

Investigating the Link Between Personality and Problem-Solving in Captive Gray Wolves

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BACKGROUND

What is **Personality**?

- Individual differences in how animals appraise and respond to environment stimuli
- Correlated with *problem-solving performance*, although the directional relationship varies depending on the species

Evidence of **Cognition** in Wolves?

- Collaborative and coordinated hunting strategies, numerical quantity discrimination¹
- Heavily focused on differences in cognitive performance between domestic dogs and captive wolves (e.g., cooperation in loose string paradigm)

What Do We Already Know?

- Personality remains *understudied* with only one study to date on captive maned wolves²

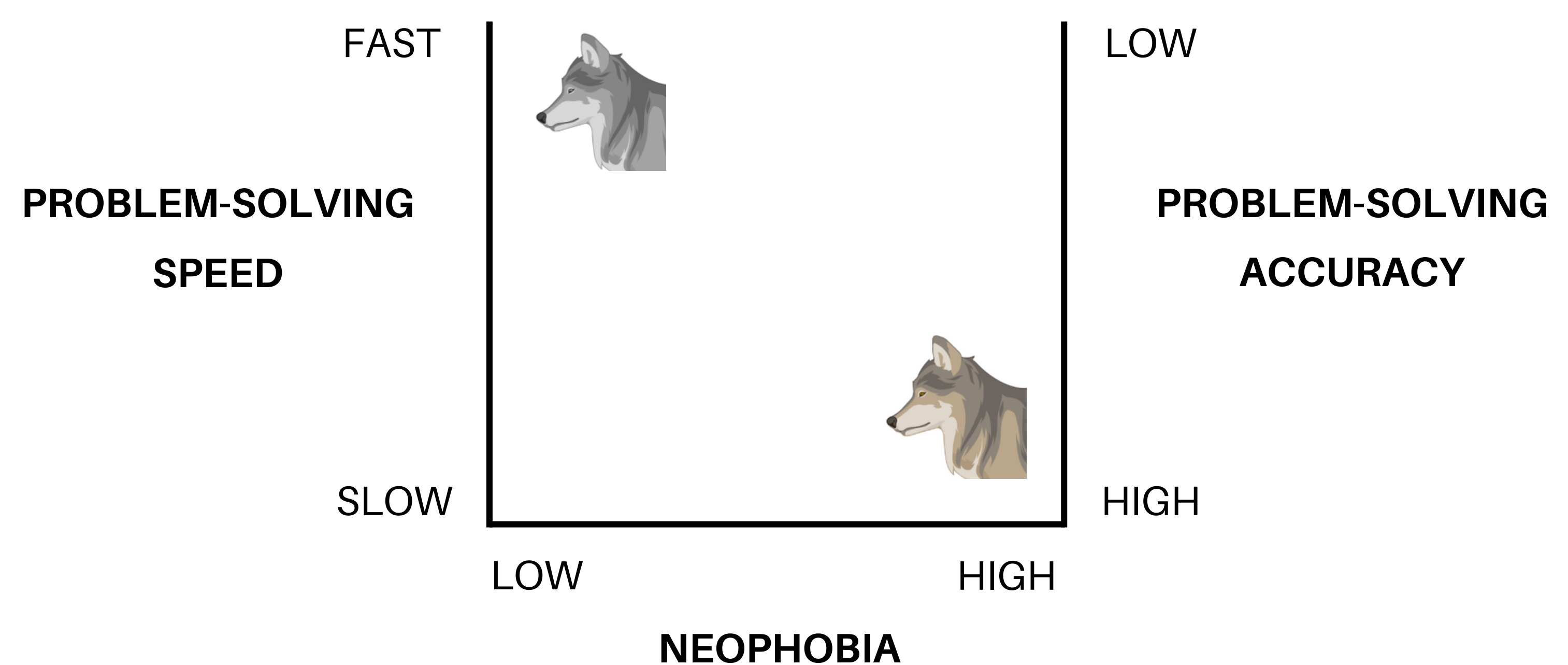
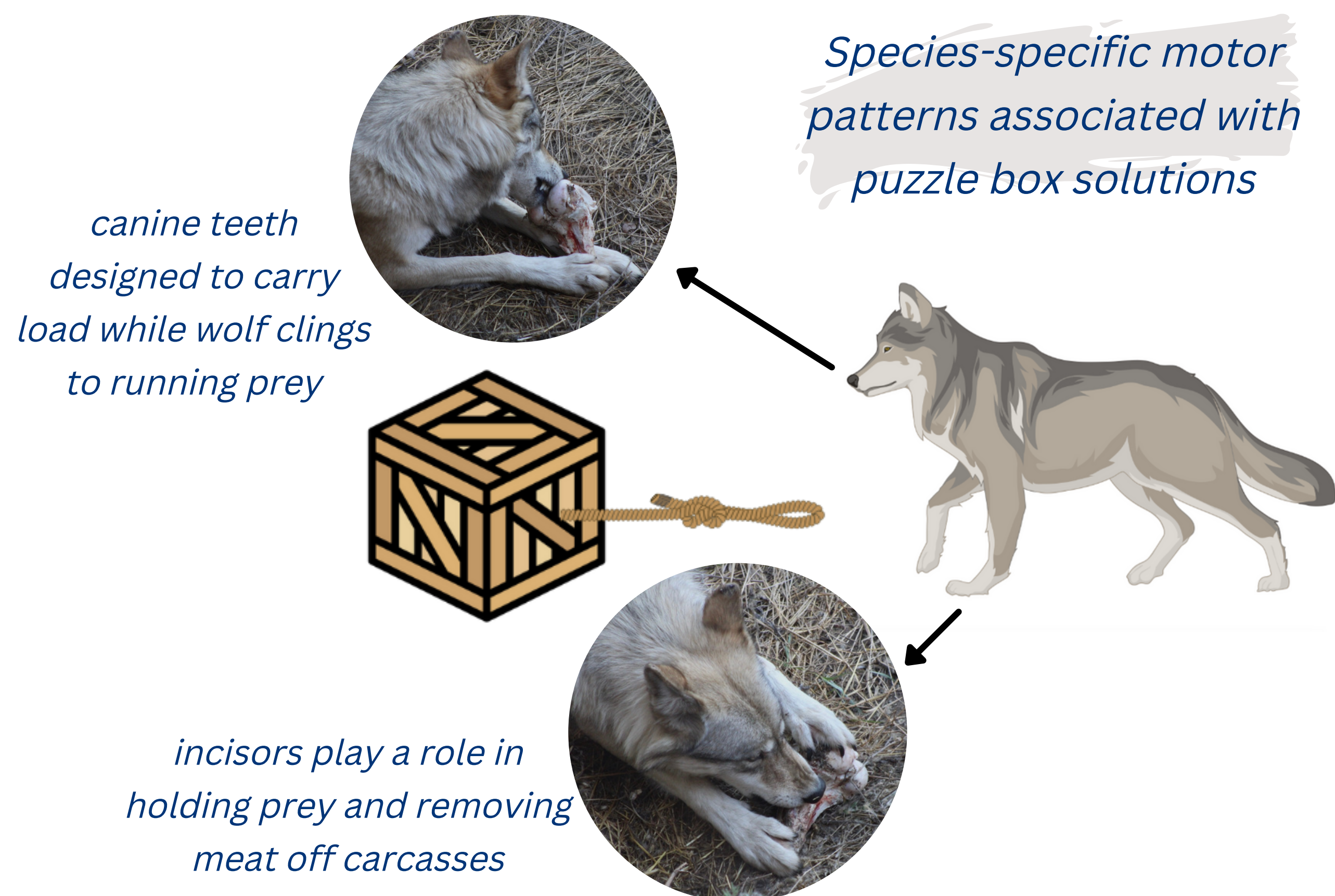


