COLORADO PARKS & WILDLIFE

Quick Key to Amphibians and Reptiles of Colorado



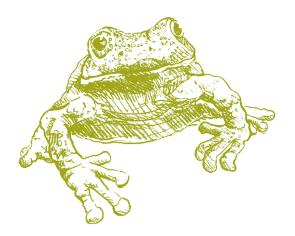
Colorado is home to more than 70 amphibian and reptile species. This Quick Key was developed to help you identify these diverse animals. No matter where you are in the state, in the city, near a pond, even enjoying the view from over 12,000 feet, you likely are sharing that space with an amphibian or reptile.

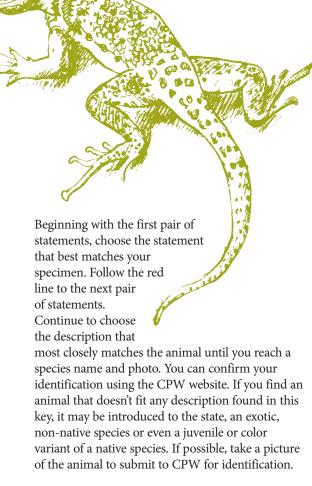
The current distribution, abundance, and population trends of many salamander, frog, toad, turtle, lizard, and snake species in Colorado are poorly known. Some species appear to be declining, but there isn't enough information to determine whether the decline is cause for alarm or simply a natural fluctuation.

To learn more about these interesting animals, check out the Colorado Parks & Wildlife (CPW) website, which has additional photographs, species descriptions, sound files of species calls, and ecological information.

How do I use this key?

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.





Photos in the key that are 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

Skin often smooth and slick, sometimes rough or warty toes, if present, are not clawed

Tail present; hind limbs not greatly larger than forelimbs; eyes small; vertical grooves along sides of body; color pattern spotted, blotched, mottled or unicolor Barred Tiger Salamander (Adult)



Barred Tiger Salamander (Larva)



Tail absent on adults, hind limbs much longer than forelimbs; eyes usually large and protruding; no vertical grooves along sides of body (See Quick Key to Frogs and Toads of Colorado, page 4)

No rattle present
(See Quick Key to Non-venomous
Snakes of Colorado, page 10)

Head covered by large scales, maximum total length about 2 feet Massasauga



Skin scaly, toes (if present) clawed

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Alternate common names are provided in parentheses for some species.

* The same species may have more than one common name.

Body not covered by a shell

Body covered by a shell (See Quick Key to Turtles of Colorado, page 3)

Limbs absent

Limbs present
(See Quick Key to Lizards
of Colorado, page 6)

Rattle present at end of tail Venomous Snakes of Colorado Eye •

Large •

Scales

Numerous small scales on top of head



Top of

Snake Head

Numerous Small Scales

Color variable, maximum total length about 4 feet Prairie Rattlesnake



Color reddish, maximum total length about 2 feet, Western slope only Western Rattlesnake (Midget Faded Rattlesnake)*



Key adapted from Lauren Livo's

Keys to Amphibians and Reptiles of Colorado.

Photos by Lauren Livo and Steve Wilcox

Key illustrations by Helen Zane Jensen

Quick Key to TURTLES of Colorado

or

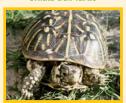
Carapace mostly

brownish: no yellow streaks on head

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

High domed upper shell with many conspicuous yellow lines against a dark background, plastron (lower shell) with distinct hinge, primarily found on land (terrestrial)

Ornate Box Turtle



Large red blotch behind each eye in addition to yellow streaks on head, indention in upper shell behind head, large dark spots on plastron (lower shell), rear of upper shell jagged, no notch in upper jaw NON-NATIVE



Upper shell green or brown, with few or no yellow markings

Carapace mostly green, head with yellow or orange streaks

Narrow yellow streaks on head, no indentation in carapace (upper shell) behind head, rear carapace smooth, and plastron (lower shell) bright red Painted Turtle



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



(bumps) on leading edge, three claws on forefeet, elongated snout

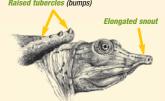
Spiny Softshell Turtle

DWN,

Raised tubercles (bumps)

Carapace flat and leathery, with row of raised tubercles

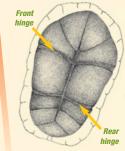
Yellow line down middle of back



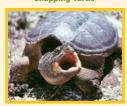


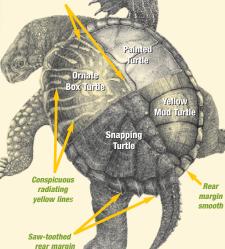
Double-hinged Plastron

Composite Turtle



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







Key adapted from Lauren Livo's Keys to Amphibians and Reptiles of Colorado. Photos by Lauren Livo and Steve Wilcox Key illustrations by Helen Zane Jensen

