a significant positive relationship between *A. mississippiensis* total length and size of opercula of snails consumed, for those specimens having consumed more than three snails (generalized linear model with a log link and Poisson probability distribution $\hat{c}$ = 1.53, $F_{1,1027}$ = 20.65, $P < 0.01$, = 0.99 ± 0.009 SE mm size of opercula per change in *A. mississippiensis* length).

Our results in this study are similar to a prior study on *Crocodylus moreletii* (Morelet's Crocodile) food habits in Belize, wherein a significant positive correlation occurred between *C. moreletii* SVL and mean, minimum, and maximum length of opercula of *Pomacea flagellata* (Golden Apple Snail) found in *C. moreletii* stomachs (Platt et al. 2006. Herpetol. J. 16:281–290). Interestingly, Platt et al. (2006, *op. cit.*) noted the occurrence of 618 *P. flagellata* in a single *C. moreletii* stomach; these are a large snail (ca. 60–70 g; Platt et al. 2006, *op. cit.*), although perhaps not as large as *P. maculate*, which have been reported with masses ranging from 55.6–135.3 g (Monette et al., *op. cit.*).

Of interest, contents of one stomach sample (277 cm total length male *A. mississippiensis*) contained a large amount of *Myocastor coypus* (Nutria) remains, in addition to 146 *P. maculata* opercula, vegetation, and roundworms. Thus, this *A. mississippiensis* fed almost entirely upon two non-native species (Nutria and Giant Apple Snail), illustrating its adaptability and utilization of available prey resources.

The current study corroborates our earlier finding (Elsey et al. 2017, *op. cit.*) of *A. mississippiensis* consuming *P. maculata*; we now provide details on large quantities consumed (despite potential toxicity) and correlations with alligator size. Thus far we have not noted nor received any reports of any wild alligator morbidity associated with consumption of potentially toxic Giant Apple Snails in Louisiana.

We recently conducted a short-term experimental feeding trial to determine if direct consumption of female Giant Apple Snails could have an adverse effect on alligators; the evidence thus far does not support cause for concern about alligators becoming poisoned by eating female Giant Apple Snails. (Carter et. al., unpubl.). It would be of interest expand the current study even further, and over a longer duration, to determine to what extent *A. mississippiensis* consumes *P. maculata*, as the snails are spreading across Louisiana. However, it is important to recognize the opercula are likely resistant to digestion and could be over-represented in stomach content analyses; Barr (*op. cit.*) noted opercula of *P. paludosa* remained in *A. mississippiensis* stomachs for up to 200 days after ingestion, after which time observations were discontinued. It might be beneficial to determine if *P. maculata* are energetically advantageous as a prey item, perhaps leading this species to consumed with greater frequency by *A. mississippiensis* and other large adult crocodilians. *P. maculata* might also be consumed in high quantity as gastropods might be considered an "easy-capture" prey item (Rosenblatt et al. 2015., *op. cit.*). Whether consumption of possibly toxic *P. maculata* consumed in larger quantities and for extended time periods has adverse effects on *A. mississippiensis* remains unknown. *A. mississippiensis* may possibly have adaptations to neutralize any toxins in the invasive Giant Apple Snails.

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SQUAMATA — LIZARDS

***AMEIVA FESTIVA* (= *HOLCOSUS FESTIVUS*). (Central American Whiptail Lizard). JUVENILE COLORATION.** A variety of reptiles and amphibians exhibit body coloration changes over maturation. A common ontogenetic trend among many lizard species is the loss of conspicuous tail coloration: juveniles bear bright tails that presumably direct predator attacks to a more expendable body region, whereas adults typically lose conspicuous tails as their activity patterns and habitat use (and concomitant selective pressures) change with age (Hawlena et al. 2006. Behav. Ecol. 17:889–896). *Ameiva festiva* is a neotropical, active-foraging lizard inhabiting a wide range of terrestrial habitats including forest interiors, small clearings, and disturbed areas throughout Central America. Juvenile *A. festiva* have bright blue tails, but adults (males > 85 mm; females > 78 mm) lose this trait (Savage 2002. The Amphibians and Reptiles of Costa Rica: A Herpetofauna between Two Continents, between Two Seas. University of Chicago Press, Chicago, Illinois. 934 pp.). Although the function of *A. festiva*'s ontogenetic color change has not been directly examined, it is plausible that differing predation pressures or escape abilities between life stages contribute to the maintenance of this ontogenetic shift in color.

We used spectrophotometry to document the spectral reflectance of a juvenile *A. festiva*'s tail to determine whether juveniles of this species might use ultraviolet signals. We opportunistically captured a juvenile *A. festiva* on a small stream bank within the pre-montane forests of Las Cruces Biological Station, Coto Brus County, Costa Rica, on 25 July 2016. During capture this individual autotomized its tail, which was in the juvenile-typical blue phase. We temporarily retained the autotomized tail and measured tail color within 60 seconds of tail separation. Spectrophotometric measurements were performed using a hand-held portable JAZ spectrophotometer (Ocean Optics, Dunedin, Florida). The tail was illuminated by a xenon-pulsed light source via a bifurcated optical fiber with a shielded probe held at a 90°-angle to the surface of the tail. Reflectance was recorded relative to a 99% Spectralon WS-2 reflectance standard (Ocean Optics). Four separate points were measured on the tail, and we used the average of the four spectra to characterize tail reflectance within the visible and ultraviolet range (300–700 nm). The spectra were mean-averaged and smoothed (Maia et al. 2013. Methods Ecol. Evol. 4: 906–913) using a LOESS smoother with a span parameter set to 0.1 in R (ver. 3.1.2; R Core Team 2014). The average reflectance spectrum (Fig. 1) shows a single major peak at 475 nm, indicating a high level of reflectance in the visible blue region of the spectrum. No reflectance peak was noted in the ultraviolet region.

