

# Summer



## Snake Surveys Slide into Family's Summer Adventure

Story and Photos by Tim Hovey



# Snake Run



The tracks across the dirt road were easy to see in the late afternoon, telltale markings indicating the movement of the snake from one side of the road to the other. I pulled the truck off to the side and climbed out. Kneeling down close to the surface, I used the sun's position to highlight little mounds of dirt the snake had pushed aside as it moved, indicating its direction. After a moment, I straightened and retrieved a snake stick from the bed of the Department of Fish and Game truck.





A Sonoran gopher snake (previous page, photo © Kyle Krause) makes its way in the late afternoon across a rural road. While not as well known as other species, the Rosy boa (upper far left) is native to California. The author's daughter, Jessica (upper left), moves a Western toad off to one side during one of the family's snake runs. Even experienced snake handlers use caution around venomous snakes (upper right), like this Western diamondback rattlesnake. Gopher snakes (upper and lower far right, and held by the author's other daughter, Alyssa) often find their way into urban areas. A horned lizard (lower right) fits in the palm of a hand. A California king snake (at right) is included in the daily count before allowed to slip across a roadway. Different snakes come in different sizes, as this Rosy boa (left) indicates.



It didn't take long. I stepped carefully along the brush that edged the road and found the 3-foot-long western diamondback rattlesnake, coiled and sleeping. With minimal movement I pulled my camera around and focused for a quick photograph. I noted the waypoint on my global positioning system, which recorded the exact location and time of the encounter. Then I backed off, never waking the sleeping snake.

In 12 years as a DFG fisheries biologist, I've spent a great deal of time along the state's natural waterways, monitoring the fisheries species in Southern California. One of the requirements of my work—monitoring fish, frogs and toads—can be simple because these species are located in or near creeks or streams. The other part

of the job—monitoring snake species—is not so easy. A snake run involves driving a consistent circuit during peak times when snakes are most active, usually during the warmer periods of the day. Snakes frequently stretch out on the surface of a road during that time and are easily spotted, identified and in some cases handled if they're non-venomous. It's an efficient method to survey an area for snakes.

Several species of snake thrive on the suburban edge. Common species like the gopher snake and king snake are frequently encountered within cities inside their range. More species are encountered in cities adjacent to unincorporated areas. Whipsnakes,

racers, garter snakes and rattlesnakes will live and thrive around stand-alone

buildings and sheds in rural areas. Some of the smaller, more difficult-to-find species also thrive in these areas and just take a bit more searching to locate.

That afternoon, after returning from my snake run, I showed my daughter, Jessica, the images of the snake I had on my camera. She grew interested and I explained the purpose of the snake runs and how I collect data for DFG's species database. I explained how DFG biologists use the information to determine whether the range of a particular species has increased or diminished. There are other uses biologists have for the data that apply throughout the state to preserve the





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resource. Her inquisitive look prompted me to continue and I told her that the data I'd collected was important because it would help identify where snakes live.

"Are snakes important?" she asked. I answered that all animals native to California are important. I saw a small spark in her eye and she grew excited. "Daddy, we should go on our own snake runs."

Both my daughters, Alyssa, 10, and Jessica, 8, are comfortable with our family outings centered on the outdoors. Living

in Southern California, we have easy access to the ocean, the foothills and the mountains. Being raised to enjoy outdoor activities, I wanted to pass on that legacy to my daughters. They have grown up accompanying me on hikes, hunts and fishing trips from the time they started walking. They're both capable of identifying local species of wildlife and each would rather run around outdoors than sit in front of a television. For some time I had thought about what we could do as a family that would continue to fan

their interest in the outdoors. Heading out on a family summer snake run seemed like the perfect solution.

We began in April when the weather started to warm. On the weekends my wife, Cheryl, and I would load our daughters into my bright blue Toyota truck and head out. We'd follow a power line road that ran adjacent to a dry riverbed near our home, ultimately developing a four-mile circuit that we covered on a consistent basis. I'd drive slowly as the girls peered out the open

windows, searching the dirt road ahead. Tucked behind the seat we kept our snake pack consisting of snake sticks, camera, GPS and snacks for the hungry explorers.

