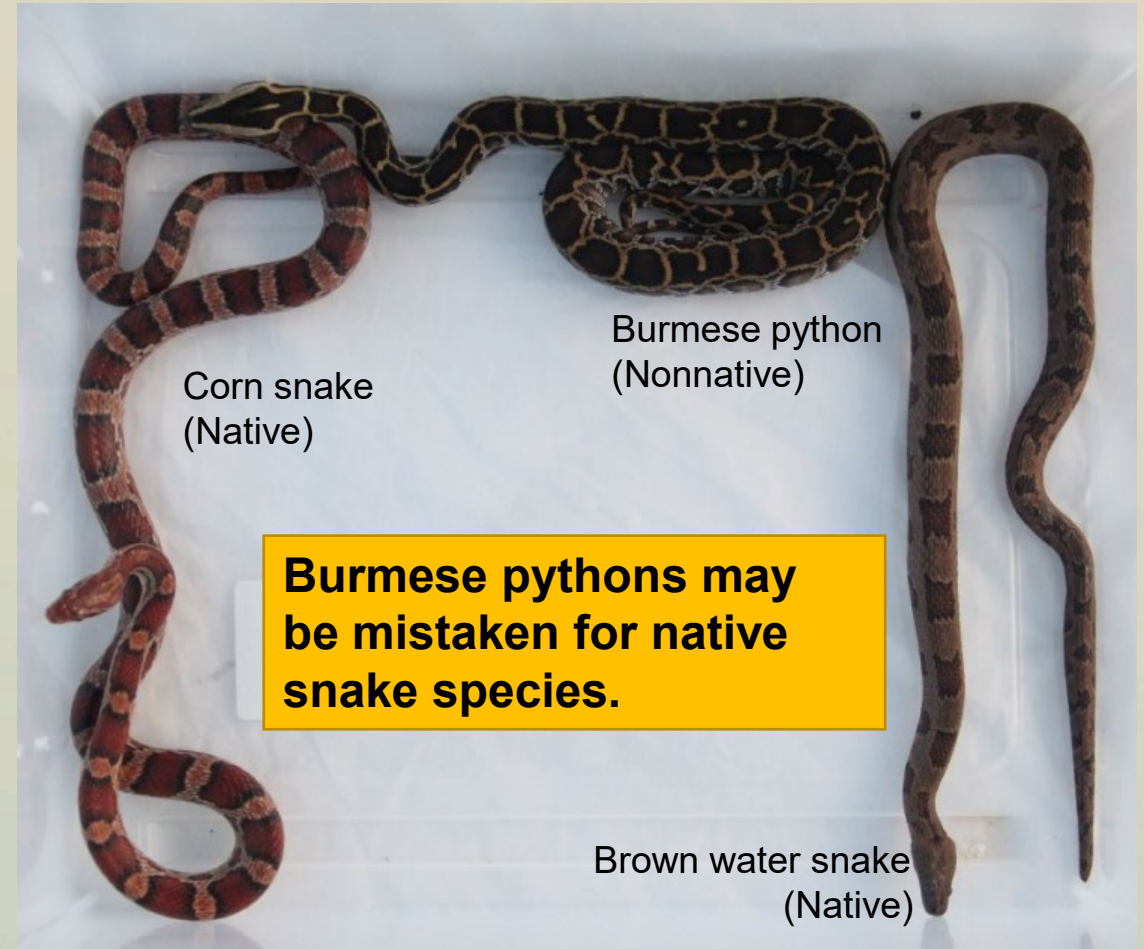
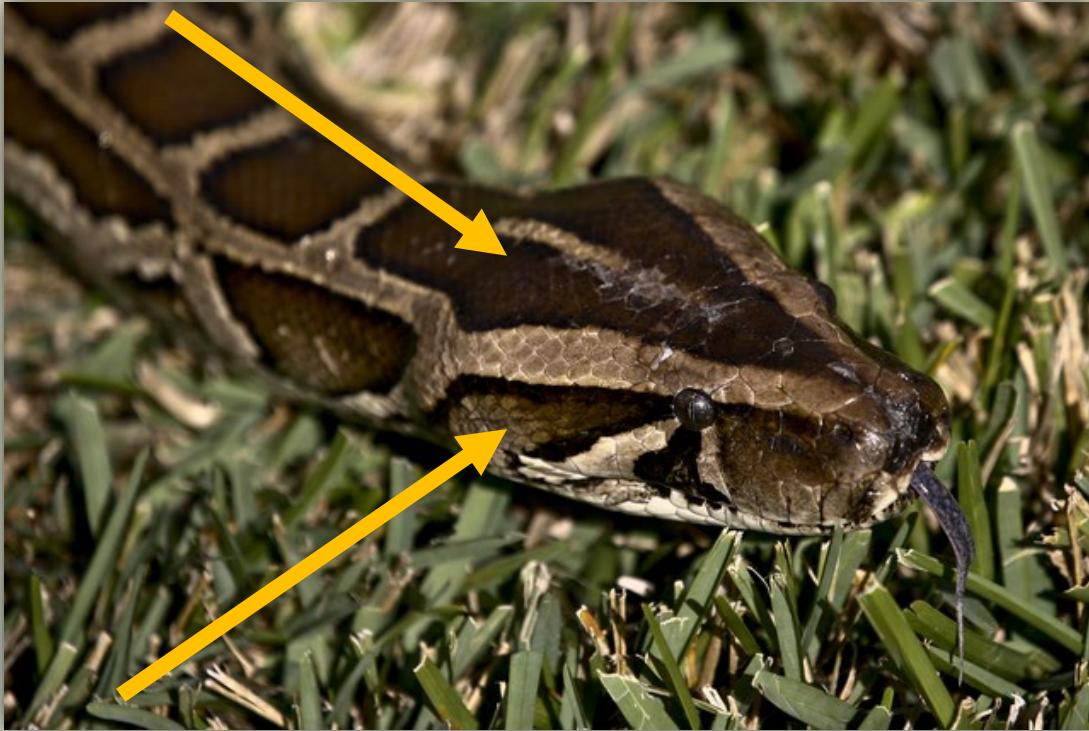


