



FIG 1. A) Male *Rhinella major* calling from on top of an adult *Rhinella schneideri* (sex unknown) and B) the male *R. major* now in cephalic amplexus with the *R. schneideri*.

minutes as the *R. major* continued to call. After ten minutes, the *R. schneideri* began to move towards the pond's edge after which the *R. major* began to amplex the *R. schneideri* (cephalic amplexus; Fig. 1B). The two toads maintained their position for at least an additional 20 minutes. During this entire time I did not hear the *R. schneideri* emit a release call.

Funding was provided by the National Science Foundation's Graduate Research Fellowship Program and the Applied Biodiversity Science NSF-IGERT Program at Texas A&M University (NSF-IGERT Award #0654377).

CHRISTOPHER M. SCHALK, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Texas 77843-2258, USA (e-mail: cschalk@tamu.edu).

TESTUDINES — TURTLES

CHELYDRA SERPENTINA (Snapping Turtle). STATE SIZE RECORD. On 14 August 2014, we captured an adult male *Chelydra serpentina* at Wekiwa Springs State Park, 0.07 km from the Wekiwa Springs boil (28.71289°N, 81.45965°W, WGS84; elev. 6 m), Orange Co., Florida, USA. The turtle was captured by hand during snorkeling surveys as a part of a long-term turtle population study at Wekiwa Springs State Park. This large turtle had a maximum carapace length of 448 mm, straight midline plastron length of 339 mm, mass of 22.2 kg (Fig. 1; Florida Museum of Natural History, FLMNH 173686). This turtle was 24 mm longer than Florida's historic record of carapace length (CL max) of 424 mm (FLMNH 66157; Meylan 2006. Biology and Conservation of Florida Turtles. Chelon. Res. Monogr. No. 3. Lunenburg, Chelonian Research Foundation; Krysko et al. 2011. Atlas of Amphibians and Reptiles in Florida. Final Report, Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. 524 pp.). The previous Florida state record specimen was caught on 16 November 1928, at a locality simply listed as "Apopka, FL." Wekiwa Springs is less than 5 km from downtown Apopka, thus it is interesting that the historic record is from the same general area as the new record. This turtle was the largest of several large Snapping Turtles captured over the years in the Florida freshwater springs under study.

ERIC C. MUNSCHER, Department of Natural Resources, SWCA Environmental Consultants, Pittsburgh, Pennsylvania 15017, USA (e-mail:



FIG. 1. Photo of new Florida state record Eastern Snapping Turtle (UF 173686) captured at Wekiwa Springs State Park.

emunscher@swca.com); **ANDREW WALDE**, Turtle Survival Alliance, P.O. Box 12074, Fort Worth Texas, USA (e-mail: awalde@turtlesurvival.org); **NICOLE SALVATICO**, University of Central Florida, Department of Biology, 4110 Libra Drive, Orlando, Florida, USA (e-mail: Herbotmouse@hotmail.com); **BRIAN BOWER**, The Ginger Man, 3716 Camp Bowie Blvd, Fort Worth, Texas 76017, USA.

CUORA AMBOINENSIS (Southeast Asian Box Turtle). DIET. *Cuora amboinensis* is a widely distributed and increasingly rare chelonian of Southeast Asia (Perpiñán et al 2008. J. Zoo Wildl. Med. 39:460–463). It is primarily herbivorous, with a diet consisting of aquatic and terrestrial plants, fungi, and fruits as determined by fecal examinations, and may be an important seed disperser in some ecosystems. (Schoppe and Das 2011. Chelon. Res. Monogr. 5:053.1–053.13). Secondary observations suggest *C. amboinensis* acts as a seed disperser for two important tree species (*Ficus* spp. and *Morinda citrifolia*; *vide* Peter Widmann, in Schoppe and Das, *op. cit.*), but no instances of actual fruit consumption by *C. amboinensis* has been reported.

