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Rhinoclemmys funerea (Cope 1875) –
Black Wood Turtle, Black River Turtle,
Jicotea Negra, Tortuga Negra, Tortuga Negra de Río

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***Rhinoclemmys funerea* (Cope 1875) –
Black Wood Turtle, Black River Turtle,
Jicotea Negra, Tortuga Negra, Tortuga Negra de Río**

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SUMMARY. – The Black Wood Turtle, *Rhinoclemmys funerea* (family Geoemydidae), is a medium to large-sized (maximum straight-line carapace length to 37.5 cm for males and 35.5 cm for females), mainly herbivorous, semi-aquatic neotropical turtle, endemic to the Caribbean slope of Central America. It was originally described based on specimens collected in Limón, on the Caribbean coast of Costa Rica. It appears to be most closely related to *R. melanosterna*, *R. diademata*, and *R. punctularia*. It is one of the most aquatic and the largest species of the genus. Males and females exhibit modest morphological dimorphism, similar to other species of the genus, with males slightly larger than females, and males having a slightly concave plastron. The nesting season apparently extends from March to August, with clutch size ranging from 1–7 eggs. The eggs are proportionately very large, oblong, and brittle shelled, averaging 68 x 35 mm, and up to four clutches may be deposited annually. The incubation period ranges from 98 to 104 days. Although not at a high risk of extinction and still abundant in some areas, the species has probably declined locally in some areas in response to habitat degradation.

DISTRIBUTION. – Costa Rica, Honduras, Nicaragua, Panama. Native to the low elevation plains of the Caribbean versant of Central America from eastern Honduras to northwestern Panama.

SYNONYMY. – *Chelopus funereus* Cope 1875, *Emys funerea*, *Geoemyda funerea*, *Geoemyda punctularia funerea*, *Rhinoclemmys funerea*, *Callopsis funerea*, *Geoemyda costaricensis* Kanberg 1930.

SUBSPECIES. – None recognized.

STATUS. – IUCN 2026 Red List: Least Concern (LC; in press); Previously: Near Threatened (NT; 1996); CITES: Appendix II, as *Rhinoclemmys* spp. (2023).

Taxonomy. — The Black Wood Turtle, *Rhinoclemmys funerea*, was described by Cope (1875) as *Chelopus funereus*, and has subsequently been variously placed in the genera *Emys*, *Geoemyda*, and *Callopsis*, before being assigned to the genus *Rhinoclemmys*. The various species in the Neotropical genus *Rhinoclemmys* Fitzinger 1835 were for several decades during the 20th century included with several Asiatic genera under the genus *Geoemyda* Gray 1834. McDowell (1964) separated the New World species from the Old World species, designating the former as *Rhinoclemmys* Gray 1863. However, Smith et al. (1976) noted that *Rhinoclemmys* was an erroneous subsequent spelling of *Rhinoclemmys* and reassigned the Neotropical species to *Callopsis* Gray (1863). *Rhinoclemmys* Fitzinger 1835 was designated a *nomen conservandum* by ICZN (1985) and has been considered the correct generic designation for these species for a long time (Fretey et al. 1977; Smith et al. 1980; Iverson 1992; Fritz and Havas 2007; TTWG 2025).

Carr (1991) performed a comprehensive phylogenetic and taxonomic analysis of the Neotropical turtle genus

Rhinoclemmys. Through this analysis, clear differences were established between *Rhinoclemmys funerea* and other species. According to Le and McCord (2008) and TTWG (2025), *Rhinoclemmys* constitutes the sole living genus in its own subfamily, Rhinoclemmydinae, and the only extant New World genus of the Geoemydidae. Although both Le and McCord (2008) and Thomson et al. (2021) found the genus to be firmly nested in a monophyletic Geoemydidae, the relationships, divergence times, and crown age estimates of the genus were dissimilar in these works. Le and McCord (2008) estimated that *Rhinoclemmys* diverged from its sister group (the rest of the living Geoemydidae) near the Paleocene-Eocene boundary (>55 Mya), while obtaining a crown age estimate of 24.6 Mya. Thomson et al. (2021), on the other hand, retrieved the genus as sister to the Geoemydinae (with the Batagurinae being sister to the combined Rhinoclemmydinae + Geoemydinae), with more recent divergence and crown age estimates of ca. 42 and 11.5 Mya, respectively. Compared to other Geoemydids, Rhinoclemmydinae can be morphologically characterized by the absence of lateral keels throughout



