

29 South Espina, P.O. Box 30003, MSC 4901, Las Cruces, New Mexico 88003-8003, USA (e-mail: wboeing@nmsu.edu).

**LISSEMYIS PUNCTATA VITTATA (Indian Flapshell Turtle).** **CLUTCH SIZE.** The clutch size of *Lissemys punctata* sensu lato is reported to be 2–15 (Bhupathy et al. 2014. In Rhodin et al. [eds.], Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. Chelonian Research Monographs No. 5, pp. 076.1–12). However, little is known of the reproductive attributes of *Lissemys punctata vittata*, a subspecies occurring in peninsular India. Four specimens of *L. punctata vittata* were confiscated by authorities in Kolkata, West Bengal, on 12 December 2014 and were housed at the Wildlife Rescue Centre (Saltlake), Kolkata. On 18 December 2014 at ca. 1830 h we found a clutch containing 12 eggs in the turtle's enclosure. Egg diameter ranged from 26.06–30.24 mm (mean = 27.68 mm) and the weight ranged from 10.8–14.6 g (mean = 12.45 g). We kept the eggs in a batch of six in two plastic boxes with vermiculite as substrate for artificial incubation. Unfortunately, facilities to maintain suitable incubation temperatures for the eggs were lacking at the rescue center and the eggs appeared non-viable. We thank the Forestry Department of West Bengal for their cooperation.

**ANIRBAN CHAUDHURI**, Nature mates-Nature club, Jodhpur Park, Kolkata 700068, West Bengal, India (e-mail: abchaudhuri@gmail.com); **JAYADITYA PURKAYASTHA**, Help Earth, Guwahati 781007, Assam, India (e-mail: mail.jayaditya@gmail.com).

**MALACLEMYS TERRAPIN LITTORALIS (Texas Diamond-backed Terrapin).** **SOCIAL OR GROUP BURROWING.** Social behavior in turtles is often seemingly related to limited resources, and is presumably beneficial if it increases mating success or access to resources. For example, Snapping Turtles (*Chelydra serpentina*) display territorial behavior that may allow them to defend resources and potential mates (Galbraith et al. 1987. Can. J. Zool. 65:2623–2629). *Malaclemys terrapin* has been observed participating in mating aggregations (Hauswaldt and Glenn 2005. Mol. Ecol. 14:723–732) and lekking (Estep 2005. Thesis: College of Charleston), however, social burrowing behavior has not been reported to date.

We observed “social burrowing” behavior of *Malaclemys terrapin littoralis* during an ongoing mark-recapture population monitoring study on South Deer and North Deer Islands, as well as in a marsh along Sportsman's Road on Galveston Island, in West Galveston Bay, Texas, USA between 2010–2011. A literature review indicates that this is the first reported occurrence of social or group burrowing in *M. terrapin littoralis*. Burrows were found during randomized terrestrial line transects and varied in location between creek beds, lowland frequently-submerged marsh, and upland vegetated marsh. These burrows were typically located in a natural occurring depression in the marsh, but were also dug by the terrapins in a few cases. We observed social burrows during December through September, but did not locate any social burrows in October and November. Burrows contained 3–15 terrapins, and sex ratios in the burrows varied between months. Sex ratios favored females in every month with the exception of September, with the average number of females being more than double the average number of males from May through August. In some cases, groups of individual terrapins were recaptured together in separate burrowing events. Spatial and temporal distribution of burrows did not appear to be related to available

habitat and resources, such as vegetation density, composition, or distance from water. This suggests that these burrows could potentially be indicative of mating aggregations rather than a resource-dependent behavior. We found that 95% of the burrows occurred less than 6.5 m from a waterbody, which includes the open bay as well as tidal creeks within the interior of South Deer island, and that the average vegetation cover at the site of the burrow was 71.8%. Females found in these social burrows were frequently gravid as determined with ultrasound imaging. On average, we observed more terrapins per burrow in August and a greater number of burrows in June compared to other months.

Further investigation into the cause and temporal and spatial distribution of these social burrows is desirable. Any trends we observed were statistically insignificant, which was mainly due to small sample size and high variance. Discovering the cause of social burrowing could increase our understanding of terrapin mating and social behavior, and could help us better describe key habitats for conservation.

**EMMA CLARKSON**, Texas Parks and Wildlife, 824 S Fuqua St, Rockport, Texas 78382-4636, USA (e-mail: Emma.Clarkson@TPWD.texas.gov); **GEORGE GUILLEN**, Environmental Institute of Houston, University of Houston Clear Lake, 2700 Bay Area Blvd, Houston, Texas 77058-1002, USA.

**MANOURIA EMYIS PHAYREI (Asian Brown Tortoise).** **FIRE SCARRING.** Fire scars on turtle shells result from burn injuries sustained during exposure to the extreme heat of fires (Ernst et al. 1995. Herpetol. Rev. 26:185–187; Dodd et al. 1997. Herpetol. Nat. Hist. 5:66–72). Fire scars are characterized by an obvious blanching of the scutes caused by damage and subsequent repair of the keratin layers (Dodd et al., *op. cit.*). Regeneration after severe fire injuries can result in complete disappearance of sutures between the scutes, as well as extensive remodeling and gross distortion of the underlying bone (Dodd et al., *op. cit.*). Fire scars can occur anywhere on the shell, but are most commonly observed on the carapace (Mitchell et al. 2005. Herpetol. Rev. 36:169). Fire scars have been reported on the shells of various chelonians in Southeast Asia, including *Sibenrockiella crassicolis* (Mitchell et al., *op. cit.*), *Cuora amboinensis* (Platt et al. 2001. Chelon. Conserv. Biol. 4:154–159; Ives et al. 2008. Chelon. Conserv. Biol. 7:240–248), *Melanochelys trijuga* (Mitchell and Rhodin 1996. Chelon. Conserv. Biol. 2:66–72), *Geochelone platynota* (Platt et al. 2003. Oryx 2:66–72), and *Indotestudo elongata* (van Dijk. 1998. The Natural History of the Elongated Tortoise *Indotestudo elongata* [Blyth, 1853] [Reptilia: Testudines] in a Hill Forest Mosaic in Thailand, with Notes on Sympatric Turtle Species. Ph.D. dissertation, National University of Ireland at Galway. 255 pp.; Platt et al. 2001. Chelon. Conserv. Biol. 4:172–177). We here report on the incidence of fire scarring among a group of adult *Manouria emys phayrei* held at two conservation-breeding facilities (assurance colonies) in Myanmar.

These *M. emys* were originally confiscated by the Myanmar Forest Department from illegal wildlife traffickers in 2007. Although their specific provenance could not be determined, given our understanding of regional wildlife trafficking networks (Platt et al. 2000. Chelon. Res. Monogr. 2:95–100), we believe the tortoises were harvested within Myanmar, most likely from the western hill tracts (Rakhine [= Arakan] and Chin Hills) or southern Tanintharyi Region (formerly “Division”); however, we cannot rule out the possibility that some members of this group originated in neighboring countries (e.g., Bangladesh or Thailand). After confiscation the tortoises were housed in outdoor pens at the Yadanabon Zoological Gardens in Mandalay