nest material consisted of a damp, coarse, sand mixture combined with soil and root material from nearby plants.

Sternotherus odoratus is a documented communal nester (Doody et al. 2009. Q. Rev. Biol. 84[3]:229–252) and in Pennsylvania Ernst (1986, *op. cit.*) reported a mean clutch size of 3.25, indicating that this nest location was the result of numerous females contributing eggs. Hatchlings that did not survive when the nest was excavated will be deposited at the Cleveland Museum of Natural History as vouchers for Cuyahoga County.

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TERRAPENE CAROLINA TRIUNGUIS (Three-toed Box Turtle). **SHELL ABNORMALITY**. We collected a live adult female (SCL 148 mm) *Terrapene carolina triunguis* on 1 October 2009 with a shell abnormality at the Sam Houston State University's Center for Biological Field Studies, Huntsville, Texas, USA. This specimen lacks the nuchal scute and all vertebral and pleural scutes; one abdominal scute is partially detached. There are small patches of abnormal keratinization surrounding previously healed bite wounds in the region of the third left and right pleural scutes. The absence of scutes completely exposes the carapacial bones. Although the cause of scute loss is unknown, we suspect that it is related to a past predation attempt, evidenced by the healed bite-impressions within the carapace. The carapacial bones are in good condition, and all previous damage appears superficial; there is no recent shell damage observed. Despite this shell abnormality, this individual was active and appeared otherwise healthy.

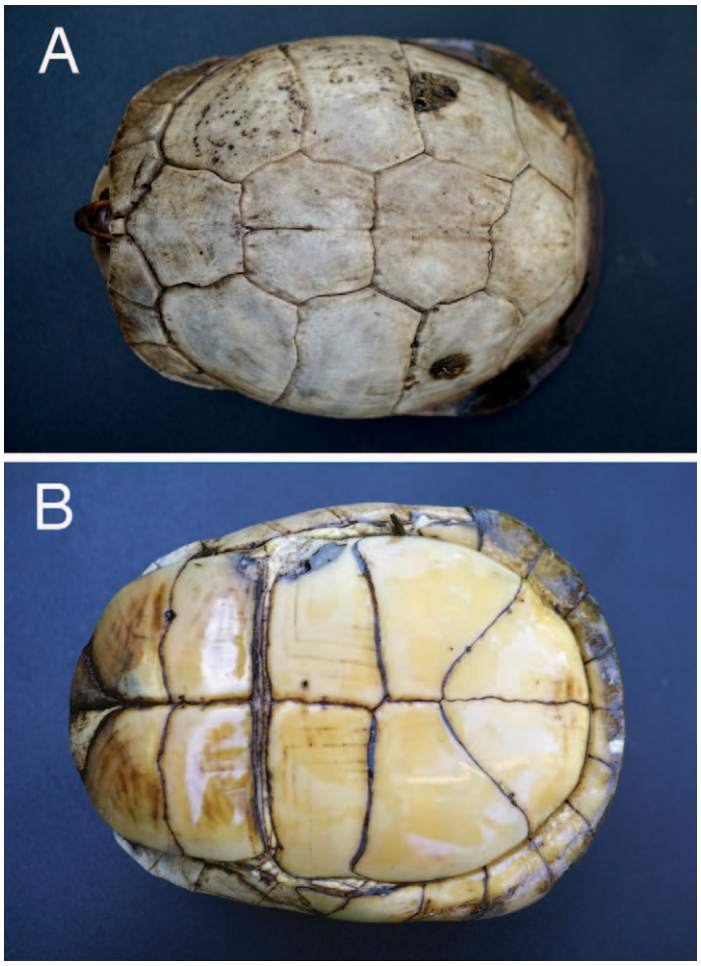

FIG. 1. *Terrapene carolina triunguis* carapace (A) and plastron (B) displaying missing and damaged scutes.

