

Supplementary materials

To

Intra-skeletal variability in phosphate oxygen isotope composition reveals regional heterothermies in marine vertebrates.

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Supplementary information 1:**Information concerning the studied Mediterranean *Thunnus thynnus*.**

The Atlantic bluefin tuna was purchased from the ITM Intermarché fish shop located in Chatillon sur Chalaronne (01400, France). The specimen was fished on 02/18/2020 in the western Mediterranean Sea off the Spanish coast. The number assigned by the Ministerio de Agricultura, Pesca y Alimentacion of the Spanish government is: ESP 0209208.

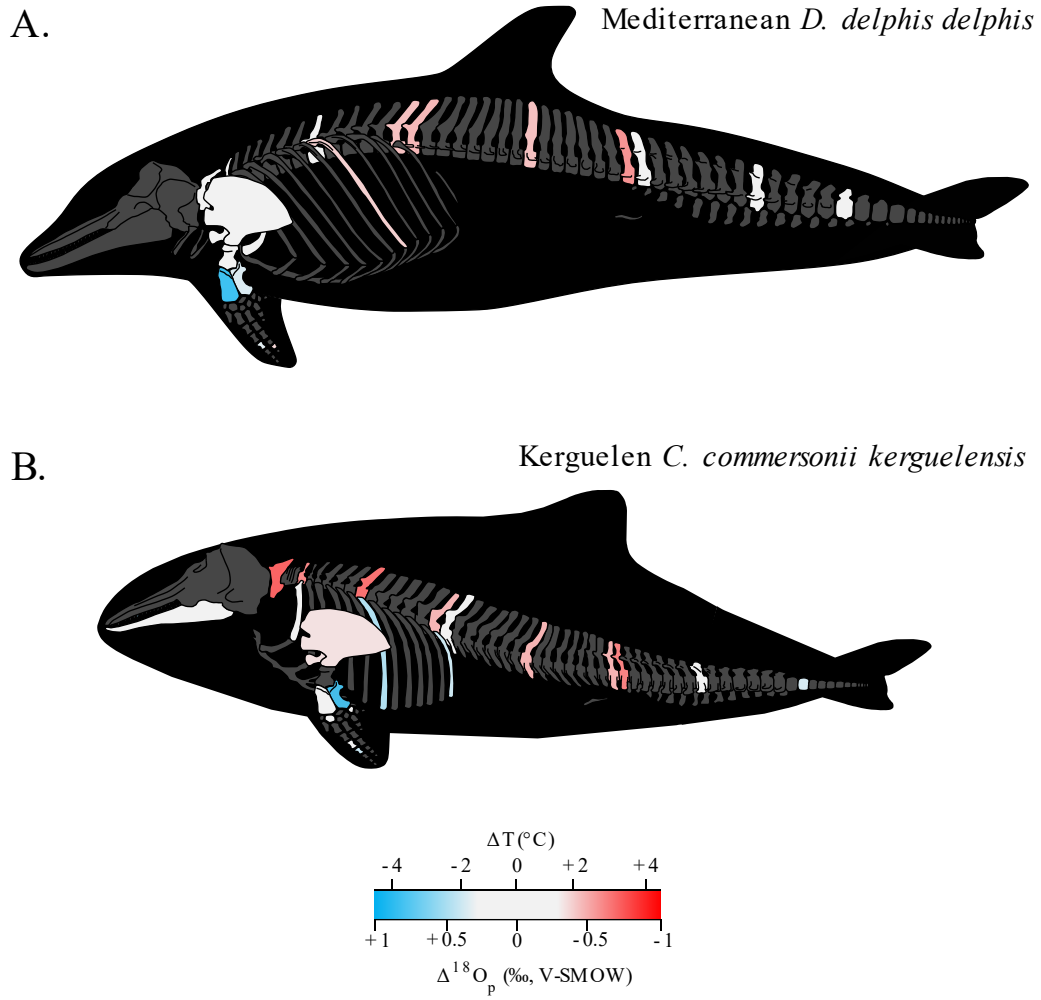


Fig. S1. Oxygen isotope variability within the skeleton of **A)** the Mediterranean *D. delphis delphis* (MNHN-ZC-AC-1876-275) and **B)** the *C. commersonii kerguelensis* from Kerguelen Islands (MNHN-ZC-AC-1983-058). Bone $\Delta^{18}\text{O}_p$ correspond to the difference between bone $\delta^{18}\text{O}_p$ value and an average value of the skeleton expressed as its mid-range value $((\delta^{18}\text{O}_{\text{max}} - \delta^{18}\text{O}_{\text{min}})/2)$. For paired skeletal elements as well as vertebrae centra and neural spines, the mean value is used.

