

Relationship between body condition and reproduction

Evangelina V. Viotto*^{1,2}, Pamela, M.L. Leiva^{1,2,3}, Melina S. Simoncini^{1,2,3} and Carlos I. Piña^{1,2,3}

¹Centro de Investigación Científica y de Trasferencia Tecnológica a la Producción - Consejo Nacional de Investigaciones Científicas y Técnicas - Provincia de Entre Ríos-Universidad Autónoma de Entre Ríos, Diamante, Argentina (evangelinaviotto@gmail.com; pameleiva4@gmail.com; melinasimoncini22@yahoo.com.ar; cidcarlo@infoaire.com.ar)

²Proyecto Yacaré-Laboratorio de Zoología Aplicada: Anexo Vertebrados Facultad de Humanidades y Ciencias, Universidad Nacional del Litoral, Santa Fe, Argentina

³Facultad de Ciencia y Tecnología, Universidad Autónoma de Entre Ríos, Diamante, Argentina

Abstract: To know patterns of energy destined to reproduction is necessary to understand reproductive ecology of species. In this work we calculated body condition (BC) index of reproductive and non-reproductive *Caiman latirostris* adult females, as an indication of stored energy. We have calculated FULTON and Scaled Mass Index (SMI) of 96 adult females, captured since 2001 to 2018 (except 2009). Females were considered reproductive (R) if they were captured defending a nest or were gravid (n= 75) and non-reproductive (NR) confirmed by echography (n= 21). We tested difference in BC between R and NR females with T test. We also evaluated minimal BC to guaranteed that females beyond that line are reproductive. Reproductive females had better BC than non-reproductive ones (in both FULTON and SMI). Our line separate 70% of the nesting females. Based on our results we could guarantee that a female will reproduce if her BC is beyond the line, but not all the females under the line are non-reproductive, indeed a few females under the line nests.

Keywords: Body condition index, *Caiman latirostris*, Reproductive female

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