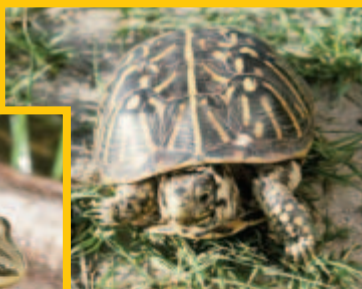


# Quick Key to AMPHIBIANS and REPTILES of Colorado

*Colorado Herpetofaunal Atlas*



## *What is the Colorado Herpetofaunal Atlas?*

It is a Web-based atlas that compiles and displays information on the distribution and abundance of amphibians and reptiles throughout Colorado.



## *Why is the Colorado Herpetofaunal Atlas important?*

The current distribution, abundance, and population trends of many salamander, frog, toad, turtle, lizard, and snake species in Colorado are poorly known. Some species appear to be declining, but there isn't enough information to determine whether the decline is cause for alarm or simply part of a natural fluctuation pattern.

The atlas Web site allows scientists—and the public—to document their observations of amphibians and reptiles. After being verified by an experienced herpetologist, these observations are added to the Web site database and help create statewide distribution maps for each species.

## *How can I get involved?*

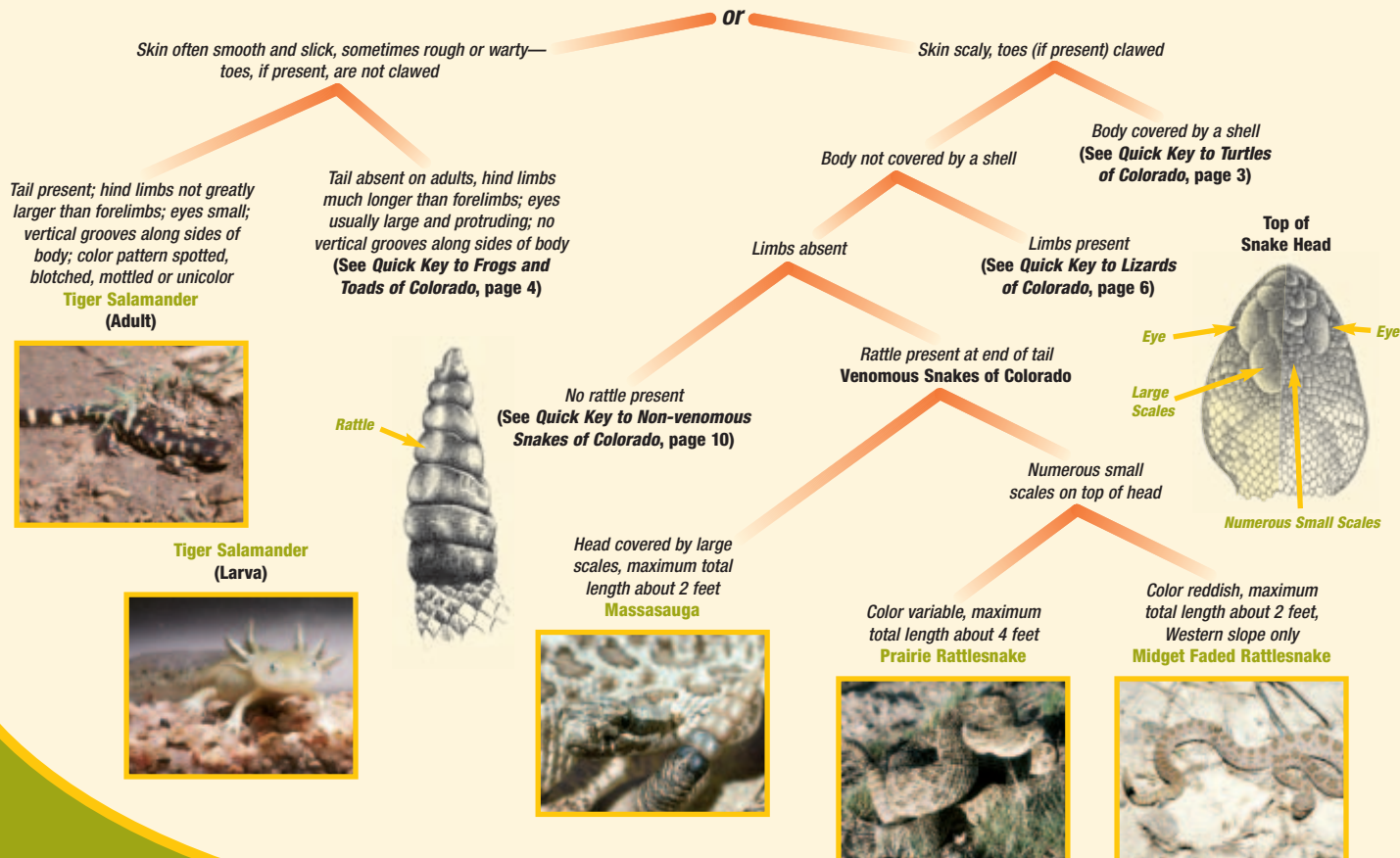
The Atlas' success depends in large part on volunteers. To register as an observer, go to the Web site (<http://ndis.nrel.colostate.edu/herpatlas/coherpatlas>) and obtain an Observer Identification Number (OIN). Also, introductory field orientations are periodically offered around the state. These sessions include an introduction to the atlas Web site, hands-on field training, and how to document and submit herpetofaunal observations. To learn more, or to schedule a field session, contact Tina Jackson at [tina.jackson@state.co.us](mailto:tina.jackson@state.co.us) or call 719-227-5237.

