



FIG. 1. Interspecific amplexus in pairs of anurans in the Pantanal wetlands, Mato Grosso, Brazil. A) A male *Scinax fuscovarius* amplexing *Physalaemus nattereri*. B) A male *S. fuscovarius* amplexing *Pseudis paradoxa*.

We found amphibians at the same temporary pond, near the edge, in open landscape. We found the first pair at 2300 h, a male *S. fuscovarius* amplexing an individual (indeterminate sex) of *P. nattereri* (Fig. 1A)—and, we found the second pair at 2312 h—a male of *S. fuscovarius* amplexing an individual (indeterminate sex) of *P. paradoxa* (Fig. 1B). To the best of our knowledge, this is the first report of amplexus of *S. fuscovarius* with *P. paradoxa* or *P. nattereri*. Although the three species habitually exhibit distinct substrates of activity (subarboreal, aquatic, and terrestrial, respectively), their reproductive activities occur at the same time and in the same temporary habitats, increasing the possibility of interspecific interactions.

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TESTUDINES — TURTLES

APALONE FEROX (Florida Softshell Turtle). KYPHOSIS. Kyphosis is a skeletal deformity defined as a dorsal–ventral curvature of the spine (Davy and Murphy 2009. *Can. J. Zool.* 87:433–439). In chelonians, kyphosis typically presents itself as an exaggerated doming of the carapace, and has been documented in wild individuals of several families (e.g., Plymale et al. 1978. *Southwest. Nat.* 23:457–461). Suspected causes for this condition include arrested development, excessive pressure exerted on incubating eggs, insufficient oxygen levels or temperatures during embryological development, late retraction of the yolk mass, partial desiccation of incubating eggs, neoplasia, freeze damage to shell tissues during winter inactivity, and premature fusion of the costal plates and ribs resulting in differential growth rates (Smith 1947. *Univ. Kansas Publ. Nat. Hist.* 1:117–124; Plymale et al. 1978, *op. cit.*).

On 18 June 2016, MT encountered an *Apalone ferox* of unknown gender and approximately 25 cm in straight carapace length in the parking lot of an apartment complex on Flemming Island, Florida, USA (30.083929°N, 81.708027°W; WGS84). With several man-made retention ponds located on the property, it appeared to be moving between ponds when encountered. Upon closer inspection, the specimen exhibited extreme doming of the carapace which measured approximately 10–12 cm in height (Fig. 1). Although no noticeable signs of trauma were present, the texture of the skin in the affected area was dried and encrusted, and hard to the touch when compared to the softer, smoother skin of the surrounding unaffected areas of the carapace. When relocated to the edge of a nearby pond, its behavior and movements appeared normal and unhampered as it retreated to the water.

Because the specimen was left *in situ*, radiographic confirmation of spinal abnormalities was not possible. Nonetheless, the specimen's outward appearance strongly resembled photographed individuals of other trionychid species with kyphosis (Anonymous 1936. *Bull. New York Zool. Soc.* 39:246; Burke 1994. *Herpetol. Rev.* 25:23). Kyphosis has previously been documented in *A. ferox* (Nixon and Smith 1949. *Turtlox News* 27:1–2) as well as several other trionychid species including *A. mutica* (Smith 1947, *op. cit.*), *A. spinifera* (Cahn 1937. *Biol. Monogr.* 16:1–218; Smith 1947, *op. cit.*; Burke 1994, *op. cit.*), *Palea steindachneri* (Anonymous 1936, *op. cit.*), *Pelodiscus sinensis* (Vogt 1922, *Arch.*



FIG. 1. *Apalone ferox* exhibiting kyphosis.

Naturgesch. 10:135–146), and *Trionyx triunguis* (Mertens 1940. Senckenbergiana 22:236–243); however, it is unclear how common this anomaly is within this group or what the underlying causes may be. In females, kyphosis could be a barrier to successful copulation (Plymale et al. 1978, *op. cit.*), although Burke (1994, *op. cit.*) reported a case of extreme kyphosis in a gravid female *A. spinifera*.

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APALONE SPINIFERA EMORYI (Texas Spiny Softshell). DIET. *Apalone spinifera emoryi* was introduced into the Colorado River system in the early 20th century, likely via the Gila River (Miller 1946. Copeia 1946:46), and is now widespread in the Colorado and its tributaries. Spiny Softshells are primarily benthic carnivores and scavengers, and have been reported feeding on insects, fish, frogs, crayfish, other aquatic animals, carrion, and occasionally aquatic, and even terrestrial, plant material (Williams and Christiansen 1981. J. Herpetol. 15:303–308, and references therein). Herein we report two novel dietary components for *A. spinifera*, in the introduced part of the species' range.

As part of a larger ongoing ecological study of this species in the Muddy River of Nevada, turtle stomach contents were examined. Gut contents were collected from animals sacrificed during native fish restoration and monitoring efforts during the 2016 field season. Of particular note were three turtles whose stomachs contained wholly or primarily terrestrial vegetative material. One female turtle (carapace length 299 mm, body mass 1134 g) contained ten intact, and multiple fragments of, Screwbean Mesquite (*Prosopis pubescens*) fruits (Fig. 1). Two different turtles, one male and one female (carapace length 137 mm, body mass 178.3 g, and carapace length 352 mm, body mass 1814 g, respectively), contained seven Desert Fan Palm (*Washingtonia filifera*) fruits/seeds (Fig. 2). Due to the large number of fruits consumed, the exclusivity of fan palm fruits in the stomach of one animal, the presence of both items in multiple animals (including some not reported here), and the fact that these fruits are consumed by other wildlife and humans (Stewart 1965. Kiva 31:46–53), we conclude these are not cases of incidental consumption, but instead that the animals were specifically seeking these items as a regular part of their diet.

Although we are still working to describe the complete diet



FIG. 1. Screwbean Mesquite (*Prosopis pubescens*) fruits inside the opened stomach of an *Apalone spinifera emoryi* specimen.



FIG. 2. Desert Fan Palm (*Washingtonia filifera*) fruits recovered from the stomach of *Apalone spinifera emoryi*.

of this introduced species in a previously turtle-free system, this adaptable animal appears to be successfully exploiting available, albeit unusual, resources. Although no reliable census has been conducted to establish turtle population size in this system, anecdotal evidence suggests continued population growth and range expansion. The apparent willingness of this species to utilize novel food sources presumably contributes to its success in this system.

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APALONE SPINIFERA (Spiny Softshell), CHELYDRA SERPENTINA (Snapping Turtle), and GLYPTEMYD INSCULPTA (Wood Turtle). EMBRYO SURVIVAL AFTER NEST FLOODING. Published field observations on the hatching success of natural turtle nests after flooding events are uncommon. Here, we report observations on the hatching success of an *Apalone spinifera* nest, several *Chelydra serpentina* nests, and a *Glyptemys insculpta* nest, following a mid-summer flood on a tributary of the Namekagon River between Hayward and Spooner, Washburn County, Wisconsin, USA (exact location undisclosed in deference to *Glyptemys* conservation status). Each nest was covered by up to 61 cm of water from 11–17 July 2016 (*Apalone* and *Chelydra* nests) or from 12–16 July 2016 (*Glyptemys* nest).

The *Apalone* nest was constructed on a gravel road on 2 July and was 9 d old at the start of the 6-d inundation period. Eight live hatchlings from this nest were first observed at 1530 h on 25 Nov 2016, along with five individuals that had apparently been killed by a vehicle at about 1030 h the same day. The last hatchlings emerged at 1623 h on 25 Nov, when the on-site air temperature