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Methods and pitfalls of measuring thermal preference and tolerance in lizards.

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Abstract

Understanding methodological and biological sources of bias during the measurement of thermal parameters is essential for the advancement of thermal biology. For more than a century, studies on lizards have deepened our understanding of thermal ecophysiology, employing multiple methods to measure thermal preferences and tolerances. We reviewed 129 articles concerned with measuring preferred body temperature (PBT), voluntary thermal tolerance, and critical temperatures of lizards to offer: a) an overview of the methods used to measure and report these parameters, b) a summary of the methodological and biological factors affecting thermal preference and tolerance, c) recommendations to avoid identified pitfalls, and d) directions for continued progress in our application and understanding of these thermal parameters. We