Photo credit FWC



Nonnative snakes: Burmese python

Dark arrowhead-shaped wedge on back of head



Dark wedges behind and below each eye

Photo credit: William DeShazer

Dark irregular blotches on tan background



Pattern resembles puzzle pieces or giraffe markings

Photo credit: FWC



Native snakes



Corn snake



Brown water snake



Venomous: Diamondback rattlesnake



Venomous: Cottonmouth



Nonnative snakes: Northern African python

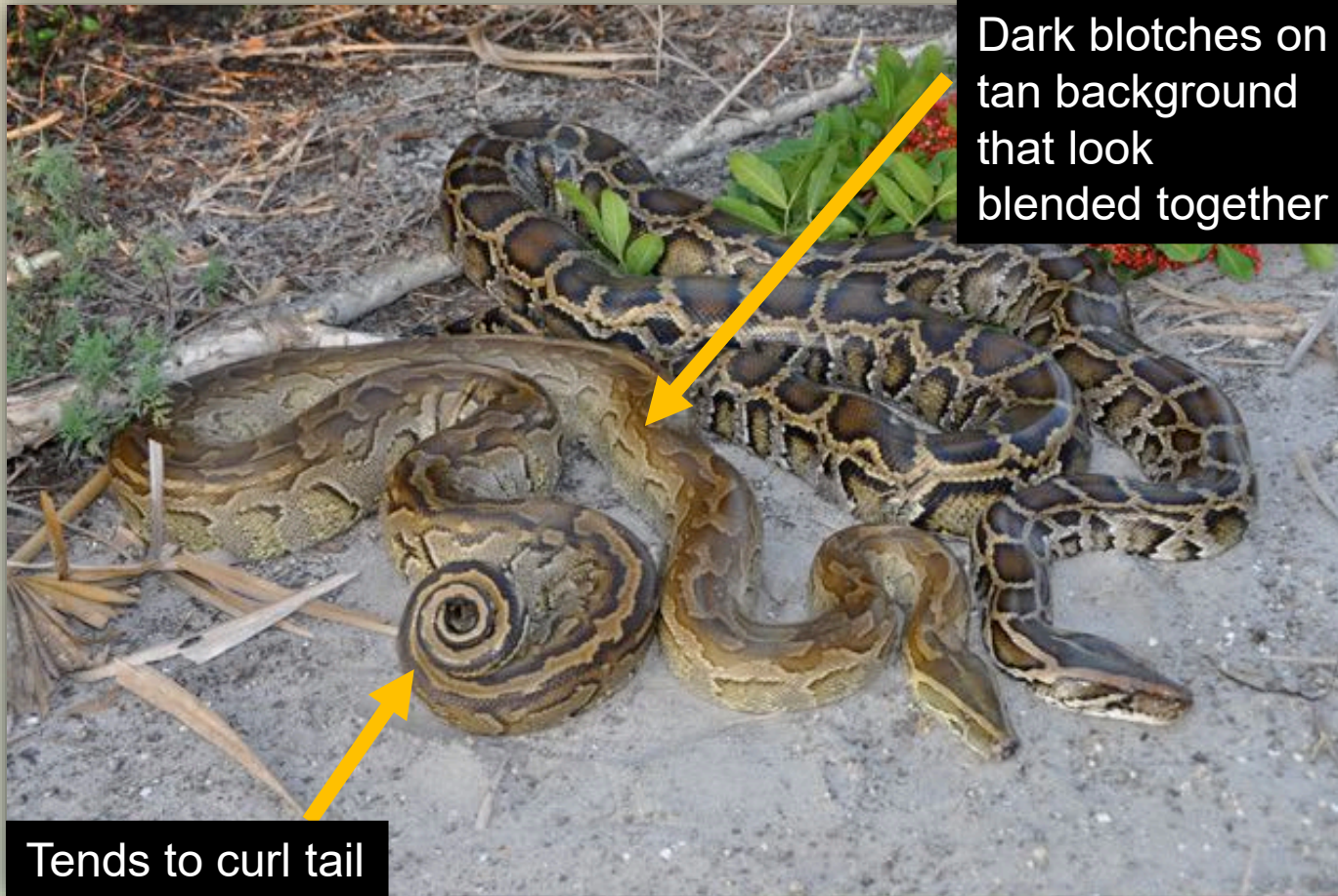


Photo credit: Anthony Flanagan

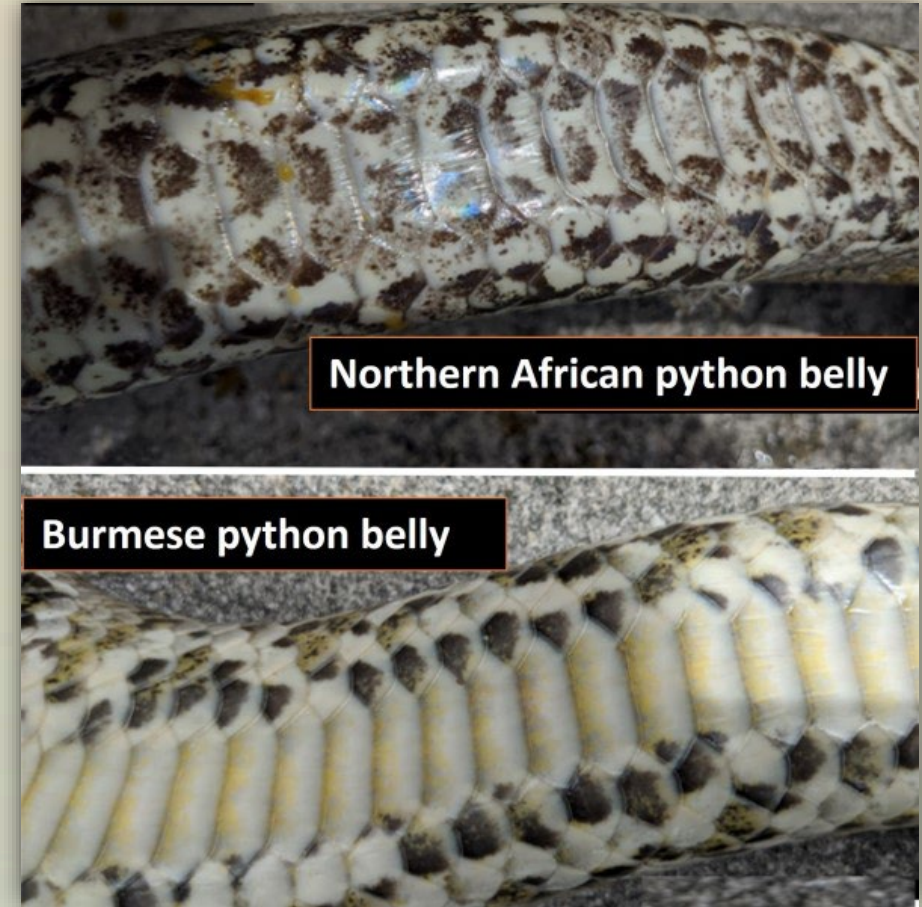


Photo credit: McKayla Spencer/FWC



Nonnative snakes: Boa constrictor

Tan ovals separated by dark brown saddles

Ovals turn red near the tail on red-tailed boas

Thin dark-colored line on head

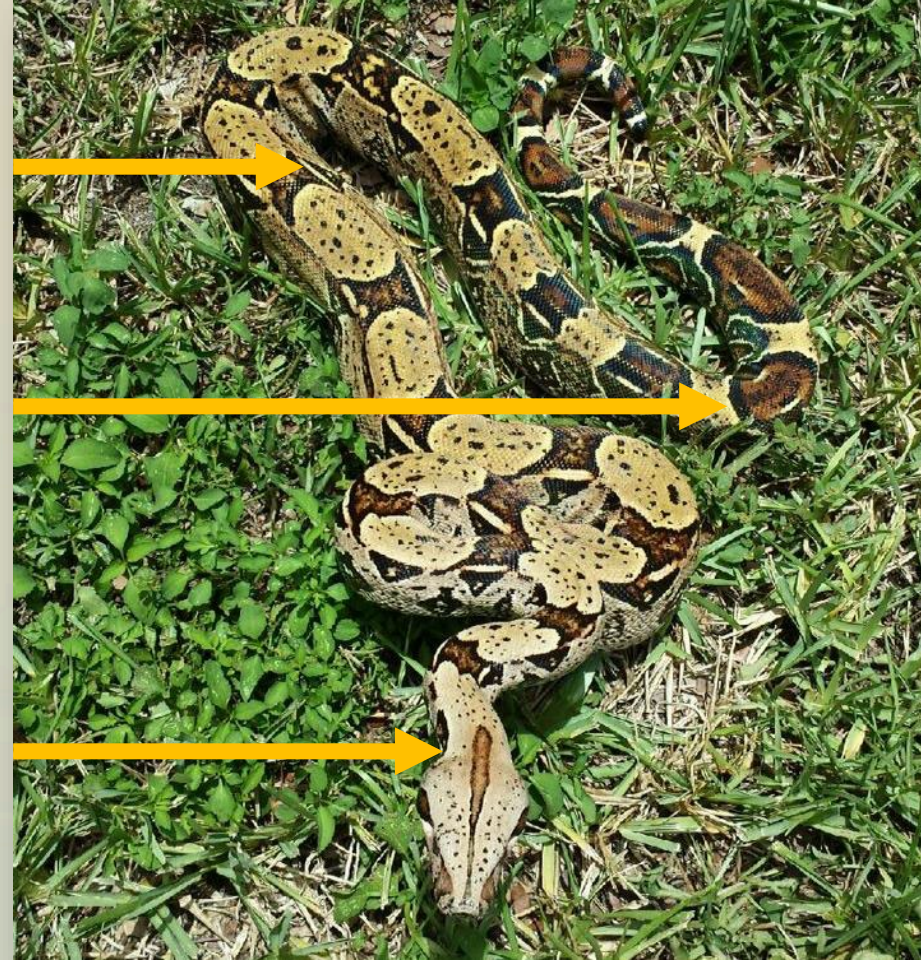


Photo credit: FWC



Presentation Outline

- 1) Background Information