On 7 August 2015 at 0313 h, we observed a female *C. amboinensis* (plastron length = 18.2 cm; carapace length = 21.5 cm; carapace width = 21.5 cm) drinking in a rain puddle on a dirt trail in Pulau Ubin, Singapore (1.406577°N, 103.971735°E; WGS 84). The puddle was situated under a fruiting *Morinda citrifolia* (Noni Tree) and one fallen noni fruit was floating in the puddle. At 0315 h, the turtle began attempting to bite the fruit, which would float away from the turtle. Independently, using one of its forelimbs, the turtle pinned the fruit to the bottom of the shallow puddle to tear off pieces. As the turtle fed on the fruit, seeds were released and floated to the top of the water. The turtle then used very rapid head movements to consume the floating seeds (as noted in Natchev et al. 2009. Zool. Jen. 112:113–127). All of these actions were repeated until 0328 h. After consumption was completed, the turtle retreated to the forest where it was captured for measurements. To our knowledge, this is the first reported observation of *C. amboinensis* feeding on the fruits and seeds of *M. citrifolia* in the wild.

We are grateful to the National Parks Board of Singapore for issuing permits to support our research. We thank the National University of Singapore for hosting this research and the National Science Foundation East Asia Pacific Summer Institute for funding.



FIG. 1. *Cuora amboinensis* (Southeast Asian Box Turtle) attempting to bite pieces off a *Morinda citrifolia* fruit (Noni fruit).

PHILIP N. VOGRINC, Department of Biological Sciences, University of Arkansas, Fayetteville, Arkansas, 72701, USA (e-mail: pnvogrin@uark.edu);
RYAN J. R. McCLEARY, Utah State University, Logan, Utah 84322, USA

GOPHERUS AGASSIZII (Mojave Desert Tortoise). BURROW ASSOCIATE. *Gopherus agassizii* is a large, semi-fossorial species of the American Southwest that digs its own burrows (Ernst and Lovich 2009. *Turtles of the United States and Canada*, 2nd ed. John Hopkins University Press, Baltimore, Maryland). These burrows are essential to their survival as they provide the necessary shelter from the extreme high temperatures during the summer and are also more humid, which aids in reducing water loss (Zimmerman et al. 1994. *Herpetol. Monogr.* 8:45–59; Bulova 2002. *J. Therm. Biol.* 27:175–189). In North America, the Mojave Desert is one of the hottest and driest regions (Rundel and Gibson 1996. *Ecological Communities and Processes in a Mojave Desert Ecosystem: Rock Valley, Nevada*. Cambridge University Press, Cambridge, U.K.) and it is therefore expected that other desert fauna would also make use of the burrows created by the Desert Tortoise. However, relatively few species have been documented utilizing this unique habitat and micro-environment (Luckenbach 1982. *In* Bury [ed.], *North American Tortoises: Conservation and Ecology*, pp. 1–38. *Wildl. Res. Rep.* 12, U.S. Fish and Wildlife Service, Washington, D.C.). This is surprising as the above-ground temperatures can be lethal to many desert species while temperatures inside the burrows have been shown to be cooler and more stable (Walde et al. 2009. *Southwest. Nat.* 54:375–381). We suspect that the utilization of Desert Tortoise burrows by desert co-inhabitants has been overlooked as several species have been documented utilizing the burrows in recent years such as rattlesnakes (Lovich 2011. *Herpetol. Rev.* 42:421; Walde et al. 2014. *Herpetol. Rev.* 45:688), lizards (Walde et al. 2015. *Herpetol. Notes* 8:107–109; Walde et al. 2015. *Herpetol. Notes* 8:501–502), invertebrates (Walde and Lindey 2009. *Herpetol. Rev.* 40:75), birds (Walde et al. 2009. *op. cit.*), and mammals (Germano and Perry 2012. *Herpetol. Rev.* 43:127).

During Desert Tortoise surveys, approximately 45 km NE of Barstow, California on 21 July 2009 at 1550 h, an adult and one young of the year Black-throated Sparrow (*Amphispiza bilineata*) flew out of a Desert Tortoise burrow as the researcher approached. The air temperature was 42.8°C and the burrow mouth opened towards an easterly direction (75°) and was thus fully shaded.

