

(Pseudoscorpionida; 11%), Hemiptera (Cercopidae 5%), Isoptera (5%), and Mollusca (Gastropoda, 5%). We also found plant matter in two individuals (11%).

The variety of prey items found in *Z. carvalhoi* indicates a generalist diet. These suggestions are consistent with data on the diet of other members in the family, with Hymenoptera and Coleoptera being the most common food items (e.g., Van Sluys et al. 2001, *op. cit.*; Siqueira et al. 2006. *J. Herpetol.* 40:520–525; Maia-Carneiro et al. 2012. *Zoologia* 29:277–279). The presence of Hymenoptera and Myriapoda in the diet of *Z. carvalhoi* is noteworthy, as individuals in these groups produce toxins that potentially could be biosequestered or transformed into skin chemicals (Hantak et al. 2013. *J. Chem. Ecol.* 39:1400–1406). The species in Cycloramphidae are not known to possess skin toxins, but do have macroglands (lateral glands in *Thoropa*, inguinal macroglands in *Cycloramphus*, and inguinal gland conglomerates in *Zachaenus*; Verdade 2005. Unpublished thesis, Universidade de São Paulo, Brazil), whose function and secretions have not been studied.

We thank FAPESP (processes 2003/10335-8, 2006/01266-0), FAPEMIG (process 2008/08853-4), and CNPq for financial support; Ibama/ICMBio for collection permits (SISBIO 14555-2, SISBIO 15363-1, and SISBIO 26157-3). We thank Celso Henrique Varela Rios for help in the field and Carolina Yamaguchi for help in identifying stomach contents.

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TESTUDINES — TURTLES

CHELYDRA SERPENTINA (Snapping Turtle). **DIET AND FORAGING BEHAVIOR.** *Chelydra serpentina* are omnivorous, consuming an extensive variety of foods including worms, mollusks, arthropods, and other invertebrates, fish, birds, amphibians, small mammals, small turtles, snakes, and other vertebrates, algae, aquatic macrophytes, and the fruits, stems, and leaves of higher plants (Ernst and Lovich 2009. *Turtles of the United States and Canada*, 2nd ed. Johns Hopkins University Press, Baltimore, Maryland. 827 pp.). On 14 May 2015 at 1310 h, I observed a large (carapace length ca. 40.0 cm) *C. serpentina* browsing on Skunk Cabbage (*Symplocarpus foetidus*) on land at a distance of ~2 m from the shoreline of a large pond in Espy, Columbia Co., Pennsylvania, USA (41.010206°N, 76.416294°W, WGS84; elev. ~150 m). The *C. serpentina* was observed for approximately 5 minutes at a distance of ~8 m. During observation, the *C. serpentina* removed Skunk Cabbage leaves by shearing the stalk near the base of each plant and subsequently consumed each leaf. When approached for closer observation, the *C. serpentina* became aware of my presence, ceased feeding, and assumed a defensive posture before retreating into the water. Closer inspection of the area in which this observation occurred revealed that approximately 40–50% of stems among ~20 clusters of Skunk Cabbage plants were sheared in a similar manner to those consumed by the observed *C. serpentina* (Fig. 1). Several partial fragments of Skunk Cabbage leaves were also noted on the surrounding substrate.

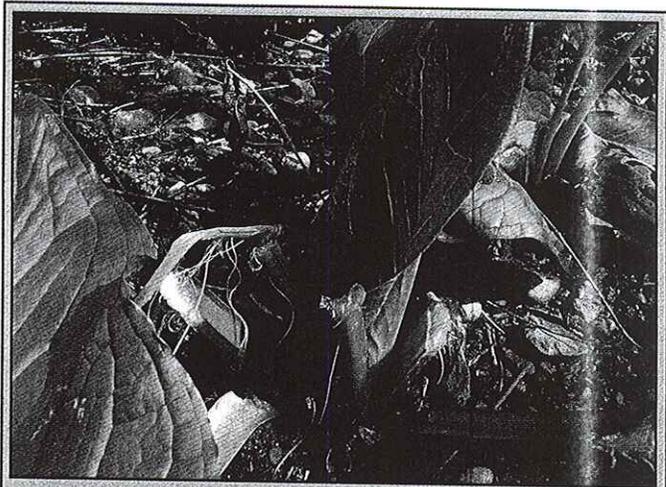


FIG. 1. Skunk Cabbage (*Symplocarpus foetidus*) stalks browsed by *Chelydra serpentina*.

