

SERUM STEROID LEVELS ASSOCIATED WITH OVIPOSITION IN THE GREEN SEA TURTLE (*Chelonia mydas*), IN ATOL DAS ROCAS, STATE OF RIO GRANDE DO NORTE, BRAZIL.

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Abstract

There is a lack of published information regarding reproductive endocrinology for most turtle species. In the case of marine turtles that are frequently exposed to many environmental challenges, more information on their reproductive physiology and behavior is essential for understanding how they function in their ecosystems. In Brazil, green turtles (*Chelonia mydas*) are one of the most common marine turtle species. The Biological Reserve Atol das Rocas (03°51'30"S e 33°49'29"W), 144 miles off northeast Brazil, is one of the nesting sites of *Chelonia mydas* in the West Atlantic. Every year during the nesting season (December–June), around 100 females nest on its sandy beaches. Reproductive activity peaked in March. In April 2004, we collected blood samples from 44 adult females immediately after oviposition. Samples were collected by venipuncture of the postoccipital venous plexus and the serum was frozen at - 30°C until it could be transported to the Department of Animal Reproduction at the University of São Paulo for processing. The samples were assayed using commercial kits for estradiol (Double Antibody-DSL, Webster, TX, USA), progesterone and testosterone (Coat-a-Count, DPC, Los Angeles, CA, USA). The hormonal levels (mean ±SD) of the green turtle females were: Estradiol 3.06 ± 1.66 pg/ml, Progesterone 1.20 ± 1.65 ng/ml and Testosterone 45.04 ± 26.47 ng/ml. This information not only increases our knowledge of the endocrine-reproductive system of this endangered species but also serves as a baseline against which to assess results from future studies.