## *How do I use this key to the Colorado Herpetofaunal Atlas?*

This key contains paired statements describing adult reptiles and amphibians. Drawings highlight important identifying characteristics to look for on the animal. Composite drawings combine the features of several animals.

Beginning with the first pair of statements, choose the statement that best matches your specimen. Follow the red line to the next pair of statements. Continue to choose the description that most closely matches the animal until you reach a species name and photo. You can confirm your identification using the Web site, which has additional photographs, species descriptions, sound files of species calls, and ecological information. If you find an animal that doesn't fit any description found in this key, it may be introduced to the state, an exotic, non-native species or even a juvenile or color variant of a native species. If possible, take a picture of the animal to submit to the atlas Web site for identification. Photos depicted with **orange** borders and species names have not been seen in Colorado for decades. If you find one of these animals, report your observation immediately and document the location and identification of the animal with photographs.

# Quick Key to AMPHIBIANS and REPTILES of Colorado



# Quick Key to TURTLES of Colorado

Carapace (upper shell) hard, covered by rigid, horny plates,  
five claws on forefeet

or

Carapace flat and leathery, with row of raised tubercles  
(bumps) on leading edge, three claws on forefeet, elongated snout  
**Spiny Softshell Turtle**

Yellow line down middle of the back and  
other conspicuous yellow lines radiating on  
carapace, plastron (lower shell) has distinct  
hinge, primarily found on land (terrestrial)

**Ornate Box Turtle**

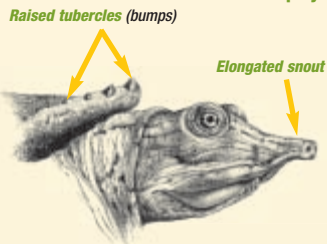


No conspicuous yellow lines on upper shell

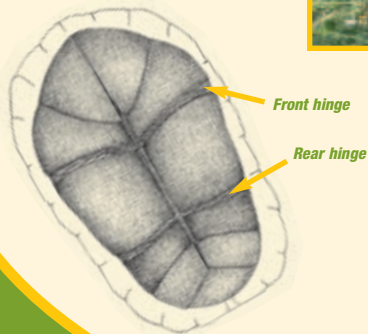
Carapace mostly greenish,  
plastron orange or red,  
head with yellow streaks  
**Painted Turtle**



Carapace mostly brownish:  
no yellow streaks on head



**Double-hinged Plastron**



Carapace lacking saw-toothed rear  
margin, plastron double-hinged  
**Yellow Mud Turtle**

