Frogs, Turtles, and Snakes—Oh My!

Welcoming Wildlife to Your Shoreline

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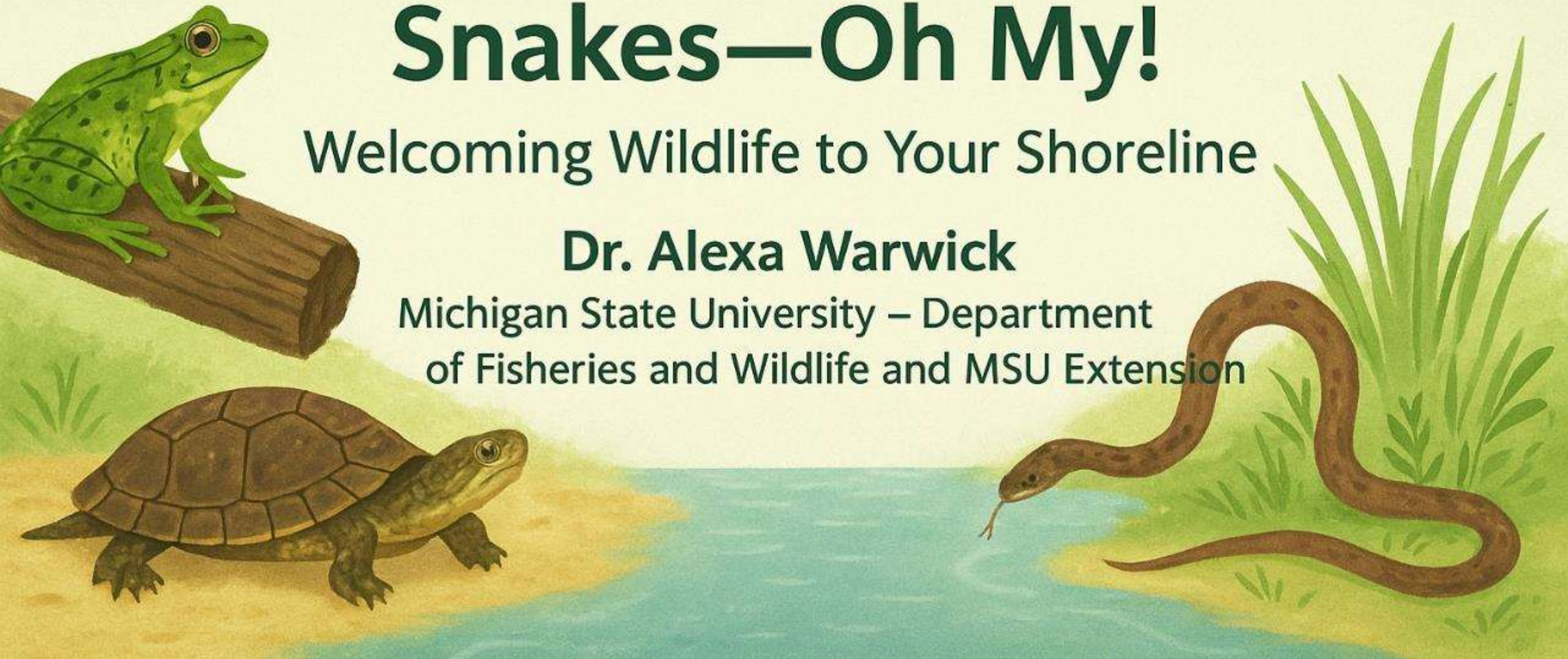

Talk Overview

- Intro to amphibian and reptile species
- Habitat preferences
- How you can help

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- **Intro to amphibian and reptile species**
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What are reptiles and amphibians?

AKA “herpetofauna” or “herps”

HERPETOFAUNA

Reptiles

- Lizards
- Turtles
- Snakes

Amphibians

- Frogs and toads
- Salamanders (includes newts, mudpuppies, etc.)

HERPETOFAUNA

Reptiles

Amphibians

What do they have in common?

Both:

- are vertebrates
- are ectothermic (cold-blooded)
- are found in aquatic and terrestrial habitats
- lay eggs (usually)
- serve as predators and prey
- sensitive to habitat degradation & environmental changes

HERPETOFAUNA

Reptiles

Amphibians

How do they differ?

