Thermoregulation of a viperid snake endemic of a small island at the south Atlantic of Brazil

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Recent suggestions that reptiles, especially tropical ones, are potentially very vulnerable to climate warming call attention for studies on thermal ecology. Based primarily on studies of lizards and snakes from temperate zones, it is broadly accepted that reptiles are able to regulate behaviorally their body temperature (T_b), but recent studies addressing different taxa make this scenario a little more complex, requiring further details on the natural history of diverse species. We examined the thermal ecology of the Golden Lancehead, *Bothrops insularis*, a critically endangered neotropical Crotalinae snake endemic to Queimada Grande Island (QGI), south-east Brazil. We applied current procedures to quantify thermoregulatory behavior. In general, *B. insularis* operated mainly as a thermoconformer, i.e., low thermoregulatory effort, basically because QGI have a relatively high thermal quality. However, seasonal declines of the thermal quality of habitat during colder seasons (autumn and winter), and even during nighttime, seems to be compensated by an increase in the effectiveness of thermoregulation. Overall, T_b of *B. insularis* is determined largely by environmental variables, particularly air temperature with some influence of biotic factors, such as body size. Use of open areas for basking (a common thermoregulatory behavior) is largely avoided and this may be explained by ecological factors.

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