Figure 1. Adult female Black Wood Turtle, *Rhinoclemmys funerea*, from Guápiles, Limón Prov., Costa Rica. Photo by Nathanael Stanek / Turtle Conservancy.

life and by the shape of the upper triturating surface of the maxilla, with it being more expanded caudally than frontally and with a very reduced lingual ridge (Le and McCord 2008).

Rhinoclemmys funerea is one of nine recognized species of *Rhinoclemmys*. According to the phylogenetic reconstructions of both Le and McCord (2008) and Thomson et al. (2021), *R. funerea* is sister to *R. melanosterna* (Gray 1861), with these taxa sister to the pair *R. punctularia* (Daudin 1801) + *R. diademata* (Mertens 1954). These relationships had high support in their analyses. Vargas-Ramírez et al. (2013), focusing on *R. melanosterna*, retrieved *R. funerea* as sister to either the western populations of *R. melanosterna* by mitochondrial data, or to all three, *R. diademata*, *R. melanosterna*, and *R. punctularia* by nuclear data; however, their concatenated analyses had low support for either of these relationships.

In *Rhinoclemmys*, the species *funerea*, *areolata*, *melanosterna*, *pulcherrima*, and *rubida* have all been

determined to possess the presumed primitive karyotype of 2N:52 chromosomes, but *R. funerea* differs from the others in having 8 metacentric or submetacentric macrochromosomes instead of the usual 9 (Killebrew 1977; Ernst and Barbour 1989). Sites et al. (1981) studied allozyme variation in several species of *Rhinoclemmys* and concluded that *R. funerea*, *R. areolata*, and *R. punctularia* were most closely related, while *R. rubida* and *R. pulcherrima* were more distinctive and isolated from the other forms.

Rhinoclemmys funerea was described by Cope (1875), based upon four immature specimens collected by W. Gabb in Puerto Limón, on the Caribbean slope of Costa Rica. In his description, Cope remarked on the profound differences between young *Chelopus funereus* and *Chelopus gabbii*



Figure 2. Adult Black Wood Turtle, *Rhinoclemmys funerea*, Costa Rica. Photo by Manuel Merchán Fornelino.



Figure 3. *Rhinoclemmys funerea*, from Guápiles, Limón Prov., Costa Rica. Photos by Nathanael Stanek / Turtle Conservancy.



Figure 4. *Rhinoclemmys funerea*, from Guápiles, Limón Prov., Costa Rica. Photo by Nathanael Stanek / Turtle Conservancy.



Figure 5. Sexual dimorphism shown in the plastron and tail (male left, female right) of *Rhinoclemmys funerea* from Sarapiquí River, Heredia Province, Costa Rica. Photo by Rafael Acuña-Mesén.

(a synonym of *Rhinoclemmys annulata*). The syntypes of *R. funerea* are all deposited in the United States National Museum of Natural History of the Smithsonian Institution (USNM 45900–1, 46134–5; Iverson 2022). Puerto Limón is the main city and port of Caribbean Costa Rica. The epithet “*funereus*” refers to the dark overall coloration of the species. The type specimen of its heterotypic synonym, *Geoemyda costaricensis* Kanberg 1930, is deposited in the Museum für Naturkunde Berlin (ZMB 36496; Iverson 2022), and also comes from Costa Rica.

