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STERNOTHERUS CARINATUS (Razor-backed Musk Turtle). PARASITISM. On 22 May 2016, a male *Sternotherus carinatus* was hand captured on the Comite River in southeastern Louisiana, USA (30.70090°N, 91.05153°W). Upon further inspection, two leeches were discovered near the tail and rear legs. The leeches were removed and stored in 95% ethanol. The leeches were later identified as *Placobdella parasitica*. This species of leech is fairly common among North American freshwater turtles and has been recorded in 22 additional turtle species (Moser 1995. Texas J. Sci. 47:71–74; Watermolen 1996. J. Fresh. Ecol. 11:211–217). This record stands as the first documentation of *P. parasitica* using *S. carinatus* as its host and increases the number of known aquatic turtle hosts.

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TERRAPENE CAROLINA (Eastern Box Turtle). DIET. *Terrapene carolina* are opportunistic omnivores, consuming a large variety of plants and animals (Dodd 2001. North American Box Turtles: A Natural History. University of Oklahoma Press, Norman. 231 pp.; Ernst and Lovich 2009. Turtles of the United States and Canada, 2nd ed. Johns Hopkins University Press, Baltimore, Maryland. 827 pp.). Invertebrates, in particular, can comprise a significant portion of the diet (Surface 1908. Zool. Bull. Div. Zool. Pennsylvania Dept. Agric. 6:106–196; Klimstra and Newsome 1960. Ecology 41:639–647). Here, we report two novel invertebrate prey items in the diet of *T. carolina*.



FIG. 1. *Terrapene carolina* consuming a leech, Johnson County, Illinois.

At 1012 h, 29 April 2016, JGP observed an adult male *T. carolina* feeding on a leech (Annelida: Hirudinea: *Erpobdella* sp.) in a muddy floodplain forest adjacent to a *Nyssa tupelo-Taxodium distichum* swamp in Johnson County, Illinois, USA (Fig. 1). On 10 June 2007, JCM encountered an adult male *T. carolina* consuming a black leech in a wooded creek floodplain with shallow water in Deep Run Park, Henrico County, Virginia, USA. Given the propensity of *T. carolina* to eat terrestrial annelids (i.e., earthworms; Dodd 2002, *op. cit.*; Ernst and Lovich 2009, *op. cit.*) the consumption of leeches is not unexpected.

At 0720 h, 28 June 2016, JAS observed one adult male and two adult female *T. carolina* feeding on dying honeybees (Insecta: Hymenoptera: *Apis mellifera*) on a gravel driveway. A honeycomb, queen bee, and most worker bees were removed alive from an adjacent house soffit the previous evening by a beekeeper. The turtles consumed the moribund bees, but ignored dead ones. The turtles were not observed at this specific location prior to hive removal, nor thereafter. The smell of honey was prevalent at the time of observation and we suspect the turtles located this transient food source by olfaction (Wachowiak et al. 2002. J. Neurophysiol. 87:1035–1045). Attraction to honey and/or bees has been observed in Ornate Box Turtles (*Terrapene ornata*; Metcalf and Metcalf 1970. Trans. Kansas Acad. Sci. 73:96–117).

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TRACHEMYS SCRIPTA ELEGANS (Red-Eared Slider) and GRAPTEMYS GEOGRAPHICA (Northern Map Turtle). HYBRIDIZATION. Intergeneric hybridization occurs more commonly than once thought in turtles (Galgon and Fritz 2002. Herpetozoa 15:137–148; Blank 2006. In Vetter and van Dijk [eds.], Terralog, Turtles of the World Vol. 4: East and South Asia, pp. 148–149. Edition Chimaira, Frankfurt am Main, Germany), although most examples have occurred in captivity (Fritz 1995. Herpetofauna 17:19–34) where species are confined together artificially. Hybrids between *Trachemys* and *Graptemys* are occasionally produced in captivity for the pet trade and display a variable mix of phenotypic characteristics from both parent species, however natural occurrences of such hybrids have not been reported. Herein we report occurrences of hybridization between *G. geographica* and *T. scripta elegans* in the wild.

