

Snake Country Survival Guide

a program of

Advocates *for* Snake Preservation



Porter, female Western Black-tailed Rattlesnake (*Crotalus molossus*), hunts against a rock alongside a human walking path.

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Submitted by:

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Snakes! What do you think of when you see that word? Unthinking, cold-blooded villains?

Vile, aggressive creatures? Like me, you probably grew up hearing stories about snakes, stories that portrayed them as deceitful and evil. Real snakes prefer to escape our notice, so myths and fables supply what most people know about them. Consequently, misunderstanding and fear eclipse appreciation of these mysterious and intriguing animals. Although snakes haven't escaped the worldwide extinction crisis due to climate change, habitat loss, and exploitation, negative attitudes may be the biggest barrier to snake conservation, despite their importance to ecosystems and a vibrant, functioning planet.

People and snakes often come into conflict: a snake may seek food or shelter in someone's backyard, or a hiker might get surprised by rattlesnake on the trail. While such encounters sometimes end badly for people, they often prove fatal for snakes. When snakes appear in someone's yard, most people see two possible choices: kill them or move them. But moving snakes far from their home may be lethal for them and is a temporary fix: where there's one, there are likely to be more.

Moving snakes from their home range can be stressful to the point of death for the individual moved and may negatively impact the ecosystem. On average, 53% of snakes moved outside of their home range die while trying to return home. The common practice of relocating many snakes to a few favored release sites may promote disease transmission and have negative impacts on the resident snakes in that area and trophic interactions between prey and predators. Snakes, especially rattlesnakes, are important predators of vectors and carriers of many diseases, including The Plague and Lyme disease. Due to their life history and behavior, rattlesnakes are more effective at controlling prey populations than bird or mammal predators. There is no evidence that removing snakes decreases the likelihood of future human-snake interactions, and it may increase negative outcomes for people (e.g., snakebites). Most adult snakes will return to where they were moved from, if possible, and whatever attracted the original snake will likely attract others. Handling or trying to kill a snake increases one's risk of snakebite.

The New Mexico Department of Game & Fish's Share with Wildlife Program awarded Advocates for Snake Preservation (ASP) \$5,000 to fund a project entitled **Snake Country Survival Guide: Safe, Sustainable Solutions to Human-Snake Conflicts**. With these funds, ASP produced a video based on our Snake Country Survival Guide brochure and expanded our online resources to include a field guide, species list, and videos of cool snake behaviors to help people become familiar with their snake neighbors in New Mexico. **An estimated 30,000 people are more likely to welcome their snake neighbors and appreciate, rather than fear, their encounters. If each person has just one positive, rather than negative, interaction with a snake, that's 30,000 snakes that avoided persecution!** Our positive impact is likely much greater, as people often share what they've learned from us with their friends and neighbors.



A curious Sonoran Whipsnake (*Coluber bilineatus*) peers at the photographer from the branches of a Mesquite Tree.

Milestones, Accomplishments, & Future Directions

2021: The Year in Snakes

3 Skype a Scientist classes

6 Field trips and snake rescues

134 Hours watched of season one of *Snakes Are Everything!*

6 In-person classroom and library presentations

8 Online classes and workshops

1 Peer-reviewed paper published



Jaclyn Koczan's class learns about snakes from Melissa through *Skype a Scientist*.



Jeff, ASP Co-founder, gives this supporter a closer view of his snake neighbor, a Prairie Rattlesnake (*Crotalus viridis*).

27,544 People learned about snakes by visiting our website -- 38% more than last year!

17,642 Interactions on Facebook and Instagram

1300 Hours watched on our YouTube channel

1545 People learned how to coexist safely with snakes through our online *Snake Country Survival Guide* and *Snake Country Travel Guide*

We have now distributed all of the first printing of 1000 [Snake Country Survival Guides](#), our brochure that fosters safe coexistence at home by highlighting the benefits of snakes as neighbors and recommending yard and human behavior modifications to make coexistence with venomous snakes safer.

The four most popular episodes of our online video series, [Snakes Are Everything](#), are related to the [Snake Country Survival Guide](#). *Snakes Are Survivors* and *Snakes Are Dangerous* specifically addressed coexisting with venomous snakes; 74 people attended the live presentations with Q&As, and the recordings have been viewed 411 times. *Snakes Are Misunderstood* and *Snakes Are Thoughtful Animals* busted myths and encouraged people to think more positively about snakes; 33 people attended the live presentations with Q&As, and the recordings have been viewed 217 times. *Snakes Are Survivors* premiered during the reporting period, on 24 March 2022.