Description. — This medium to large-sized turtle attains straight-line carapace lengths (SCL) up to 37.5 cm in males and 35.5 cm in females (Ernst 1980; Savage 2002; Folt 2020; TTWG 2025; Acuña-Mesén and Moll, unpubl. data), and weighs up to 4.55 kg (Moll and Jansen, unpubl. data). Ernst (1980) and Ernst and Barbour (1989) described the species as a dark freshwater turtle with a spotted lower jaw and chin. The adult carapace is high, somewhat domed, medially keeled, posteriorly serrated, and usually widest and highest just behind the middle (Ernst 1991; Acuña-Mesén 1998). Its surface is smooth to rugose (due to retention of growth annuli), and it is dark brown to black (some yellow occasionally occurs on the juvenile pleurals).



Figure 6. Young juvenile *Rhinoclemmys funerea*. Photos by Twan Leenders.

The plastron is well developed, upturned anteriorly, and notched posteriorly. The plastral formula is Abd> Pect> Gul> An> Fem> Hum (Ernst 1978; Ernst and Barbour 1989; Lovich and Ernst 1989; Acuña-Mesén 1998). The plastron is black with yellow seam borders, a wide yellow midseam, and the bridge is black to dark brown with yellow seams (Bonin et al. 2006; TTWG 2025).

The head is of moderate size with a slightly projecting snout and notched upper jaw. It is black with a wide lateral yellow stripe above the tympanum. Two narrower yellow stripes run from the orbit and the corner of the mouth to the tympanum, and there are large black spots on the yellow lower jaw and chin. The skin of the neck and limbs is yellow with black vermiculations (or vice-versa). The feet are strongly webbed.

Adult males have a slightly concave plastron and longer, thicker tails with the vent posterior to the carapacial margin; adult females have a flat plastron and shorter tails with the vent beneath the carapace (Savage 2002). Moll and Legler (1971) observed that the size at maturity is



Figure 7. Hatchling *Rhinoclemmys funerea*. Photos by Luke Berg.

