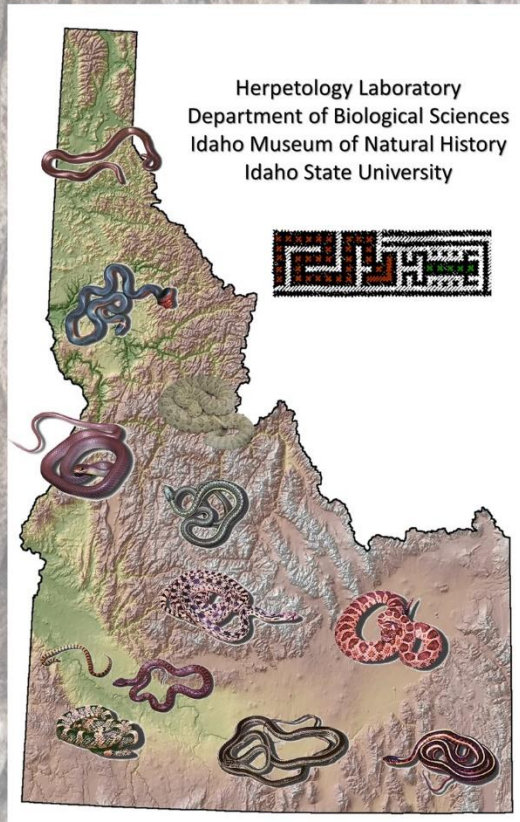


Snakes of Idaho

Photographs by Dr. Charles R. (Chuck) Peterson
charlespeterson@isu.edu



Herpetology Laboratory
Department of Biological Sciences
Idaho Museum of Natural History
Idaho State University



Snakes of Idaho Photo Exhibit

Goal:

The goal of this place-based exhibit is to promote the appreciation and conservation of Idaho's native snakes.



Description:

The exhibit consists of metal prints of Idaho's 12 native species of snakes with captions describing their identifying characteristics and natural history.

Importance:

- They are important elements of biodiversity with over 4,000 species of snakes worldwide.
- They play key ecological roles as both predators and prey.
- They benefit humans because they help control rodent populations thus preventing the loss of crops and the spread of some diseases.
- They provide important model systems for biological research.
- They are symbolically important in many cultures throughout the world.

Exhibit History and Schedule

- 2017 - Oboler Library, Idaho State University, Pocatello, Idaho



- 2018 - The Idaho Chapter of the Wildlife Society Annual Meeting, Boise Center, Boise, Idaho



- 2021 - M-K Nature Center, Boise, Idaho



- 2021 - University of Idaho Library, Moscow, Idaho



- 2022 - BYU-Idaho, Rexburg, Idaho



- 2024 - Hailey Public Library Mallory Wall, Hailey, Idaho



Accompanying Lecture

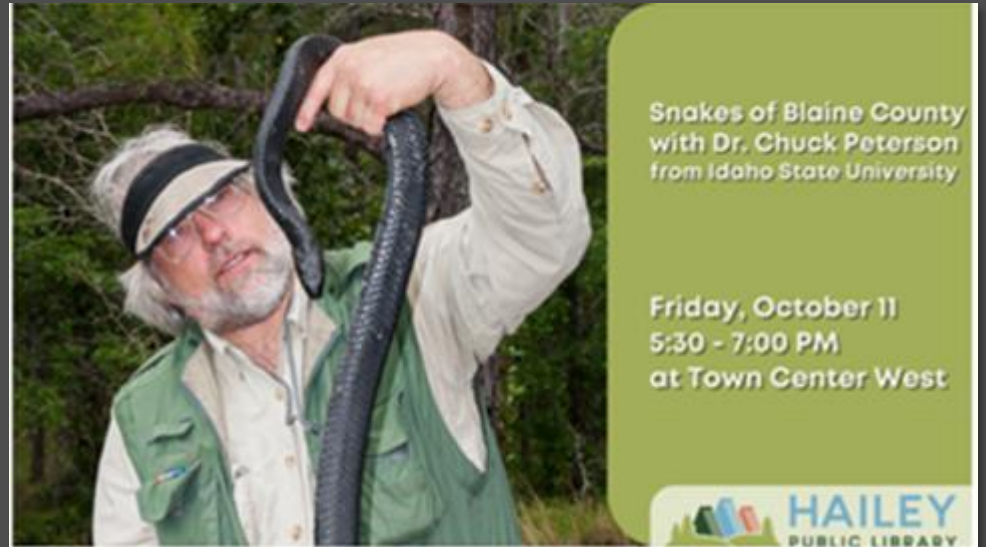
Photographing the Snakes of Idaho



Charles R. (Chuck) Peterson

Herpetology Laboratory
Department of Biological Sciences
Idaho Museum of Natural History
Idaho State University

M-K Nature Center, Boise Idaho
6:30 pm
Monday, 7 June 2021





Charles R. Peterson

Adult female Northern Rubber Boa (*Charina bottae*).