- 2) Snake Identification
- 3) How to Search for Pythons**
- 4) Safely Handling Pythons
- 5) Wrap-up



Photo credit: McKayla Spencer

Removal of Pythons Year-Round

Hunting on Private Land:

- Landowner permission required
- Must be [humanely killed](#) on site
- No live transport
- No permit / license required
- No bag limit

Hunters must follow specific area regulations and local ordinances

Hunting on Commission-managed Land:

- Executive Order 20-17
- 25 Commission-managed lands
- Must be [humanely killed](#) on site
- No live transport
- No permit / license required
- No bag limit

Hunters must follow specific area regulations and local ordinances



Specific area regulations may be found:
MyFWC.com/Hunting/WMA-brochures
Or use the interactive map on the Removing Pythons webpage

Habitats to search

1. Canals & banks
2. Vegetation edge between canal and road shoulder
3. Road shoulders

Many levee roadways do not allow public vehicle access. Hunting with a gun on, from, or across levees or the right-of-way of roads is prohibited.



Burmese pythons are difficult to detect

- The Everglades habitat is large, undeveloped, and has plenty access to water.
- Pythons have a cryptic, camouflaged pattern.
- Detection probability estimated as $<5\%$.
- Difficult to estimate population size accurately.



Photo credit: FWC





What to look for: Shiny coils

Only one small section or “coil”
may be visible



Photo credit: Lori Oberhofer, NPS



Light reflecting on scales



Photo credit: Alicia Wellman

What to look for: Nests

- Nests can be found in vegetation, soil, or in the burrows of other species.
- Eggs are pliable with no hard shell.
- Females will coil around eggs protectively until they hatch.
- Important for nest identification!