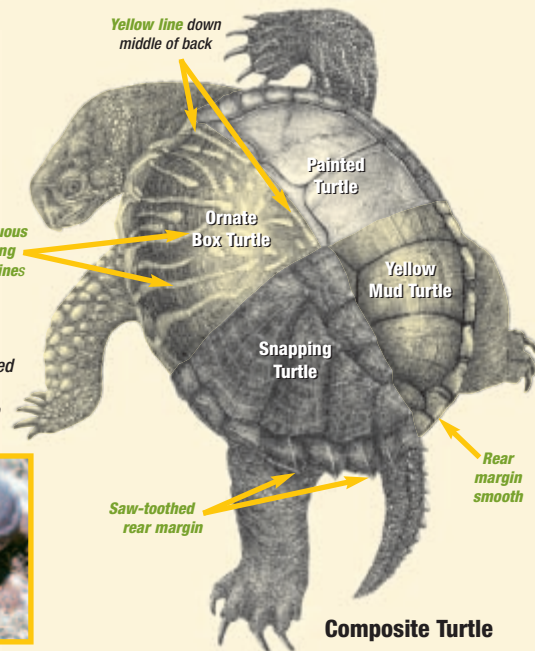


Carapace with saw-toothed  
rear margin, plastron  
small and lacking hinge  
**Snapping Turtle**



