Brown, Mary (marybrown)

Call # QL640 H4

Journal Title: Herpetological Review

Volume: 39 Issue:

Month/Year: 2008

Pages: 464

Article Author: Brown and Brown

Article Title: *Terrapene ornata predation on cliff swallows*

---

on the same bank ca. 45 m upstream had two other basking *A. marmorata* that were undisturbed.

Many populations of *A. marmorata* are sensitive to factors that affect reproduction and recruitment such as habitat loss, non-native predators, disturbance, water quality, and natural predation. Though actual predation on *A. marmorata* by *L. canadensis* was not confirmed during this observation, the cooperative hunting strategy utilized by *L. canadensis* during this observation provides insight into predator/prey interactions between these species.

Submitted by **REBECCA S. STUDEBAKER**, California Department of Fish and Game, 619 Second Street, Eureka, California 95501, USA; e-mail: RStudebaker@dfg.ca.gov.

PSEUDEMYS CONCINNA (Eastern River Cooter). **MOVEMENT**. On 24 July 2007 a female *Pseudemys concinna* (carapace length = 329 mm; mass = 4020 g), was uniquely marked by drilling holes in the marginal scutes (ID = 655) and released from a baited hoop trap at 1000 h. Later that same day (1500 h), it was recaptured 1470 m downstream during snorkeling surveys. Capture locations were determined with a Trimble Geo3 Explorer GPS (accuracy 1–5 m). To our knowledge, this is the longest daily movement recorded for *P. concinna*. On 6 July 2008 another female *P. concinna* (carapace length = 383 mm; mass = 5610g), was also uniquely marked (ID = 946) and released from a baited hoop trap at 0900 h. On 9 July 2008 at 1315 h, the same female was recaptured during a snorkel survey 6280 m downstream. A female and male *P. concinna* were observed to move a maximum distance of 358 and 321 m in a Virginia population over the course of a two-month study (Buhlmann and Vaughan 1991. J. Herpetol. 25:72–78). Dreslik et al. (2003. Chelon. Cons. Biol. 4:706–710) found *P. concinna* in an Illinois pond to move 336.9 m ± 200.9 m, with females moving 321.9 m ±197.3 m during the day. Marchand (1942. M.S. thesis, Univ. Florida, Gainesville. 113 pp.), during a two-year study, found that 14 *P. c. suwanniensis* moved, on average, > 640 m between recaptures and observed one movement of 8.9 km. It was mentioned that these movements may be attributed to extended handling and releasing groups of turtles at the same place. Long, linear movements of riverine turtle species have been attributed to nesting voyages by females (Moll and Moll 2005. The Ecology, Exploitation, and Conservation of River Turtles. Oxford University Press. New York). In the southern United States, *P. concinna* generally nest in May and June (Ernst et al. 2004. Turtles of the United States and Canada. Smithsonian Institution Press. Washington, D.C. 578 pp.). The two movements we observed may have been associated with either nesting or disturbance from handling, although attempts were made to minimize handling disturbance in the field.

Submitted by **SEAN C. STERRETT, LORA L. SMITH, M. BRENT HOWZE, AUBREY M. HEUPEL,** and **CARLA L. ATKINSON,** Joseph W. Jones Ecological Research Center, Route 2, Box 2324, Newton, Georgia 39870, USA (e-mail: sterretts@warnell.uga.edu).

TERRAPENE ORNATA (Ornate Box Turtle). **PREDATION ON CLIFF SWALLOWS**. Turtles are known to have broad, omnivorous diets that include plant material, aquatic and terrestrial invertebrates, and vertebrates (Klimstra and Newsome 1960. Ecology 41:639–647). During a 25-year study of Cliff Swallows (*Petrochelidon pyrrhonota*) in southwestern Nebraska, we observed *Terrapene ornata* prey, or attempt to prey, on swallows. Cliff Swallows feed exclusively on insects caught in flight. They are quick, agile fliers and rarely alight on the ground (Brown and Brown 1996. Coloniality in the Cliff Swallow: The Effect of Group Size on Social Behavior. University of Chicago Press. Chicago, Illinois). Consequently, they are very unlikely prey for turtles.

On 4 July 2002, one of us (MBB) was netting Cliff Swallows with a stationary mist-net placed near the entrance of a culvert underneath a railroad embankment near Keystone, Keith County, Nebraska, USA (41.3841667°N, 101.7988889°W). The colony consisted of 200 swallow nests. On one occasion as large numbers of birds flushed and hit the net, the weight of the birds pulled the net down to ground level. One *T. ornata*, which was seen regularly at the colony, approached one adult Cliff Swallow that was very low in the net and killed it by biting and eating its head. After killing the bird, the turtle walked away carrying the head. Nesting at Cliff Swallow colonies is usually quite synchronous (Brown and Brown 1996, *op. cit.*). Most colonies are initiated in mid-May, incubation lasts until mid-June, and most nestlings have fledged by mid-July. It is not uncommon for nestling Cliff Swallows to fall out of their nests (or jump out in response to nest parasites). Because these birds are too young to fly back to their nest and parent swallows do not attend nestlings on the ground, these nestlings become chilled, starve, and die. During peak periods of nesting synchrony, relatively large numbers of doomed nestlings can be found on the ground underneath nests at large colonies. From 2002–2007, at one large (1000–1800 nests) Cliff Swallow colony near Keystone, Keith County, Nebraska, USA (41.3555556°N, 101.6286111°W), we regularly observed two *T. ornata* patrolling the ground underneath the nests, killing and eating the moribund nestlings and scavenging dead nestlings. The turtles would walk up to nestlings that were alive and bite their heads, usually grabbing the nestlings by the front part of the head (in the beak and mouth area). Based on unique markings on their carapaces, we are confident that the same two turtles were present at this colony throughout the nesting season, and we suspect that the same two turtles returned to this colony site to feed for several consecutive years. *T. ornata* are known to be most active during June, which coincides with the swallow's nestling period (D. Ferraro, pers. comm.). *T. ornata* are rarely seen at colonies during the birds' incubation period or after most of the nestlings have fledged. Our observations are anecdotal in nature, but it appears that *T. ornata* recruit to and remain at Cliff Swallow colonies during the nestling period, when a reliable food resource is available.

Submitted by **MARY BOMBERGER BROWN**, Tern and Plover Conservation Partnership, University of Nebraska, Lincoln, Nebraska 68583-0931, USA (e-mail: mbrown9@unl.edu); and **CHARLES R. BROWN**, Department of Biological Sciences, University of Tulsa, Tulsa, Oklahoma 74104, USA.