Photo credit: Jemeema Carrigan, University of Florida



WHICH EGG IS A PYTHON EGG?

If you aren't
sure, leave
eggs alone!



Scout Snakes – Do Not Harm Or Remove



If you locate a scout snake, photograph the tags with the tag number visible and then release the python alive in the same location where it was captured.

Report the capture as soon as possible with photos, date, time, GPS location to bicy_python@nps.gov.



Presentation Outline

- 1) Background Information
- 2) Snake Identification
- 3) How to Search for Pythons
- 4) Safely Handling Pythons**
- 5) Wrap-up



Photo credit: McKayla Spencer

Be Aware, Be Careful, Be Safe!

- Pythons may bite.
- Pythons may constrict.
- Pythons will likely defecate/musk when handled.
- Take a buddy with you.
- Plan for rocky and unstable ground, insects, heat, storms, wild animals and other hunters.



Photo credit: FWC



Choose appropriate gear



Photo credit: Tiffany Duong, Ocean Rebels

- Gloves
- Snake hook
- Tool to humanely kill the python (ex. Captive bolt gun, firearm, pithing tool)*
- Cooler or bag for python carcasses
- Maps/navigational aids
- First aid kit
- Sun and insect protection



*Use of tools to humanely kill a python must follow specific area regulations

Safe Capture Step 1: Assess the situation

- Be aware of the strike zone.
- Use a snake hook or sturdy tool to pull snakes into open ground.
- Look for stable footing and less vegetation.
- Avoid the water.



Photo Credit: Everglades National Park

Multiple pythons are possible



Photo credit: FWC



Safe Capture Step 2: Pin the python



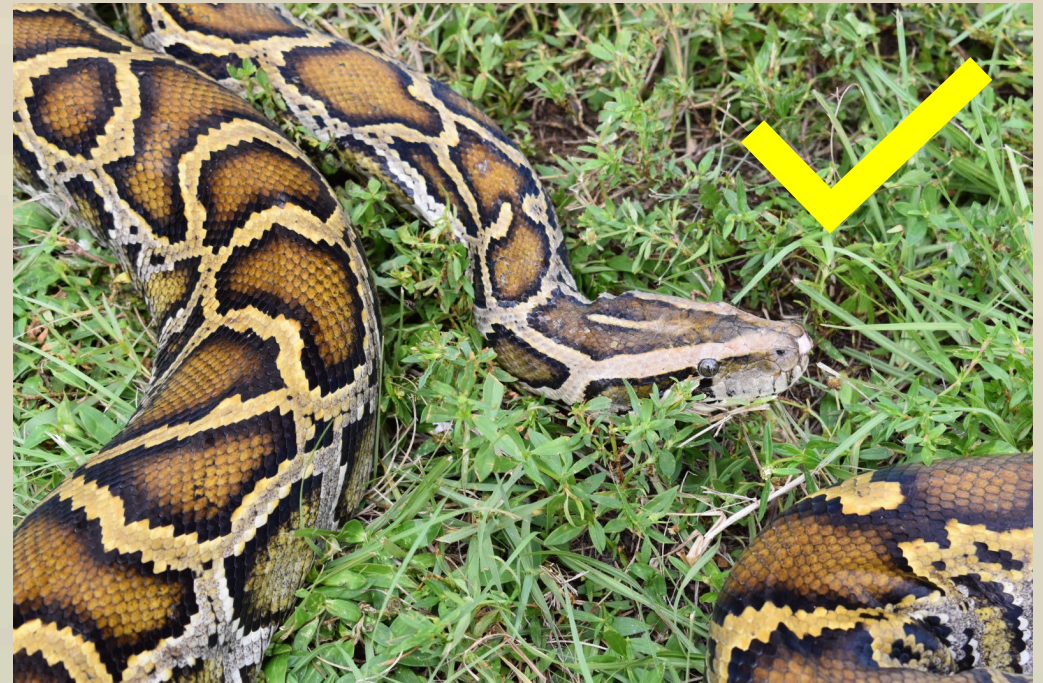
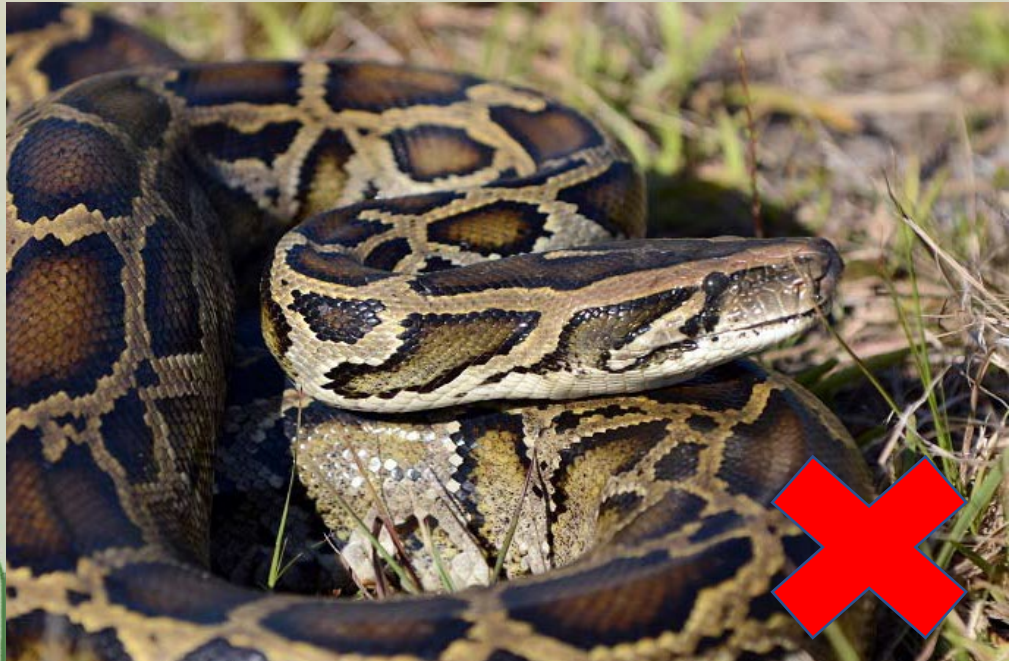
Photo by FWC