Quick Key to

FROGS and TOADS of Colorado

Skin warty, large lumpy parotoid glands behind eyes

Skin relatively smooth, no parotoid glands

No light stripe down middle of back

Light stripe down middle of back

No large symmetrical dark blotches on back

No cranial crests, usually found above 8,000

Large symmetrical dark blotches on back



Cranial crests, usually found below 7,000'



Parotoid glands nearly circular, body tan or gray with red warts **Red-spotted Toad**



Parotoid glands large and triangular,



body green with scattered dark spots **Green Toad**

> Conspicuous dorsolateral folds (folds along the sides of the back)

Head small with fold of skin behind eyes **Western Narrow-mouthed Toad**



No fold of skin behind eves

Vertical pupils: rear feet each with single, hard dark "spade"

Boss (large lump) between eyes

Pupils not vertical

No boss (lump) between eyes

> Boss pliable, western Colorado **Great Basin Spadefoot**



Boss hard, mostly eastern Colorado **Plains Spadefoot**



Body greenish-yellow with dark blotches; spade on rear foot elongated; body length may exceed 2.5 inches



Body gray or brown with dark spots; spade on rear foot about as broad as it is long; body length up to 2.5 inches **Mexican Spadefoot**



No folds down the sides of the back (dorsolateral folds)

Toepads not enlarged

Toepads distinctly enlarged



Dark spots on body, no mid-dorsal stripe

Dark mask through eye from snout to angle of jaw, usually light mid-dorsal stripe, found in north-central Colorado **Wood Frog**



Dorsolateral folds broken and inset near groin, body tan or brown **Plains Leopard Frog**



Dorsolateral folds continuous from eye to groin, body green or brown



Northern Leopard Frog





Fold of skin around top

of eardrum; body size

may exceed 7 inches

erican Bullfrog

Stripe through eye from snout to groin, usually three stripes on back (may be spotted), little webbing on hind feet **Boreal Chorus Frog**

Maximum body size less than 1.5 inches

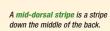


Triangular spot between eyes, extensive webbing on hind feet



A cranial crest is a ridge

are folds of skin on the sides of the back.



Warts are bumps



A spade is a horny projection on the bottom of a spadefoot toad's back foot. The spadefoot uses the spade to dig itself deep into the ground.

Tubercules (tubercles) are large bumps on the underside of the foot; toads often have two on each rear foot.



A boss is a lump between the eyes



Composite Frog/Toad

Quick Key to LIZARDS of Colorado

Horn-like spines on back of head

No horn-like spines on back of head

dark bars radiating from eyes

Short spines on back of head, no

No fringe scales on sides of body

Round-tailed Horned Lizard



Single row of fringe scales on sides of body, Hernandez's Short-horned Lizard



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



Short spines on back of head



Scales variable but not very shiny

Composite Horned Lizard

Single row of fringe scales

radiating

benred-ire

Scales on back smooth and shiny with rounded rear edges

Rear margin of each scale on hack nointed

Scales on back rounded and granular

> Continued from this point on page 8

Longitudinal stripes down length of very slender body, total length

to about 7.75 inches

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



No black wedge-shaped mark on neck

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



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



Skink Body

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



Keeled scales on rear of thigh, dorsal color variable





Western Colorado



South-central Colorado





North-central to ıtheastern Colorado



Eastern Colorado

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





to s bitlies of Colorado. Steve Wilcox to by Suzanne L. Collins, The Center ogy; key illustrations by Helen Zane Jenser

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Quick Key to LIZARDS of Colorado

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

or •

External ear openings visible

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

No external ear openings **Common Lesser Earless Lizard**



Dark collar-like mark on neck **Eastern Collared Lizard**



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

Stripes running length of body, no spots or checkered pattern

Conspicuous brown spots on back **Long-nosed Leopard Lizard**



Found on western slope **Plateau Striped Whiptail**



Found on eastern slope



spots on back

No dark collar-like mark on the neck



Checkered pattern

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

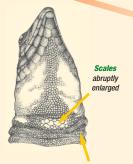


Row of enlarged scales down middle of back **Ornate Tree Lizard**



Common

Scales in front of gular fold abruptly enlarged: occurs on



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



Composite Lizard

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



Composite Whiptail

Quick Key to NON-VENOMOUS SNAKES of Colorado

(See page 2 for Key to Venomous Snakes)



Scales smooth; longitudinal black and white stripes Striped Whipsnake



No distinct black bars at edge of scales on upper lips

Composite Snake

or 🗨

Distinct black bars at edge of scales on upper lip

No red color

Belly with conspicuous double row of half-moon markings **Lined Snake**

Pale stripes on 2nd and 3rd scale rows above belly scales

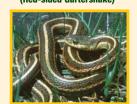


Pale stripes on 3rd and 4th scale rows above belly scales

Body plain, banded, or blotched,

Distinct black bars at edge of scales on upper lips

Scales keeled



Common Gartersnake

Belly variable, but without half-moon markings

Pale stripes on 2nd and 3rd scale rows above belly scales **Western Terrestrial Gartersnake**



Pale stripes on 3rd and 4th scale rows above belly scales



* The same species may have more than one common name. Alternate common names are provided ne species.