Multiple markings in the substrate surrounding Skunk Cabbage clusters consistent with *C. serpentina* claw marks and a “slide” depression on the shoreline on which the individual *C. serpentina* traveled upon during retreat may suggest that either the same or multiple individuals frequent this area to feed upon Skunk Cabbage. I noted an additional area that displayed similar characteristics (browsed Skunk Cabbage and multiple *C. serpentina* claw markings) along the pond shoreline approximately 20 m from the first.

Chelydra serpentina occasionally browse vegetation on land. Ernst and Lovich (2009, *op. cit.*) report an observation of two large individuals on land browsing upon sedge grass. However, Skunk Cabbage appears to be an uncommon component of *C. serpentina* diet. Upon examination of the stomach contents of 470 *C. serpentina*, Alexander (1943. *J. Wildl. Manage.* 7:278–282) reported Skunk Cabbage in less than 1% of individuals studied. Observations reported herein suggest that terrestrial browsing of Skunk Cabbage by *C. serpentina* may be more typical in this species than previously documented. The pond shore and surrounding area in which these observations occurred is a portion of a once larger wetlands area that has been reduced and fragmented by development. Alternatively, *C. serpentina* may more commonly utilize Skunk Cabbage as a food source when other resources are limited.

I thank Amber L. Pitt for advice during the preparation of this note. Observations reported herein were conducted during turtle transect survey research approved by Bloomsburg University of Pennsylvania IACUC (Protocol #131, Summer 2015). Additional photographs of Skunk Cabbage browsed by *C. serpentina* and other aspects of the area described in this note are available from the author.

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GOPHERUS AGASSIZII (Agassiz's Desert Tortoise). **ATTEMPTED PREDATION.** Desert Tortoises have many predators (Rostal et al. 2014. *Biology and Conservation of North American Tortoises*. Johns Hopkins University Press, Baltimore, Maryland. 190 pp.). Several ophidian species have been identified as potential predators (Ernst and Lovich 2009. *Turtles of the United States and Canada*. Johns Hopkins University Press, Baltimore,



FIG. 1. *Arizona elegans* attempting to prey on *Gopherus agassizii* at Edwards Air Force Base, Kern Co., California, USA.

Maryland. 827 pp.), but no published reports have mentioned *Arizona elegans* (Glossy Snake).

At 0827 h on 3 October 2013, we observed an *Arizona elegans* ca. 80 cm total length attempting to prey on an 8.6-yr old juvenile *Gopherus agassizii* (midline carapace length = 90.5 mm, width = 72.4 mm, height = 42.1 mm, weight = 137.3 g) that had been fitted with a radio-transmitter and released the previous day from a head-start facility at Edwards Air Force Base in the Mojave Desert, Kern Co., California, USA. When first observed, the tortoise was 2 cm outside the entrance of a rodent burrow, the snake was between the tortoise and burrow entrance, and the snake had the head of the tortoise firmly in its jaws. The tortoise initially was immobile and probably cold (air temperature at 1 cm 18.0°C, soil temperature 16.2°C). The snake coiled around the tortoise shell three times and pulled the tortoise head first, closer to, and partially within the burrow entrance. The snake appeared to use the radio transmitter attached to the 5th vertebral scute of the tortoise as purchase for its coils. The tortoise with the snake coiled around it was too large to be pulled further into the burrow, and the head and anterior half of the tortoise were not visible (Fig. 1). The right hind foot of the tortoise was pinned backwards by the snake's coils and was immobile. The snake appeared to squeeze the tortoise shell with its coils; at the same time, the snake's head was still out of view within the burrow and possibly still gripping the tortoise's head. At 0912 h, the tortoise and snake moved slightly, and the snake's head, with partially opened mouthed and disarticulated jaws, came into view, exiting the burrow along the bridge of the tortoise shell. One of the coils loosened. Both animals remained still for another 10 min. Observations ceased and were re-initiated at 1110 h, but neither the tortoise nor the snake was evident at the burrow. The tortoise had moved 20 m away and was basking at the entrance of a small mammal burrow. No injuries were apparent on head or limbs. After a few minutes, the tortoise walked into the burrow and turned sideways, almost entirely within the burrow. By 1345 h, the tortoise was 15 cm into the burrow tunnel and no longer visible. The tortoise dug the burrow deeper and did not emerge again until 10–11 October, when it moved to and enlarged another rodent burrow for fall-winter brumation. The juvenile tortoise had apparently been too large for the snake to eat and was still alive the following spring. Our observation is the first record of an *A. elegans* attempting to prey on a juvenile *G. agassizii*. The diet of *A. elegans*, based on evaluation of 205

