

# Digestive constraints and nutrient hydrolysis in nestlings of two flamingo species

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In vertebrates, enzymatic activity levels in the small intestine are correlated with dietary composition.

We examined enzymatic activity levels in juvenile specimens of two flamingo species,

*Phoenicoparrus andinus* and *Phoenicoparrus jamesi*. Both species feed their chicks with

esophageal secretions. Based on the chemical composition of these secretions in flamingoes, we

predicted low activity levels of disaccharidases and higher activities of aminopeptidase-N and

esterase. As predicted, sucrase was absent in *P. andinus*, and its activity was low in *P. jamesi*.

Esterase and aminopeptidase-N activities were relatively high. Low maltase activity suggested the

presence of carbohydrates in esophageal secretions. Digestive features can have consequences on

the growth and survival of chicks. Hence the data presented here may be relevant to the

maintenance and reproduction of wild and captive endangered flamingoes.