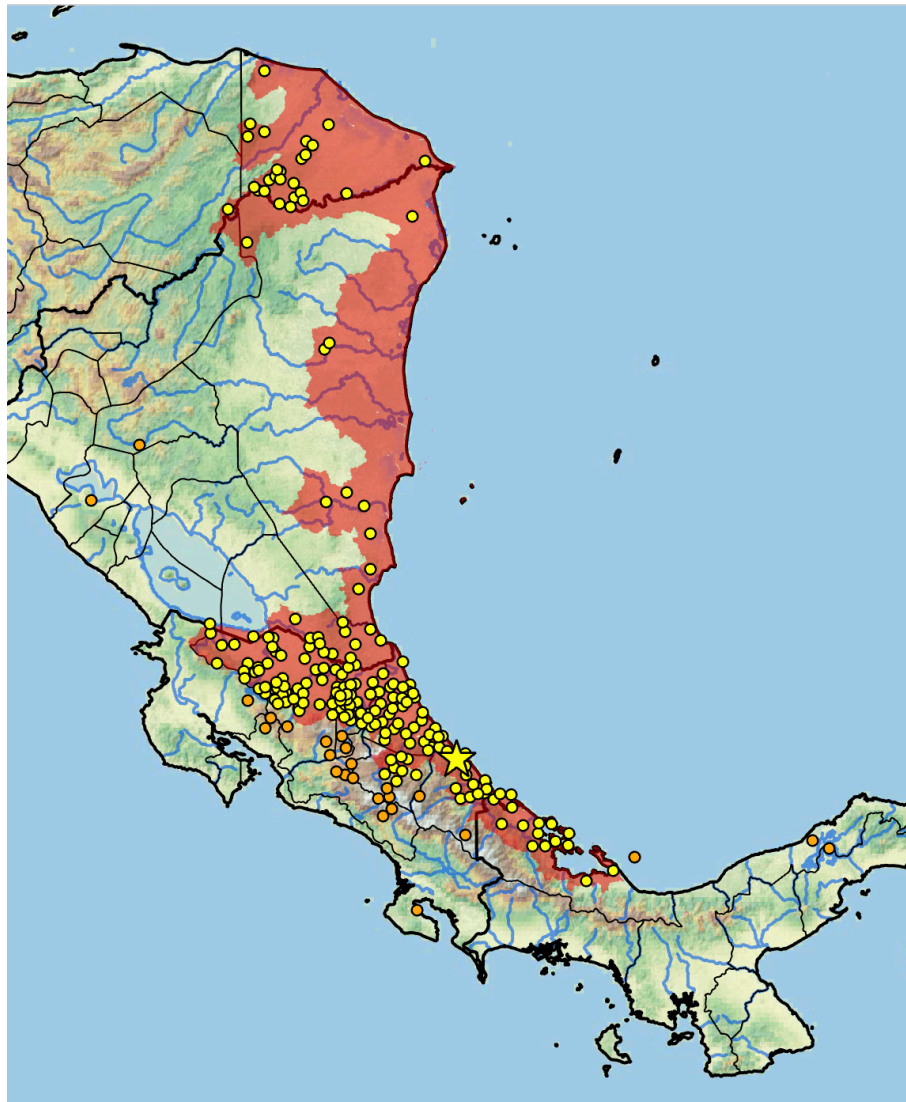


Figure 8. Estimated historical indigenous distribution of *Rhinoclemmys funerea* in Central America (Honduras, Nicaragua, Costa Rica, and Panama). Yellow dots = museum and current and historical occurrence records of presumed native populations based on literature and online records (TTWG 2025); orange dots = presumed translocated or introduced non-native records; yellow star = type locality for *Chelopus funereus* Cope 1875. Colored shading = estimated historical indigenous range. Distribution is based on fine-scaled GIS-defined level 12 HUCs (hydrologic unit compartments) constructed around localities and then adding HUCs that connect point localities in the same watershed or physiographic region, and similar habitats and elevations as verified HUCs, based on TTWG (2025) and adjusted based on subsequent data from the authors. Map by Chelonian Research Foundation.

about 210 mm SCL, with the smallest mature male having a plastral length of 198 mm and a carapacial length of 209 mm, while the smallest mature female they found had a plastral length of 212 mm, and a carapacial length of 220 mm. Hatchlings are usually between 55 and 60 mm SCL, and a mass of ca. 24 g (Hofstra 2001).

Distribution. — Carr (1991) made an in-depth assessment of the distribution of species of the genus *Rhinoclemmys* including *R. funerea*, indicating that it is found in Honduras, Nicaragua, Costa Rica, and Panama. Several authors have determined that *R. funerea* is native to the Caribbean versant of Central America (Ernst 1980; Ernst and Barbour 1989; Iverson 1992; Bonin et al. 2006; TTWG 2025) and they detail the distribution of this species from eastern Honduras (Olancho and Gracias

a Dios Departments) to northwestern Panama (Bocas del Toro Province, Ngäbe-Buglé, and possibly Naso Tjër Di Comarcas). Populations recorded from Colón near the Panama Canal have been considered translocations or misidentifications (TTWG 2025).

The range includes Nicaragua (Región Autónoma de la Costa Caribe Norte, Región Autónoma de la Costa Caribe Sur, Río San Juan, southeasternmost Rivas Department, and likely introduced or misidentified in Matagalpa and Managua Departments) as well as Costa Rica (Alajuela, Heredia, Cartago, Limón, and probably including northeastern-most Guanacaste Provinces).