- Uncoil the python with a long, sturdy tool: snake hook, pole, etc.
- Use the handle to pin the python.
- Keep hook parallel to the ground.
- Kneel and work on ground level.
- Pin behind the python jawbones.
- Be ready to adjust pin position!





Photo credits: FWC

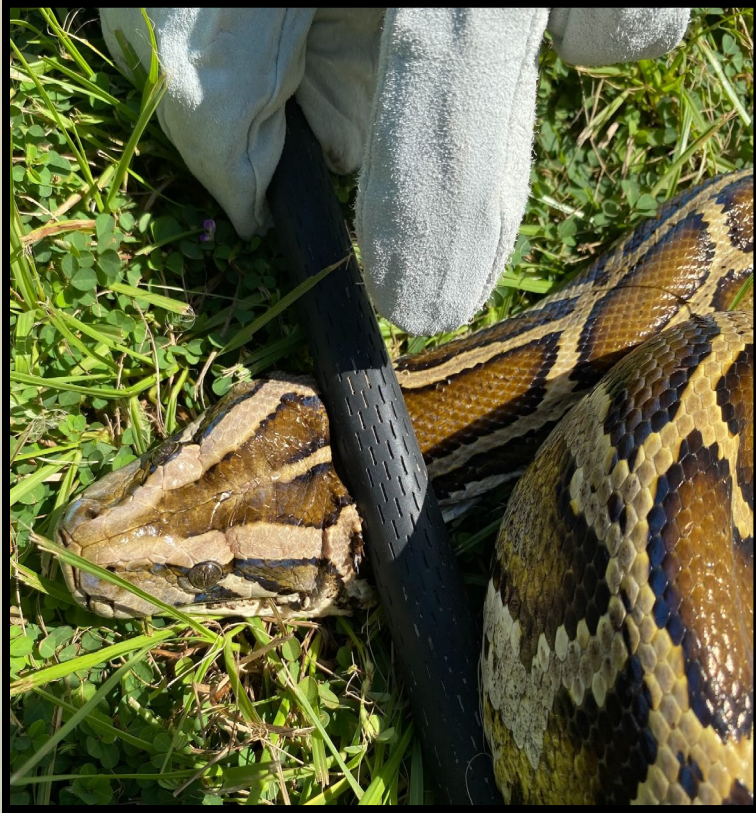


To pin or not to pin:

Avoid pinning the head next to or on top of body coils.

Pin the python when the head is free and clear of the body.





Place the handle behind the jawbones using pressure to prevent escape.



Grasp the head. Bring your knee forward.



Expect the python to react: coil, constrict, musk.