HERPETOFAUNA

Feature	Reptiles	Amphibians
Skin		
Breathing		
Eggs		
Metamorphosis		
Diet		
Sensitivity		

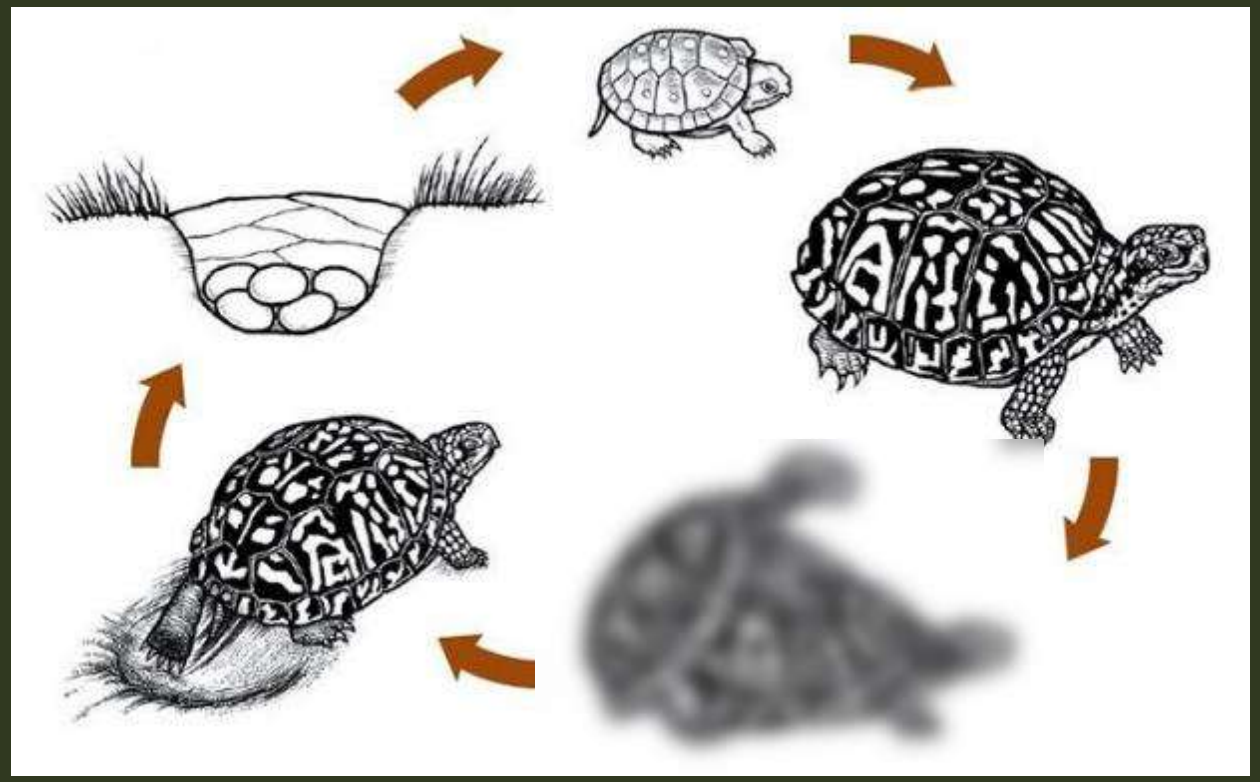
HERPETOFAUNA

Feature	Reptiles	Amphibians
Skin	Dry, scaly, impermeable	Moist, permeable, no scales
Breathing	Lungs only	Gills (larvae), lungs, and skin
Eggs		
Metamorphosis		
Diet		
Sensitivity		

