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

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DOI: *10.5281/zenodo.6533270*

*Rhinemys rufipes* (Spix, 1824), the Red Side-necked Turtle (Fig. 1) is a chelid species restricted to small shallow blackwater 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) Uaçú, which flows into the Anebá River (2.8998º S, 58.5281º 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.

## ACKNOWLEDGEMENT

We thank Mariceudo Pinho de Carvalho, Luiz Aurélio Leandro and Cledinei Brito Costa for fieldwork. We also thank Camila Ferrara and Camila Fagundes for making available to us the data from occurrence records compiled by them. This work was supported by Fundação de Amparo à Pesquisa do Estado do Amazonas (FAPEAM). This study is part of MAPA's Ph.D. thesis in the Biodiversidade e Biotecnologia da Amazônia Legal – PPG BIONORTE post graduate program at Universidade Federal do Amazonas - UFAM.

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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 Uaçu | 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 Açu | 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.

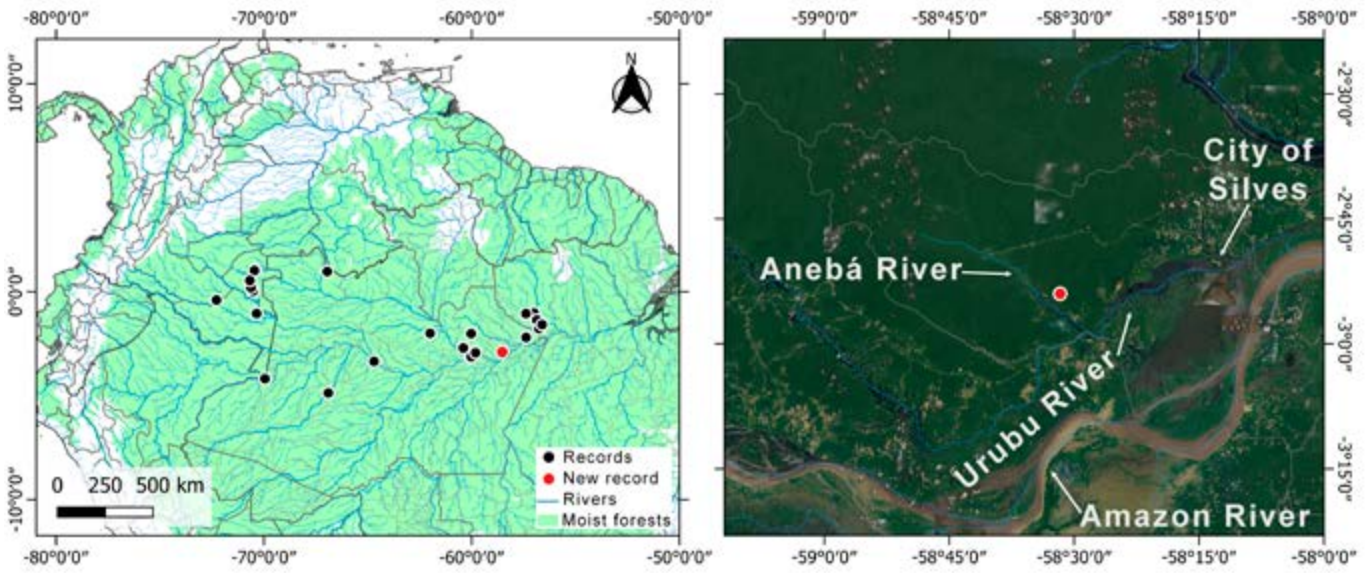



*Figure 2.* Map showing all known records of *Rhinemys rufipes*, the Red Side-necked Turtle. Map created using QGIS software (QGIS, 2021).



*Enyalius bilineatus*
Nova Lima, MG
@ Nathane Queiroz



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