In Costa Rica, it inhabits the southeastern and northeastern Caribbean lowlands and adjacent foothills up to 1,049 m elevation (lowland tropical humid to premontane



Figure 9. Some aquatic habitats used by *Rhinoclemmys funerea*. *Top left:* Tortuguero Canal, Costa Rica. Photo by Institute of Graphic Hunting and Natural Sciences and Mario Boza. *Top right:* Río Tortuguero, Tortuguero National Park, Costa Rica. Photo by José Esteban Jiménez Vargas. *Middle left:* Caño Negro Wildlife Refuge, Alajuela Province, Costa Rica. Photo by Manuel Merchán Fornelino. *Middle right:* Laguna San Sebastián, Río Frío, Heredia Province, Costa Rica. Photo by Manuel Merchán Fornelino. *Bottom left:* Caño Negro Wildlife Refuge, Alajuela Province, Costa Rica. Photo by José Esteban Jiménez Vargas. *Bottom right:* Río Tortuguero, Tortuguero National Park, Costa Rica. Photo by José Esteban Jiménez Vargas.

humid forest zones) in the Central Valley (Acuña-Mesén et al. 1983), but specimens collected on the Pacific slope in Costa Rica (San José, southern Alajuela, southern Heredia, Puntarenas Provinces) as well as above 600 m have been suggested to be trade introductions or translocations (Savage 2002; TTWG 2025). One specimen has been found in south Florida, USA (Pearce and Enge 2025), but there is, so far, no evidence of a breeding population there.

Habitat and Ecology. — This semi-aquatic species inhabits a large variety of aquatic habitats ranging from small swamps and ponds, often dominated by Cyperaceae

and Fabaceae, to lakes (natural and reservoirs), sometimes invaded by *Pontederia crassipes* (Pontederiaceae), to large, slow rivers, and canals, as well as flooded forests and *Raphia* swamps (Moll and Legler 1971; Mittermeier 1972; Acuña-Mesén et al. 1983; Savage 2002). While usually associated with humid forests, it is known to occur in gallery forests in pine savannahs near Puerto Cabezas, Nicaragua, and offshore islands (e.g., Bastimentos Island) in Panama (Moll and Legler 1971). *Trachemys* (either *T. grayi* or *T. venusta*) and *R. funerea* have been seen basking together on the same logs (Moll and Legler 1971).



Figure 10. *Rhinoclemmys funerea* basking in Costa Rica. Photo by Jonathan Aguayo.



Figure 11. Spatial distribution among *Rhinoclemmys funerea* while basking. Guatuso, Alajuela Province, Costa Rica. Photo by Luis Bonaño Quiñones.

In Panama, where *T. grayi panamensis* is abundant in riverine habitats, *R. funerea* is more commonly (though not always) observed in smaller and often ephemeral aquatic habitats (J.M. Legler, pers. comm.), whereas in Costa Rica, where the locally sympatric *T. grayi emolli* is often rather rare, *R. funerea* is extremely abundant in the major fluvial habitats (Pritchard and Trebbau 1984; Acuña-Mesén and Moll, pers. obs.). Besides these two taxa with somewhat overlapping habitat preferences, *R. funerea* can also be sympatric with the aquatic *Chelydra acutirostris* and *Kinosternon angustipons*, the semi-aquatic *K. leucostomum postinguinale*, and the mostly terrestrial *R. annulata* (Acuña-Mesén 1998).

Juveniles of *R. funerea* in Costa Rica are mainly terrestrial or swamp inhabitants, as evidenced by collection data and often heavy infestations of the tick *Amblyomma sabanerae* (Ixodida: Ixodidae; Ernst and Ernst 1977; Acuña-Mesén 1998). Adults spend much of their time in water or basking on emergent logs but will move into surrounding terrestrial habitats in late afternoon and evening to forage.