In September 2013 during a turtle survey, two hybrids were captured in hoop net traps baited with pieces of silver carp (*Hypophthalmichthys molitrix*) on the North Fork Saline River, Gallatin County, Illinois, USA, by R. Bluett and D. Woolard. After discovering that reports of these species hybridizing was lacking in the literature, A. Gooley and R. Bluett retrapped the same stretch of river in August 2014 to obtain photographs and measurements of any hybrids. One female (Fig. 1; 37.76471°N, 88.32310°W; WGS 84) and two male (Fig. 2; 37.77127°N, 88.31359°W, and 37.77216°N, 88.30926°W; WGS 84) hybrids, as well as 9 *T. s. elegans* and 8 *G. geographica* were captured as a result. The hybrids were identified as such because they possessed a combination of *T. s. elegans* and *G. geographica* phenotypic characteristics similar to captive hybrids. Adult *T. s.*

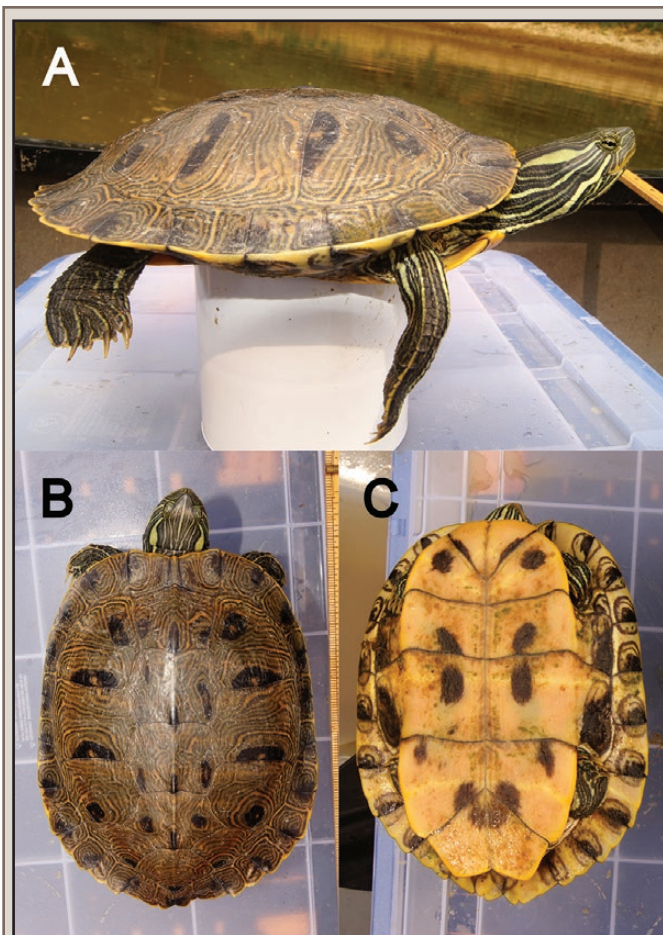


FIG. 1. Lateral (A), dorsal (B), and ventral (C) views of a female hybrid between *Graptemys geographica* and *Trachemys scripta elegans* (North Fork Saline River, Gallatin County, Illinois) captured August 2014. Note the pale-yellow postorbital stripe, carapace patterning, and dark blotches on the plastron.