Yellow line down  
middle of back

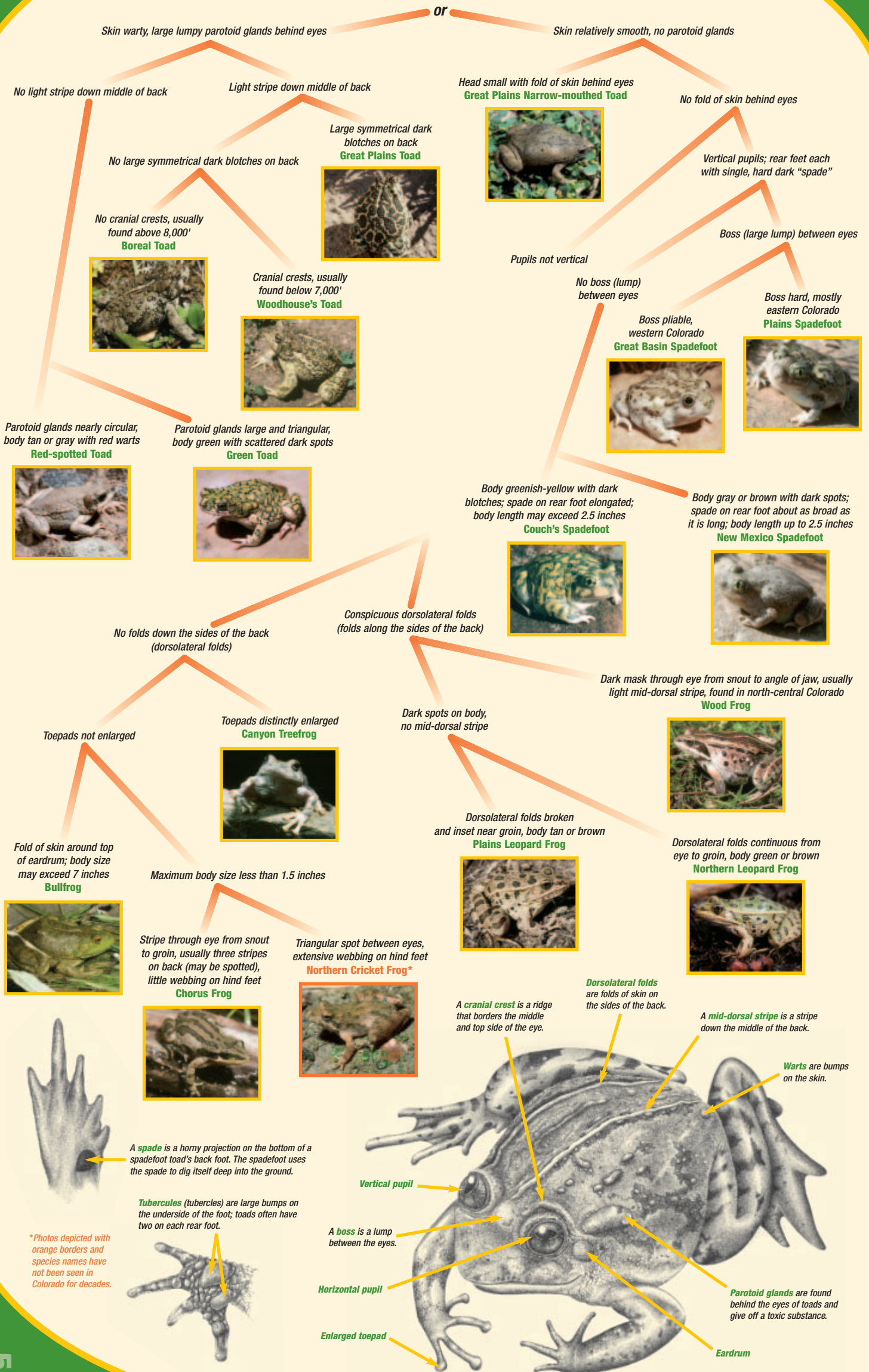
Conspicuous  
radiating  
yellow lines



**Composite Turtle**



# Quick Key to FROGS and TOADS of Colorado



Composite Frog/Toad

# Quick Key to LIZARDS of Colorado

or

Horn-like spines on back of head

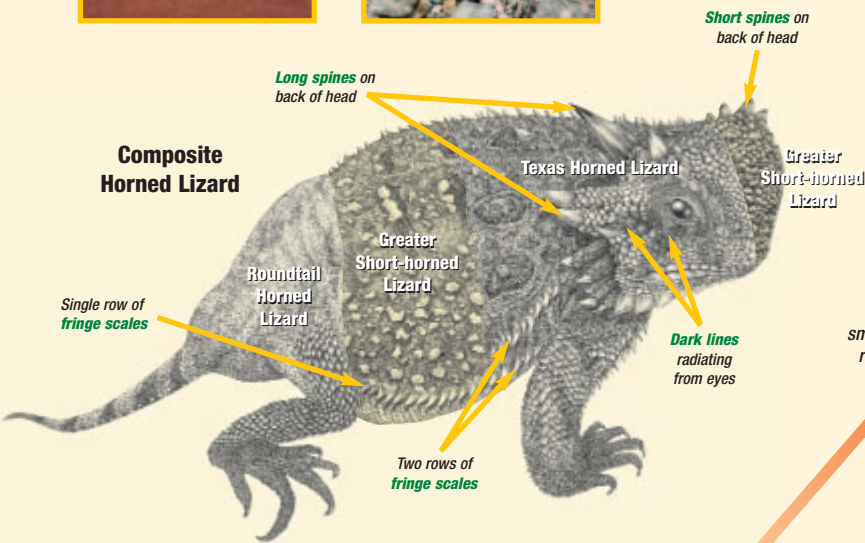
No horn-like spines on back of head

Short spines on back of head, no dark bars radiating from eyes

Long spines on back of head, two rows of fringe scales on sides of body, dark bars radiating from eyes  
**Texas Horned Lizard**

No fringe scales on sides of body  
**Roundtail Horned Lizard**

Single row of fringe scales on sides of body,  
**Greater Short-horned Lizard**



Scales variable, but not very shiny

Rear margin of each scale on back pointed

Scales on back rounded and granular

Scales on back smooth and shiny with rounded rear edges

Continued from this point on page 8

Individual scales clearly black and cream, total length to 13.75 inches  
**Great Plains Skink**

Black wedge-shaped mark on side of neck, up to 13 inches total length  
**Desert Spiny Lizard**

Longitudinal stripes down length of very slender body, total length to about 7.75 inches



Usually has light stripe along each side of back contrasting strongly with brown body and dark stripes; occurs south and west of Arkansas River  
**Variable Skink**

Body tan with several dark stripes; occurs north and east of Arkansas River  
**Many-lined Skink**



No black wedge-shaped mark on neck

Keeled scales on rear of thigh, dorsal color variable  
**Prairie Lizard/Plateau Lizard Complex**

Granular scales on rear of thigh, black bar usually present on shoulder  
**Sagebrush Lizard**



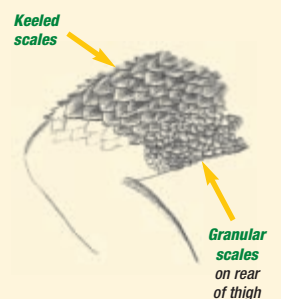
Found in central and southeastern Colorado

Found in eastern Colorado



Found in western Colorado

Primarily found in Archuleta County, Colorado



# Quick Key to LIZARDS of Colorado

(See previous page for Horned Lizards, Skinks, and Spiny Lizards)

or

External ear openings visible

No ear opening

No external ear openings  
Lesser Earless Lizard



Distinct neck between head and body,  
no large and rectangular belly scales

No distinct neck between head and  
body, large and rectangular belly scales

Dark collar-like mark on neck  
Eastern Collared Lizard



Stripes running length of body,  
no spots or checkered pattern

No dark collar-like  
mark on the neck

Found on western slope  
Plateau Striped Whiptail



Found on eastern slope  
Six-lined Racerunner



Conspicuous brown spots on back  
Long-nosed Leopard Lizard



No conspicuous brown  
spots on back

Checkered pattern

Scales down middle of back  
not enlarged; black spot  
on chest behind foreleg  
Side-blotched Lizard