HERPETOFAUNA

Reptiles

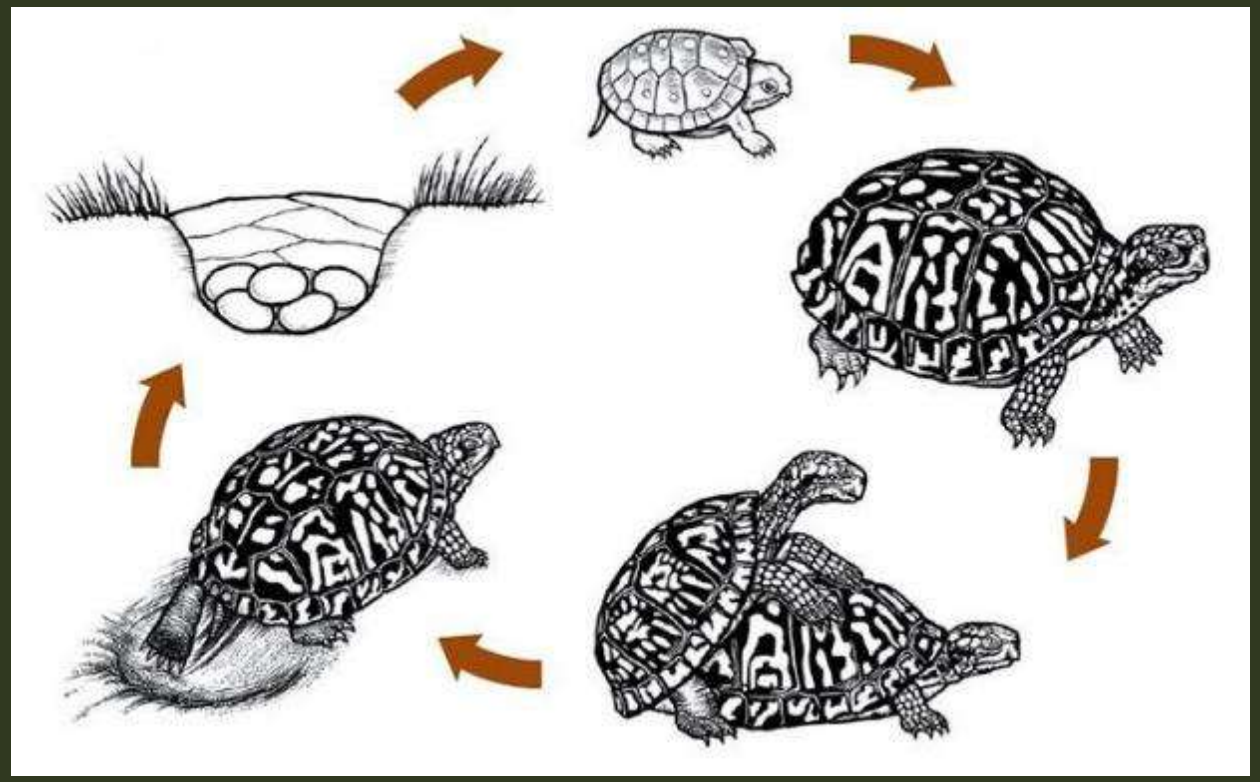
Amphibians



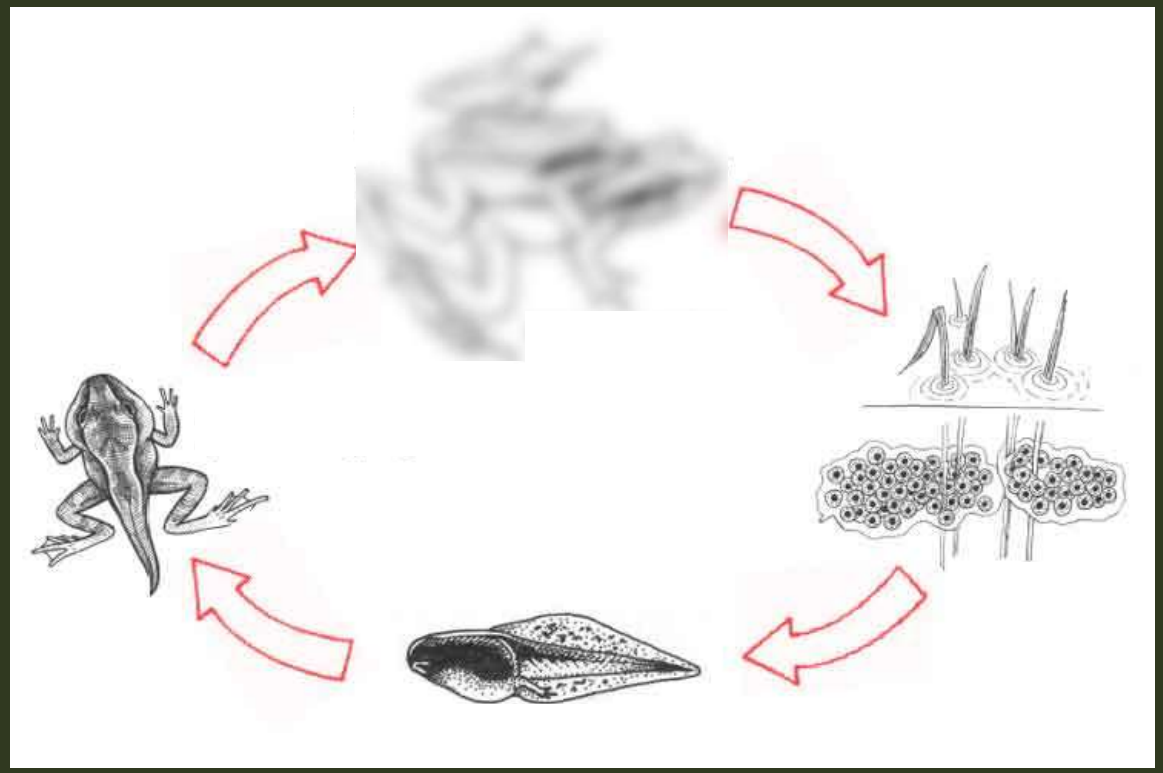
Lifecycle

HERPETOFAUNA

Reptiles



Amphibians



Lifecycle

HERPETOFAUNA

Feature	Reptiles	Amphibians
Skin	Dry, scaly, impermeable	Moist, permeable, no scales
Breathing	Lungs only	Gills (larvae), lungs, and skin
Eggs	Leathery/hard shells*, laid on land *Some have live birth	Jelly-like, laid in water** **Some on land
