

Ryukyu 9:1–202). The typical coloration for the species is brownish gray or yellowish brown, with darker cross-bands or large blotches on the dorsum (Maki 1931. A Monograph of the Snakes of Japan. Daiichishobo, Tokyo, Japan. Vii + 240 pp.). Here, I report unusual coloration observed in *O. okinavensis*.

At 0119 h on 20 March 2017, a leucistic juvenile *O. okinavensis* (169 mm SVL, 29 mm tail length; Kyoto University, Graduate School of Human and Environmental Studies [KUHE] 61971; Fig. 1) was found on a forestry road in Amami-Oshima Island, Kagoshima Prefecture, Japan (28.42641°N, 129.57841°E; WGS84; 283 m elev.). Its coloration was yellowish pink with yellow blotches on the dorsum. The pupils were black, and the irises were grayish white. Albinism has been reported previously in *O. okinavensis* (Takada and Ohtani 2011. Keys to the Illustrated Manual of Japanese Reptiles and Amphibians in Natural Color. Hokuryukan, Tokyo. 296 pp.), however, to my knowledge this is the first report of leucism in *O. okinavensis*.

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**OXYBELIS FULGIDUS (Green Vine Snake). DIET.** *Oxybelis fulgidus* is a large (to 230 cm total length [TL]), slender, arboreal colubrid that occurs at low and moderate elevations of Veracruz and southeastern Oaxaca, in México, through Central and South America, to northern Bolivia and Argentina (Heimes 2016. Herpetofauna Mexicana Vol. I. Snakes of Mexico. Edition Chimaira. Frankfurt am Main, Germany. 572 pp.). In the Yucatán Peninsula, this species inhabits all vegetation types, being most common in secondary vegetation and forest edges (Lee 2000. A Field Guide to the Amphibians and Reptiles of the Mayan World. Cornell University Press, Ithaca, New York. 402 pp.). The diet of *O. fulgidus* is mostly composed of lizards, although they also prey on birds (Henderson 1982. Amphibia-Reptilia 3:71–80). This species has been reported prey on birds from 17 families (Cherry et al. 2017. Mesoam. Herpetol. 4:650–652), and in 106 *O. fulgidus* analyzed in

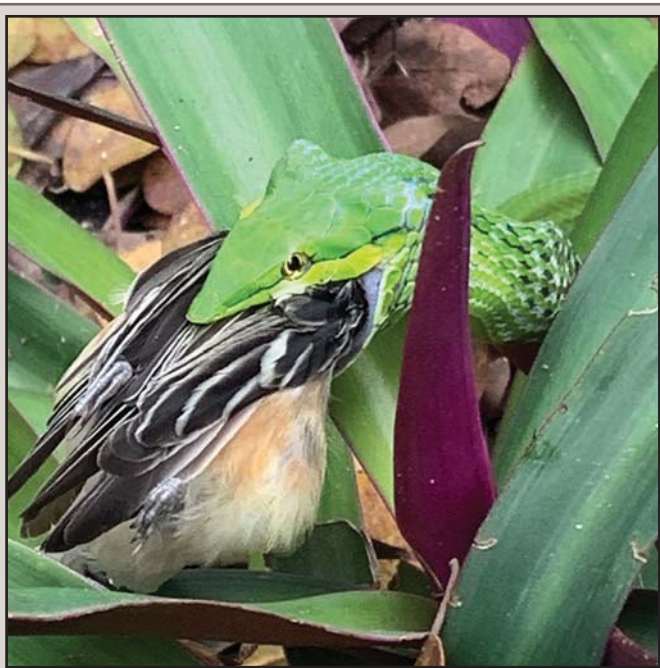


FIG. 1. An adult *Oxybelis fulgidus* consuming a *Tyrannus forficatus* in an urban zone in Cancún, Benito Juárez, Quintana Roo, Mexico.

the northern region of Brazil, 46.3% of the prey were birds, especially Passeriformes (Scartozzoni et al. 2009. S. Am. J. Herpetol. 4:81–89).

