

have had made track entrance more likely for *G. polyphemus*.

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**HYDROMEDUSA TECTIFERA** (South American Snake-necked Turtle). **COPULATION.** The freshwater chelid turtle *Hydromedusa tectifera* is distributed in rivers and streams of northeastern Argentina, Paraguay, eastern and southeastern Brazil, and part of Uruguay (Ceï 1993. Mus. Reg. Sci. Nat. Torino Monogr. 14). The province of Córdoba (central Argentina) is home to a population that is isolated from the species' core distribution area and inhabits streams in the central region of the Sierras (Cabrera 1998. Las Tortugas Continentales de Sudamérica Austral. Privately printed, Córdoba, Argentina. 108 pp.). We report three observations of copulation of this species in two streams in Córdoba. In all observations, males were on top of females, grabbing them with the front and rear claws by the carapace edge, and continuously biting the central region of the neck. Males folded the tail to have it closer to the tail of the female. Copulation lasted less than 60 minutes on all three occasions. After copulation, the male released the female, which then swam rapidly away. The first copulation was observed at 2100 h on 11 October 2005 (spring) in Toro Muerto stream (31°23.5'S, 64°35.8'W). The specimens (carapace length 243 mm, male; 257 mm, female) were submerged at a depth of 40 cm, in a river section with sandy substrate, at a water temperature of 16.5°C and air temperature of 10°C. On 4 August 2006 (winter), we made a second observation, at 2015 h in Toro Muerto stream (31°22.7'S, 64°36.3'W). The specimens (carapace length 264.6 mm, male; 256.9 mm, female) were submerged at a depth of 30 cm, on a rocky, well vegetated substrate. Water temperature was 9°C and air temperature 3.5°C. The third observation was made in Tanti stream (31°21.2'S; 64°33.9'W) at 1920 h on 5 September 2006 (winter). The specimens (carapace length 240 mm, male; 251.2 mm, female) were submerged at a depth of 90 cm, on a rocky bed with sand and submerged aquatic vegetation. Water and air temperatures were 17°C and 20°C, respectively. *Hydromedusa tectifera* is one of the least documented reptile species in Argentina, especially concerning aspects of its ecology. This is apparently the first description of copulation of this species in the wild.

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**KINOSTERNON SCORPIOIDES** (Scorpion Mud Turtle). **BEHAVIOR.** Semiaquatic mud turtles (genus *Kinosternon*) are broadly distributed in a variety of habitats from eastern North

America to northern Argentina. The southern two-thirds of this range is occupied by its largest member, *Kinosternon scorpioides*, of which various regional subspecies have been described based upon head and plastron coloration, extent of carination of the carapace, plastral seam ratios, and adult size (Ernst and Barbour 1989. Turtles of the World. Smithsonian Inst. Press, Washington DC. 313 pp.). The natural history of this species is not well known; its penchant for turbid shallow water, including anthropogenic habitats, outside of rain forests in northern South America is noted in the most exhaustive account of the species to date (Pritchard and Trebbau 1984. The Turtles of Venezuela. SSAR Contrib. Herpetol. No. 2, 403 pp. + 47 color plates + 16 maps).

On 11 November 1999 six specimens of *K. scorpioides* were found in a roadside pool and in a roadside ditch between Mariscal Estigarribia, Depto. Boquerón, and Parque Nacional Defensores del Chaco, Dept. Alto Paraguay, Paraguay. The GPS coordinates are 21°29'885"S, 59°52'736"W and 21°11'184"S, 59°45'188"W. The first individual was seen from a moving vehicle as it sat motionless, possibly basking, on the far embankment of the pool at 1115 h. Seconds later, upon my approach, the turtle moved quickly upwards, away from the water, towards the dense, spiny vegetation locally known as "chañar" consisting of various species of *Bromelia*, *Dyckia*, and *Aechmea*. More than 2 h later, in a roadside ditch stretching to the horizon, movement seen from the vehicle prompted investigation. Within 2 minutes, three searchers found 5 *K. scorpioides* (2 males, 2 females, 1 juvenile) in water no deeper than 30 cm. As they were pursued, two of the turtles emerged from the water body, climbed the embankment, and moved towards the adjacent chañar. The larger male and one female bore several ticks in the soft parts of their anterior portions, whereas the juvenile's carapace had a dense growth of algae.