Metamorphosis	No (hatchlings resemble adults)	Yes*** (e.g., tadpole to frog) ***Some skip larval stage
Diet		
Sensitivity		

HERPETOFAUNA

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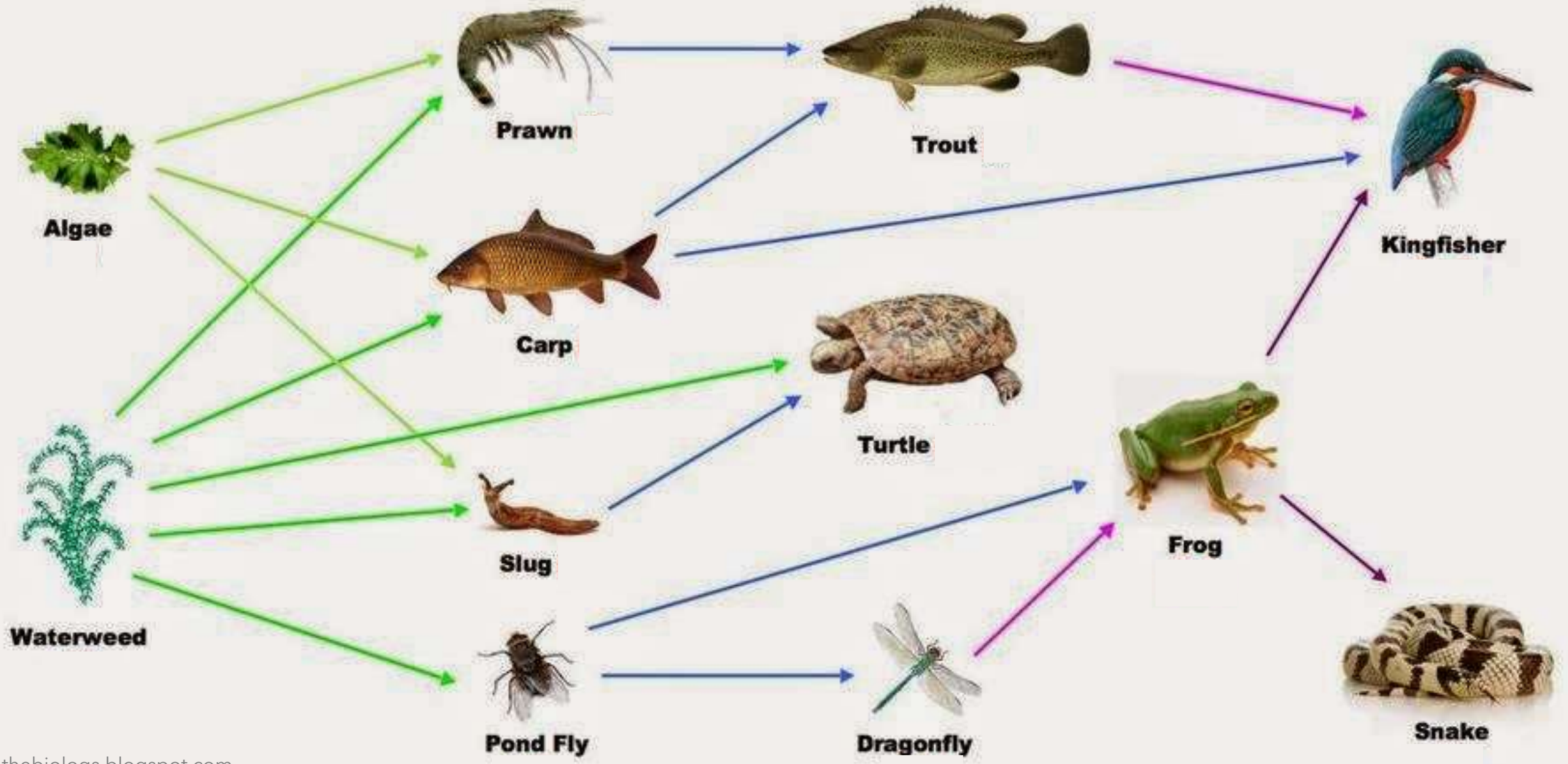
Eggs	Leathery/hard shells*, laid on land	Jelly-like, laid in water**
Metamorphosis	No (hatchlings resemble adults)	Yes*** (e.g., tadpole to frog)
Diet	Carnivore (snake, lizard), omnivore (turtle)	Vegetarian (larvae), carnivore (adult)
Sensitivity	More resistant short-term	Highly sensitive short-term