Milestones, Accomplishments, & Future Directions (*continued*)

Our new webpage, [Snake Country Survival Guide: New Mexico Edition](#), helps New Mexicans become familiar with their snake neighbors (see Appendix 1). It includes:

- Instructions on using our free snake identification service,
- Our iNaturalist field guide to the Snakes of New Mexico,
- A downloadable Snakes of New Mexico species list (see Appendix 2),
- A link to our Snakes & Lizards of New Mexico project on iNaturalist, and
- The new [Snake Country Survival Guide](#) video.



Stuart, Western Diamond-backed Rattlesnake (*Crotalus atrox*), hunting next to a barn with a horse standing nearby. Rattlesnakes are very effective predators of small mammals that consume horse feed, often stored in barns.

Our [Snake Country Survival Guide video](#) answers the most common question we get: *What do I do about snakes in my yard?* In it, we discuss:

- What doesn't work for managing backyard snakes and why,
- Why snakes make good neighbors, and
- How to create and maintain a safe and wildlife-friendly yard.

We have completed the first scientific evaluation of educational messaging strategies related to rattlesnakes. In collaboration with a graduate student and professors from West Liberty University and California Polytechnic State University, we evaluated an empathetic messaging strategy (emphasizing traits and behaviors rattlesnakes share with humans against the traditional utilitarian approach (natural history information and how people may benefit from rattlesnakes. Participants viewed a video with either empathetic or utilitarian messaging and took a pre- and post-survey to assess their perceptions of rattlesnakes. Preliminary results indicate that while both strategies improve perceptions of rattlesnakes, an empathetic message is more effective with younger audiences, and the utilitarian approach is more convincing to older folks. While we're working with collaborators to publish these findings in the peer-reviewed literature, we're incorporating more information on how snakes benefit people into our own messaging and developing a new presentation that focuses on ecosystem services provided by snakes.

Milestones, Accomplishments, & Future Directions (*continued*)

This summer we're organizing the first symposium on coexisting with snakes. The [Coexisting with Pitvipers Symposium](#) will be held at Biology of Pitvipers 4 and will include:

- A brainstorming session where participants contribute to a list of effective outreach practices;
- A panel discussion with experts on various forms of outreach about pitvipers; and
- A presentation on the study described above that evaluated educational messaging strategies.

Our goal for this symposium is to form a working group of participants interested in contributing to a guide on best practices for pitviper education and outreach to be published in an academic journal and shared with other educators and advocates.



Melissa shows a concerned family the Gophersnake that was trapped in their laundry room, before releasing her safely outside.

Thank You!

It is sometimes difficult to garner support for animals as misunderstood and unfairly maligned as snakes. So we are especially appreciative of those who value our work – you're awesome! Your partnership and financial support makes it possible for us to expand our efforts to **give everyone the opportunity to learn to love snakes**. Thanks again for your generous support and we look forward to partnering with The New Mexico Department of Game & Fish's Share with Wildlife Program again.

Appendix 1: Snake Country Survival Guide: New Mexico Edition Webpage.....5

Appendix 2: Snakes of New Mexico Species List.....8

Online Resources:

[Snake Country Survival Guide: New Mexico Edition: www.livingwithsnakes.org/nm](http://www.livingwithsnakes.org/nm)

[Snake Country Survival Guide Video: www.youtube.com/watch?v=TMXzYglz4NA](https://www.youtube.com/watch?v=TMXzYglz4NA)

[Snakes of New Mexico Species List: www.livingwithsnakes.org/nm/snakes](http://www.livingwithsnakes.org/nm/snakes)

[Snakes of New Mexico Field Guide: www.inaturalist.org/guides/15693](http://www.inaturalist.org/guides/15693)

[Snakes & Lizards of New Mexico iNaturalist Project: www.inaturalist.org/projects/snakes-lizards-of-new-mexico](http://www.inaturalist.org/projects/snakes-lizards-of-new-mexico)

