

New record of Red Side-necked Turtle *Rhinemys rufipes* (Reptilia, Testudines, Chelidae), a Near Threatened Amazonian freshwater turtle

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R*hinemys rufipes* (Spix, 1824), the Red Side-necked Turtle (Fig. 1) is a chelid species restricted to small shallow black-water streams in closed-canopy forested regions of the upper Amazon River Basin in Brazil and Colombia (Magnusson & Vogt 2014; Ferrara et al. 2017). Although *R. rufipes* is widespread in Amazonia, the species is known from few records, especially in the Negro River basin (Magnusson & Vogt 2014; Ferrara et al. 2017; Turtle Taxonomy Working Group 2021).

This species was classified as Near Threatened (NT) by the International Union for Conservation of Nature, because of a decline in area and quality of habitat (IUCN 1996). More recently, it was listed as Least Concern (LC) by the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group (Rhodin et al. 2018). Despite this apparent contradiction, this data has not been updated by the IUCN and this species still lacks accurate published data on occurrence records. Where other turtle species are absent, adults and eggs of *R. rufipes* are

consumed as a food resource by traditional communities, despite the small body size and relatively small number of eggs compared to other Amazonian turtles. Today, hunting and urban growth are considered the main threats for *R. rufipes* (Vogt 2008; Ferrara et al. 2017).

On October 2020 we captured five specimens of *R. rufipes* (three adult females, one immature female, and one adult male) in a forested section of the clear-water stream (igarapé) Uaçu, which flows into the Anebá River (2.8998° S, 58.5281° W; WGS 84) a tributary of the Urubu River, 54 km downstream from the town of Silves, Amazonas State, Brazil (Fig. 2). The collection site was a typical habitat for *R. rufipes*, a stream in closed-canopy forest (Magnusson & Vogt 2014). Captures were made using 1 m diameter fyke nets with dead fish bait and 10 m leads; water temperature varied between 24°C and 26°C.

Field work began on 17 October, and on 21 October we collected one male juvenile and an adult female *R. rufipes*. On 21 October, an adult female was found dead in a trap; its necropsy revealed an immature oviduct and stomach contents of seeds and unidentified material. This specimen was deposited at *Coleção de Anfíbios e Répteis, Instituto Nacional de Pesquisas da Amazônia* (Skeleton INPA-H 42325). On 22 October we captured an adult female and a

juvenile female. Morphological data of the specimens are detailed in Table 1.

The four specimens captured alive are being temporarily maintained in captivity for research and environmental education at *Centro de Estudos dos Quelônios da Amazônia* (CEQUA), located in *Bosque da Ciência, Instituto Nacional de Pesquisas da Amazônia* (INPA), Manaus, Amazonas, Brazil. Permits #14032-3 were issued to R. C. Vogt by the *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (IBAMA) and *Instituto Chico Mendes de Conservação da Biodiversidade* (ICMBio).

This is the first record of *R. rufipes* in the Urubu River region, 200 km east of the nearest previous known record in Manaus and 150 km west of Igarapé Açu (Fig. 2; Tab. 2) (Ferrara et al. 2017). Silves is a small town with 9,289 inhabitants (IBGE 2021) and one of the oldest cities in the Brazilian state of Amazonas, founded in 1660. Although people there have been eating turtles for over 350 years, we did not see or capture any other turtle species in this region, an uncommon situation in Amazonia (R.C. Vogt pers. obs.).

The fact that we have not captured any other species of turtle in Silves could be related to a decreasing trend in the populations of Podocnemididae (the turtle family most consumed in Amazonia) in

this location. Although local residents say they eat podocnemidids like *Podocnemis unifilis*, *P. erythrocephala*, and *Peltocephalus dumerilianus*, there is no information about the origin these animals, and they may not have been captured in Silves. There is still a lack of knowledge on turtles in the region of Silves that deserves future investigation, as well as management activities to ensure the conservation of turtle populations there.

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Table 1. Morphological data of specimens of *Rhinemys rufipes* sampled in the municipality of Silves, Amazonas, Brazil. SCL: straight carapace length; SCW: straight carapace width.

Date	Description	SCL (mm)	SWC (mm)	Weight (g)
20/10/2020	male juvenile	163	126	407
20/10/2020	adult female	252	190	1424
21/10/2020	adult female	198	147	743
22/10/2020	adult female	199	147	730
22/10/2020	juvenile female	151	118	366

Table 2. *Rhinemys rufipes* known occurrence records. Lat: Latitude; Long: Longitude; AM: Amazonas; PA: Pará; VA: Vaupés; BRA: Brazil; COL: Colombia; per. com.: Personal Communication; *: approximate coordinates.

Locality	Municipality	State	Country	Lat	Long	References
Igarapé Uaçú	Silves	AM	BRA	-2.8998	-58.5281	This study
Reserva Adolpho Ducke	Manaus	AM	BRA	-3.1333	-60.0667	de Lima et al., 1997
Reserva Adolpho Ducke	Manaus	AM	BRA	-3.0067	-59.9381	Ferrara et al., 2017
Reserva Adolpho Ducke	Manaus	AM	BRA	-3.0072	-59.9389	Ferrara et al., 2017
Reserva Adolpho Ducke	Manaus	AM	BRA	-2.9663	-59.9329	Magnusson et al., 1997
Reserva Adolpho Ducke	Manaus	AM	BRA	-3.1329	-60.0662	Alvarenga, 2006
Reserva Adolpho Ducke	Manaus	AM	BRA	-3.0163	-59.9829	Sanchez, 2008
Reserva Adolpho Ducke	Manaus	AM	BRA	-2.9163	-59.8829	Sanchez, 2008
Igarapé Açú	Manaus	AM	BRA	-2.1994	-57.3806	de Lima et al., 1997
Reserva Adolpho Ducke	Manaus	AM	BRA	-2.9163	-59.8829	Caputo & Vogt, 2008
Parque do Rio Negro	Manaus	AM	BRA	-2.7055	-60.4020	Rafael Bernhard per. com.
Manaus	Manaus	AM	BRA	-3.1333	-60.0167	Emysystem, 2021

