Variation in myoglobin content of skeletal muscle of seal species.

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1 Introduction

Aquatic and marine mammals are able to dive underwater for extended periods as a result of having a higher muscle myoglobin concentration than terrestial mammals. Seal species are known to vary in dive length. We investigated whether the concentration of myoglobin differed between species.

2 Methods

We measured the myoglobin content of the skeletal muscle of individuals in each of three species. We used R (R Core Team 2019) with tidyverse packages (Wickham 2017) for all analyses.

3 Results

There is a significant difference in myoglobin concentration between species ($F = 5.88$; *d.f.*=2, 81; $p = 0.004$). Post-hoc testing revealed that difference to be between the Weddell seal with the highest myoglobin concentrations ($\bar{x} \pm s.e.$: 48.91 $\pm$ 1.61 g Kg^{-1}) and the Harbour seal with the lowest (41.6 $\pm$ 1.46 g Kg^{-1}). See Figure 1

References

R Core Team. 2019. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Wickham, Hadley. 2017. *Tidyverse: Easily Install and Load the 'Tidyverse'*. https://CRAN.R-project.org/package=tidyverse.

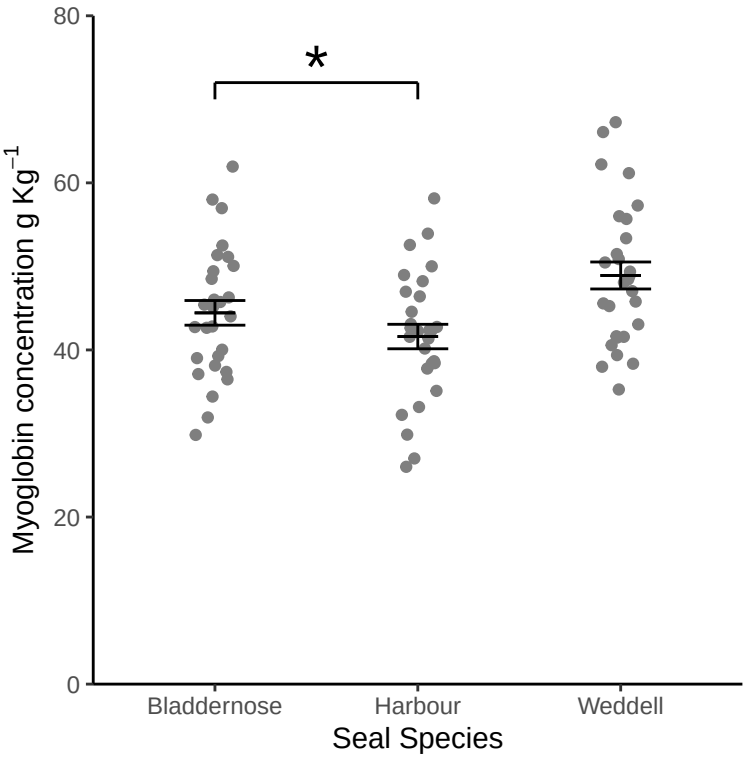

Figure 1: Mean Myoglobin content of skeletal muscle