Taylor Ranch Wilderness Research Station, Big Creek, Frank Church - River of No Return Wilderness Area, Valley County, Idaho.

July, 1994.

This small species of the Boa family is named for the rubber-like look and feel of its smooth skin.



Adult female Northern Rubber Boa (*Charina bottae*).
Turnbull National Wildlife Refuge, Spokane County, Washington.
Summer, 1976.

Note the short, blunt tail which resembles the head and may be used to divert predatory attacks.



Charles R. Peterson

Adult North American Racer (*Coluber constrictor*).

Big Creek, Frank Church - River of No Return Wilderness Area, Valley County, Idaho.

May, 1994.

These fast-moving snakes have smooth scales and large eyes. The adults lack a pattern.



Juvenile North American Racer (*Coluber constrictor*).
Custer State Park, County, Custer County, South Dakota.
Summer, 1973.
Juveniles racers have blotches that disappear as they age.



Charles R. Peterson

Striped Whipsnake (*Coluber taeniatus*).
Butte County, Idaho.
April, 1994.

Striped Whipsnakes in Idaho have a dark ground color, 2 white stripes, and pink coloration under the tail.



Charles R. Peterson

Striped Whipsnake (*Coluber taeniatus*).
Morley Nelson Snake River Birds of Prey National Conservation Area, Owyhee County, Idaho.
15 April 2011.
Note the large eyes of this diurnal, widely foraging predator.



Adult Gophersnake (*Pituophis catenifer*).
Butte County, Idaho.
4 May 2016.

Gophersnakes in Idaho can approach 6 feet (1.8 meters) in length.



Charles R. Peterson

Adult Gophersnake (*Pituophis catenifer*).
Butte County, Idaho.
4 May 2016.

Gophersnakes have the round pupils typical of diurnally active species.



Charles R. Peterson

Long-nosed Snake (*Rhinocheilus lecontei*).
Valley of Fire State Park, Clark County, Nevada.
11 May 2017.

This species is rarely found in Idaho and is restricted to the southwestern portion of the state.



Long-nosed Snake (*Rhinocheilus lecontei*).
Valley of Fire State Park, Clark County, Nevada.
11 May 2017.
This tri-colored species has a relatively long snout.



Western Groundsnake (*Sonora semiannulata*).
Valley of Fire State Park, Clark County, Nevada.
11 May 2017.

The coloration and pattern of these small Idaho snakes are highly variable. This is the most common color pattern in Idaho.



Ringnecked Snake (*Diadophis punctatus*).
Latah County, Idaho.
Fall, 1980.

The white substrate is ash from the volcanic eruption of Mount St. Helens on May 18, 1980 which covered much of eastern Washington and northern Idaho.



Desert Nightsnake (*Hypsiglena chlorophaea*).
Butte County, Idaho.
2 June 2000.

The smooth scales of these small snakes result in the shiny appearance.



Charles R. Peterson

Desert Nightsnake (*Hypsiglena chlorophaea*).
Butte County, Idaho.
2 June 2000.

Note the vertical pupils typical of many nocturnal species.



Charles R. Peterson

Terrestrial Gartersnake (*Thamnophis elegans*).
Yellowstone National Park.
May, 1991.

This snake has three longitudinal stripes with dark spots between them.



Charles R. Peterson

Adult Terrestrial Gartersnakes (*Thamnophis elegans*) in den.
Harriman State Park, Fremont County, Idaho
18 April 2015

These two snakes were basking in a crack in a basalt cliff where the snakes overwinter.
More than 10 snakes were visible in the cracks on the cliff face.



Charles R. Peterson

Adult Common Gartersnake (*Thamnophis sirtalis*).
ISU O'Neill Ecological Preserve, Bannock County, Idaho.
1 May 2016.

Gartersnakes are usually found near water. Despite its name, this species is now relatively rare in southeastern Idaho. This individual is the first one I had seen at this site in 25 years.



Charles R. Peterson

Captive Common Gartersnake (*Thamnophis sirtalis*).
Bannock County, Idaho.
May, 1994.

These snakes have distinct stripes and often red spots on the sides.



Charles R. Peterson

Adult Western Rattlesnake (*Crotalus oreganus*) at den.
Bannock County, Idaho.
22 April 2018.

Idaho rattlesnakes typically den communally, often sharing the overwintering sites with other species of snakes.



