



ORAL COMMUNICATIONS

SEASONAL CHANGES IN MORPHOLOGY AND PERFORMANCE IN INSULAR LIZARDS: PLASTICITY OR SURVIVAL?

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Previous studies have established that cyclical variations in ecological parameters and environment have important consequences on organisms. In temperate regions drastic changes in food availability can often be observed across seasons that are often accentuated on islands. Moreover, aggression and competition for reproductive partners mainly take place during a single season. Bite force is a fitness relevant performance trait that may also show seasonal variation. However, whether these seasonal changes are correlated to changes in the morphology of the underlying muscles and bony structures remains unknown. Here we provide data on seasonal changes in bite force, muscles cross sectional area and cranial shape in lizards of the species *P. sicula* from a small island in the Adriatic. Both bite force and the mass and cross sectional area of the jaw adductor muscles change seasonally with animals having greater bite forces and muscles in late summer relative to spring. These changes are accompanied by changes in the shape of the cranium and the mandible. As bite forces are greater outside of the reproductive season it is unlikely that these differences are due to sexual selection acting on male competitive ability. However, whether these results represent plastic changes in morphology and function from one season to the next or rather reflect differential survival of animals with greater bite forces remains to be tested.