This species, although attracted to fish-baited traps and omnivorous in captivity, is mostly herbivorous in nature, although scavenging in the wild has been recently reported (Sepúlveda-Seguro 2021). Aquatic and semi-aquatic grasses, various broad-leaved plants, fruits of terrestrial vegetation, and other plant material are eaten in large quantities (Moll and Legler 1971; Acuña-Mesén et al. 1983). Seeds of some fruits pass through the digestive tract undamaged and are capable of germination, suggesting a role for *R. funerea* as a seed disperser in tropical forests, in particular of riparian species (Moll and Jansen 1997). Studying stomach contents, Moll and Jansen (1997) found that *Artocarpus altilis* (Moraceae), *Cecropia* sp. (Urticaceae), *Ceiba pentandra* (Malvaceae), *Dieffenbachia longispatha* (Araceae), *Pontederia crassipes*, *Ficus* sp. (Moraceae), *Ipomoea trifida* (Convolvulaceae), *Miconia* sp. (Melastomataceae), *Passiflora foetida* (Passifloraceae), *Solanum rudepannum*



Figure 12. *Rhinoclemmys funerea* basking in Río Celeste, Guatuso, Alajuela Province, Costa Rica. Photo by Manuel Angulo.

(Solanaceae), and *Spondias mombin* (Anacardiaceae) are consumed by *R. funerea* and that, after traversing the digestive tract, *Dieffenbachia longispatha*, *Ficus* sp., and *Ipomoea trifida* maintained very high germination rates.

In agricultural areas and in captivity, *R. funerea* can also consume fruits such as bananas (*Musa acuminata*, Musaceae), guavas (*Psidium guajava*, Myrtaceae), oranges (*Citrus aurantiaca*, Rutaceae), and papayas (*Carica papaya*, Caricaceae). Lewis et al. (2026) recorded wild *R. funerea* consuming ripe fruit of Noni (*Morinda citrifolia*, Rubiaceae). There is also a report of wild individuals scavenging on a carcass of *Iguana iguana* (Iguanidae; Sepúlveda-Seguro 2021).

Folt (2020) provided an account on the population demography of *R. funerea* in La Selva, Heredia, Costa Rica. He noted that in his study population, males were more abundant than females and that the latter's population fluctuated significantly during his study, suggesting that females could be transient in the local riparian populations.

Rhinoclemmys funerea goes through various phases of reproductive behavior in which olfactory, visual, and tactile signals play roles in coordinating the activity. While copulation is totally aquatic, a terrestrial prelude has been observed in captivity (Acuña-Mesén, pers. obs.). Iverson (1975) observed that the male pursues the female through the water. When the female slowed down, the male would swim to her side and present his extended head and neck, rapidly vibrating his head up and down. Mating in captivity was observed several times by Allen (1985). Merchán Fornelino (2002) described the following behavior sequence: initially the male approaches the female, this is followed by the male vibrating his head and neck in front of female, then the male attempts to mount the female, with the male using both the anterior and posterior limbs to prevent the female from escaping, if the mount is successful then the male bites the female neck, after this, copulation is attempted, followed by retraction of the female head. The same researcher also reported aggressive responses between males during mating.

Rhinoclemmys funerea is a solitary nester and probably a formal nest is not actually constructed (Moll and Legler 1971). The eggs are laid on the surface of the substrate and covered with leaf litter (Monge et al. 1988). The nesting season in Costa Rica extends from March to August. In Panama, the nesting season extends from April to July. No data are available from Honduras or Nicaragua.

This species produces one to four clutches each season. The average number of eggs per clutch is 3, with a range of 1–7 (Moll and Legler 1971; Acuña-Mesén and Moll, pers. obs.). The eggs are proportionally very large, oblong, and brittle-shelled, averaging 68 x 35 mm (range 58 x 34 to 76 x 39 mm) and 49.6–52 g (Moll and Legler 1971, Merchán Fornelino 2002). Iverson et

al. (2025) reported estimations of relative clutch mass (clutch mass/gravid body mass) as 4.3–8.4%. According to Moll and Legler (1971), the incubation period ranges from 98 to 104 days. A description of the ultrastructure of the eggshell of *R. funerea* has been provided by Acuña-Mesén (1991).