Pale stripe on side of body on 3rd and 4th scale rows above belly scales Plains Gartersnake



Pair of glossy black blotches behind head; pale stripe on side of body on 2nd and 3rd scale rows above belly scales Black-necked Gartersnake



Nose not distinctly upturned

Body with distinctly keeled scales

Nose distinctly upturned

Hog-nosed Snake



Nose distinctly

upturned

Scales completely

smooth: body

Body with red,

black and cream (or yellow) pattern

Scales on back very weakly keeled; body tan with brown blotches; rectangular marks on belly; dark stripes on underside of tail

Scales on body smooth or very weakly keeled



Back vellowish with brown blotches, single anal scale Gophersnake



Oval-shaped blotches on back; belly and underside of tail black Plains Hog-nosed Snake



Brown bands on brown or tan body, divided anal scale Northern Watersnake



Large, somewhat rectangular blotches on back, belly dusky, underside of tail lighter than belly **Eastern Hog-nosed Snake**



Cream, red and black bands with red bands bordered by black bands
Milksnake



Pattern of red and black bands with cream speckling Long-nosed Snake



Body without red, black and cream (or yellow) pattern





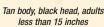
Quick Key to NON-VENOMOUS SNAKES of Colorado

No pattern of brown blotches on paler background

Eastern slope

Great Plains Black-headed Snake

Pattern of brown blotches on paler background





Vertical pupils, divided anal scale, length less than about 2 feet

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



Body and color varies, adults larger than 15 inches

Distribution in Chihuahuan Nightsnake



Pattern of black and white bands or black with white speckling

Distribution in western Colorado **Desert Nightsnake**



Western slope



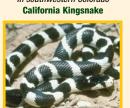
No black and white bands and no black with white speckling

Tail resembles braided

whip; adults large (to 80 inches), color variable Coachwhip



Pattern of alternating black and white bands, distribution



in southwestern Colorado

Black with white speckling, distribution in southeastern Colorado Speckled Kingsnake



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

same size, vestigial eyes Texas Blind Snake (Texas Threadsnake)3



and ventral scales about the

Worm-like appearance, dorsal

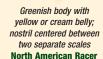


Body not worm-like in appearance

Body variable (orange, brown, or gray), often with dark saddles: maximum total length about 15 inches Western Groundsnake



No dark saddles on dorsum, maximum length exceeds 15 inches

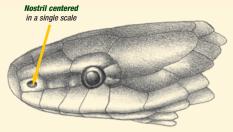




Body bright grass green; nostril centered in a single scale Smooth Greensnake



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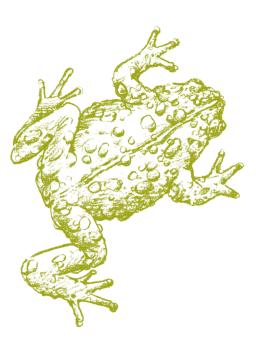


Smooth Greensnake





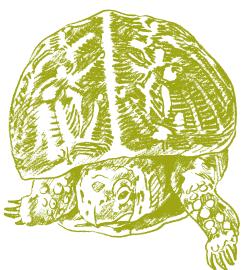




How to Observe Reptiles and Amphibians

- 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 Parks & 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 Recording Herpetofaunal Data

 Always bring something to write on and a pencil or waterproof pen. Good science does not rely on memory!

 It's essential that you know where you are. Take the time to find your location on a map or record the GPS coordinates.

 Visit a site at different times of the year and under different weather conditions, and try to visit a site in different years.
 By making multiple visits, you increase your chances of finding most of the species that occur in the area and you can also document year-toyear changes.

Essential Information for Every Observation

• Precise location. Your observations are much more valuable when you have good information about the locations. GPS units and even Smartphones can provide Latitude and Longitude or UTM (Universal Transverse Mercator) coordinates. Topographic maps and online sources can show additional information, such as elevation and names of geographic features. A written description of the location enhances the information and can help cross-check the reliability of geographic coordinates. 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.

 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.

• Photographs. 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 write down the identifying characteristics you observed in your specimen(s).

14 ILLUSTRATIONS © MARJORIE LEGGITT

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)



The purchase of Colorado fishing and hunting licenses or a State Parks pass supports wildlife conservation. Buy yours today:

- Online—cpw.state.co.us
 - By phone—(800) 244-5613
 - At CPW Offices and State Parks
 - At License Vendors statewide



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