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TERRAPENE ORNATA ORNATA (Ornate Box Turtle). **MUSKING**. Musking behavior in *Terrapene ornata ornata* has been seldom reported in wild turtles and its function is yet unknown. This behavior may serve defensive, social, or other purposes (Legler 1960. Univ. Kansas Publ., Mus. Nat. Hist. 11:527–669; Dodd 2001. North American Box Turtles: A Natural History. Univ. Oklahoma Press, Norman. 231 pp.). While conducting field research on a population of Ornate Box Turtles on the sand hills of Weld Co., Colorado, USA, we have observed 14 instances of musking during the 2007, 2008, and 2009 field seasons. We also observed musking in two captive *T. o. ornata,* one a known wild specimen originating ~25 km W of the Kansas border and one found stray within the city limits of Longmont, Colorado.

During three seasons of field research, 12 of 34 (35.3%) juveniles (SCL < 100 mm) and 2 of 48 (4.2%) adult males were observed musking. Musking turtles ranged greatly in size from yearlings (34.2 mm SCL, 10 g) to full-grown adult males (122.1 mm SCL, 397 g). Observations of two musking adult males is contrary to Neill's (1948. Copeia 1948:130) speculation in *Terrapene carolina carolina* that turtles lose the ability to musk when the plastral hinge becomes functional and Patton's observations of musking only in recently hatched juvenile *T. c. triungius (*Patton et al. 2004. Proc. Louisiana Acad. Sci. 65:22–25).

A wild adult female box turtle (SCL = 102.3 mm) collected from Cheyenne Co., Colorado was obtained in 2008 after participation in the county fair's turtle races. This turtle was housed outdoors in a naturalistic setting. On presentation of a respiratory infection during 2009, this turtle received injections of antibiotics. On three occasions, musking occurred when restraining a front leg to deliver the injection. In May 2010, the same turtle also musked during restraint. Additionally, a stray juvenile (SCL = 95.1 mm) *T. o. ornata*, found in the city limits of Longmont, Colorado in 2009, musked during gentle handling.

Turtles emitted musk as they were handled for data collection, medical treatment, and observation, presumably because of induced stress. This strong odor, distinct from urine or fecal excrement and similar to that emitted by the Common Musk Turtle (*Sternotherus odoratus*), often came in "waves" of oscillating pungency. In several turtles, we observed liquid exuded below the 4th marginal in the axillary region. The liquid was more viscous than water, taupe in color, and slightly opaque.

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TERRAPENE ORNATA ORNATA (Ornate Box Turtle). **DIET AND MICROHABITAT.** *Terrapene o. ornata* is described as omnivorous, eating a broad range of animal and plant material and requiring access to water within its home range. However, within our study site standing water is generally not available and permanent water sources are well outside the typical home range areas of *T. o. ornata*. Here we provide information on one food choice, *Tradescantia occidentalis* (Prairie Spiderwort) from a wild population of Ornate Box Turtles in the sand hills of eastern Colorado that may also operate as an important water source. We also show the ready acceptance of this food item by two captive populations of wild-collected *T. o. ornata* housed in naturalistic habitats.

The present study site in Weld Co., Colorado encompasses approximately 50 ha of sand hills. The site is crossed with single-lane unpaved roads facilitating access to gas and oil wells. The property has been cattle ranched for more than 20 years; grazing is rotated with a water-pumping windmill as the focal point of each grazing section. The study area lacks any natural free-standing water and the windmill is only sporadically operated; overflow that may be used by turtles is thus unpredictable.

Average yearly precipitation at the nearest available weather station, about 16.6 km W of the study site, is 360 mm. Though more than 95% of precipitation occurs from April through October, natural ephemeral water is rarer than agriculturally related runoff. Precipitation from April though October 2009 was 32 mm greater than during the same period in 2008, and 100.6 mm greater than 2007. While 2009 precipitation was near average for the study season, the two previous years had decreased precipitation during the field study period. In 2009, *T. occidentalis* was seen during every field outing, in more areas within the study site, and in greater concentrations than in previous years.