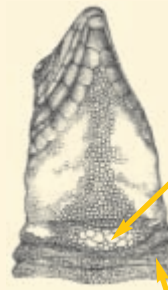
Row of enlarged scales  
down middle of back  
Ornate Tree Lizard



Scales in front of gular fold not abruptly  
enlarged; occurs on Western Slope  
Western Whiptail



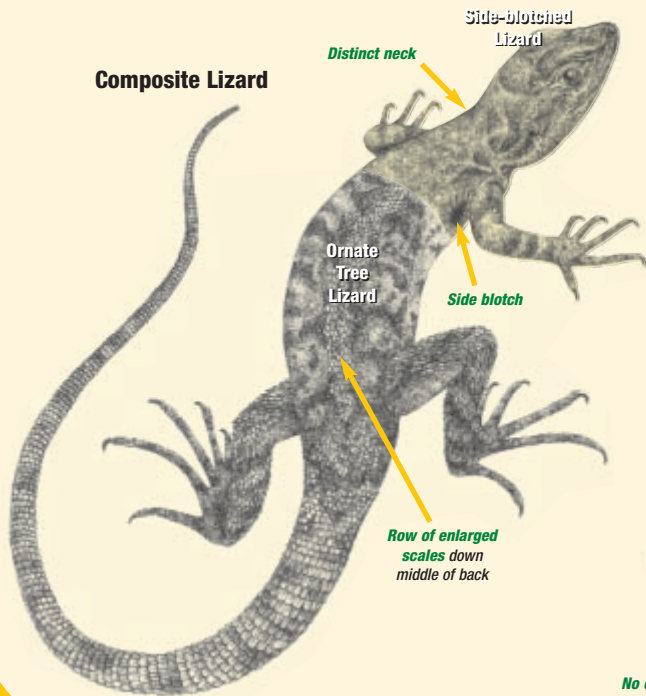
Scales in front of  
gular fold abruptly  
enlarged; occurs on  
Eastern Slope



Gular fold

Scales  
abruptly  
enlarged

Composite Lizard



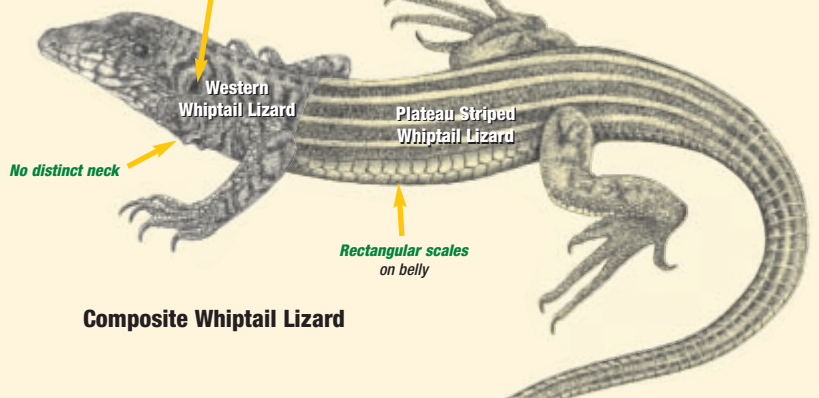
One or two complete stripes  
down center of back; more  
checkered appearance; back of  
thigh spotted or reticulated  
Diploid Checkered Whiptail



Single stripe down center of back  
(stripe may be incomplete); less  
checkered appearance; unbroken,  
irregular pale streak on posterior  
surface of one or both thighs  
Triploid Checkered Whiptail