The species is parasitized by the tick *Amblyomma sabanerae*, especially during its more terrestrial juvenile period (Ernst and Ernst 1977; Acuña-Mesén and Moll, pers. obs.). Adults also harbor the leech, *Placobdella multilineata* (Hirudinea; Rossow et al. 2013), large numbers of undetermined intestinal nematodes (Acuña-Mesén and Moll, pers. obs.) and intraerythrocytic haemogregarines (Apicomplexa: Adeleorina; Rossow et al. 2013). Green algae sometimes grow on the carapace.

Predators of adults and juveniles include crocodilians (*Crocodylus acutus*, Crocodylidae; *Caiman crocodilus*, Alligatoridae), and eggs are eaten by predacious and scavenging birds (e.g., *Cathartes*, Cathartidae; *Harpagus*, Buteo, Accipitridae), coyotes (*Canis latrans*, Canidae), and perhaps, milk snakes (*Lampropeltis micropholis*, Colubridae; Acuña-Mesén 1998; Merchán Fornelino and Mora 2000).

Population Status. — At present, large populations of this species are still known to exist in many localities within its range. It is particularly abundant in the rivers and canals comprising the inland waterway between Limón and Barra del Colorado (especially in the Tortuguero-Barra del Colorado vicinity; Pritchard and Trebbau 1984; Allen 1985; Leenders 2019; Acuña-Mesén and Moll, pers. obs.). The species is also abundant in the Sarapiquí, San Carlos, and Puerto Viejo rivers in the vicinity of La Selva Biological Station (Folt 2020). Fewer turtles are observed in the southeastern Atlantic lowlands of Costa Rica and Panama, except in Sixaola, where they are abundant (Acuña-Mesén, pers. obs.). The species is less common in Costa Rica's Central Valley (where Savage [2002], and TTWG [2025] suggest it may have been introduced). Less information is currently available from other parts of its range. Folt et al. (in press) considered the species to be common throughout most of its range.

Threats to Survival. — The native human communities in the northern and Caribbean zone of Costa Rica have consumed the meat of *R. funerea* for thousands of years (Acuña-Mesén 1998). Natives capture adult turtles for a ritual feast in October every year. They do not discriminate between males and females and they never capture more than ten specimens per community. They do not collect turtles during other seasons of the year. The hatchlings, eggs, and juveniles of the species are considered sacred and therefore they never capture them (Acuña-Mesén, pers. obs.).

This turtle is occasionally eaten in the vicinity of Tortuguero, but it is apparently not as favored as *Trachemys* (Moll, pers. obs.); a survey conducted by Merchán

Fornelino (2004) surprisingly found that few people knew about the species in Tortuguero. Small quantities of the species feature in international pet trade. USA imported 34 supposedly captive bred specimens from Costa Rica and Nicaragua during 2011–2016 (CITES 2022).

Some natural habitats of *R. funerea* are deteriorating due to banana and pineapple agriculture and the establishment of housing developments near riversides. In the first case, there is evidence that many rivers of the Caribbean slope in Honduras, Nicaragua, Costa Rica, and Panama receive runoff containing the agrochemicals which are applied on banana and pineapple plantations. There is an urgent need to quantify the effect of the contamination caused by these fertilizers, herbicides, nematicides, and fungicides on the populations of *R. funerea* in Central America. In many rivers, a decline in density of the species has become evident (Acuña-Mesén, pers. obs.), as the species has become much less frequently seen in rivers where it was abundant a few decades earlier.

In addition, the construction of housing developments and industries that dispose of their solid, semisolid, and liquid wastes into the adjacent rivers are further potential threats to this species. Anecdotal accounts from settlers who established themselves near these rivers many years ago, have commented that 40 years ago they observed up to 20 turtles basking daily, but today they seldom notice any turtles basking (Acuña-Mesén, pers. obs.).

Acuña-Mesén et al. (1983) documented a population of *R. funerea* at a reservoir located in Cachí (Cartago Province), Costa Rica, where the company in charge of the hydroelectric plant emptied the reservoir annually. Whenever this occurred, many turtles were caught up in the strong current and died when they went over the 50 m high dam. This may also occur in other reservoirs.

