

# TRASH PANDAS IN THEIR NATURAL ENVIRONMENT

HOW RACCOONS USE AND ABUSE HUMAN TRASH



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# RACCOONS AND PEOPLE

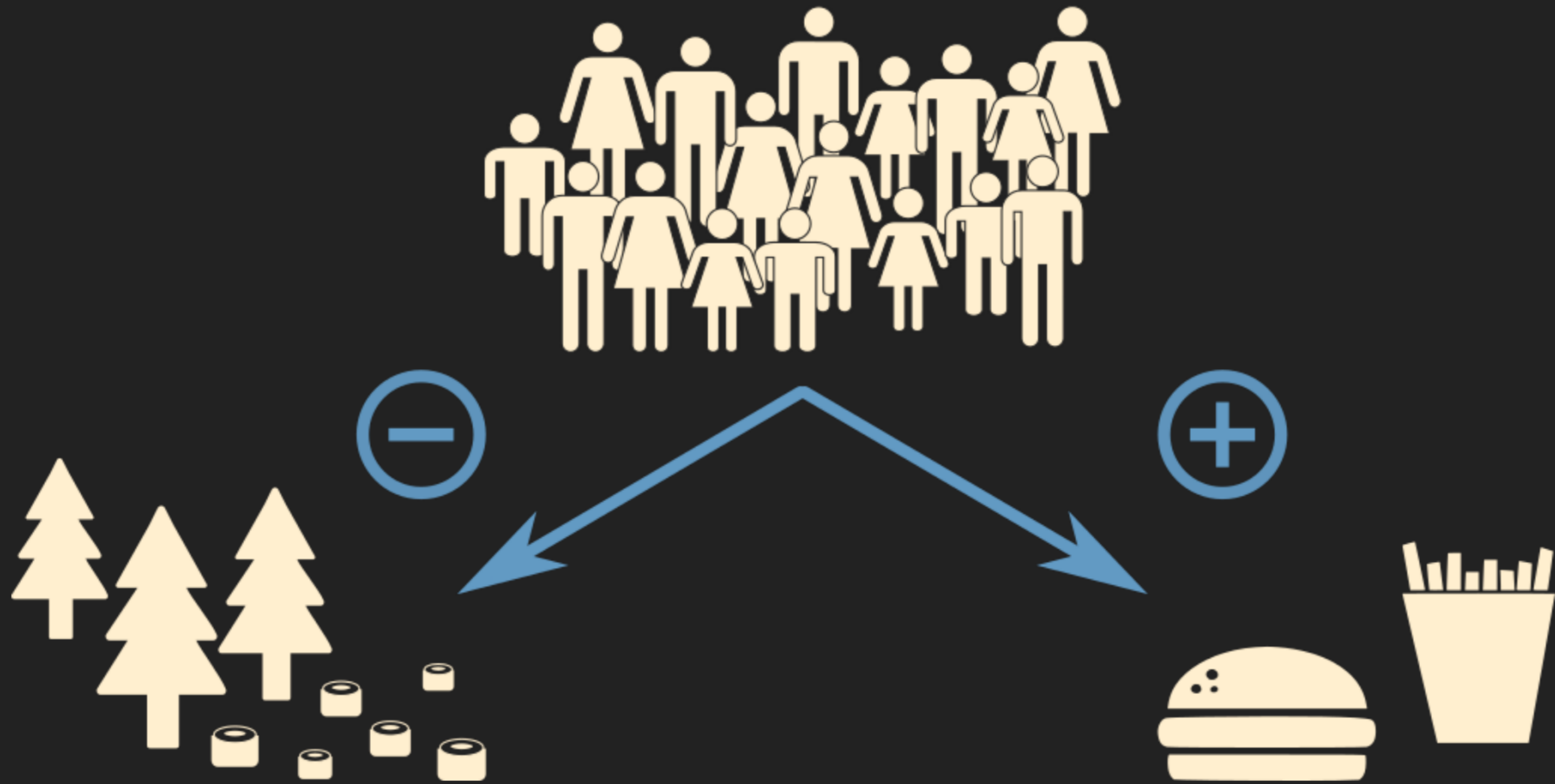
# HUMAN IMPACT ON WILDLIFE