elegans are characterized by yellow-striped green to olive brown skin, wide red postorbital stripes, green to olive carapaces with yellow striping across each pleural, and yellow plastrons with a large dark blotch on each scute (Ernst and Lovich 2009. *Turtles of the United States and Canada*, 2nd ed. John Hopkins University Press, Baltimore, Maryland. 827 pp.; Powell et al. 2016. *Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America*, 4th ed. Houghton Mifflin Harcourt Publishing Company, New York. 494 pp.). Adult *G. geographica* are characterized by yellow-striped olive to brown-black skin, small triangular post orbital marks, olive green carapaces covered in yellowish-orange reticulations bordered in black, small to absent vertebral spines, pale yellow plastrons, and megacephalic females (Ernst and Lovich, *op. cit.*; Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*, University of Oklahoma Press, Norman. 460 pp.). Each hybrid possessed prominent orange patterning bordered in black on the carapace that appeared intermediate between *G. geographica* reticulations and *T. scripta elegans* striping, small vertebral spines, a pale yellow plastron with large dark blotches or oculi on each plastral scute, and yellow striping bordered by thick black lines on the head, neck, and limbs. The female's carapace was light olive with a dark blotch on each scute while the males' carapaces were olive to dark olive-green. Small vertebral spines



FIG. 2. Lateral views of two male hybrids between *Graptemys geographica* and *Trachemys scripta elegans* (North Fork Saline River, Gallatin County, Illinois) captured August 2014. Note the large postorbital blotches and carapace patterning.

were present on the female and one male but nearly absent on the other male. Both males possessed large yellow postorbital blotches while the female possessed a prominent pale-yellow postorbital stripe. The female (midline carapace length [MLCL] = 18.6 cm; width = 14.8 cm; mass = 624 g) was larger than the males (MLCL = 14.3 cm; width = 11.1 cm; mass = 283 g; and MLCL = 11.9 cm; width = 10.0; mass = 227 g respectively) but did not display megacephaly; the head was not noticeably wider than similarly sized male *T. s. elegans* captured at the location.

The capture location was rural and surrounded by agricultural land, leading us to believe the hybrid individuals were not of captive origin. We speculate this hybridization was facilitated by periodic low streamflow that confined *T. s. elegans* and *G. geographica* together in close proximity in shallow pools, leading to reduced habitat partitioning and an inability of females to retreat from mating advances of heterospecific males. Resulting conditions would be similar to that of captive environments where pre-zygotic isolating mechanisms more readily break down. Intergeneric turtle hybrids are potentially fertile (Galgon and Fritz, *op. cit.*), thus the frequency and effects of gene flow events between sympatric wild turtle populations of differing genera needs further investigation.

Our activities were authorized by state law (515 Illinois Compiled Statutes 5/20-100) and complied with standards for animal welfare adopted by the American Society of Ichthyologists and Herpetologists.

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CROCODYLIA — CROCODILIANS

ALLIGATOR MISSISSIPPIENSIS (American Alligator). INCIDENTAL CAPTURE AND ESCAPE FROM WATERFOWL TRAP. Several studies have documented the use of “walk in” box traps to capture crocodilians, including *Alligator mississippiensis* (Elsey and Trosclair 2004. Herpetol. Rev. 35:253–255; Ryberg and Cathey 2004. Wildl. Soc. Bull. 32:183–187). Recently, we documented *A. mississippiensis* (hereafter alligators) possibly consuming corn at an automated deer feeder (Platt and Elsey 2011. Croc. Spec. Grp. Newsl. 30:27–28). It is uncertain if the alligators were attracted to the corn present at the feeders, the audible noise made by the feeder dispensing corn, or the presence of potential prey species such as *Odocoileus virginianus* (White-tailed Deer), *Sus scrofa* (Feral Pigs), or *Procyon lotor* (Raccoons) that might be present at the feeders (Platt and Elsey 2011, *op. cit.*). Although alligators are generally considered to be carnivores and early research suggested they may not be able to digest plant-based proteins (Coulson and Hernandez 1983. Alligator Metabolism. Studies on Chemical Reactions *in vivo*. Pergamon Press, New York. 182 pp.), recent work has documented that alligators are able to utilize plant proteins (Reigh and Williams 2013. Aquaculture 412–413:81–87). Indeed, a recent review suggested numerous crocodilian species exhibit frugivory and may serve as seed-dispersers (Platt et al. 2013. J. Zool. 291:87–99).