Conservation Measures Taken. — While *R. funerea* is not specifically protected by law within its range states, it has been included in Appendix II of CITES since February 2023. Several of its major habitats and largest populations fall within the borders of Central American protected areas, particularly in Costa Rica, but also in other countries. It occurs in Río Plátano Biosphere Reserve (Honduras), Indio Maíz Biological Reserve (Nicaragua), Tortuguero National Park, La Amistad International Park, La Selva Biological Station, Tirimbina Biological Station, Hitoy-Cerere Biological Reserve, Refugios Nacionales de Vida Silvestre Caño Negro, Barra del Colorado, and Gandoca-Manzanillo (Costa Rica), and likely San San Pond Sak Wetland and Damiani Giariviera Wetland Mixed Forests (Panama).

The species has been included on the IUCN Red List of Threatened Species since 1996, originally assessed as Near Threatened (TFTSG 1996), but recently re-assessed as Least Concern (Folt et al., in press), not because of any real improvement in its status, but instead based on better information.

Conservation Measures Proposed. — Basic research concerning the status and ecology of this species is needed in unprotected and protected habitats across its range. Although studies such as Legler and Moll (1971), Moll and Jansen (1997), Merchán Fornelino (2002), and Folt (2020) have answered some ecological questions about the species, particularly in Costa Rica, the knowledge we have concerning *R. funerea* in Nicaragua, Honduras, and Panama is still very limited.

The effects of specific types of pollutants and habitat degradation experienced by certain populations, and implicated in their apparent decline need to be determined; however, very few studies have addressed the demography of this species, excepting the work of Folt (2020) in La Selva, Costa Rica.

Captive Husbandry. — *Rhinoclemmys funerea* can be maintained in captivity without great difficulty and is sometimes kept as a pet by Costa Ricans. Captive colonies of 3–10 animals have been maintained by Allen (1985) and Acuña-Mesén (unpubl. data) and V. Castillo in Tortufauna S.A. at La Garita, Alajuela Province, Costa Rica. Captives are omnivorous and require access to both land and clean water (Hofstra 2001). In Europe, Hofstra (2001) kept juveniles and hatchlings with warm water at a temperature of 28°C.

Merchán Fornelino (2002) noted that in captivity both juveniles and adults showed few dietary preferences and consumed bananas, papayas, cooked sweet potatoes (*Ipomoea batatas*: Convolvulaceae), cooked potatoes (*Solanum tuberosum*: Solanaceae), cooked rice (*Oryza sativa*: Poaceae), cooked carrots (*Daucus carota*: Apiaceae), soybeans (*Glycine max*: Fabaceae), dog and fish food, and vitamin supplements. Hofstra (2001) maintained young turtles with a broad diet including tomatoes (*Solanum lycopersicum*: Solanaceae), lettuce (*Lactuca sativa*: Asteraceae), apples (*Malus domestica*: Rosaceae), kiwis (*Actinidia chinensis*: Actinidiaceae), bananas, dandelion (*Taraxacum officinale*: Asteraceae), mushrooms, earthworms (Oligochaeta: Annelida), meat, shrimps, filleted codfish (*Gadus* sp., Gadidae), fillet of chicken (*Gallus gallus*: Phasianidae), baitfish and catfood, with extra calcium provided as pulverized eggshells.

Based on 25 eggs hatched in captivity, incubated at 28°C, Merchán Fornelino (2002), determined that incubation lasted between 81 and 106 days. This agrees broadly with Hofstra's (2001) observation of an egg hatching after 80 days at 30°C. The same author also reported that eggs from a long term captive female were 54 x 33 mm, making them smaller than the smallest eggs mentioned by Moll and Legler (1971). Hofstra (2001) kept living specimens for at least 30 years in captivity, this being the oldest estimate for any individual of the species.

Current Research. — The authors are unaware of any research currently being conducted on this species.

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