Study of metallic elements in eggshell of *Caiman latirostris*: preliminary results

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Abstract: Deforestation and other changes in land use are the main reasons why man has drastically modified the wildlife habitat, being the agricultural activity the most contributing one due to the use (often indiscriminate) of agrochemicals, fertilizers and external antiparasitic chemicals, which have had multiple impacts. Recently, in Argentina, agricultural activity has increased exponentially, and livestock farming was concentrated in intensive systems due to the global demand for resources, particularly food, as a result of demographic expansion. This leads to the dispersion of various contaminants, such as heavy metals associated with the use of pesticides and fertilizers. The objective of this study was to determine and compare levels of heavy metals (whose origin may be related to anthropogenic activities), present in the eggshells of *Caiman latirostris* in different reproductive seasons, in the province of Santa Fe (Argentina). For this purpose, we collected *C. latirostris* eggs in sites with different degrees of anthropization. Then, they were taken to the laboratory for processing and analysis, to determine the concentration of metallic elements. We detected heavy metals such as copper (Cu), lead (Pb) and zinc (Zn), being Zn the one found in greater proportion followed by Cu and Pb. It should be noted that in 2014 Pb was not found, while it was detected in recent samples (2020), suggesting that the increase in anthropogenic activities has caused the presence of new metallic elements highly toxic to animals. This study provided valuable information related to the presence of heavy metals in the eggshells of *C. latirostris*, very useful to monitor possible contamination in their habitats due to the presence of metallic elements.

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