OBJECTIVE

To assess variation in personality traits among captive gray wolves and understand the relationship between personality and problem-solving performance

METHODS

1. Evaluate consistency of personality assessment for captive gray wolves
 - Keeper trait ratings
 - Ethological coding
 - Behavioral tests: novel object, audio playback
2. Integrate multi-access puzzle box to assess individual differences in cognitive traits (e.g., social learning, problem-solving speed and accuracy)
3. Evaluate consistency of cognitive traits and their covariation with personality traits



WHY IT MATTERS

Livestock Protection

Allow ranchers to improve non-lethal interventions for decreasing livestock depredation³



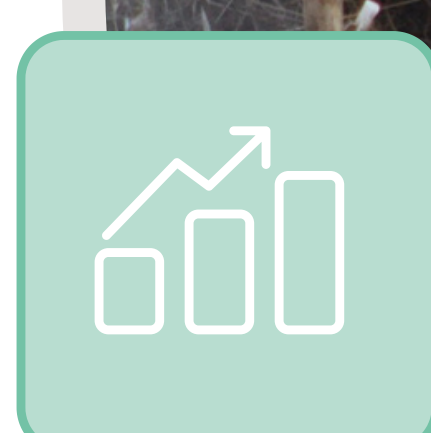
Management

Inform environmental enrichment practices, mate pair compatibility, and social structures in captivity⁴



Conservation

Identify which individuals are the best candidates for reintroduction⁶



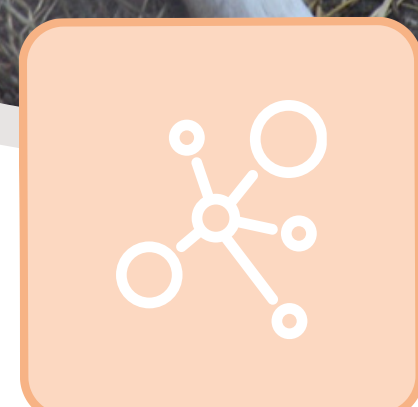
Welfare

Understand how individuals cope with changes in their environment (individual-tailored treatment)⁵



Education

Increase species awareness and impact guest learning experience^{4, 6}



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