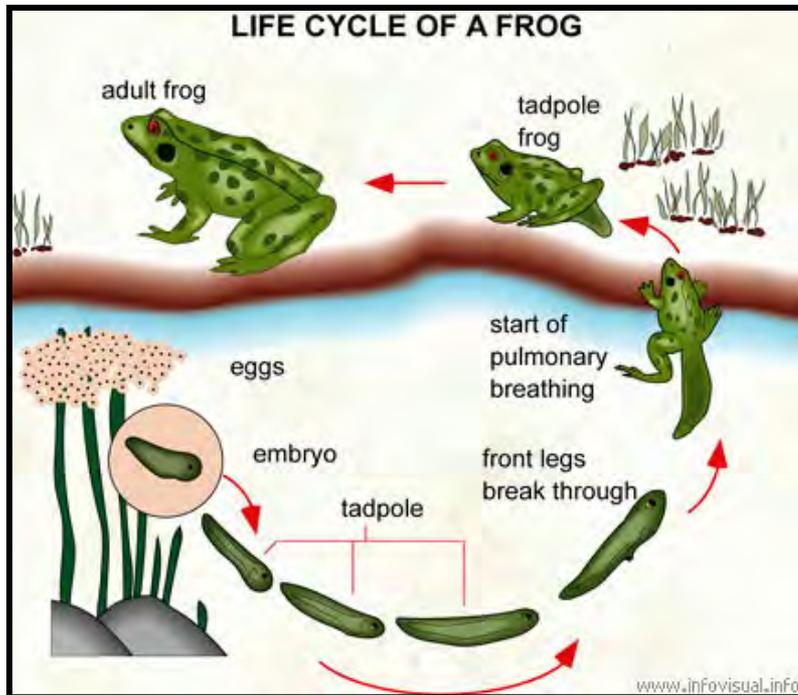


Amphibians
of the
Coconino National Forest

Threats to Frogs and Their Habitats:

Pollution
Wetland Destruction or loss
Global climate Change
Invasive species
Disease and parasites



DID YOU KNOW?

- ✓ Of all groups of vertebrate animals, amphibians face the most threat of extinction.
- ✓ Since 1980, 122 species of amphibians are known to have disappeared.
- ✓ Nearly a third of all the amphibian species in the world are facing extinction.
- ✓ On the Red Rock Ranger District, one quarter of the frog and toad species (4 of 12) have declined enough to warrant protection by various agencies special status listings.

Characteristics of Amphibians

- Amphibians breathe through:
 - gills (as larvae and some adults)
 - lungs (adults)
 - skin (adults)
- Eggs metamorphose into larvae
 - Called tadpoles in frogs and toads
 - Called waterdogs in salamanders
- Larvae are aquatic, most adults are terrestrial
- Larvae metamorphose (absorb gills and tail, grow lungs and legs)
- Lay eggs in the water; larvae live in water; adults live on land, but then return to water to lay their eggs
- Adult skin is scaleless, moist, and allows oxygen exchange



Salamanders Vs. Frogs & Toads

Salamanders

- Larvae have external gills
- Adults retain their tails and some adults retain their gills
- Adults walk on all fours like lizards
- Strange adaptations:
 - Some larvae capable of breeding (neotenic)
 - Some larvae never transform (paedomorphic)
 - Some adults retain their gills and are aquatic
 - Some adults are lungless

Frogs & Toads

- Larvae have internal gills
- Tails are absorbed as the legs develop
- Adults hop
- Strange adaptations:
 - Some adults are poisonous



