

# 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 terrestrial 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<sup>-1</sup>) and the Bladdernose seal with the lowest ( $42.32 \pm 1.46$  g Kg<sup>-1</sup>). See Figure 1.

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>.

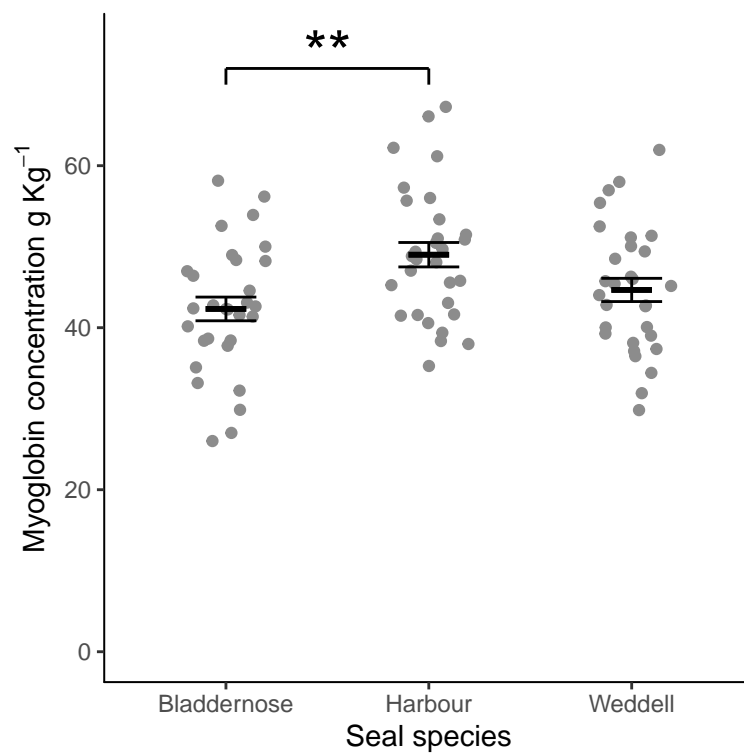


Figure 1: Figure 1 Mean Myoglobin content of skeletal muscle