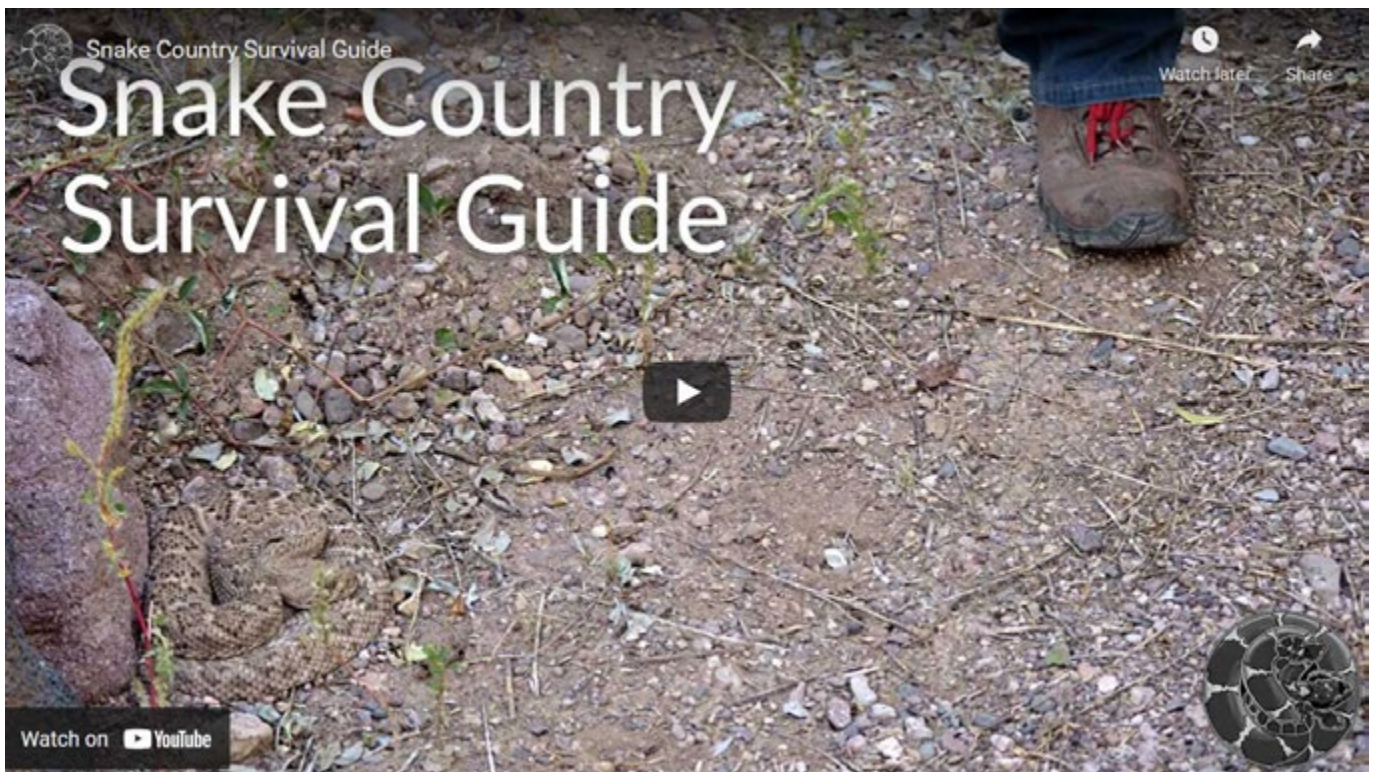


Living With Snakes
from Advocates for Snake Preservation (ASP)

DONATE NOW

Snake Country Survival Guide

New Mexico Edition



Free Snake Identification

Share a photo and location* and we'll identify the snake. Email or text will get the quickest response.

**We are much more familiar with snakes native to North America, but will try to help you figure out what you're looking at in other places too.*

- [Email us: info\[at\]snakes.ngo](mailto:info[at]snakes.ngo)
- Text: 575-956-5231
- [Tag @SnakeAdvocate on Instagram](#)

- [Tag @SnakeAdvocate on Twitter](#)
- [Message @SnakePreservation on Facebook](#)



Sonoran Whipsnake (*Coluber bilineatus*) peeking at us from within the leaves of a Mesquite Tree.

Regional Online Field Guides

We created a field guide on iNaturalist: [Snakes of New Mexico](#). This guide includes all the snake species documented in Grant County or close enough that they may occur here. Just want a species list? [We got you covered](#).

[Snakes of New Mexico Field Guide](#)

[Snakes of New Mexico Species List](#)

You can also join or explore our project, [Snakes & Lizards of New Mexico](#), to learn about our local squamates (fancy word for snakes and lizards). This project includes all observations of snakes and lizards reported to iNaturalist. Add yours and get feedback to get better at identification.

