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SEX AND MALE-MORPH SPECIFIC EXPRESSION OF AN ACTIVITY-BASED PERSONALITY TRAIT IN DUNG BEETLES

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Male horn dimorphism is a special type of polyphenism. Majors develop into large males with bulky horns while minors support diminished forms of the same trait. These morphological differences covary with ARTs: majors guard females by warding off potential intruders through patrolling and tunnel blockage, and minors exhibit a variety of behaviors that are loosely grouped under 'sneaky tactics'. Our objective was to test whether personality types of male morphs diverge in accordance with their ARTs. We studied activity as a personality trait in two dung beetle species: horn dimorphic *Onthophagus furcatus*, and hornless *Onthophagus ruficapillus*. We measured activity as walking performance (i.e. speed and distance covered) in behavioral assay. Our results confirm walking performance as a personality trait. We found that sexes in the hornless species show equivalent degrees of performance both in terms of walking speed and distance. The difference emerged in the horn-dimorphic species as males (more specifically, majors) were physically more active than females, though the actual speed of movement manifested no disparity. We detected no difference in walking performance between morphs.

Session: Bold Moves: Personality