Frogs Vs. Toads

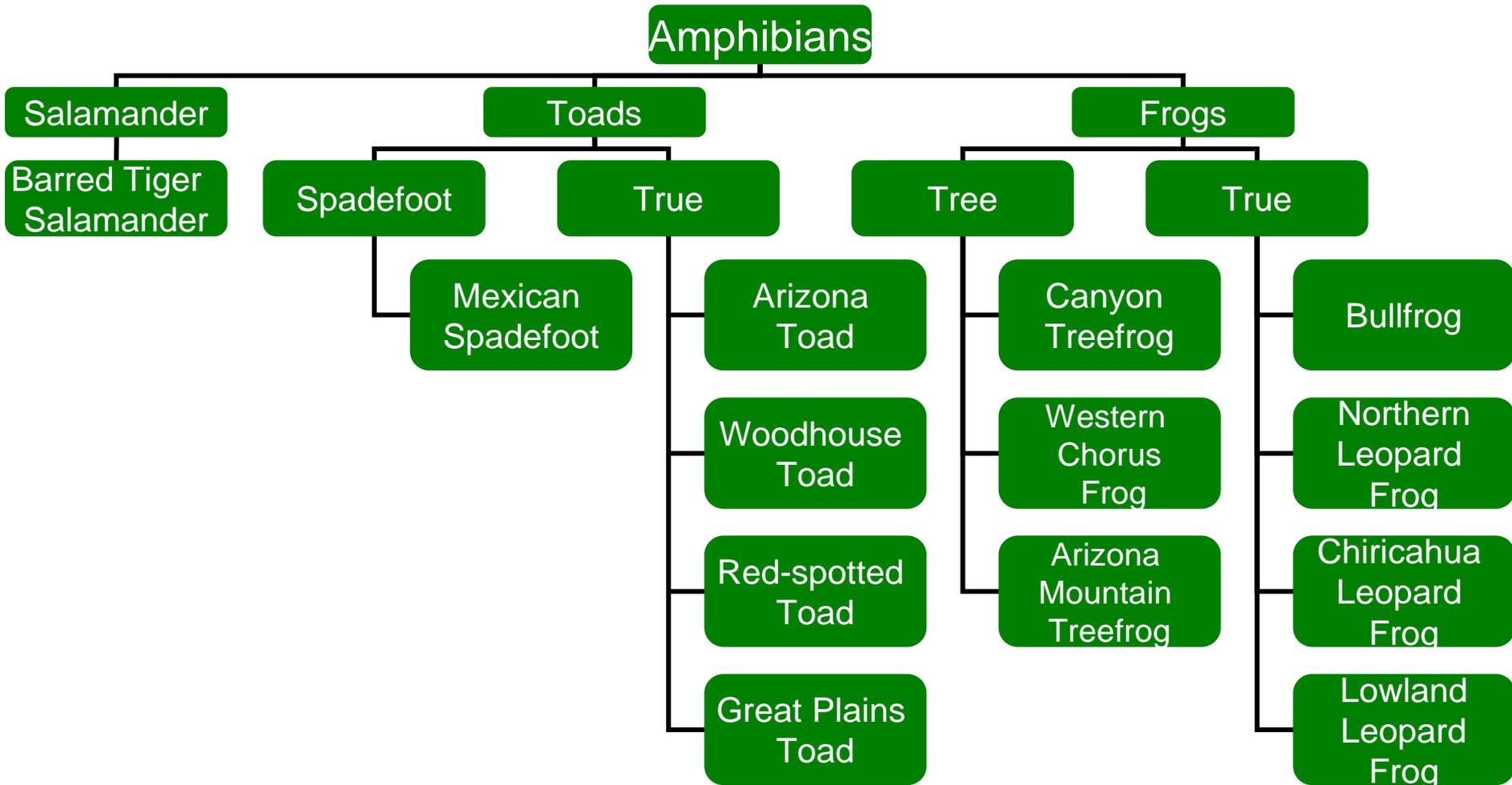
Frogs

- Skin is smooth and moist
- Adults have slender build
- Long hind legs - excellent jumper
- Spends life in and around water
- No parotid glands

Toads

- Skin is rougher, bumpier, and drier
- Adults have chunkier bodies
- Short hind legs - clumsy jumpers
- Spend more time on land returning to water only to breed
- Have parotid glands behind ears

Amphibians of the Verde Valley



Salamanders

Barred Tiger Salamander
Ambystoma mavortium nebulosm

***Found on these districts: Red
Rock, Mogollon Rim, Peaks***



Spadefoot Toads



Mexican spadefoot- *Spea multiplicata*

***Found on these districts: Red
Rock, Mogollon Rim, Peaks***

Photo © Gary Nafis



Red-spotted toad - *Anaxyrus punctatus*
**Found on these districts: Red Rock,
Mogollon Rim, Peaks**

Photo © Randy Babb



Great plains toad- *Anaxyrus cognatus*
**Found on these districts: Red Rock,
Mogollon Rim, Peaks**

Photo © Randy Babb



Arizona toad- *Anaxyrus microscaphus*
USFS SENSITIVE
**Found on these districts: Red Rock,
Mogollon Rim, Peaks**

Photo © Randy Babb



Woodhouse's toad- *Anaxyrus woodhousii*
**Found on these districts: Red Rock,
Mogollon Rim, Peaks**

Toads



Arizona treefrog-*Hyla wrightorum*

**Found on these districts: Red Rock,
Mogollon Rim, Peaks**



Canyon tree frog-*Hyla arenicolor*

**Found on these districts: Red Rock,
Mogollon Rim, Peaks**

Treefrogs



Western chorus frog

Pseudacris triseriata

**Found on these districts: Red Rock,
Mogollon Rim, Peaks**



Chiricahua leopard frog

Lithobates chiricahuensis

**Found on the following districts:
Only extant population on Red
Rock RD. Historically, all districts
on forest**



Northern leopard frog

Lithobates pipiens

**Found on the following districts:
Red Rock, Mogollon Rim, Peaks**

Lowland leopard frog

Lithobates yavapaiensis

**Found on the following
districts: Red Rock RD.**



True Frogs

True Frogs, continued



Bullfrog-*Lithobates catesbeiana*

NON-NATIVE

***Found on these districts: Red Rock,
Mogollon Rim, Peaks***