We initiated a study in 2015 to band *Dendrocygna autumnalis* (Black-bellied Whistling Ducks, hereafter BBWD) in southwestern Louisiana, USA. Round walk-in corral style traps (9.14 m diameter and 1.22 m high) were constructed and baited with cracked corn. One trapping site was on a levee with adjacent marsh wetlands on privately owned property in Grand Chenier, Louisiana. The site is located ~9 km W of Rockefeller Wildlife Refuge headquarters. The site was first baited on 16 February 2016, and the trap was set up on 22 February; fresh

bait was placed approximately 5–7 days/week. Game camera traps (Moultrie A5 low glow) were deployed to monitor BBWD consumption of bait within the traps to guide in scheduling banding efforts and times.

Review of images captured revealed an image of an adult alligator within the trap at 2045 h on 11 March 2016 (Fig. 1). The next image was captured 4 hours and 8 minutes later, by which time the alligator was absent and the trap was damaged, almost certainly by the large alligator climbing out to escape. The alligator may have escaped much sooner without the camera being activated; a raccoon in foreground may have caused the photo to be taken. Of note, the trap was designed as a light-weight temporary waterfowl trap, and was not of overly sturdy design for containing large predatory species. Based on the known height of the pen (1.22 m) we estimate the alligator's total length to be ca. 2.13–2.44 m, clearly an adult. The opening to allow access of waterfowl to the trap is only ~25 cm wide; thus it seems the alligator would have not easily fit through this relatively small opening.

The camera trap image caught prior to the appearance of the alligator was taken at 1840 h, which documented a bird (presumably *Fulica americana*, an American Coot,) in the trap and at least ten BBWD flying above the trap. This suggests the alligator may have been attracted to (1) the coot if it was still present; (2) BBWD that may have been resting/roosting nearby; (3) the bait corn within the trap; (4) other species attracted to the corn such as raccoons or (5) somehow entered the trap inadvertently. Also, it is noteworthy that the trap was situated on dry land, thus the normally aquatic alligator (Elsey and Woodward 2010. *In* Manolis and Stevenson [eds.], Crocodiles. Status Survey and Conservation Action Plan. 3rd ed., pp 1–4. Crocodilian Specialist Group, Darwin) would have left its typical wetlands habitat to investigate the baited waterfowl trap on the adjacent levee. However the wetlands were only ~6 m away from the trap, and alligators are known to sometimes exhibit terrestrial hunting (Dinets 2010. Herpetol. Bull. 114:15–18). During the day on 11 March, camera trap images showed numerous waterbirds (BBWD, *F. americana*, *Quiscalus major* [Boat-tailed Grackles], *Agelaius phoeniceus* [Red-winged Blackbirds], and *Anas discors* or *Anas crecca* [Teal]) visiting the bait site; all are potential prey for *A. mississippiensis*.

Additionally, in the 2015 trapping season, one of us (JW) made several observations of an adult alligator (ca. 213 cm total length) near a similarly designed waterfowl trap at a site some 48 km E of the site discussed above. Indirect evidence suggested the alligator appeared attracted to waterfowl near and within the trap, and may have even have deterred waterfowl entering the trap. An adult alligator was observed nearly each time (N = 5 or 6) the trap was baited/visited by JW, and the alligator was observed lunging at BBWDs on several occasions. Another biologist observed similar behavior at a duck banding site some 32 km further east.

One of us (RME) has previously captured a juvenile alligator (ca. 122 cm total length) in a walk-in turtle trap placed in a local freshwater pond; and co-workers have caught adult alligators in Fyke nets (Selman et al. 2014. Chelon. Conserv. Biol. 13:131–139) used to trap *Malaclemys terrapin* (Diamondback Terrapins) in brackish-saline habitats. In a multi-year study in southwestern Louisiana, nine alligators (ca. 91–244 cm total length) were caught in 504 trap days; in one instance two alligators were caught in the same Fyke net on the same day (W. Selman, pers. comm.). The nets were initially unbaited,



FIG. 1. Adult American Alligator (*Alligator mississippiensis*) inside waterfowl trap, Grand Chenier, Louisiana.