Variation in myoglobin content of skeletal muscle of seal species.

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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.

Methods

We measured the myoglobin content of the skeletal muscle of 30 individuals in each of three species. We used R (R Core Team 2019) with tidyverse packages (Wickham 2017) for all analyses.

Results

There is a significant difference in myoglobin concentration between species ($F = 5.35$; *d.f.*=2, 87; $p = 0.006$). Post-hoc testing revealed that difference to be between the Harbour seal with the highest myoglobin concentrations ($\bar{x} \pm s.e.$: 49.01 $\pm$ 1.51 g Kg^{-1}) and the Bladdernose seal with the lowest (42.32 $\pm$ 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.

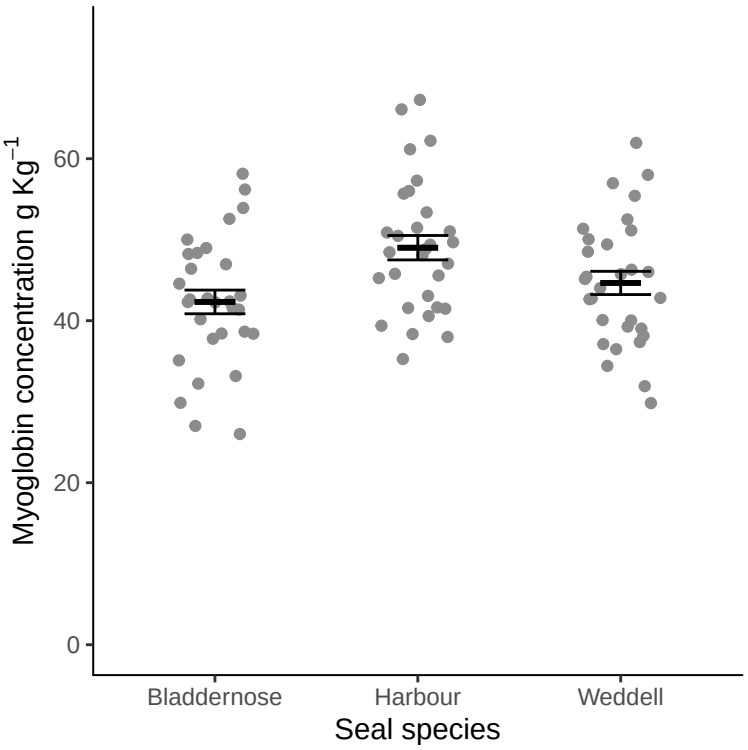

Figure 1: Figure 1 Mean Myoglobin content of skeletal muscle