museum specimens, is composed of lizards, birds, mammals, and insects (Rodríguez-Robles et al. 1999. *J. Herpetol.* 33:87–92). The diet differed significantly by snout-vent length, with larger snakes consuming birds, followed in descending order by mammals, and lizards. If *A. elegans* had attempted to prey on a recently hatched, soft-shelled juvenile tortoise, the predation likely would have been successful.

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GOPHERUS AGASSIZII (Agassiz's Desert Tortoise). **MECHANICAL INJURY.** On 3 June 2015 at 1024 h, a team of U.S. Geological Survey scientists located an immature *Gopherus agassizii* at Joshua Tree National Park, near the southern Cottonwood Canyon entrance, that had been injured by a large *Ferocactus cylindraceus* (California Barrel Cactus) spine. The *G. agassizii* was estimated to be four years old by counting growth rings on the plastron, and was 89.4 mm in carapace length and weighed 160 g. It was found basking on a flat spot on a north-facing, steep, rocky slope with the *F. cylindraceus* spine impaling it under the right leg. The area is typical of the Sonoran Desert in California, with several species of cacti, some of which are locally abundant.

The tip of the spine had entered the body at the right anterior axillary area and penetrated the lower body to the posterior portion of the neck, at a right angle to the long axis of the *G. agassizii*, along a plane parallel with the ground, and close to the inside of the plastron. The spine was removed; significant tissue debris had formed around the diameter of the spine for approximately a centimeter from the insertion spot. It is unknown how long the spine had been in the *G. agassizii* but the dark color of the spine

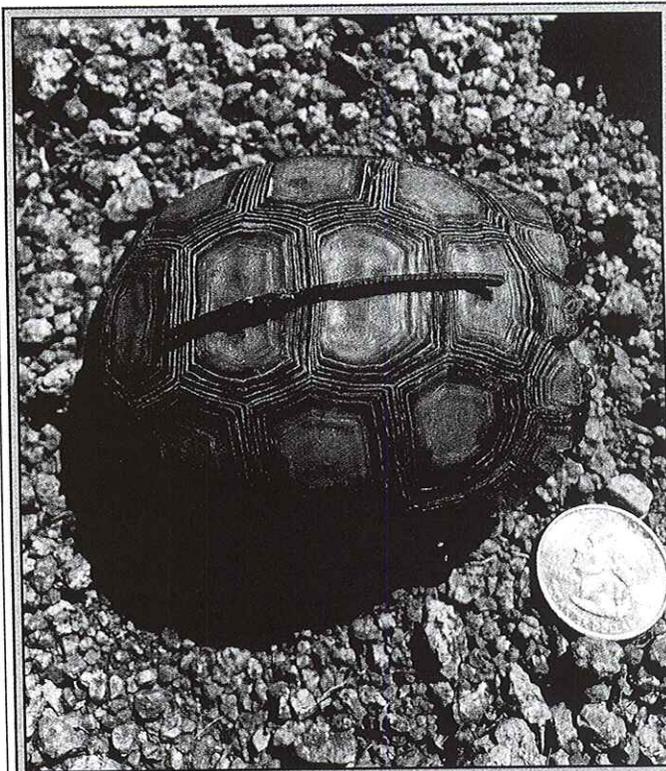


FIG. 1. Immature *Gopherus agassizii* with *Ferocactus cylindraceus* spine that was removed from its body. Built-up tissue can be seen on the removed spine from the left end to where it overlaps the seam between the second and third vertebral scutes of the *G. agassizii*.