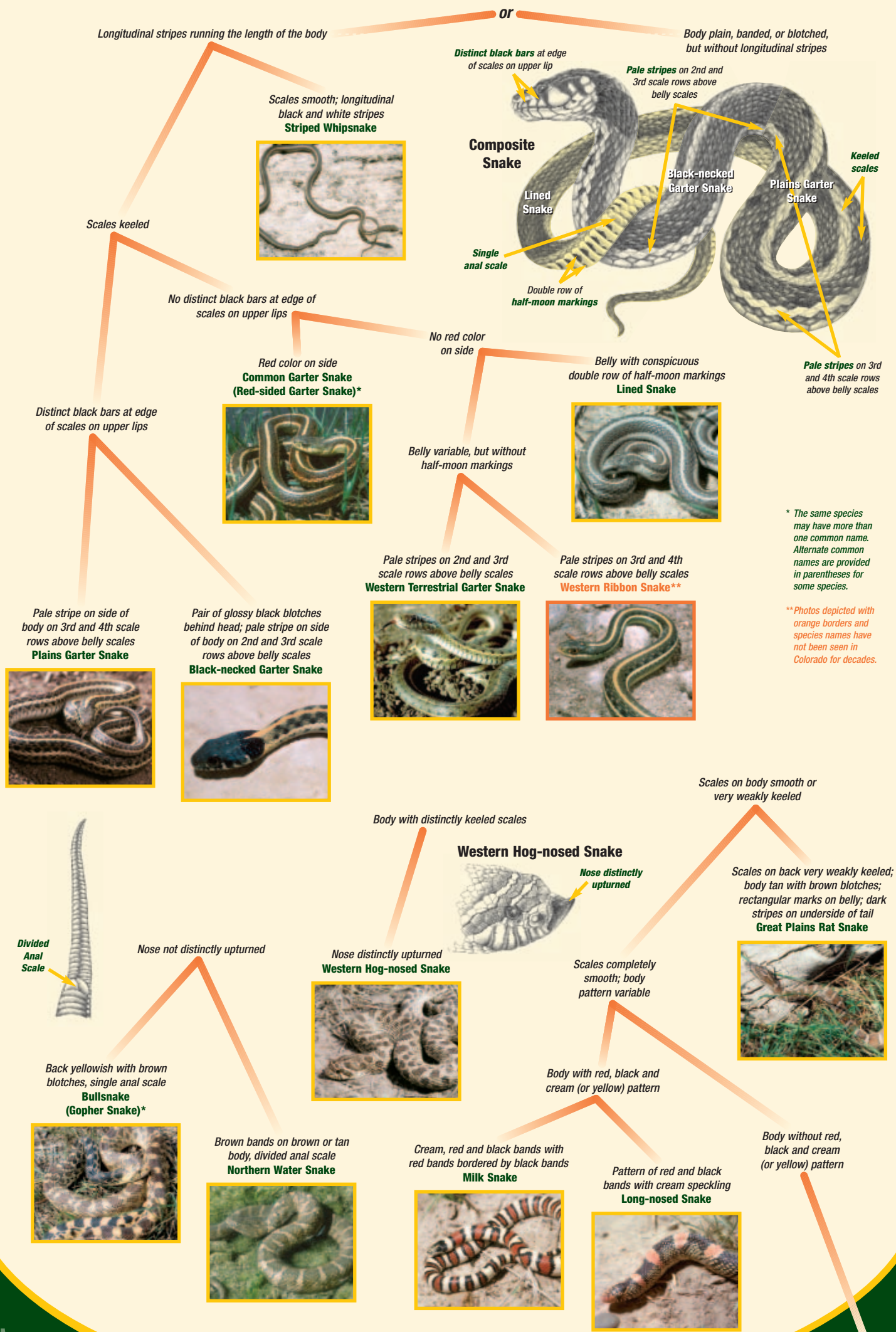
External ear  
opening



Composite Whiptail Lizard

# Quick Key to NON-VENOMOUS SNAKES of Colorado

(See page 2 for Key to Venomous Snakes)



\* The same species may have more than one common name. Alternate common names are provided in parentheses for some species.

\*\*Photos depicted with orange borders and species names have not been seen in Colorado for decades.