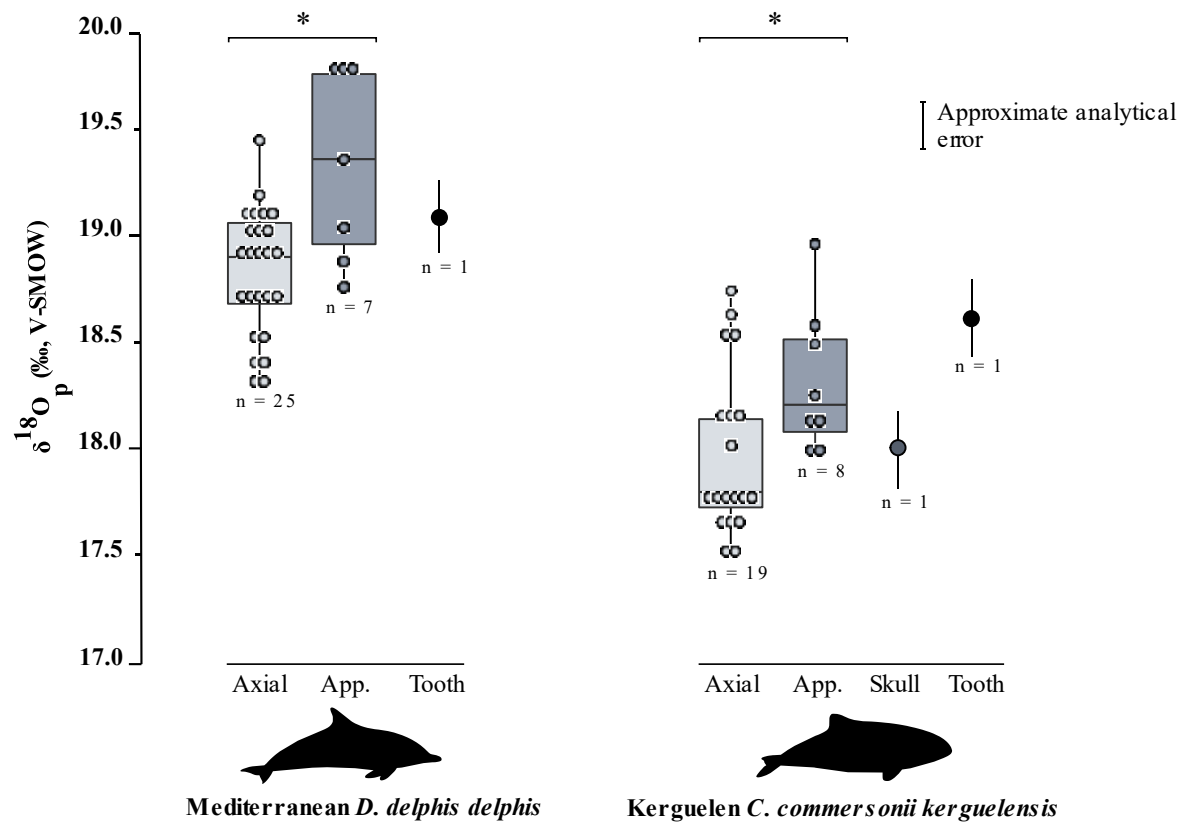


Fig. S2. Boxplots showing the $\delta^{18}\text{O}_p$ values of skeletal regions for Mediterranean *D. delphis delphis* (MNHN-ZC-AC-1876-275) and Kerguelen *C. commersonii kerguelensis* (MNHN-ZC-AC-1983-058). Asterisks indicate the significance of the observed differences between pairs of groups: * for $p < 0.05$. Outliers are plotted as small black circles. **Abbreviation= App.:** appendicular skeleton.