

Effect of dietary enrichment with wild food items on the proximal composition of muscle and fat of *Caiman latirostris* in captivity

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Abstract: Animals' diets, such a crocodilian, are reflected in their tissue's chemical composition. Therefore, the incorporation of items belonging to the wild diet into the farm diet would be evidenced in the tissues of individuals, where each item could induce a change as a source of nutrients. Our objective was to evaluate the effect of enrichment diet with wild food items of *Caiman latirostris* on the proximal composition (ash, moisture, protein, and total lipids) of caiman muscle and fat. Four dietary treatments were offered: diet with insects (DI), with snails (DM), and with red meat (DCR) and captivity diet (control, DC); the diets were offered *ad libitum* for 30 days. The proximal composition of the diets, muscle and fat of caimans under study were analyzed. Our work showed increases in total protein concentrations in the DCR and DI diets, and an increase in total lipids in the DCR diet, with respect to the DC. The PCA of muscle tissue showed that the data from caiman fed the DI diet were associated with changes in lipids and ash, and those fed the DCR diet were associated with few changes in all parameters of proximal composition. In the fat, it was evidenced that DI and DCR reduced moisture content, while DI reduced protein content with respect to DC. Data indicate that DI and DCR diets are recommended for the feeding of *C. latirostris* in captivity, since their incorporation would be a source of proteins and lipids that would favor the correct development of caimans.

Keywords: Broad-snouted caiman, Insects, Snails, Red meat, Wild diet

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