Continued from  
this point on page 12



# Quick Key to NON-VENOMOUS SNAKES of Colorado

or

No pattern of brown blotches on paler background

Pattern of brown blotches on paler background

Tan body, black head, adults less than 15 inches

Body and color varies, adults larger than 15 inches

Vertical pupils, divided anal scale, small size  
**Night Snake**

Single anal scale; length to 56 inches  
**Glossy Snake**

Eastern slope  
**Plains Black-headed Snake**



Western slope  
**Southwestern Black-headed Snake**



No black and white bands and no black with white speckling

Pattern of black and white bands or black with white speckling  
**Common Kingsnake (California Kingsnake)**  
**(Speckled Kingsnake)**



Tail resembles braided whip; adults large (to 80 inches), color variable  
**Coachwhip**



Tail plain; not resembling braided whip

Olive body with orange ring around neck  
**Ring-necked Snake**



No olive body with orange ring around neck

Worm-like appearance, dorsal and ventral scales about the same size, vestigial eyes  
**Texas Blind Snake (Texas Threadsnake)\***



Body not worm-like in appearance

Body variable (orange, brown, or gray), often with dark saddles; maximum total length about 15 inches  
**Ground Snake**

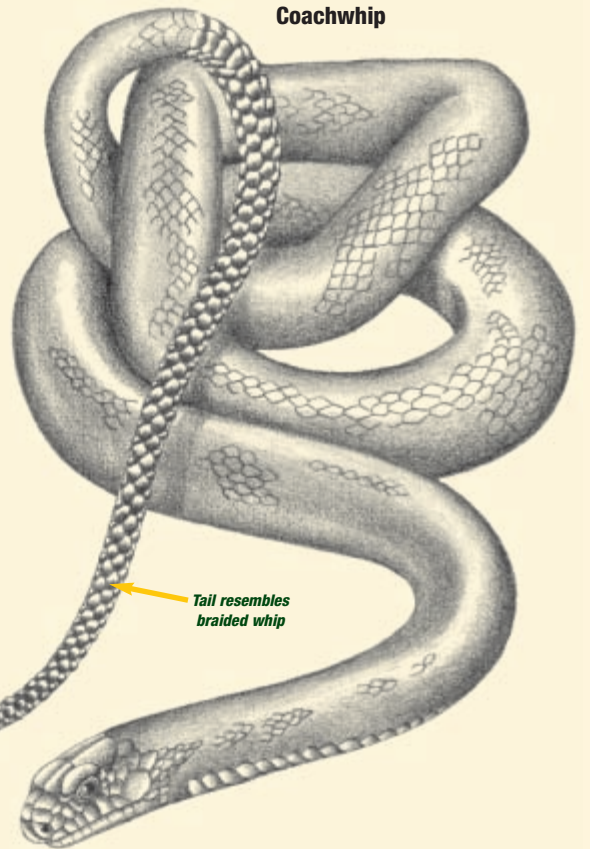


No dark saddles on dorsum, maximum length exceeds 15 inches

Greenish body with yellow or cream belly; nostril centered between two separate scales  
**Racer**



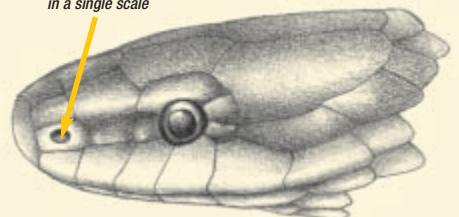
Body bright grass green; nostril centered in a single scale  
**Smooth Green Snake**



**Coachwhip**

Tail resembles braided whip

Nostril centered in a single scale

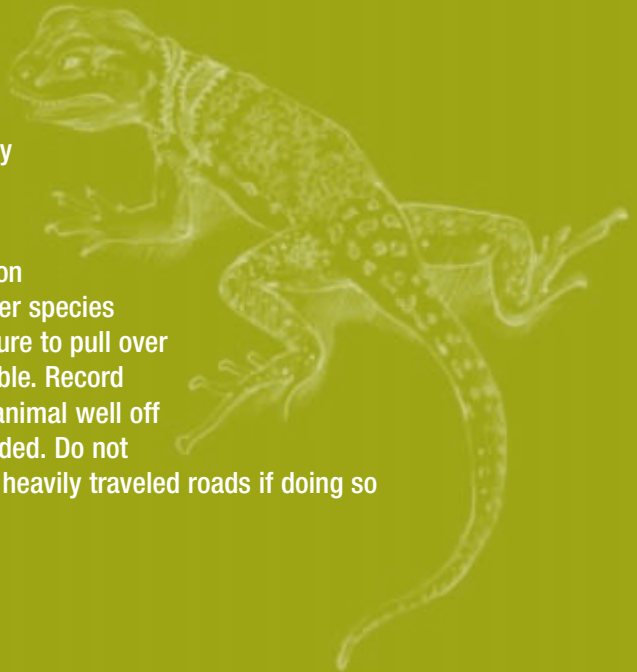


**Smooth Green Snake**

\* The same species may have more than one common name. Alternate common names are provided in parentheses for some species.