Safety Tips



Photo credit: FWC

Safe Capture Step 3: Grasp the python



- Grasp the python behind the head, feeling the jaw bones at your fingers.
- If you grasp too far down the neck, the python may turn and bite you.
- Ensure the python can breathe.
- Gloves are recommended for safety.

Photo by Tiffany Duong, Ocean Rebels



Safe capture points to remember:

- It is illegal to transport Burmese pythons alive.
- It is illegal to relocate or release any nonnative species.
- Burmese pythons must be humanely killed at the time of capture.
- Learn the local ordinances and specific area rules before using any tool to humanely kill a python.



Photo credit: FWC



Humane killing of Burmese pythons

Burmese pythons are not protected in Florida except by anti-cruelty law. There is an ethical and legal obligation to ensure a Burmese python is killed in a humane manner.

The American Veterinary Medical Association (AVMA) recommends a two-step process for humane killing of reptiles to prevent suffering and destroy the brain.



Two-step method for humane killing

Many tools are available to kill pythons. Regardless of the tools you choose, you must ensure **both** steps are completed to humanely kill the python:

Step 1:

The application of the tool should immediately result in the python losing consciousness.

Step 2:

Immediately and substantially destroy the python's brain by manually "pithing" which prevents the python from regaining consciousness.



Photo credit: FWC



For more information visit the [2020 AVMA Guidelines for the Euthanasia of Animals](#)

Step 1: Immediate loss of consciousness

Target the Brain:

- Draw an imaginary X between the eyes and jawbones.
- The brain is located where the red lines intersect.
- Apply the tool to the target area / the brain of the python.



Tools for Humanely Killing Pythons

Require
human
application
of force

Mechanical tool examples:

- Captive bolt stunners
- Air guns and firearms

Manual tool examples:

- Handheld hammers
- Sharp hunting knife, used only in decapitation*

Considerations for tool selection:

- The amount of force the tool can deliver to the brain to complete Step 1.
- The AVMA recommends mechanical tools with controlled, consistent and appropriate applications of force when compared to manual tools.
- All tools should be followed by pithing to destroy the brain.

*Decapitation is considered humane as part of a 3-step method recommended by the AVMA:
1) A loss of consciousness, 2) followed by decapitation with a sharp knife, 3) followed by pithing*
Knives are not recommended as a tool to stun or pith a python.

Step 1: Additional considerations

- **Is the tool legal to use in the area?**
 - *All specific area regulations and local ordinances for firearms and air guns must be followed.*
- **Will the tool apply an appropriate amount of force?**
 - *Per the AVMA, the combined firearm/gun and ammunition selected must achieve a muzzle energy of 300 foot-pounds (FPE) to humanely kill animals weighing up to 400lbs. Hunters are responsible for determining if their firearm or air gun can achieve Step 1.*
- Please review the target area and check that the tool is correctly placed over the brain and safe to apply for you and those around you.
- Be certain you have the required experience and skill to apply the chosen tool correctly to complete Step 1.