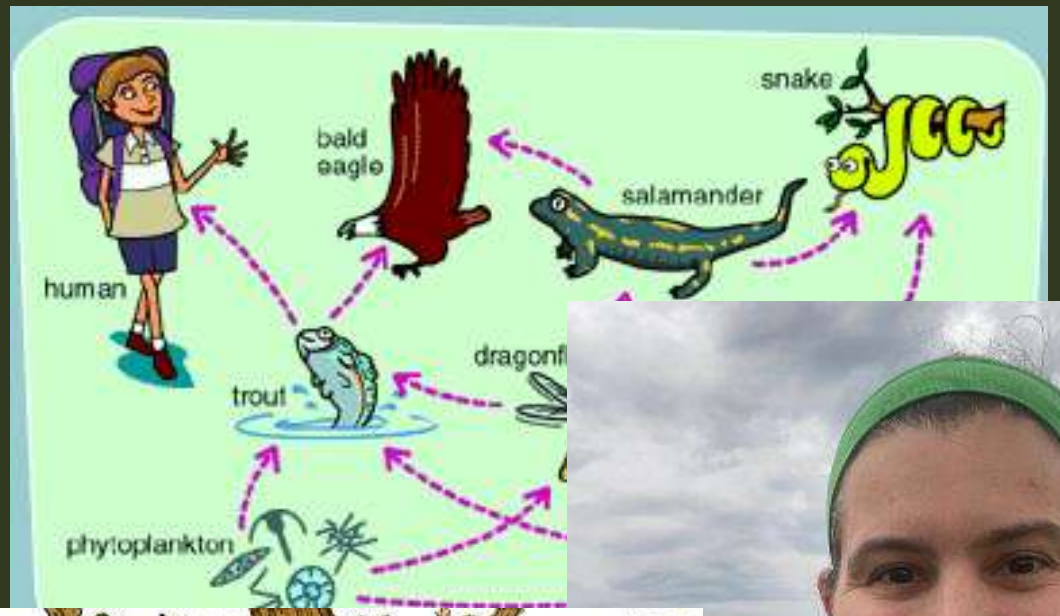
Why do we care about herps?

