



Detection of polymorphisms of the mtDNA control region of *Caretta caretta* (Testudines: Cheloniidae) by PCR-SSCP

E.C. Reis¹, R.M. Albano², A.C.V. Bondioli³, L.S. Soares⁴ and G. Lôbo-Hajdu¹

¹Departamento de Genética, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brasil

²Departamento de Bioquímica, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brasil

³Museu de Zoologia, Universidade de São Paulo, São Paulo, SP, Brasil

⁴Fundação Centro Brasileiro de Proteção e Pesquisa das Tartarugas Marinhas, Projeto TAMAR-ICMBIO (Projeto Tartaruga Marinha - Instituto Chico Mendes de Conservação da Biodiversidade, Salvador, BA, Brasil

Corresponding author: E.C. Reis
E-mail: est.cardinot@gmail.com

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ABSTRACT. Marine turtles are increasingly being threatened worldwide by anthropogenic activities. Better understanding of their life cycle, behavior and population structure is imperative for the design of adequate conservation strategies. The mtDNA control region is a fast-evolving matrilineal marker that has been employed in the study of marine turtle populations. We developed and tested a simple molecular tracing system for *Caretta caretta* mtDNA haplotypes by polymerase chain reaction-single strand conformation polymorphism (PCR-SSCP). Using this technique, we were able to distinguish the SSCP patterns of 18 individuals of

the haplotypes CC-A4, CC-A24 and CCxLO, which are commonly found in turtles sampled on the Brazilian coast. When we analyzed 15 turtles with previously unknown sequences, we detected two other haplotypes, in addition to the other four. Based on DNA sequencing, they were identified as the CC-A17 and CC-A1 haplotypes. Further analyses were made with the sea turtles, *Chelonia mydas* (N = 8), *Lepidochelys olivacea* (N = 3) and *Eretmochelys imbricata* (N = 1), demonstrating that the PCR-SSCP technique is able to distinguish intra- and interspecific variation in the family Cheloniidae. We found that this technique can be useful for identifying sea turtle mtDNA haplotypes, reducing the need for sequencing.

Key words: Single strand conformation polymorphism; Sea turtles; Polymorphism; Mitochondrial DNA