## Relationship between skin color, ophthalmological and skin diseases in captive *Caiman latirostris* in Argentina

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Abstract: The valuation of a species and the environment is essential for sustainable use to serve as a conservation tool being that the commercial use of crocodilians for the production of skin and meat has been considered one of the most successful models, having the skin as its most valuable product. However, diseases can negatively affect this industry, causing great losses. In this context, this study attempts to examine the relationship between color and skin diseases in captive Caiman latirostris in Argentina. A total of 151 individuals were measured, weighed, physically examined and classified according to the skin color (dark/light) and the type of disease found (dermatitis and "red eyes"), with 51.66% of the individuals observed had dark color and 49.34% light color. The prevalence of "red eyes" in these individuals was 41% and dermatitis was 23%. The statistical test indicated that there is a direct relationship between skin color and health condition (X2 = 19,956, Df = 1, n = 151,  $\alpha$  = 0.001), where light-skinned alligators (84.1%) are more affected than those with dark skin (64.3%); however, some darkskinned individuals seemed more vulnerable, presenting eye diseases and dermatitis at the same time (14.57%). In addition, the weight and length of healthy animals, of both colors, were higher than caimans with eye disease or with both associated diseases. These results may help, in the future, crocodilians farms to isolate susceptible animals, establishing stricter criteria for health status. This may imply a decrease in diseases that affect the quality of the skin and the loss of individuals, with a consequent increase in profits obtained by the industry.

Keywords: Dermatitis, Red eyes, Broad-snouted caiman; Industry

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