Juvenile Western Rattlesnake (*Crotalus oreganus*).
Butte County, Idaho.
23 April 2015.

Juveniles generally have more distinct patterns than adults.



Charles R. Peterson

Adult Prairie Rattlesnake (*Crotalus viridis*).

Sweetwater County, Wyoming.

22 July 2015.

The rattle is composed of interlocking segments of a fibrous protein called keratin. A segment is added each time the snake sheds its skin but they sometimes break off.



Charles R. Peterson

Adult male Prairie Rattlesnake (*Crotalus viridis*).
Big Creek, Frank Church River of No-Return Wilderness, Valley County, Idaho
20 September 2008.

This snake was part of a radio-telemetry study of the effect of topography on rattlesnake movements by former ISU graduate student Javan Bauder. The snake was recovering from surgery to remove a miniature radiotransmitter and was released the following day.

iNaturalist

iNaturalist.org

4 May 2021

ADD
OBSERVATIONS



Idaho Amphibian and Reptile iNaturalist Project

Stats

Totals

3740 + ~1300

Observations »

39

Species »

792

People »

Most Observations

	kiparker 571 observations
	dingerdynasty 165 observations
	cjustus320 164 observations
	aletaquinn 97 observations
	petechar1 83 observations

Most Species

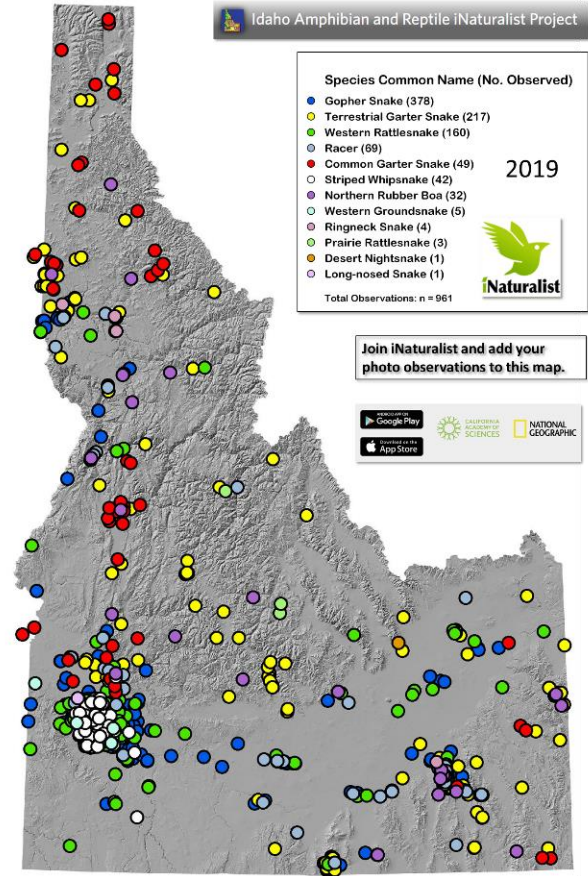
	petechar1 33 species
	dingerdynasty 29 species
	cjustus320 23 species
	patdan23 17 species
	johngsalamander 17 species

Most Observed Species

	Gopher Snake 569 observations
	Western Terrestrial Garter Snake 477 observations
	Western Rattlesnake 227 observations
	Columbia Spotted Frog 199 observations
	Sierran Tree Frog 196 observations

Snakes of Idaho iNaturalist Observations

Idaho Amphibian and Reptile iNaturalist Project



Map by Dan Giltz

Idaho Snake Habitats

Lake Coeur d'Alene Kootenai County



Northern Rubber Boa



Racer



Common Gartersnake



Terrestrial Gartersnake



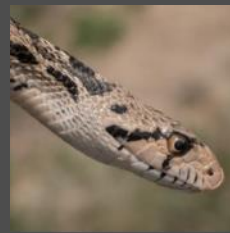
Big Creek, Frank Church - River of No Return Wilderness Area, Valley County



Northern Rubber Boa



Racer



Gophersnake



Terrestrial Gartersnake



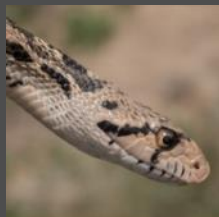
Prairie Rattlesnake



Little Lost River Valley, Butte County



Northern Rubber Boa



Gophersnake



Desert Nightsnake



Terrestrial Gartersnake



Western Rattlesnake



Morley Nelson Snake River Birds of Prey National Conservation Area



Racer



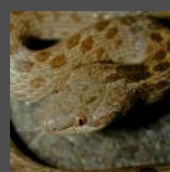
Striped Whipsnake



Gophersnake



Long-Nosed Snake



Desert Nightsnake



Western Groundsnake



Terrestrial Gartersnake



Western Rattlesnake

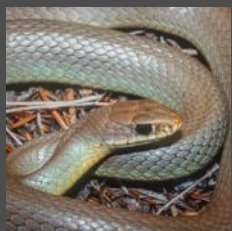


Charles R. Peterson

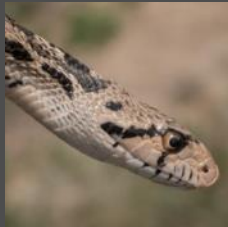
Craters of the Moon National Monument, Butte County, Idaho