Our observation suggests that juvenile *A. festiva* tails do not bear substantial ultraviolet colors; tail coloration appears to be limited to blue wavelengths. The blue coloration is most

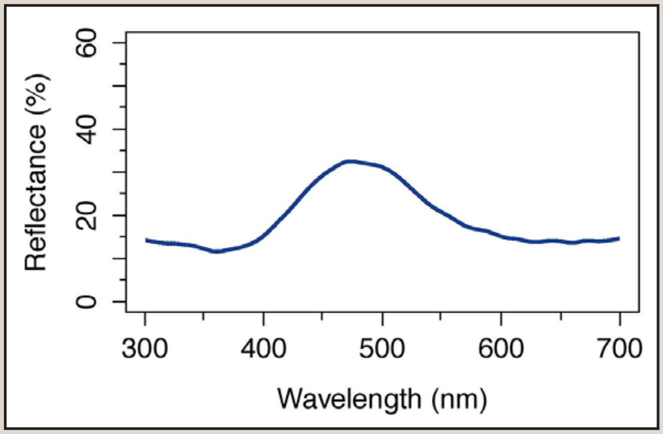

Fig. 1. Average tail reflectance spectrum of a juvenile *Ameiva festiva*.

likely generated via a structural mechanism (through blue light scattering as it passes through skin chromatophore cells). As blue tail coloration is restricted to juveniles, it is unlikely to serve a role in sexual signaling. Information about the primary predators of adult and juvenile *A. festiva* is generally lacking, although some studies report that snakes might be important predators of *A. festiva* (Sorrel 2009. Copeia 2009:105–109) and other co-occurring *Ameiva* species (Hirth 1963. Ecol. Monogr. 33:83–112). Nevertheless, if blue tails do indeed function to misdirect predator strikes in juvenile *A. festiva*, the tail's conspicuous coloration suggests that visual predators (e.g., birds) might also be important during this life stage.

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***ANOLIS UNILOBATUS*. SURFACE TENSION.** *Anolis unilobatus* is a small anoline lizard that ranges from southern Mexico to Costa Rica (Köhler and Vesely 2010. Herpetologica 66:207–228). They can often be found on fences where they are usually perched head down on the posts, especially near bushes. At some locations they can reach high densities (Köhler and Vesely, *op. cit.*). Several species of *Anolis* exhibit aquatic activity, perching near bodies of water to either hunt or escape from predators by swimming or diving (Robinson 1962. Copeia 1962:640–642; Brandon et al. 1966. Herpetologica 22:156–157; Beuttell and Losos 1999. Herpetol. Monogr. 13:1–28; Leal and Losos 2000. J. Herpetol. 34:318–322; Birt et al. 2001. J. Herpetol. 35:161–166). Herein, I report for the first time use of water as an alternative mechanism against threat in *A. unilobatus*.

At 1054 h on 29 November 2017, in ejido Copoya, Municipio de Tuxtla Gutiérrez, Chiapas, México (16.71730°N, 93.12820°W, WGS 84; 868 m elev.), I observed a subadult male *A. unilobatus* perched on a fallen branch at 1 m above ground level. The vegetation in the area is tropical dry forest, with temporary bodies of water during the rainy season. When I approached, the lizard jumped and fell onto the surface of a small pond, remaining suspended by its limbs and tail on the water's surface. After remaining immobile for less than a minute and suspended on the water surface, the lizard swam ca. 60 cm in a straight line on the surface to the shore. Swimming motions consisted of rapid undulatory movements of the body and tail with adpressed limbs. Although *A. unilobatus* is not an inhabitant of aquatic habitats, this could imply that the use of water as a refuge is a facultative phenomenon as Powell and Parmerlee (1993. Herpetol. Rev. 24:59) mention for *A. chlorocyanus*, and the small size at the subadult stage might facilitate suspension on water and surface swimming.

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***CHALCIDES OCELLATUS* (Ocellated Skink). DIET.** A specimen of *Chalcides ocellatus* was collected at Mishor Yamin, Israel (31.00397°N, 35.10713°E) on 22 June 2012. The specimen, an adult male with a total length of 132 mm (snout–vent length 82 mm, tail length 50 mm, mass 11.8 g), was deposited in the Steinhardt Museum of Natural History (Tel Aviv, Israel) as TAU 16357. Dissection of the *C. ocellatus* specimen revealed a *Mesalina guttulata* (Small-spotted Lizard, TAU 17847) within its digestive tract (Fig. 1). The head and tip of the tail of the *M. guttulata* are missing (presumably digested during the intervening period between initial predation and time of collection). The total length of the remaining *M. guttulata* specimen was 44 mm from base of neck to broken tail tip (base of neck to cloaca: 22.7 mm; cloaca to broken tip of tail 21.3 mm). This means the *M. guttulata* was no less than a third of the total length of the *C. ocellatus*, and in all likelihood larger with the inclusion of its head and, potentially, its tail.

In Israel *C. ocellatus* is noted to primarily feed on various arthropods, occasionally supplementing its diet with fruit (Bar and Haimovitch 2011. A Field Guide to Reptiles and Amphibians of Israel. Pazbar LTD, Herzliya. 246 pp.). In other parts of its distribution, instances have been reported of it preying on *Podarcis filfolensis* (Filfola Wall Lizard) and conspecific juveniles (Carretero et al. 2010. Bonn Zool. Bull. 57:111–118). However, saurophagy has not been reported for this species from Israel. This new finding strengthens our understanding of *C. ocellatus* as an opportunistic omnivore.

Fig. 1. *Chalcides ocellatus* (left) with a partially digested *Mesalina guttulata*, removed from its stomach (right).