



Stable isotopes as a proxy for temperature in biosystems - An open discussion about its validity with the audience

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Oxygen isotope values (^{18}O) are used as a proxy for temperature in biosystems, such as in carbonate or phosphate components of species such as corals, foraminifera, bivalves, otoliths, teeth and others. Question is if we have complete control over the isotopic fractionation against temperature in these species, and if temperature is the only parameter which controls the the isotopic value. Terms such as 'kinetic' or 'vital effects' are often used in those cases where the expected outcome is not obtained and special if erratic patterns are found. These terms will be discussed briefly and are included in the open discussion with the audience.