References & More Information

Charles W. Painter, James N. Stuart, J. Tomasz Giermakowski, and Leland J. S. Pierce. 2017. [Checklist of the Amphibians and Reptiles of New Mexico, USA, with Notes on Taxonomy, Status, and Distribution](#). *Western Wildlife* 4:29–60.

[New Mexico Herpetological Society](#)

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Snakes of New Mexico (54 species)

Compiled by Advocates for Snake Preservation

Harmless Snakes

- Glossy Snake (*Arizona elegans*)
- Trans-Pecos Ratsnake (*Bogertophis subocularis*)
- Sonoran Whipsnake (*Coluber bilineatus*)
- North American Racer (*Coluber constrictor*)
- Coachwhip (*Coluber flagellum*)
- Striped Whipsnake (*Coluber taeniatus*)
- Ring-Necked Snake (*Diadophis punctatus*)¹
- Chihuahuan Hook-Nosed Snake (*Gyalopion canum*)
- Mexican Hog-Nosed Snake (*Heterodon kennerlyi*)¹
- Plains Hog-Nosed Snake (*Heterodon nasicus*)¹
- Eastern Hog-Nosed Snake (*Heterodon platirhinos*)¹
- Desert Nightsnake (*Hypsiglena chlorophaea*)¹
- Chihuahuan Nightsnake (*Hypsiglena jani*)¹
- Gray-Banded Kingsnake (*Lampropeltis alterna*)³
- California Kingsnake (*Lampropeltis californiae*)
- Western Milksnake (*Lampropeltis gentilis*)
- Madrean Mountain Kingsnake (*Lampropeltis knoblochi*)
- Arizona Mountain Kingsnake (*Lampropeltis pyromelana*)
- Desert Kingsnake (*Lampropeltis splendida*)
- Plain-Bellied Watersnake (*Nerodia erythrogaster*)³
- Smooth Greensnake (*Opheodrys vernalis*)
- Great Plains Ratsnake (*Pantherophis emoryi*)
- Gophersnake (*Pituophis catenifer*)
- New Mexico Threadsnake (*Rena dissecta*)
- Western Threadsnake (*Rena humilis*)
- Long-Nosed Snake (*Rhinocheilus lecontei*)
- Eastern Patch-Nosed Snake (*Salvadora grahamiae*)
- Western Patch-Nosed Snake (*Salvadora hexalepis*)
- Green Ratsnake (*Senticolis triaspis*)⁴
- Western Groundsnake (*Sonora semiannulata*)
- Smith's Black-Headed Snake (*Tantilla hobartsmithi*)¹
- Plains Black-Headed Snake (*Tantilla nigriceps*)¹
- Yaqui Black-Headed Snake (*Tantilla yaquia*)¹
- Black-Necked Gartersnake (*Thamnophis cyrtopsis*)
- Terrestrial Gartersnake (*Thamnophis elegans*)
- Mexican Gartersnake (*Thamnophis eques*)^{2, 3}
- Checkered Gartersnake (*Thamnophis marcianus*)
- Western Ribbonsnake (*Thamnophis proximus*)⁴
- Plains Gartersnake (*Thamnophis radix*)
- Narrow-Headed Gartersnake (*Thamnophis rufipunctatus*)^{2, 3}
- Common Gartersnake (*Thamnophis sirtalis*)
- Sonoran Lyresnake (*Trimorphodon lambda*)¹
- Texas Lyresnake (*Trimorphodon wilkinsonii*)¹
- Lined Snake (*Tropidoclonion lineatum*)

Venomous Snakes

- Western Diamond-Backed Rattlesnake (*Crotalus atrox*)
- Arizona Black Rattlesnake (*Crotalus cerberus*)
- Rock Rattlesnake (*Crotalus lepidus*)⁴
- Western Black-Tailed Rattlesnake (*Crotalus molossus*)
- Eastern Black-Tailed Rattlesnake (*Crotalus ornatus*)
- Mohave Rattlesnake (*Crotalus scutulatus*)
- Prairie Rattlesnake (*Crotalus viridis*)
- Ridge-Nosed Rattlesnake (*Crotalus willardi*)^{2, 3}
- Western Massasauga (*Sistrurus tergeminus*)
- Sonoran Coralsnake (*Micruroides euryxanthus*)

1) Mildly venomous (not medically significant); 2) United States Status: Threatened; 3) New Mexico Status: Endangered; 4) New Mexico Status: Threatened