

Central American River Turtles in Belize

by Denise M. Thompson, Day B. Ligon, and Donald T. McKnight

The Central American River Turtle (*Dermatemys mawii*) is native to southern Mexico, Guatemala, and Belize. It is beautifully adapted to an aquatic lifestyle, with a smooth hydrodynamic shell, giant webbed feet, a snorkel-like nose, and some ability to breath underwater. It can reach impressive sizes, commonly reaching 10 kg and occasionally 22 kg. It is a strict herbivore and many populations historically achieved exceptional densities. Unfortunately, recent surveys throughout its range have documented steep population declines and extirpation of many populations. Today, more viable populations occur in Belize than in Mexico or Guatemala, but even there many populations are gone. Unfortunately, although it is IUCN Red Listed as Critically Endangered, *Dermatemys* can be legally hunted for most of the year in Belize. This hunting pressure is the primary cause of its decline. The foremost questions for conservationists in Be-

lize and internationally are how many viable populations remain, and how can the consistently negative population trends of recent decades be reversed to save the species from extinction?

In 2018, the Belize government prioritized assessing the population status of *Dermatemys* to better understand how to manage its recovery. We assembled an international team of biologists to conduct population surveys through the time-intensive work of calculating population sizes and assessing the demography of populations in rivers and lagoons.

As we did this work, unsurprisingly, we fell in love with both *Dermatemys* and Belize. In 2020, with support from TCF and others, we established the Belize Turtle Ecology Lab (BTLE), a consortium of passionate turtle biologists representing academic institutions and NGOs in Belize, USA, and Australia. BTLE is currently conducting projects to better understand *Dermatemys* biology and conservation, including ongoing population surveys throughout Belize, behavioral and reproductive studies, and telemetry to measure movements, habitat preferences, sociality, and the utility of reintroducing headstarted turtles to augment and reestablish populations. Much of our rewarding work is led by students to foster the growth of the next generation of conservation biologists.

From 2002 through 2021, TCF has funded 313 of 860 submitted proposals, for total disbursements of about \$1.34 million; average awards were \$4,268, with projects conducted in 60 nations. TCF has provided 17 grants for work on *Dermatemys*, including this most recent one, for a total of \$72,000. 🐢



Dr. Day Ligon inspects a juvenile, headstarted Central American River Turtle affixed with a transmitter prior to its release.

Contact: Denise Thompson [denise.thompson17@gmail.com], Day Ligon (DayLigon@MissouriState.edu), Donald McKnight [donald.mcknight@my.jcu.edu.au], Hugh R. Quinn [DoubleHQ@aol.com], Anders G.J. Rhodin [rhodincr@aol.com]