There appear to be few literature records of aquatic turtles (i.e., those known to largely live and feed in aquatic habitats) purposely seeking immediate refuge away from the water. In this case, the spiny vegetation may have offered better protection from predators than did the open, shallow water.

Terrestrial refugia are apparently used by non-estivating aquatic chelonians elsewhere in the Gran Chaco, in most of which there is no permanent surface water. In January 1987 and 1988, 7 of 26 specimens of *Acanthochelys pallidipectoris* were found beneath broad leaves of living bromeliads on dry land during the rainy season in nearby northern Argentina, in the vicinity of abundant, seasonal shallow bodies of water (Monguillot and Fabius 1993. Bol. Soc. Zool. Uruguay 2nda época 8:196-203). The seeking of terrestrial refugia (rather than nearer aquatic habitat) upon release by the third species of non-terrestrial chelonian in the region, *A. macrocephala*, following capture in shallow water has been recently documented by Métrailler (2006. Manouria 9[33]:26-32). This observation took place in February 2002.

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**LEPIDOCHELYS KEMPII** (Kemp's Ridley Seaturtle). **DEVELOPMENTAL HABITAT.** Kemp's Ridley Seaturtle is unique because it nests primarily on a single beach in Tamaulipas, Mexico (Rancho Nuevo), and it nests during the day in large groups called

*arribadas*. Unfortunately, the population was severely reduced by the 1960s from intense egg harvesting and further reduced by the 1980s because of incidental capture in commercial fishing gear (Márquez-M. et al. 2005. *Chelon. Conserv. Biol.* 4[4]:761–766).

Studies describing the coastal developmental habitats of hatchling and juvenile Kemp's Ridley Seaturtles are important to scientists, conservationists, and resource managers for drafting sound recovery plans. A newly discovered developmental habitat has recently been described in Gullivan Bay, Ten Thousand Islands, southwestern Florida, USA (Witzell and Schmid 2004. *Gulf Mexico Sci.* 22:54–61; see also Schmid and Barichivich 2005. *Chelon. Conserv. Biol.* 4[4]:828–834). This area is centered just north of the Everglades National Park boundary. After the original turtle research was completed in Gullivan Bay, a visual survey was conducted southwards through the Everglades Park because tagging data suggested that the Gullivan Bay turtles were possibly transient.

The survey was conducted from December 2003 to August 2004. Each survey consisted of five individual days and was conducted bimonthly from a 7.6-m flat-bottom commercial fishing vessel. Each day typically lasted from 0700 h to 1600 h with two persons in the vessel at all times looking for turtles. We moved southwards from the village of Goodland through Gullivan Bay into the Everglades National Park, stopping in likely places and waiting for Ridelys to surface to breathe. We stayed within 1 km of the shore and frequently stopped at passes between islands where ridelys often congregate and waited at least 4–6 h before moving southwards to a new location. It was impossible to synoptically survey the entire area because stormy weather conditions frequently dictated where we could safely go. All sightings were recorded using a portable global positioning system (GPS).

There were 92 immature Ridley, 24 Loggerhead (*Caretta caretta*), 2 Green (*Chelonia mydas*), and 2 unknown turtle sightings recorded. Because of the possibility of duplicate sightings, these figures do not represent an actual turtle census, but they do indicate that Ridelys are utilizing this entire coast as developmental habitat. Turtles were seen on each survey in sea surface temperatures ranging from 17.3°C in December to 31.1°C in August. The sightings extended from Gullivan Bay to Lostmans River, a dis-

tance of approximately 68.6 km (Fig. 1). We were not able to safely travel beyond this point in this particular vessel so we do not know if Ridelys inhabit the waters further south in the Park. Immature Kemp's Ridelys were sometimes seen in small groups of 2–3 individuals but never consistently in the same locations, and no particular area seemed to consistently be more productive than other areas. This indicates possible movement throughout the entire area as they feed. There were proportionately more sightings in the north because we traveled through this area more often as we moved southward from Gullivan Bay (Fig. 1).

