

Gerrhonotus parvus

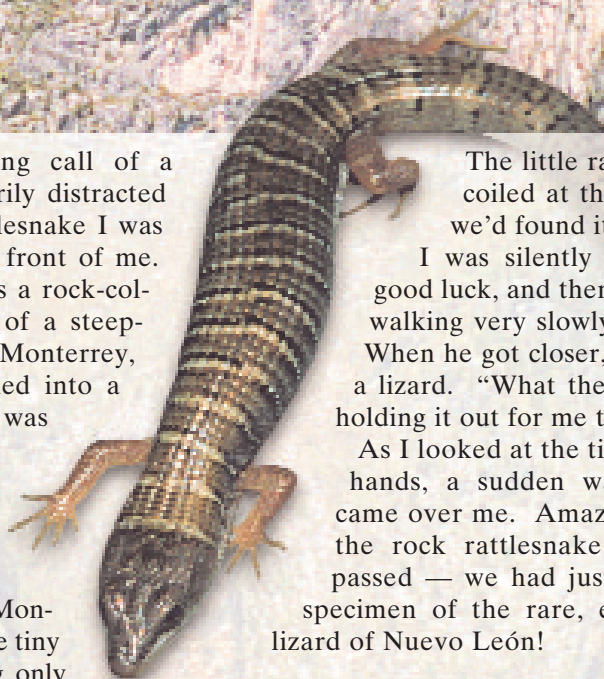
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Overhead, the laughing call of a canyon wren momentarily distracted my focus from the rattlesnake I was watching just 2 feet in front of me.

What had started off as a rock-collecting trip through the bottom of a steep-walled limestone canyon south of Monterrey, Nuevo León (Mexico), had turned into a snake-collecting trip — and now I was waiting patiently in the afternoon sun for Javier to return from the truck.

Javier Banda-Leal is a student at the Universidad Autónoma de Nuevo León (UANL) in Monterrey. When we stumbled onto the tiny rock rattlesnake we were carrying only one bag for rocks, so Javier made a quick beeline back to the truck for our snake collecting equipment, leaving me to keep an eye on our new-found friend. For several years I had been collaborating with researchers at UANL on the captive breeding of montane rattlesnakes, and this new specimen would make a great addition to the school's captive collection.



The little rattlesnake was still calmly coiled at the base of the rock where we'd found it when Javier reappeared.

I was silently feeling thankful for our good luck, and then I noticed that Javier was walking very slowly and staring at his hand. When he got closer, I saw that he had caught a lizard. "What the heck is this?" he asked, holding it out for me to see.

As I looked at the tiny lizard squirming in his hands, a sudden wave of excited disbelief came over me. Amazingly, our luck in finding the rock rattlesnake had already been surpassed — we had just found the third known specimen of the rare, endemic pygmy alligator lizard of Nuevo León!

Natural history

The pygmy alligator lizard, *Gerrhonotus parvus* Knight and Scudday, 1985, is the smallest known species of anguid lizard, reaching a total length of only 55–72.5 millimeters (one huge adult measured 76.5 millimeters!) snout-vent length. The tail is typically about twice the SVL. This species is oviparous.

The Pygmy Alligator Lizard of Nuevo León, Mexico



Gerrhonotus parvus. Photo: D. Lazcano



Gerrhonotus infernalis is sympatric with *Gerrhonotus parvus*. Photo: D. Lazcano

The paratype was a 71.7-millimeter (SVL) female that was maintained in captivity for 5 years and reportedly laid several clutches of eggs before her death. The species is endemic to Nuevo León, Mexico, and has been collected from February to October in arid transition woodland characterized by oak, agave, sotol, and extensive outcrops of exposed limestone, at elevations of 5,250–5,415 feet (ca. 1,600–1,650 meters).

During the course of our fieldwork on montane rattlesnakes, we have now found a total of five specimens of pygmy alligator lizard.

One was found under a dead yucca in a garbage dump south of Galeana, the type locality of the species. Three of the other four (including the one mentioned at the beginning of this article) were found west of San Isidro in a canyon (ca. 5,250 feet above sea level) running east to west, with scattered piles of leaf litter, large rocks, and an intermittent stream that leaves pools of water (most of which dry up during the dry season).

Near Galeana, the pygmy alligator lizard's distribution

area is also home to the pine woods shortnose skink, *Eumeces brevisrostris pineus*; the northern mesquite lizard, *Sceloporus grammicus disparilis*; the northern bluebelly lizard, *S. parvus parvus*; the spiny lizard, *S. spinosus spinosus*; the Nuevo Leon crevice swift, *S. torquatus binocularis*; the Texas night snake, *Hysiglena torquata jani*; the San Luis Potosi kingsnake, *Lampropeltis mexicana*; Jan's bullsnake, *Pituophis deppei jani*; the Texas patchnose snake, *Salvadora*