At 1205 h on 24 October 2019, we found an adult *O. fulgidus* (ca. 165 cm TL) on the ground in an urban zone in the city of Cancún, Municipality of Benito Juárez, Quintana Roo, México (21.19735°N, 86.85940°W; WGS 84). The snake had caught an adult *Tyrannus forficatus* (Scissor-tailed Flycatcher; Fig. 1). At the time of the first observation, the *T. forficatus* was dead and the *O. fulgidus* was in the process of eating it. After ca. 15 min, the *O. fulgidus* finished eating the *T. forficatus* and, noticing our presence, moved to a small tree (ca. 4 m high), where it coiled up.

Among the species of the family Tyrannidae reported in the diet of *O. fulgidus* are *Elaenia* sp. (Rodrigues et al. 2005. Herpetol. Rev. 36:325–326), *Pitangus sulphuratus* (Viana et al. 2014. Herpetol. Rev. 45:518–519) and *Tyrannus melancholicus chloronotus* (Hayes 2002. J. Trinidad & Tobago Field Nat. Club. 2002:59–61). This represents the first time that *T. forficatus* has been reported in the diet of *O. fulgidus*.

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**PITUOPHIS RUTHVENI (Louisiana Pinesnake). REPRODUCTION IN REPATRIATED POPULATION.** Threatened with extinction, the survival of *Pituophis ruthveni* is reliant on the fire-maintained, Longleaf Pine (*Pinus palustris*) ecosystem, which has been drastically reduced by ongoing and historical land use changes. On 19 July 2010, three captive-bred individuals were released onto restored habitat within the Kisatchie National Forest in Louisiana, USA, marking a major milestone in a cooperative effort between the U.S. Forest Service, U.S. Fish and Wildlife Service, Louisiana Department of Wildlife and Fisheries, and the Association of Zoos and Aquariums' Louisiana Pinesnake Species Survival Plan. The release site is positioned within *P. ruthveni*'s historic range, where the taxon is thought to be extirpated, as no snakes had been reported after 3749 trap-days of trapping during 2004–2009 (unpubl. data). A total of 178 captive-bred *P. ruthveni* have been repatriated to this site since 2010, all of which were tagged with passive integrated transponder (PIT) tags. Monitoring via automated PIT readers and funnel traps indicate that a significant portion of the released snakes have survived, grown, and acclimated to the natural environment (unpubl. data). Here, we report the first instance of reproduction within the repatriated population of *P. ruthveni*.

On 21 June 2016, a non-tagged individual with an SVL of 116.3 cm (Snake X; Fig. 1) was caught via funnel trap within the Catahoula Ranger District release site (Grant Parish, Louisiana). A genetic repository of skin sheds from all released snakes was used to perform parentage analyses on the repatriated population. Specifically, DNA was extracted from sheds of all individuals released before the discovery of "Snake X" (N = 75) following methods described by Fetzner (1999. BioTechniques 26:1052–1054). Individuals were genotyped for 14 previously developed microsatellite loci (Kwiatkowski et al. 2010. Conserv. Genet. Resour. 2:163–166) via PCR. The resulting PCR products were genotyped



FIG. 1. Untagged *Pituophis ruthveni* collected in Grant Parish, Louisiana, USA.

using an ABI 3100 Genetic Analyzer. Program Cervus v3.0.7 was used to perform both a parent-pair analysis with known sexes and an identity analysis. Identity analyses ruled out the possibility of a released snake losing its PIT tag, and parent-pair analyses confirmed a female hatched in 2010 and released in 2011 as the most likely mother, with 99% statistical confidence. No father was confidently assigned. This significant discovery is a highpoint in the repatriation efforts of this species and indicates that captive-bred, released Louisiana Pinesnakes are able to survive and reproduce in the wild.

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**PSEUDASPIS CANA (Mole Snake). DIET and HABITAT USE.**

*Pseudaspis cana* is a robust (ca. 200 cm total length) species of non-venomous lamprophiid snake inhabiting the southern and eastern parts of Africa. It has a pointed snout with an enlarged rostral scale which aids in breaking into rodent burrows (Alexander and Marais 2007. A Guide to the Reptiles of Southern Africa. Struik, Cape Town. 408 pp.) and specially designed teeth to aid in prey handling in confined spaces (Evans et al. 2019. PeerJ 7:e6943). The tendency for *P. cana* to prey upon fossorial and subterranean mammals as well as occupy uninhabited rodent burrows is well described in field guides (Fitzsimons 1970. A Field Guide to the Snakes of Southern Africa. Collins, London. 221 pp.; Alexander and Marais 2007, *op. cit.*). However, the peer reviewed literature lacks observation notes regarding diet or behavior. Here we report the first documented occurrences of *P. cana* breaking into, occupying, and likely preying upon mole-rats (family Bathyergidae) in southern Africa.