This stretch of Florida coast is the largest developmental habitat for immature Kemp's Ridley turtles discovered to date (76 km including Gullivan Bay). This habitat remained hidden until now because the area is remote and because there is little opportunity for turtles to be impacted by human activities (e.g., commercial fishing or channel dredging). Additionally, the coastline is not conducive for turtle strandings to be found due to the dense mangrove habitat, so the presence of these turtles remained unknown to sea turtle researchers until now. The other developmental habitats reviewed by Witzell and Schmid (*op. cit.*) are all important for the continued expansion of the population but they are relatively insignificant in size and possibly importance compared to the potentially huge habitat of the Ten Thousand Islands along the southwestern tip of Florida. This area will become more important as the population continues to rebuild and it is critical that it remain as pristine and undisturbed as possible. Fortunately, this area is protected from commercial fishing and coastal development by the Everglades National Park and it is suggested that National Park personnel be involved in the Kemp's Ridley Recovery Team as they draft a new Recovery Plan.

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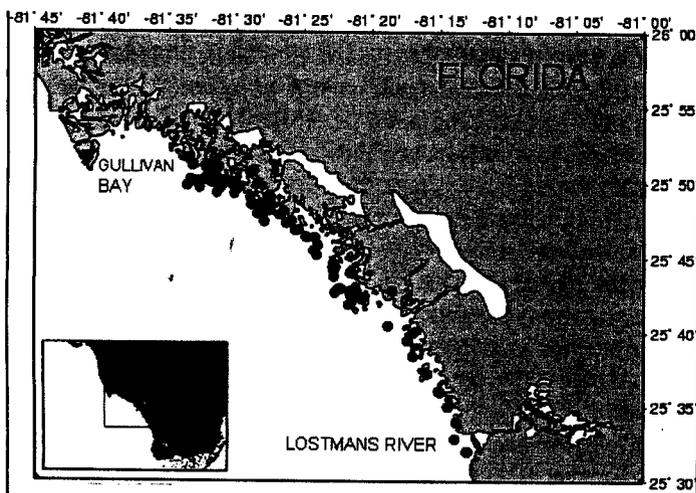


FIG. 1. Sightings of immature Kemp's Ridley Seaturtles from Gullivan Bay to Lostmans River, Ten Thousand Islands, Southwest Florida.

**MACROCHELYS TEMMINCKII** (Alligator Snapping Turtle). **TERRESTRIAL REFUGIUM.** With the exception of nesting, *Macrochelys temminckii* has rarely been reported leaving the water (Ernst et al. 1994. *Turtles of the United States and Canada*. Smithsonian Inst. Press, Washington, D.C., 578 pp.; Ewert 1976. *Herpetologica* 32:150–156). The few reported occurrences have been described as basking attempts (Ewert 1976, *op. cit.*; Farr et al. 2005. *Herpetol. Rev.* 36:168; Shelby and Jensen 2002. *Herpetol. Rev.* 33:304). On 7 July 2006 at 1251 h in the East Fork of Cadron Creek, Arkansas (USA), a male *M. temminckii* (354 mm carapace length, 309 mm carapace width) was located out of the water. This turtle was part of an ongoing telemetry project and was located every 3–5 days prior to and after the aforementioned observation. Between 2 July (previous location) and 7 July 2006, the turtle left the water and entered an exposed beaver den within the bank of the stream. The opening to the burrow was located under a large maple tree (*Acer* sp.) and was ca. 200 mm from the water. The