

Social alliances and their benefits in Northern Bald Ibis (*Geronticus eremita*)



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Introduction

In group living individuals social context represents one of the most potent stressors. Affiliative interactions may buffer individual stress responses and ultimately enhance reproductive success.

Methods

- *individually marked birds*
free flying colony of the Konrad Lorenz Research Station
- *focal observations (5 min)*
May to November 2015
frequency of initiated and received affiliative behaviour
- *collection of droppings*
excreted corticosterone immune-reactive metabolites
enzyme-linked immunoassay

Do affiliative interactions influence the amount of excreted corticosterone immune-reactive metabolites?

Results

Conclusion

Our results suggest that being well embedded in a social network benefits individual stress management. Especially socially bonded adults seem to buffer their stress load by exchanging high frequencies of affiliative behaviour.

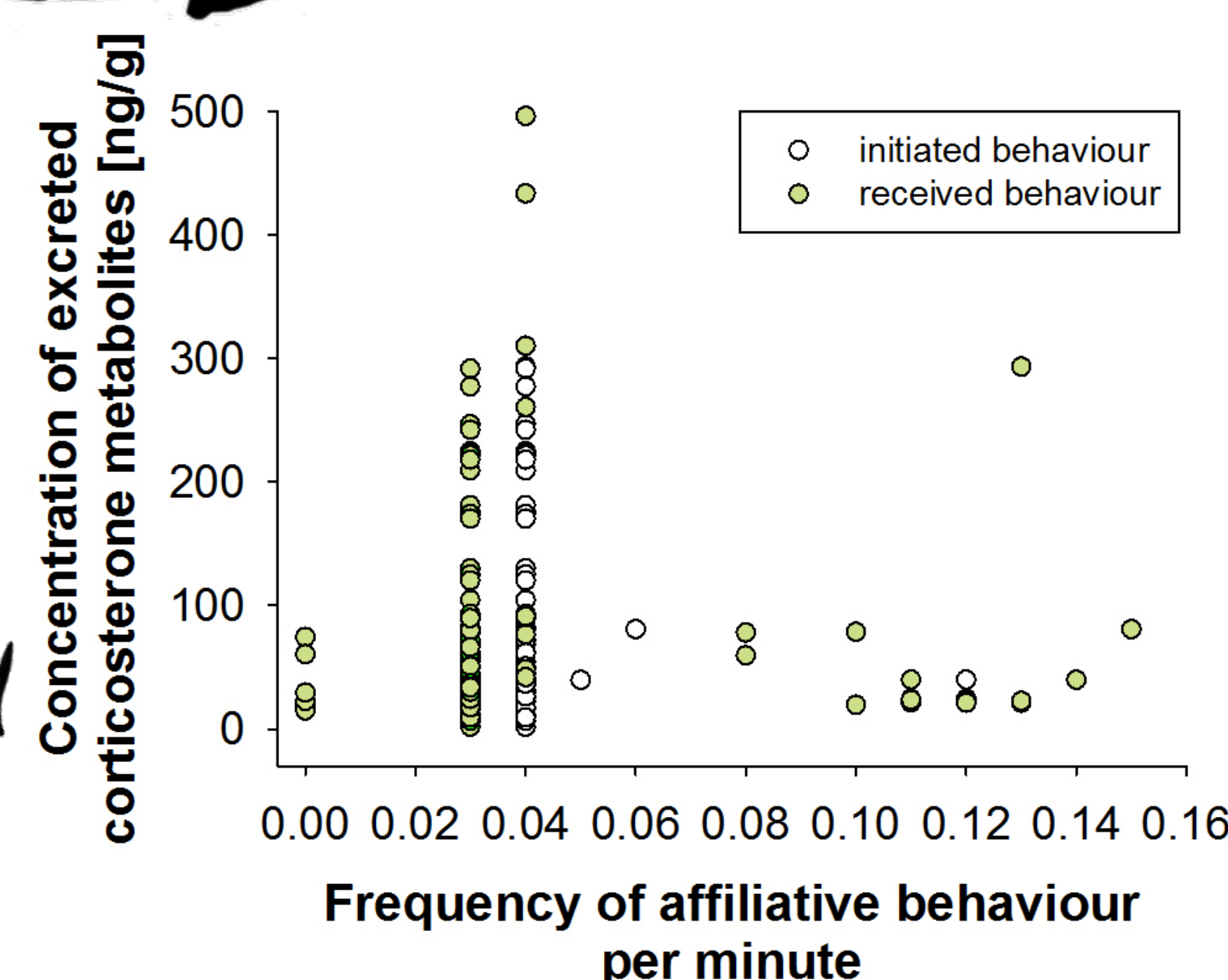


Figure 1. Corticosterone metabolites & affiliative behaviour. Individuals initiating and receiving affiliative behaviour with a higher frequency excreted lower concentrations of corticosterone metabolites, compared to individuals less involved in affiliative behaviour.

