Online journal ISSN - 1676-5680
GMR Genetics and Molecular Research
EVOLUTION AND TECHNOLOGY

Short Communication

Polyandry in the red-headed river turtle *Podocnemis erythrocephala* (Testudines, Podocnemididae) in the Brazilian Amazon

C. Fantin[1,2], I.P. Farias[1], L.A.S. Monjeló[1] and T. Hrbek[3]

[1]Departamento de Biologia, Laboratório de Evolução e Genética Animal, Universidade Federal do Amazonas, Manaus, AM, Brasil
[2]Departamento de Biologia, Universidade do Estado do Amazonas, Manaus, AM, Brasil
[3]Biology Department, University of Puerto Rico-Rio Piedras, San Juan, Puerto Rico

Corresponding author: C. Fantin
E-mail: cleitonfantin@hotmail.com

Genet. Mol. Res. 9 (1): 435-440 (2010)
Received November 29, 2009
Accepted January 4, 2010
Published March 16, 2010

ABSTRACT. The genus *Podocnemis* comprises six living species, including *P. erythrocephala* (irapuca - red-headed river turtle). Data are available concerning the reproductive biology of the species of the genus *Podocnemis*, but little is known about their reproductive strategies. Considering the total lack of such data for *P. erythrocephala*, and with the goal of contributing information on their mode of reproduction, we examined the relationships among individuals of nests of this turtle, using microsatellite markers. Using four microsatellite loci, we analyzed the progeny in six nests from two localities in the Brazilian Amazon (Santa Isabel do rio Negro and Parintins). All juveniles from each nest were analyzed. The genotypes of each juvenile from each nest were identified, and because a sample of female DNA was not available, the maternal genotype was inferred from homozygous individuals in each nest. We found that this species is promiscuous; there was multiple paternity in five of the six nests analyzed. In addition to being important for the understanding of evolutionary and genetic processes, this type of information will be useful for chelonian management projects. Our data suggest one possible

difference between reproductive patterns of the different populations. This multi-paternal condition may be a natural reproductive strategy for the preservation of the genetic diversity of this species.

Key words: Chelonian; *Podocnemis erythrocephala*; Irapuca; Microsatellite; Paternity; Mating system