As spring turned to summer, the wildlife began to move. Our first snake of the summer was a 4-foot-long western diamondback rattlesnake. At a safe distance, I described the specifics of a western diamondback and used the opportunity to show the girls how to operate the GPS. Both were aware of rattlesnakes and knew enough to stay at a safe distance and just observe.

As the days grew longer, we'd frequently leave the house after dinner and travel the roads looking for animals. Alyssa would operate the GPS and both girls had a favorite snake stick tucked in the bed of the truck. When someone spotted a snake, I'd pull over to the side of the road and we'd carefully get out of the truck to check it out. The girls grew proficient at identifying the local snake species and they always abided by our number one snake run rule: If it's a non-venomous species, daddy picks it up first; no one picks up a venomous snake.

California serves as home to 40 species of snakes. Only the state's six species of rattlesnakes are poisonous. All of them live in some portion of Southern California.

And so the summer went. We ended up logging almost 200 miles that summer, all along our four-mile snake route. We saw several species of reptiles—including a few that hadn't been observed in our search area before. The most common species we encountered was the gopher snake. It wasn't unusual for us to see several during a single outing and the overall total for the summer was nearly 30.

The second most common was the western diamondback rattlesnake. This species of rattlesnake loves to bask on the road in the early afternoon and that's where we found most of them.

We encountered the tiny and rare night snake and the patch-nosed snake a single time each. The encounters proved unique because neither species was expected in that part of Southern California. The sightings were considered new records.

A single sighting of the more

common king snake added to our growing species list. We encountered western toads, horned lizards, alligator lizards and a legless lizard and in each instance the girls enjoyed the activity of handling these animals before they released them.

We submitted all the waypoint data that the girls collected on the GPS unit to the BIOS database. The sightings were used to develop a map and the girls could see the geographical locations of each of their sightings. They grew familiar looking for creatures on the road and eventually both proved faster than I in spotting a snake's track. Referring back to what they were taught, both could tell the direction a snake was headed when it made the track. And each of my girls knew to respect what

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we had found in the wild and to leave it as we found it.

Even though our main focus was finding snakes during our summer runs, we always kept an eye out for other wildlife. We found deer frequently feeding at the rural edge on grassy hills in the late afternoon. The power line road paralleled a dry river bed where we saw cottontail rabbits regularly feeding at dusk. Quail and their young—termed 'Quaillets' by one of my girls—proved common during our drives and both girls could imitate their guttural flight noises as the covey flushed. When snakes were scarce, I'd introduce them to different animal tracks and then test them on what animal they thought left the print. And, on occasion, we witnessed the violent side of nature.

We watched an orange-winged tarantula hawk attack an adult tarantula on the road and drag it back to a burrow. The girls were silent when I explained that the stinging insect would lay an egg on the spider and once it hatched, it would feed on the tarantula. In nature, not everything is fuzzy and cuddly and it's important that they know that. Nature is wild, and outside is where it belongs.

An unexpected development of our summer adventure was a research journal publication of a scientific note I wrote,

## Enjoy with Caution

### Things to Remember in Snake Country

California has 45 taxa of native snake. Certain places like the Sierra Nevada Foothills are high in snake species diversity. The trees, rock outcrops and caves of the foothills provide cover in a variety of habitats.

Therefore it's not uncommon to encounter snakes while enjoying the outdoors. They are not confined to rural areas. They have been found near urban areas, in river or lakeside parks and at golf courses.