Typical *Gerrhonotus parvus* habitat. Photo: R. Bryson



Gerrhonotus parvus. Photo: D. Lazcano



Gerrhonotus parvus. Photo: D. Lazcano

grahamiae lineata; the western blackneck garter snake, *Thamnophis cyrtopsis cyrtopsis*; the western diamondback rattlesnake, *Crotalus atrox*; the blacktail rattlesnake, *C. molossus molossus*; the Mojave rattlesnake, *C. scutulatus scutulatus*; the coastal plain toad, *Bufo nebulifer*; and the Rio Grande chirping frog, *Eleutherodactylus cystignathoides campi*. In the canyon near San Isidro, the pygmy alligator lizard is sympatric with the Texas alligator lizard, *Gerrhonotus infernalis* — and this distribution area is also home to Couch's spiny lizard, *Sceloporus couchi*; the northern

mesquite lizard; the northern bluebelly lizard; the Nuevo Leon crevice swift; Ruthven's whipsnake, *Masticophis taeniatus ruthveni*; the Nuevo Leon graceful brown snake, *Rhadinaea montana*; the Texas patchnose snake; Sartor's snail sucker, *Sibon sartori sartori*; the arid land ribbon snake, *Thamnophis proximus diabolicus*; the mottled rock rattlesnake, *Crotalus lepidus lepidus*; the blacktail rattlesnake; the coastal plain toad; the Rio Grande chirping frog; and the long-footed chirping frog, *Eleutherodactylus longipes*.

Taxonomic confusion

KNIGHT and SCUDDAY (1985) described the pygmy alligator lizard and named it *Gerrhonotus parvus* — assigning the taxon to this genus

because of its perceived close relationship with Lugo's alligator lizard, *G. lugoii*, from the Cuatro Ciénegas Basin in Coahuila. Only a year later, however, SMITH (1986) assigned the species to the genus *Elgaria* based on head scalation. Nonetheless, recent molecular work (CONROY et al., in press) has shown the pygmy alligator lizard to indeed belong to the genus *Gerrhonotus* as originally described.

The pygmy alligator lizard is distinguished from all other species of the family Anguidae by the following combination of characteristics: smooth dorsal scales, the rostral in contact with the nasals, a second primary temporal that is in contact with the fifth medial supraocular, suboculars separated from the lower primary temporal by an upper labial, and wide pale crossbands on the tail (KNIGHT and SCUDDAY, 1985).

Captive Husbandry

The pygmy alligator lizard has proven to be a hardy captive. At the herpetology lab at UANL, three specimens have been kept for more than 2 years with no problems. This species seems to be less aggressive than other anguids — such as the sympatric, larger *Gerrhonotus infernalis* — but they do occasionally twist around and bite.



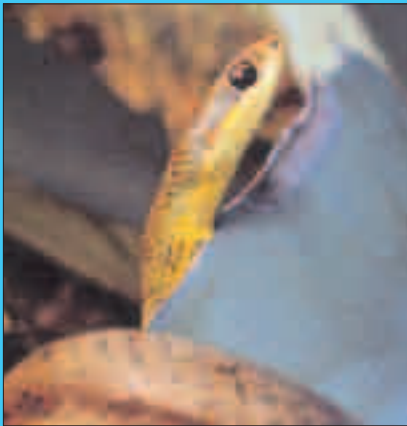
Other species that are also found within the range of *Gerrhonotus parvus*



Sibon sartori sartori. Photo: D. Lazcano



Coluber constrictor oaxaca. Photo: D. Lazcano



Coluber constrictor oaxaca. Photo: D. Lazcano



Crotalus lepidus. Photo: R. Bryson



Eleutherodactylus c. campi. Photo: D. Lazcano

The UANL specimens have been housed individually in plastic shoeboxes measuring 35 x 23 x 15 centimeters, with numerous holes drilled in the top and sides for ventilation. Each enclosure has a small water bowl, a small plastic hide box, and a newspaper substrate that is changed daily. The lizards are usually fed vitamin/calcium-dusted crickets every 3–4 days, and mealworms once a month. The room temperature is usually maintained at 77°F (25°C) during the day, and 70°F (21°C) at night. During the winter, these temperatures drop by about 5 degrees Fahrenheit (about 3 degrees Celsius). No other enclosure heating is used. No artificial lighting is used. The enclosures are exposed to natural indirect light that comes in through the windows, with the natural photoperiod of Monterrey.

Recently, the lizards have been transferred to all-glass aquariums measuring 60 x 50 x 30 centimeters, with screen tops. The substrate is cypress mulch, and each enclosure has a small water dish and a hide box. The mulch substrate is spot cleaned and the water dishes are cleaned and refilled once a week. The enclosures are misted lightly two or three times a week.

We have recently been able to sex the lizards, and found that all three are males (by hemipenal “popping”).

If we can obtain a female, we would like to breed the species. We would hibernate the lizards for 3–4 months at 55–60°F (13–16°C), and then put males and females together within 2–3 weeks of removal from hibernation. We would provide overhead basking lights and a nest box to allow a gravid female to thermoregulate and lay eggs.

It is hoped that we will succeed in reproducing this species in captivity. The experience of finding the unique and rare pygmy alligator lizard of Nuevo León in the wild is thrilling, and could only be approximated by the experience of hatching babies in the lab!

Note: All research has been conducted with permits issued by the Mexican government. ■

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