## ***How to Observe Reptiles and Amphibians***

- Learn to recognize venomous snakes and observe them from a safe distance.
- Be gentle on the animals and their habitat. Do not trample amphibian breeding sites.
- Use caution when lifting or turning objects to find animals. If possible, wear protective gloves. If you remove animals from under rocks or logs, place the objects back in their original positions and then release any animals you captured next to the object. The microhabitats under these objects are used by many kinds of organisms; it may take years to develop suitable conditions for some of them.
- Do not collect live specimens unless you are working on a specific research project and have the necessary scientific collection permit from the Colorado Division of Wildlife. Instead, take photographs of the animals you find. Specimens collected as road kills can be donated (with data noting location and date of collection) to the University of Colorado Museum in Boulder.
- Do not move animals from one location to another. Do not release pets or other individuals that have been in captivity for an extended period of time or held with other animals. Some of the possible results of translocating animals or releasing captives include: death of animals released in unsuitable habitat, disruption of populations that are genetically adapted to local conditions, transmission of disease, harm to native wildlife, and confusion of the natural distribution of the released species.
- Clean your nets, boots, and other gear with a 10% chlorine bleach solution between surveys to reduce the possibility of inadvertently transferring pathogens from one location to another.
- Be careful not to create a traffic hazard on roads. If you find a snake, turtle, and other species on a road and can safely remove it, be sure to pull over to the side and park off the road if possible. Record your observation data, then release the animal well off the road on the side to which it was headed. Do not stop or attempt to retrieve animals from heavily traveled roads if doing so would endanger you or other motorists.



## *Tips for Conducting Herpetofaunal Surveys*

- Always bring plenty of **data sheets** (download from Web site) with you into the field to record information. Good science does not rely on memory!
- It's essential that you know where you are. Take the time to find your survey site on a topographic map. You can print one from the distribution maps on the Web site.
- Visit a site at different times of the year and under different weather conditions, and try to visit a site in different years. By doing multiple surveys, you increase your chances of finding most of the species that occur in the area and you can also document year-to-year changes.



## *Essential Information for Every Observation*

- **Precise location.** One of the primary purposes of this project is to determine the geographic distribution of Colorado's herpetofauna, so observations without location information are almost useless. Mark the location of your observation on a topographic map. You can get longitude, latitude, elevation and Township/Range/Section information directly from the map. If possible, obtain **UTM** (Universal Transverse Mercator) coordinates using a global positioning system (GPS). As a cross-check on this information, or if you do not have a GPS unit, please record a written description of the location (plus the county name). You really can't record too much information on the location.
- **Date.** Observation dates help researchers determine activity period as well as trends in the distribution and abundance of Colorado's herpetofauna.
- **Observer's name.** Once you **register** as an observer, you can just type in your Observer Identification Number (OIN) when you enter your data on the Web site. If you will be mailing in your observation forms, it's a good idea to record your name too.
- **Number of individuals detected for each species.** The number of individuals of each species you saw or heard is important for assessing changes in their relative abundance over time.
- **Photograph.** Submitting a photograph that documents the amphibian or reptile you observed allows others to have confidence in your identification, and it allows researchers to make maximal use of your information for scientific analyses. Of course, taking a photograph won't always be possible. In these cases, you should note the identifying characteristics you observed in your specimen(s) on your data sheet.

## Good Places to Look for Amphibians and Reptiles

- *Edges and shallows of lakes and ponds*
- *Marshes and other wetlands*
- *Creeks and margins of rivers*
- *Intermittent stream courses with permanent pools*
- *Pools that form after heavy rains or floods*
- *Rock outcrops*
- *Sandy prairies*
- *Plains and valleys with lots of rodent burrows*
- *Arroyos (dry gulches, washes)*
- *Debris on the ground near abandoned ranch or farm buildings*
- *Prairie dog towns (be alert for rattlesnakes)*

To help fund herpetofaunal research and conservation in Colorado, contact:



**Colorado Wildlife  
Heritage Foundation**

P.O. Box 211512  
Denver, CO 80221  
303-291-7212

[http://wildlife.state.co.us/cwhf/  
Projects/Herp](http://wildlife.state.co.us/cwhf/Projects/Herp)