Only three species of birds have been documented using Desert Tortoise burrows: the Common Poorwill (*Phalaenoptilus*

nuttalli), the Burrowing Owl (*Athene cunicularia*), and the Horned Lark (*Eremophila alpestris*; Luckenbach 1982, *op. cit.*; Walde et al. 2009, *op. cit.*). Our observation of Black-throated Sparrows using a burrow adds a fourth species to this list. We suspect that birds may utilize the burrows more often than has been documented as they flush early and are able to fly away quickly upon approach of researchers. Due to the high air temperature at the time of this observation it is highly likely that the birds were using the Desert Tortoise burrow as a thermal refugia as was documented for Horned Larks (Walde et al. 2009, *op. cit.*). However, one cannot discount that the sparrows could have been foraging on insects or seeds inside the burrow. In the face of global climate change the burrows of Desert Tortoises may become more important for desert wildlife. As Desert Tortoise populations continue to decline (USFWS 1994. *Desert Tortoise [Mojave Population] Recovery Plan*. U.S. Fish and Wildlife Service, Portland, Oregon; Esque et al. 2010. *Endang. Species Res.* 12:167–177), so will these unique microhabitats that are providing refuge to the desert fauna.

Funding for the project during which this observation was made was provided by DPW Environmental at the National Training Center, Fort Irwin, California.

ANDREW D. WALDE (e-mail: awalde@hotmail.com), **ANGELA M. WALDE**, Walde Research & Environmental Consulting, 8000 San Gregorio Rd., Atascadero, California 93422; USA (e-mail: angiecone@hotmail.com); **A. PETER WOODMAN**, Kiva Biological Consulting, P.O. Box 1210, Inyokern, California 93527, USA.

GOPHERUS AGASSIZII (Mojave Desert Tortoise) and COLUBER FLAGELLUM PICEUS (Red Racer). BURROW ASSOCIATES. The Mojave Desert of North America's Southwest is one of the harshest environments on the continent, and the flora and fauna of this region are adapted physiologically and behaviorally to the heat and aridity of the region. Habitat features such as ephemeral washes, shrubs, and burrows often serve as refugia for desert animals of all types. One of the desert species relied upon by a variety of others for creating such refugia is *Gopherus agassizii*. The Desert Tortoise constructs burrows in the soil that act as buffers to thermal radiation, extreme temperatures, and aridity (Zimmerman et al. 1994. *Herpetol. Monogr.* 8:45–59; Bulova 2002. *J. Therm. Biol.* 27:175–189; Walde et al. 2009. *Southwest. Nat.* 54:375–381). Of the few dozen species documented using Desert Tortoise burrows, only five snake species have been reported, and of those, only observations of rattlesnakes have been repeated (Woodbury and Hardy 1948. *Ecol. Monogr.* 18:145–200; Burge 1978. *Proc. 1978 Desert Tortoise Council Symp.* 80–111; Luckenbach 1982. *In* Bury [ed.], *North American Tortoises: Conservation and Ecology*, pp. 1–38. *Wildl. Res. Rep.* 12, U.S. Fish and Wildlife Service, Washington, D.C.; Barrett and Humphrey 1986. *Southwest. Nat.* 31:261–263; Baxter and Stewart 1990. *Proc. 1986 Desert Tortoise Council Symp.* 124–127; Lovich 2011. *Herpetol. Rev.* 42:421). Here we report two observations of *Coluber flagellum piceus* using active tortoise burrows.

We made two separate observations of Red Racers utilizing Desert Tortoise burrows, on 24 March 2004 and again on 8 August 2005. Both observations were in the morning (1125 h and 0811 h, respectively). Moderate air temperatures of 24.3°C and 30.2°C, respectively, were recorded, but ground temperatures were notably warmer at 35.4°C and 35.9°C, also respectively. Both burrow entrances were facing west-northwest, making them cooler refugia in the morning times when these observations were made. The spring observation was of the Red Racer emerging from a tortoise