Vicinity Leticia	Leticia	AM	COL	-4.1833	-69.9500	Emysystem, 2021
Reserva Adolpho Ducke	Manaus	AM	BRA	-2.9333	-59.8167	Mertens, 1967
Juruá River	Carauari	AM	BRA	-4.8667	-66.9000	Lamar & Medem, 1982
Marabitanos	São Gabriel da Cachoeira	AM	BRA	0.9667	-66.9500	Siebenrock, 1909
Oriximiná	Oriximiná	PA	BRA	-1.0167	-57.0000	Vogt et al., 2009
Oriximiná	Oriximiná	PA	BRA	-1.0500	-57.3833	Vogt et al., 2009
Cano Uirari	-	VA	COL	-0.4000	-72.2800	Pritchard, 1979
Puerto Guayabo	-	AM	COL	-1.0500	-70.3500	Lamar & Medem, 1982
Cano Colorado	-	VA	COL	0.0300	-70.5200	Lamar & Medem, 1982
Cano Uirari	-	VA	COL	0.2000	-70.6200	Lamar & Medem, 1982
Cano Monserero	-	VA	COL	1.0700	-70.4300	Lamar & Medem, 1982
Cano Golondrina	-	VA	COL	1.0200	-70.4500	Lamar & Medem, 1982
Tefé	Tefé	AM	BRA	-3.3496	-64.6995	Ferrara et al., 2017
Near Trombetas River	Oriximiná	PA	BRA	-1.3590	-56.8610	Ferrara et al., 2017
Presidente Figueiredo	Presidente Figueiredo	AM	BRA	-2.0168	-60.0246	Rosana Thiel, per. com.
Jau River*	Barcelos	AM	BRA	-2.0000	-62.0000	Pezzuti et al., 2010
Ti-Parana River*	-	VA	COL	0.5419	-70.6737	McCord et al., 2001
Flona Saraca Taquera	Oriximiná	PA	BRA	-1.7737	-56.7549	Elizangela de Brito, per. com.
Flona Saraca Taquera	Oriximiná	PA	BRA	-1.5813	-56.6092	Elizangela de Brito, per. com.



Figure 1. Adult male *Rhinemys rufipes* from Silves, Amazonas, Brazil. Photo by RCV.

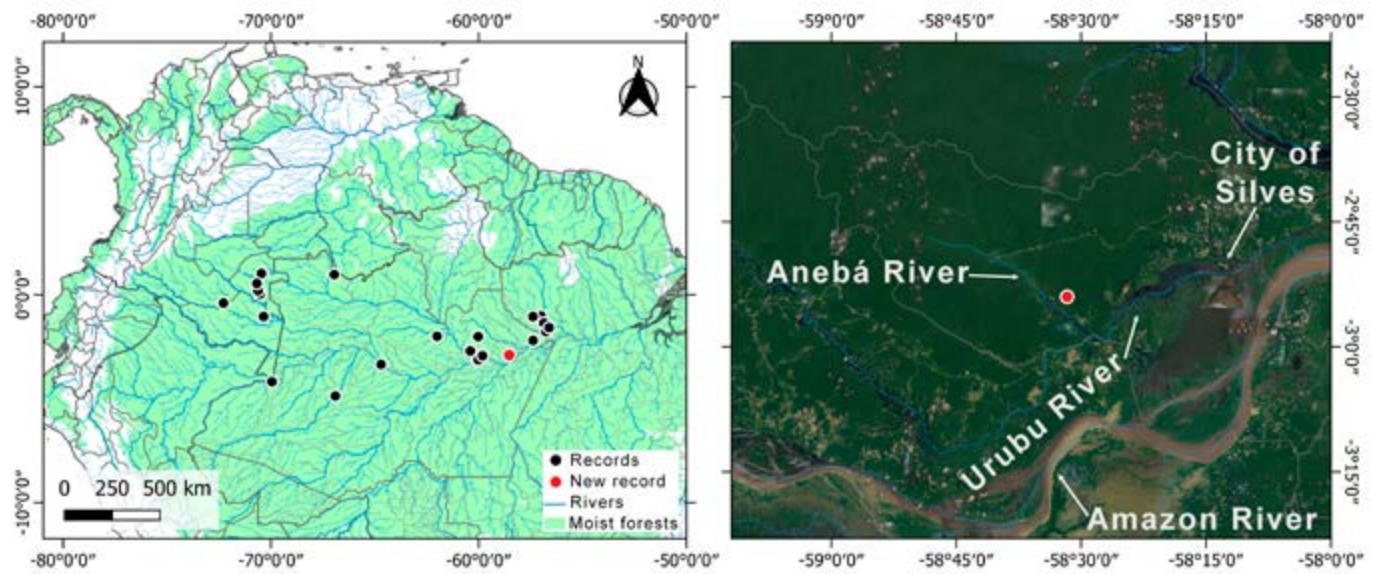


Figure 2. Map showing all known records of *Rhinemys rufipes*, the Red Side-necked Turtle. Map created using QGIS software (QGIS, 2021).



Enyalius bilineatus
Nova Lima, MG
@ Nathane Queiroz



Micrurus albicinctus
Floresta Nacional do Jamari, RO
@ Ana Barbara Barros