Northern Rubber Boa



Racer



Gophersnake



Terrestrial Gartersnake



Western Rattlesnake



Portneuf Valley and Range



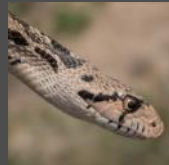
Northern Rubber Boa



Racer



Striped Whipsnake



Gophersnake



Ring-Necked Snake



Desert Nightsnake



Common Gartersnake



Terrestrial Gartersnake



Western Rattlesnake

Idaho Snake Conservation Status

- Species of Greatest Conservation Need:
 - Common Gartersnake



- Species of Greatest Information Need:
 - Western Groundsnake



- Population information is also needed for Ring-necked, Desert Night, and Long-nosed snakes.
- All snake species except rattlesnakes are Protected, Nongame Species.
- Since 2023, rattlesnakes are unfortunately considered a Predatory (pest) species and are unprotected.

Snake Conservation Threats

General

- Habitat destruction, modification, and fragmentation.
- Global warming
- Introduced species
- Disease
- Pollution
- Overutilization / Persecution

Examples

- Agriculture, urbanization, altered fire regimes, roads
- Range Expansion vs. Fire Effects
- Cheat grass
- Snake Fungal Disease ?
- Effects of pesticides on prey species?
- Rattlesnakes



Snake Conservation Actions

- Reduce your carbon footprint.
- Support conservation organizations protecting habitat and biodiversity.
- Contribute snake observations through community science projects like iNaturalist to document species distribution and activity.
- Support Inventory and Monitoring Programs, including Prevention of Invasive Species / Diseases
- Habitat Protection and Restoration
- Minimize use of pesticides
- Education
- Legislation and Regulations
- **Don't release any captive reptiles!**



Idaho's Amphibians and Reptiles Rules Summary
Rules for collection, possession and permitting



About the Photographs

- I took most of these photographs in Idaho but used several taken elsewhere in the Intermountain West that better represented the species.
- These photographs were taken over a 45-year period (1973-2018).
- Most of the photos were posed in the field. The Desert Nightsnake, one of the Common Gartersnakes, and the telemetered Prairie Rattlesnake were photographed in captivity and then released.
- I used a wide variety of cameras, including 35-mm film single-lens reflexes, digital point-and-shoots, digital single-lens reflexes, and mirrorless, interchangeable lens cameras.
- I processed the photo files in Adobe Lightroom.
- The images were printed on aluminum with a matte finish by McKenna Pro.
- If you are interested in purchasing a print, please contact Chuck Peterson at petechar@isu.edu. All profits will go to snake conservation efforts.

Acknowledgments

- This exhibit is dedicated to Lowell Diller (1947-2017) who made many important contributions to our understanding and appreciation of Idaho's snakes.
- Kristi Austin (ISU Oboler Library) invited me to show some of my photographs and assisted with creating this exhibit in many ways.
- Dan Giltz created the maps of Idaho Snake Species Richness and iNaturalist observations. He also provided suggestions on how to improve the exhibit.
- Kristie Swatosh Nyhus of McKenna Pro helped with the printing.
- All of my students and colleagues who have helped study Idaho snakes.
- The many organizations that have supported the ISU Herpetology Laboratory over the past 30 years.



Further Information

- Discovering and Sharing Information about Idaho Amphibians and Reptiles: <https://nrccooperative.org/wp-content/uploads/2023/02/Discovering-and-Sharing-information-about-Idaho-Amphibians-and-Reptiles-2022-02-1388.pdf>
- Idaho Department of Fish and Game – Species: <https://idfg.idaho.gov/species/>
- Idaho Digital Atlas – Reptiles: <https://digitalatlas.cose.isu.edu/bio/reptile/main/repfram.htm>
- Idaho Amphibian and Reptile iNaturalist Project: [iNaturalist.org](https://www.inaturalist.org/projects/idaho-amphibian-and-reptile)
- Northwest Partners in Amphibians and Reptiles: <https://www.nwparc.org/>
- Reptile Database: <http://www.reptile-database.org/>