$N_{\text{individuals}}=28$
 $N_{\text{samples}}=105$
GLMM
initiated behaviour: $z=-6.47$, $p<0.001$
received behaviour: $z=2.44$, $p=0.015$

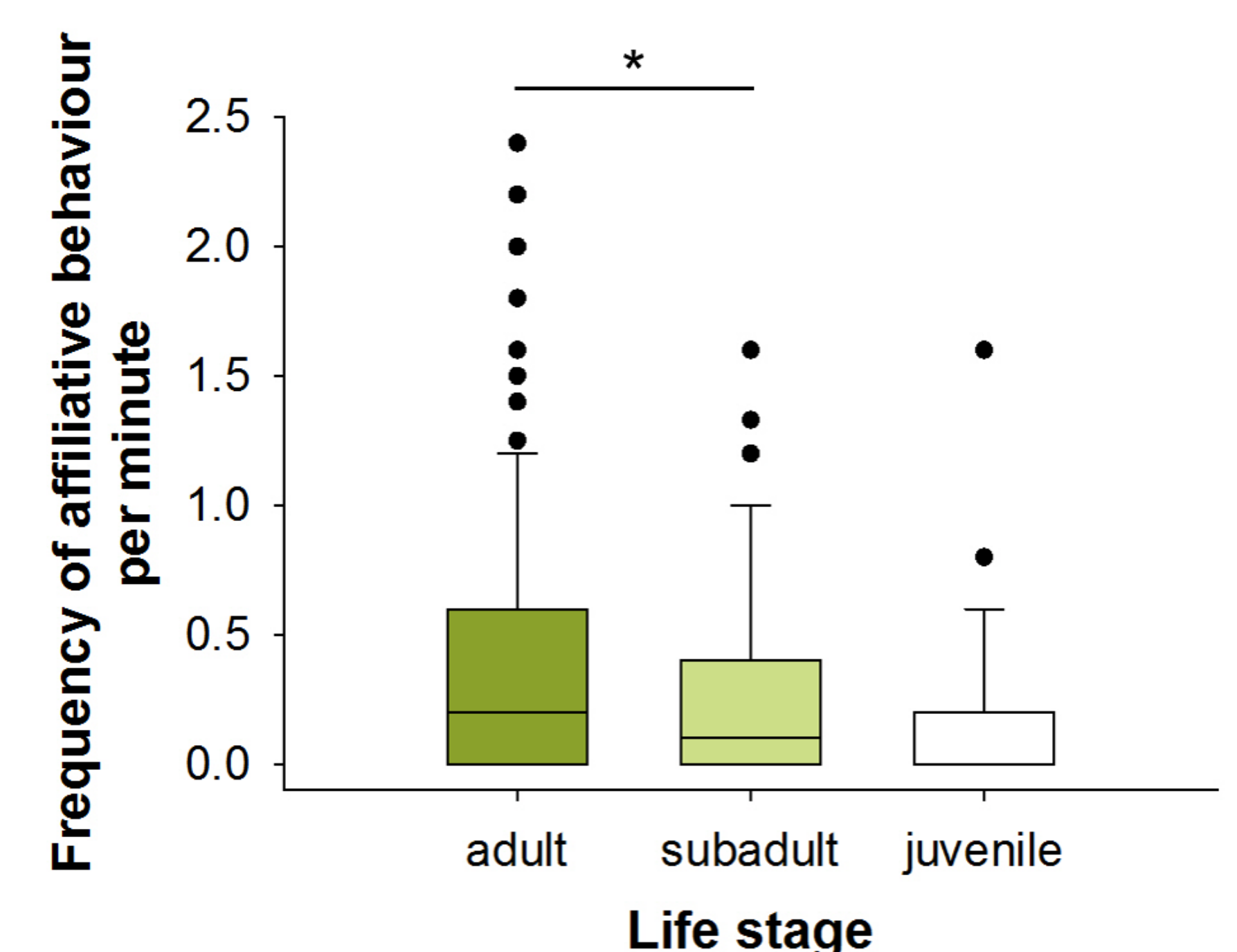


Figure 2. Affiliative behaviour & life stages. Adults were involved in more affiliative interactions as compared to subadults.

$N_{\text{adults}}=22$
 $N_{\text{subadults}}=15$
 $N_{\text{juveniles}}=6$
GLMM
adult-subadult: $\chi^2=6.66$, $p=0.030$
adult-juvenile: $\chi^2=4.21$, $p=0.120$
juvenile-subadult: $\chi^2=0.42$, $p=1.000$
mean number of protocols/individual=11

Acknowledgements: This study was funded by the project Sparkling Science SPA-05/026. We are grateful for the permanent support by the "Verein der Förderer der Konrad Lorenz Forschungsstelle" and the "Herzog von Cumberland Stiftung".



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