We have been researching *Fukomys damarensis* (Damaraland Mole-rat) in the Kalahari region of southern Africa as well as both *Georychus capensis* (Cape Mole-rat) and *Bathyergus suillus* (Cape Dune Mole-rat) in the Western Cape of South Africa for a number of years. Mole-rats are subterranean dwelling rodents native to Africa which live in extensive burrows completely sealed from the surface as a predator avoidance tactic (Begall et al. 2007. Subterranean Rodents—News from Underground. Springer, Berlin. 388 pp.). Mole-rats occupy the same burrow for life (Bennett and Jarvis 2004. Mamm. Species 756:1–5) and will aggressively defend it against any invaders including conspecifics (Cooney 2002. Proc. R. Soc. Lond. B Biol. Sci. 267:801–806). After sufficient rainfall has softened the soil, they create new tunnels and excess sand is extruded into mounds on the surface (Lovegrove and Painting 1987. Koedoe 30:149–163). They are at risk from predation by snakes (primarily *P. cana* and *Naja nivea* [Cape Cobra]) which may enter mole-rat burrows through these fresh mounds by pushing into the soft soil with their snout (Bennett and Jarvis 2004, *op. cit.*). To enter a mole-rat burrow, a snake would have to force their way through the mound and a 10–20 cm soil plug until it reaches the tunnel (Bennett and Jarvis 2004, *op. cit.*). During the dry season the mounds harden so that it would be almost impossible for a snake to break into a mole-rat burrow (KF, CV, DWH, pers. obs.). Since mole-rats occupy the same burrow for life they can be frequently recaptured by placing live traps at the tunnel under mounds. If there are fresh mounds then it means a mole-rat is present in that burrow and often mole-rats are still present if no fresh mounds are visible (KF, CV, DWH, pers. obs.). If several days of trapping pass without capture or activity (mole-rats respond to disturbances by blocking the offending tunnel or trap with sand) we assume the burrow is empty.

On 15 October 2018 at the Kalahari Research Centre in the Northern Cape Province of South Africa (26.97859°S, 21.83227°E; WGS 84; 1480 m elev.) we placed traps at tunnel entrances to a *F. damarensis* burrow ca. 30 cm deep within 10 m of each other and checked them every couple of hours. This group consisted of a reproductive male and female and their three adult offspring (174 g, 143 g, 130 g, 87 g, 79 g, respectively). We had successfully captured part of the colony, and JJ continued checking traps as normal throughout the day. It was discovered that a tunnel had been blocked by sand in the manner typical of a mole-rat response to disturbance. The sand that blocked the tunnel was only a few

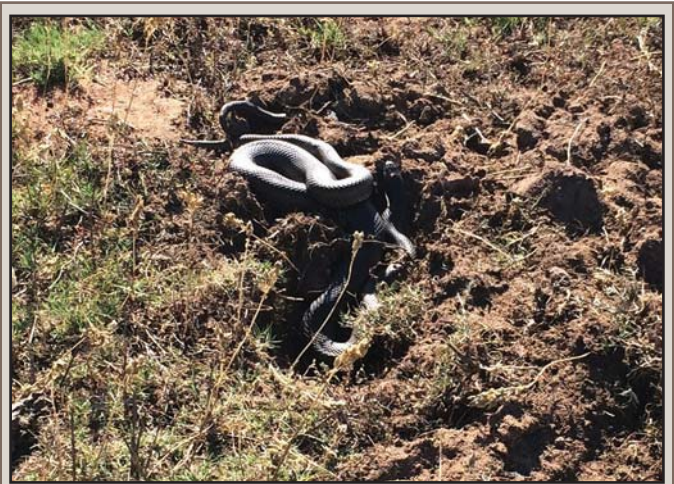


FIG. 1. Two *Pseudaspis cana* at a *Georychus capensis* burrow. One of the snakes was inside the burrow with just its tail visible (top middle).