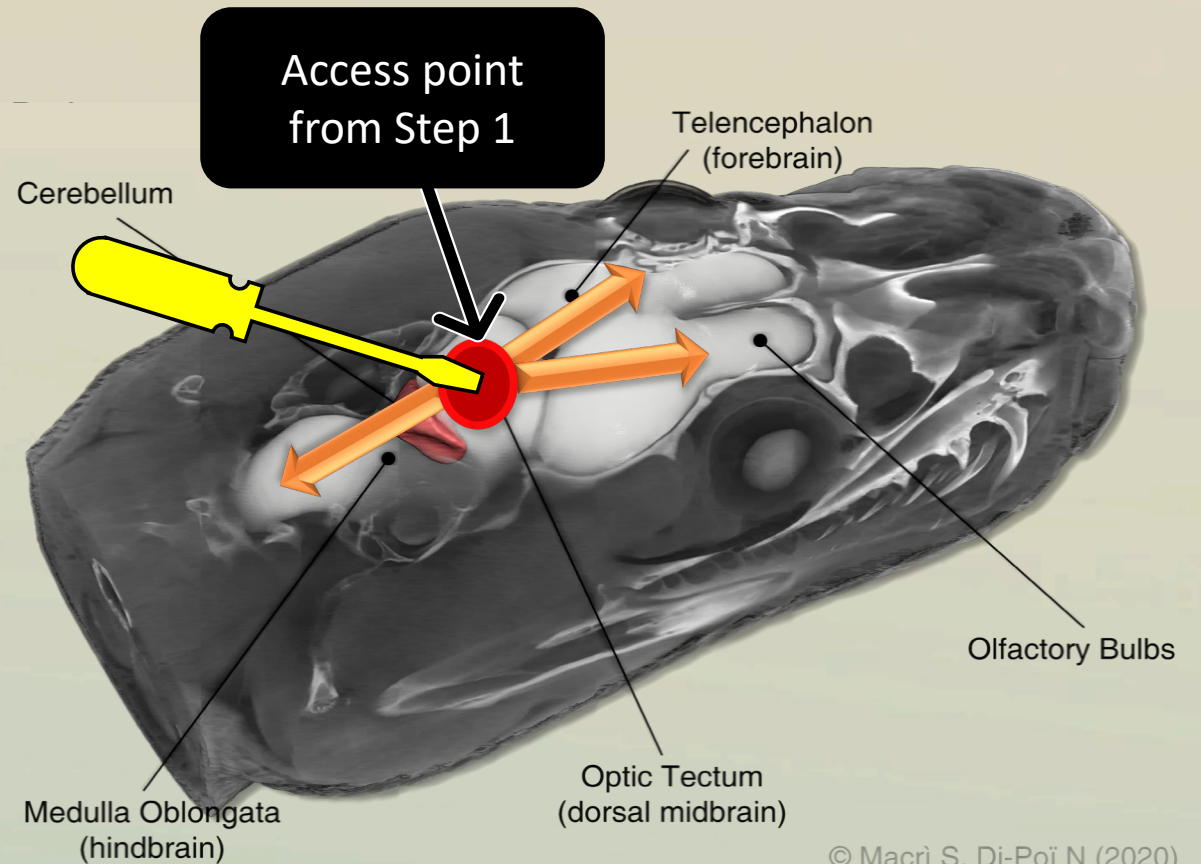


Step 2: Destruction of the brain

Regardless of the tool you choose for Step 1, you should immediately complete the following process of pithing to substantially destroy the brain and humanely kill the python:

Pithing is an additional technique meant to cause death by increasing substantial destruction of the brain and brainstem. The goal is to render the cerebral cortex and brain stem nonfunctional.

- Insert a small rod (a rigid, metal tool like a screwdriver, spike or pick of sufficient length) into the cranial cavity.
- Manipulate the rod using deliberate, multi-directional movement inside the skull, ensuring substantial destruction of the brain.



© Macrì S, Di-Poï N (2020)

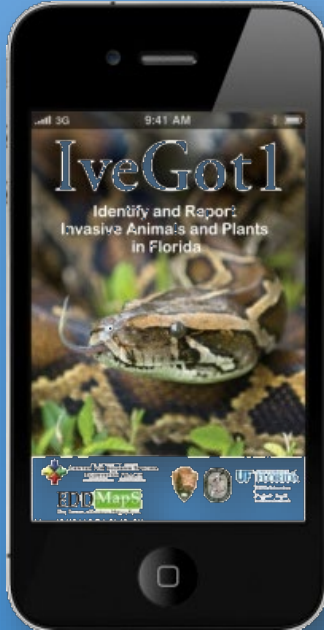
Disposal of the carcass

- Take the carcass with you for disposal.
- Check local waste ordinances.
- Double bag and freeze until waste pickup day.
- It is possible to sell the skin or have the skin tanned.
- Consumption: It's legal but be aware of high mercury levels in past studies.



Report Invasive Species

I've Got 1 App



www.IveGot1.org

EDDMapS Early Detection & Distribution Mapping System

FISP Florida Invasive Species

Home Report Sightings Distribution Maps Species Information Tools & Training My EDDMapS About Login Register

Ive Got 1
Report Invasive Animals and Plants in Florida

Download on the App Store
ANDROID APP ON Google play

Login

Email/Username

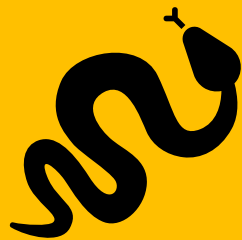
Password

☐ Remember Me

Log In

[Forgot Username or password?](#)

Sign up



Invasive Species Hotline
888-Ive-Got-1
(888-483-4681)



Thank you for attending!

Jan.Fore@MyFWC.com



**Have you seen
something nonnative?
Report your sighting!**

- 1. Take a picture**
- 2. Note the location**
- 3. Report your sighting**

By phone: 888-Ive-Got1 (888-483-4681) **Online:** IveGot1.org
or download the IveGot1 reporting app.

Knowing the distribution of nonnative species
in Florida helps wildlife biologists
plan more effective
management strategies.



MyFWC.com/Nonnatives

