PROBLEM-SOLVING ABILITY OF NATIVE AUSTRALIAN ANIMALS IN FARMLAND AND NATURAL FORESTS POPULATIONS

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INTRODUCTION

Problem-solving:

- Assesses behavioural and cognitive responses of animals
- Allow animals to navigate novel situations and and overcome anthropogenic disturbances

Aims:

- Assess problem-solving abilities of native Australian species using puzzles
- Determine if problem-solving abilities differ between species and habitat types

Hypothesis:

- Farmland species are better problem solvers than woodland and rainforest species.

METHODS

- Set up in different habitats:

Farmland & Rainforest

Wandoo woodland   **White gum woodland**
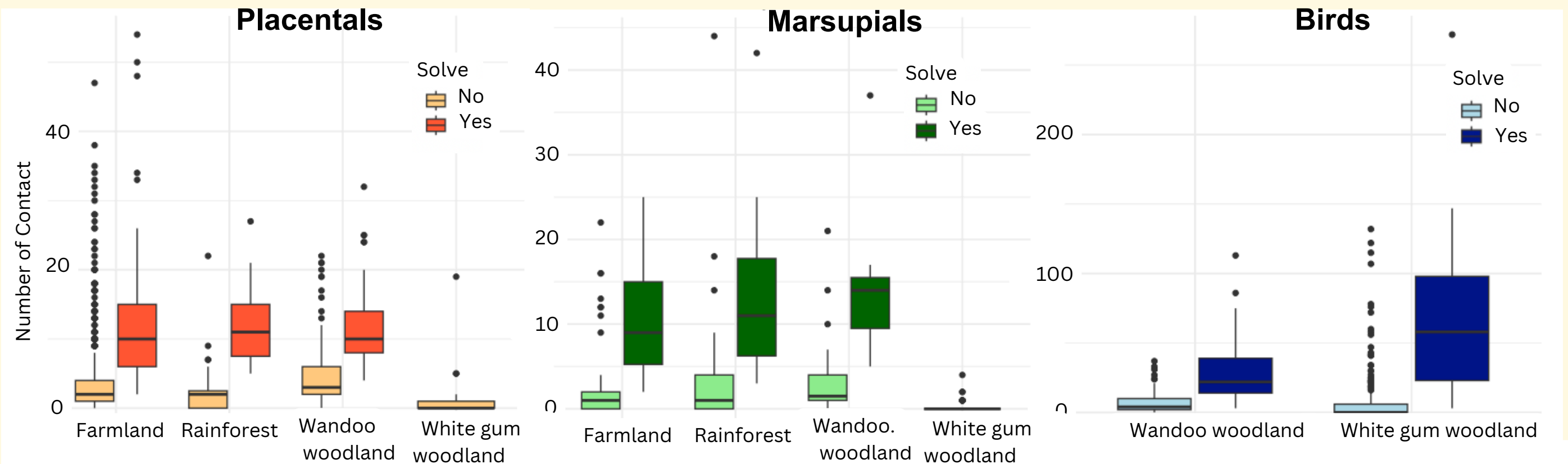
- Used different puzzle types

Matchbox puzzle   **Trixie puzzle**   **Cylinder puzzle**

- Used camera traps
- Used different bait types

RESULTS - Species effect on contact

- Placentals in the rainforest, marsupials in the _wandoo_ woodland and birds in the white gum woodland are more persistent in solving the puzzles.
- Placentals in the farmland, marsupials in the farmland, and birds in the _wandoo_ woodland are more successful in solving the puzzles.

DISCUSSION

- Placentals in _wandoo_ woodland, marsupials in farmland and birds in _wandoo_ woodland are the best problem-solvers.
- The motivational state of animals could have affected the engagement and puzzle solving.

CONCLUSION

- Various native Australian species across different habitats expressed problem-solving abilities.
- This research can help make effective conservation strategies to preserve biodiversity in rapidly changing environments.

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