In California, only the rattlesnake is considered dangerous. The California Department of Fish and Game recommends the following safety precautions be followed to reduce the likelihood of startling a rattlesnake:

- Wear hiking boots and loose-fitting long pants. Never go barefoot or wear sandals when walking through wild areas.
- When hiking, stick to well-used trails. Avoid tall grass, weeds and heavy underbrush where snakes may hide during the day.
- Do not step or put your hands where you cannot see, and avoid wandering around in the dark. Step on logs and rocks, never over them, and be especially careful when climbing rocks or gathering firewood. Check out stumps or logs before sitting down, and shake out sleeping bags before use.
- Never grab sticks or branches when in lakes and rivers. Rattlesnakes can swim.
- Be careful when stepping over doorsteps as well. Snakes like to crawl along the edge of buildings where they are protected on one side.
- Never hike alone. Always have someone with you who can assist in an emergency.
- Do not handle a freshly killed snake, as it can still inject venom.
- Teach children early to respect snakes and to leave them alone.





During the snake runs, the author's daughters learned to take a satellite position using the Garmin GPS to record the exact location of the gopher snake Alyssa holds.

the direct result of data we collected as a family. During one of our snake runs we came across a large western diamondback rattlesnake dead in the road. Even dead rattlesnakes should be respected. Most rattlesnake bites suffered by humans come from handling snakes thought dead. When I handle rattlesnakes—dead or alive—I use a grasping snake stick.

As the girls worked the GPS to get a waypoint for the road kill sighting, I noticed that the snake had recently eaten something large prior to its death. We collected the snake and took it home for dissection. The girls hovered around me as I extracted a recently consumed California thrasher out of the snake. In unison they voiced their amazement, "Whoa!"

After we finished, I contacted a staff environmental scientist in Sacramento who was an ornithologist to verify the species. A tremendous amount of data exists on both the reptile and the bird, but nothing documented the California thrasher as a prey item for the western diamondback. The scientific journal *Herpetological Review* expects to publish the note in 2011. When it appears, each of my daughters wants a framed copy of the

article to hang in their rooms.

I think back on that summer often, appreciating how it represents a time of change for all of us. I saw the spark of interest in my daughters' eyes as they experienced the wild outdoors that lies just beyond their backyard. We learned nature is sometimes cruel and drags its prey back to its burrow. We learned how important the collection of data remains to further our knowledge of a species and we'll enjoy the fruit of that lesson when it's published in a respected scientific journal. And, if I tossed my daughters a GPS, they could turn it on and figure out where they are.

But the most dramatic change was watching each of them learn to face their fears of the unknown. My wife and I have watched the level of confidence and self-assuredness increase in each girl over the summer. And, as a parent—during a time in a young person's life when video games, cell phones and a lethargic approach to life can overtake them—it felt good to teach my girls what I know about the outdoors. After all, it's what I do for a living and it's what my dad did for me.

As the summer snake season came to

## Snake Bite

### Follow These Simple Steps

**W**hile uncommon, rattlesnake bites do occur, so having a plan in place for responding is always a good idea.

Carry a cell phone, hike with a companion who can assist in an emergency and let someone know where you are going and when you will be back.

The first thing to do if bitten is to stay calm. Generally, the most serious effect of a rattlesnake bite to an adult is local tissue damage, which needs to be treated. Children, because they are smaller, are in more danger if they are bitten.

Get to a doctor as soon as possible but stay calm. Frenetic, high-speed driving places the victim at greater risk of an accident and increased heart rate. If the doctor is more than 30 minutes away, keep the bite below the heart and then proceed to the doctor as quickly as possible.

The California Poison Control Center advises:

- Stay calm.
- Wash the bite area gently with soap and water.
- Remove watches, rings or anything that may constrict swelling.
- Immobilize the affected area.
- Transport safely to the nearest medical facility.

For more first aid information please visit California Poison Control at [www.calpoison.com](http://www.calpoison.com).

a close, both girls continued to ask to go on snake runs. It grew clear they weren't ready for the adventure to end. So, even though I knew we were beyond the warm part of the year and our chances of seeing snakes were low, we collected our snake sticks and climbed into the truck. After all, it was never really about finding snakes.



*Tim Hovey is an associate biologist with the Department of Fish and Game's South Coast Region.*