Important to the food web



Why herps matter

- Ecosystem role
  - Control pests (insects, rodents)
  - Prey for birds, mammals, fish
  - Transfer nutrients between habitats
- Environmental indicator
- Cultural and scientific value
- Conservation urgency



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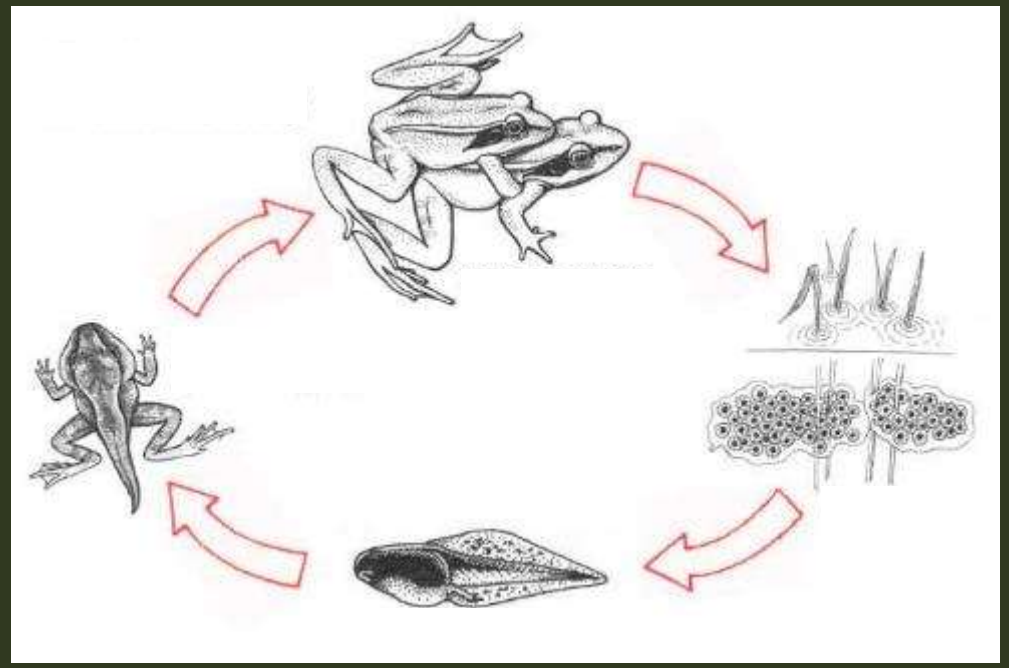
- **Habitat preferences**
- How you can help

Amphibian Activity	Habitat Need

Amphibian Activity	Habitat Need
Frogs and salamanders breeding / feeding (spring/summer) • *Blanchard's cricket frog*	• **Access to water** (gentle slope, low water level at entry, vegetation) • **Aquatic structure** (emergent and *submergent* vegetation) • **Good water quality** • **Limited human disturbance**




Cable Natural History Museum
Northwoods Frog Call Phenology
www.cablemusum.org
March
April
May
June
July
August
Wood Frog
Boreal Chorus Frog
Spring Peeper
Northern Leopard Frog
American Toad
Gray Treefrog
Green Frog
American Bullfrog
https://youtu.be/CVi_0DHOUoY