Prairie Spiderwort is a smooth, subsucculent, perennial monocot up to 50 cm tall. Stems are often tufted, and when pulled apart, the copious mucilaginous slime inside forms what somewhat resembles a spider's web. These plants are known as "cow slobber" because of the gooey, stringy sap they produce. Given the absence of free water sources, we hypothesize that Spiderwort may be an important source of water for *T. o. ornata* in sand hills habitat. The study site also contains *Opuntia* cactus species and a variety of forbs and grasses. Ohio Spiderwort (*Tradescantia ohiensi*) has been listed as part of the floral community in *T. o. ornata* habitat in Iowa (Bowen at al. 2004. J. Herpetol. 38:562–568) and Wisconsin (Doroff and Keith 1990. Copeia 1990:387–399).

On 13 June 2008, we observed evidence of two adult turtles eating Spiderwort. The female was observed with a purple plant in her mouth, most likely *T. occidentalis* petals, and the male was observed with a chewed *T. occidentalis* stem directly in front of him and green vegetation on his beak. Several days later we located another adult female sitting in crushed Spiderwort stems with foliage stuck to her beak. During 2009, we found increased evidence of *T. o. ornata* eating Spiderwort, as well as characteristic crushed stems that may indicate turtle feeding, with three adult turtles (two females and one male) observed eating *T. occidentalis*. All observations of Spiderwort consumption occurred in the month of June.

Several specimens of *T. occidentalis* were planted into two naturalistic box turtle habitats, each more than 60 m^2. Wild-collected *T. o. ornata* readily ate this plant, often cropping it to the ground and inducing dormancy until the next growing season. This was in spite of other available food items provided on a regular basis, typically a mix of grocery-store produce (greens, vegetables, and berries). Other habitat plants including mallow (*Malva neglecta*) and common dandelion (*Taraxacum officinale*) were rarely observed being consumed. In neither captive population did we make any attempt to introduce occupants to the presence of *T. occidentalis*; turtles located and consumed this food item by free choice, often traveling 1–5 m from routine feeding locations.

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CROCODYLIA — CROCODILIANS

CROCODYLUS ACUTUS (American Crocodile). **ADULT MASS**. Few data exist on the body mass of large reptiles, due in part to the difficulties of handling and weighing these animals (Minton and Minton 1973. Giant Reptiles. Charles Scribner's Sons, New York, New York. 345 pp.). In particular, few reliable data exist regarding body size of large crocodilians (Richardson et al. 2002. Crocodiles: Inside Out: A Guide to the Crocodilians and their Functional Morphology. Surrey Beatty and Sons, Ltd., Chipping Norton, NSW. 172 pp.; Webb and Manolis 1989. Crocodiles of Australia. Reed Books Pty. Ltd., Frenchs Forest, NSW. 160 pp.; Woodward et al. 1995. J. Herpetol. 29:507–513). However, crocodile research and management rely on knowledge of individual body size and size-class structure of populations (Webb and Smith 1987. *In* Webb et al. [eds.], Wildlife Management: Crocodiles and Alligators, pp. 199–210. Surrey Beatty & Sons, Ltd, Sydney) because demographic and reproductive variables are functionally dependent on body size rather than age, and population models are generally based on the former (Nichols 1987. *In* Webb et al., *op. cit*., pp. 177–187). Here, we report the body mass of a large *Crocodylus acutus* from Costa Rica.

On 13 September 2007, we captured an adult male *C. acutus* in the lower Tarcoles River, Costa Rica (9.79906389°N, 84.615278°W) during a study of ocular disease in this crocodile population. Total length (TL; anterior tip of the snout to the posterior tip of the tail, measured along the dorsal surface) and snout–vent length (SVL; anterior tip of the snout to the anterior margin of the cloacal vent, measured along the ventral surface) of the crocodile were measured with a tape as 482.6 cm and 237.5 cm, respectively. The crocodile was wrapped in an industrial cargo net and weighed using an electronic crane scale (Dynafor LLX/LLTR; Schumann GmbH, Sillerup, Germany) and manual chain hoist secured to the limb of a tree on the bank of the river. The mass of the crocodile was 537.45 kg, after subtracting the mass of the cargo net (29.54 kg).

In 2003, two of us (BRB, JRBM) captured a large *C. acutus* (TL = 395.0 cm) for translocation during a radio-tracking project in Costa Rica and determined that it weighed 500 kg (Barr 2003.