MI Frog Call Phenology

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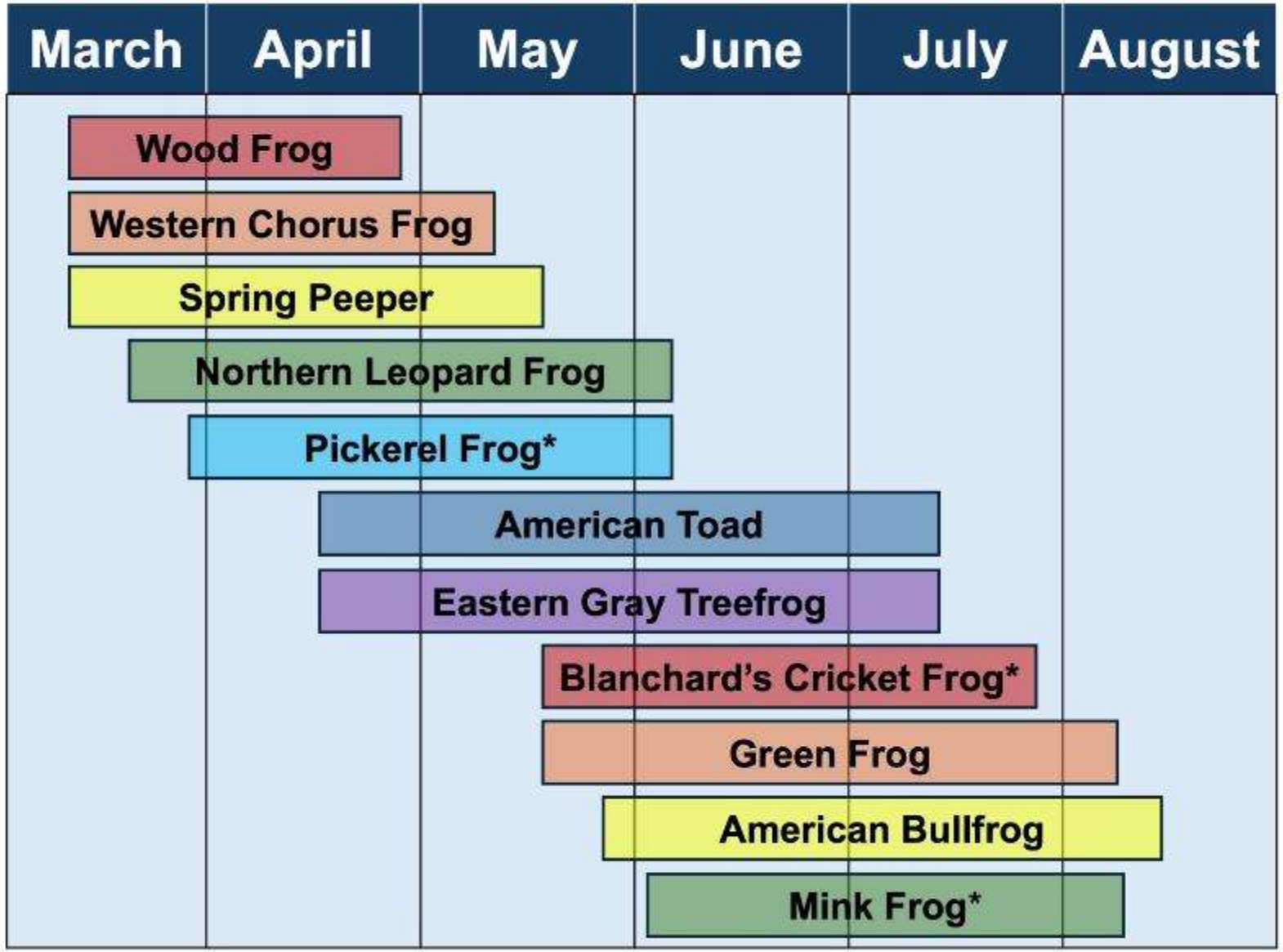

* Rare species

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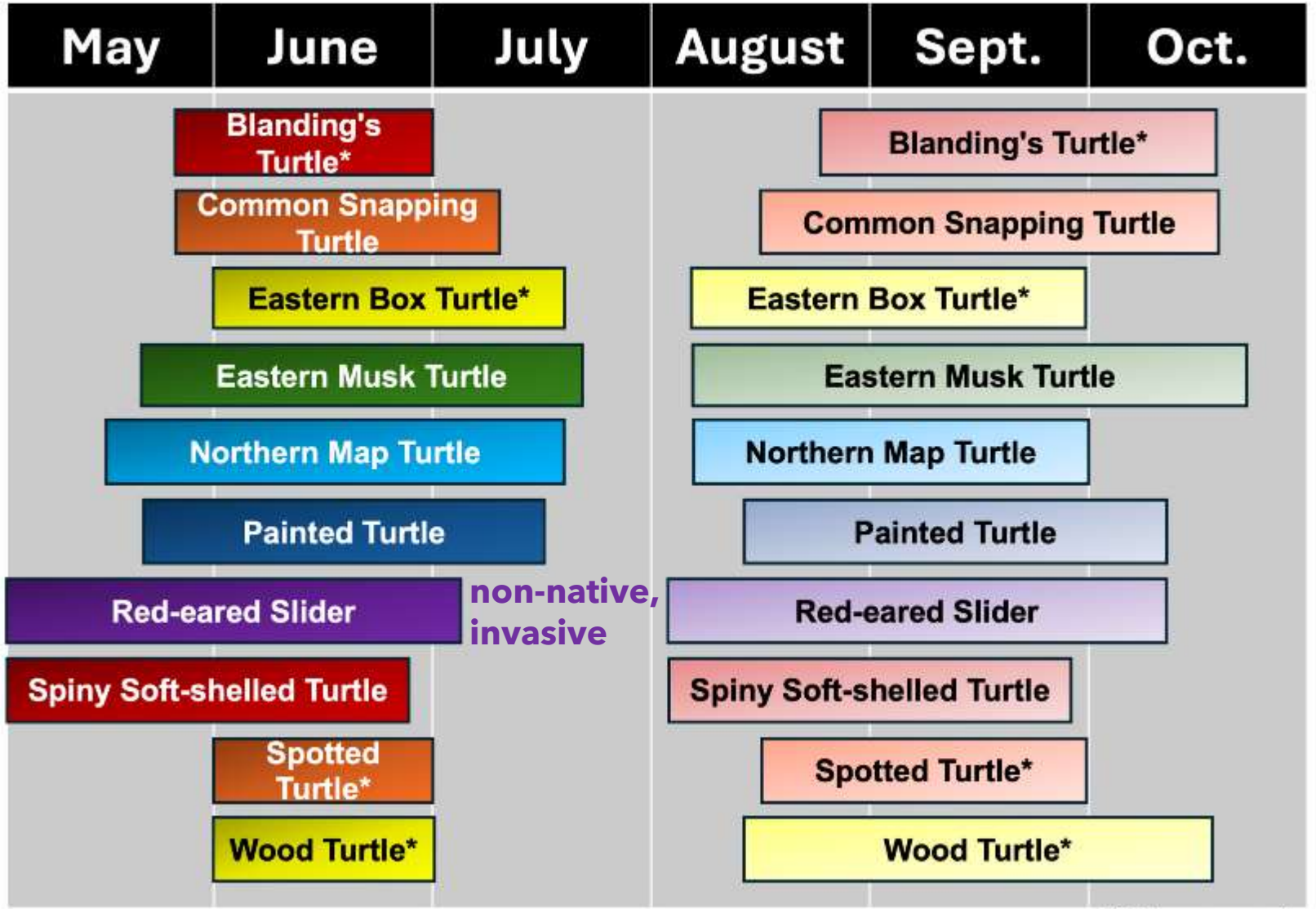
Frogs surviving over winter • *Blanchard's cricket frog*	• **Native vegetation on shoreline** • *Crayfish burrows*
Frogs basking for temperature regulation	• **Sunny spots - logs** (aquatic) and shrubs/natural vegetation
Salamanders feeding / hiding • *Mudpuppy (fully aquatic)*	• **Aquatic structure** (rocks, logs, vegetation) • **Limited human disturbance** (*release if caught while fishing*)

Reptile Activity	Habitat Need
Turtles and snakes basking for temperature regulation • *Copperbelly watersnake*	• **Sunny spots - logs** (aquatic) and shrubs/natural vegetation, horizontal branches • *Button bush*
Turtles and snakes feeding	• **Access to water** (gentle slope etc.)
Snakes surviving over winter	• **Native vegetation on shoreline**

Turtle Nesting & Hatching Phenology



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Shoreline Species

Reptiles

- **Turtles:** Painted, Snapping, Eastern Musk, Northern Map Turtle, Red-eared Slider, E. Spiny Softshell, Blanding's, E. Box Turtle (edge only)
- **Snakes:** Northern Watersnake, Garter, Ribbon, Dekay's Brown, Copper-belly Watersnake*
  - If sedge meadows/fens may find Eastern Massasauga Rattlesnake*

Amphibians

- **Frogs:** Green, Bull, Blanchard's Cricket*, American Toad, Gray Treefrog, N. Leopard, Pickerel*, Mink* (UP only)



- **Salamanders:** Mudpuppy, E. Newt

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Summary of Habitat Features:

- **Gently sloping access to water, low water level at entry**
  - Remove seawalls and riprap
  - Limited water movement and human disturbance
- **Emergent and submergent aquatic vegetation**
- **Logs for basking**
- **Use native/natural shoreline vegetation**
  - Reduce impervious surfaces
  - Eliminate / reduce lawns and mowing
- **Eliminate chemical use** (fertilizers, pesticides) **and runoff**
- **Attract crayfish and other invertebrates** (aquatic plants, rocks, good water quality)

Other ways you can help:

- Never release pets and/or non-native herps into the wild
- Never buy wild native caught herps from pet sellers
- Clean your gear in between sites (avoid disease spread)
- Protect turtles from egg predators (e.g., raccoons)
- Report observations of wild herps (need photo, location):
  - MI Herp Atlas
    - https://miherpatlas.org/
  - MNFI Rare Species Form
    - https://mnfi.anr.msu.edu/species/report

Thank you!

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Q&A
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