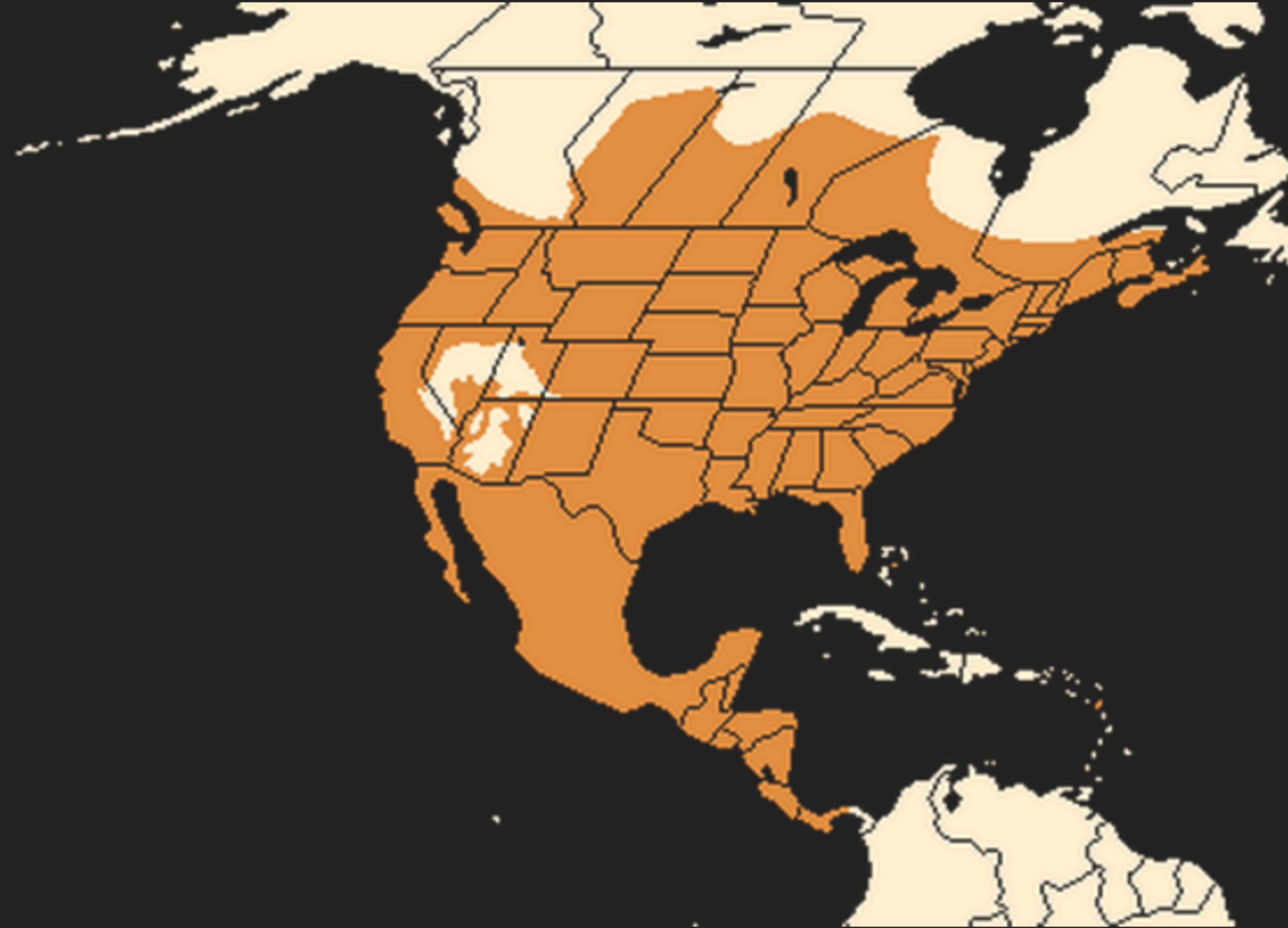
# HUMAN IMPACT ON WILDLIFE



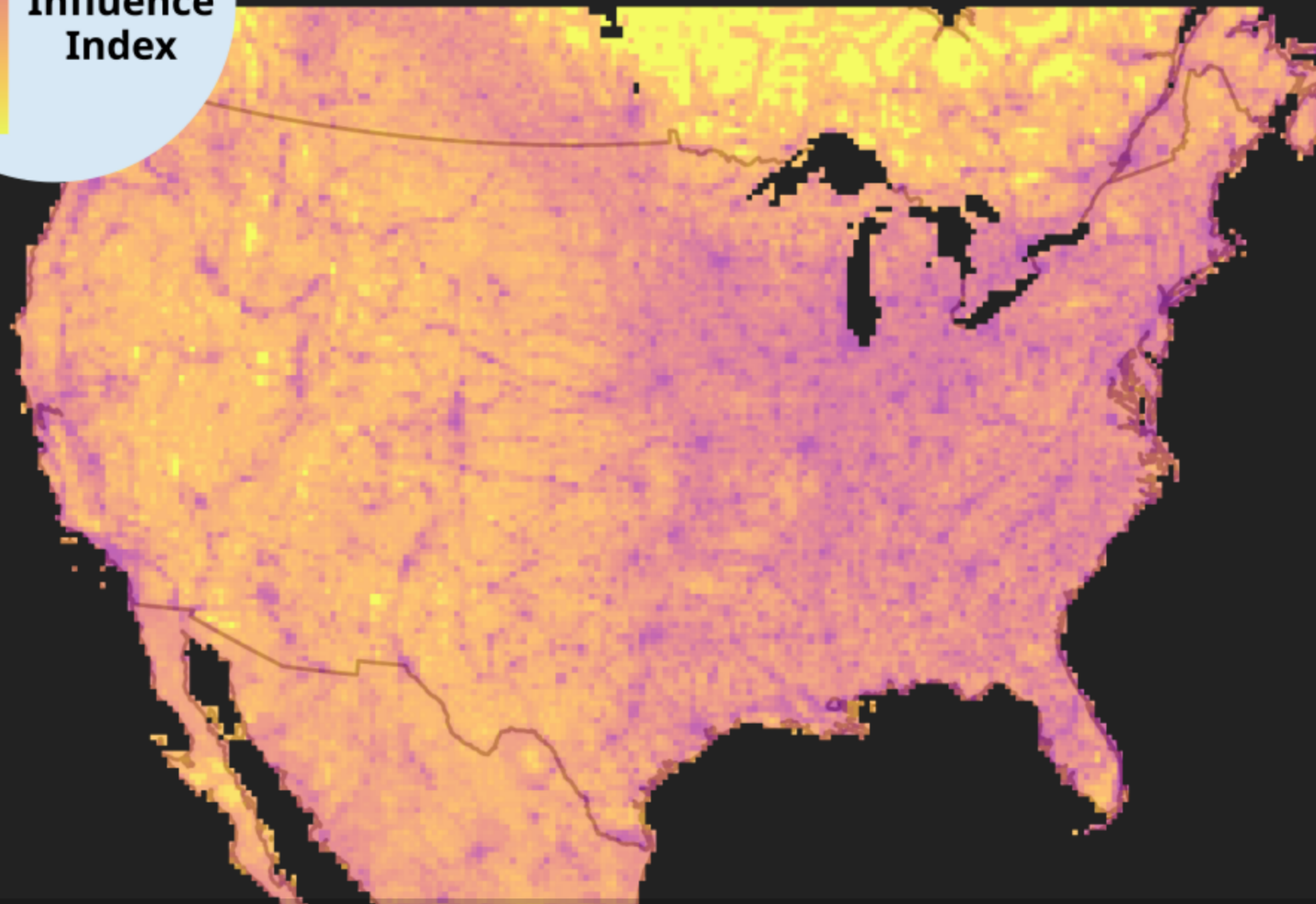
# HUMAN IMPACT ON WILDLIFE



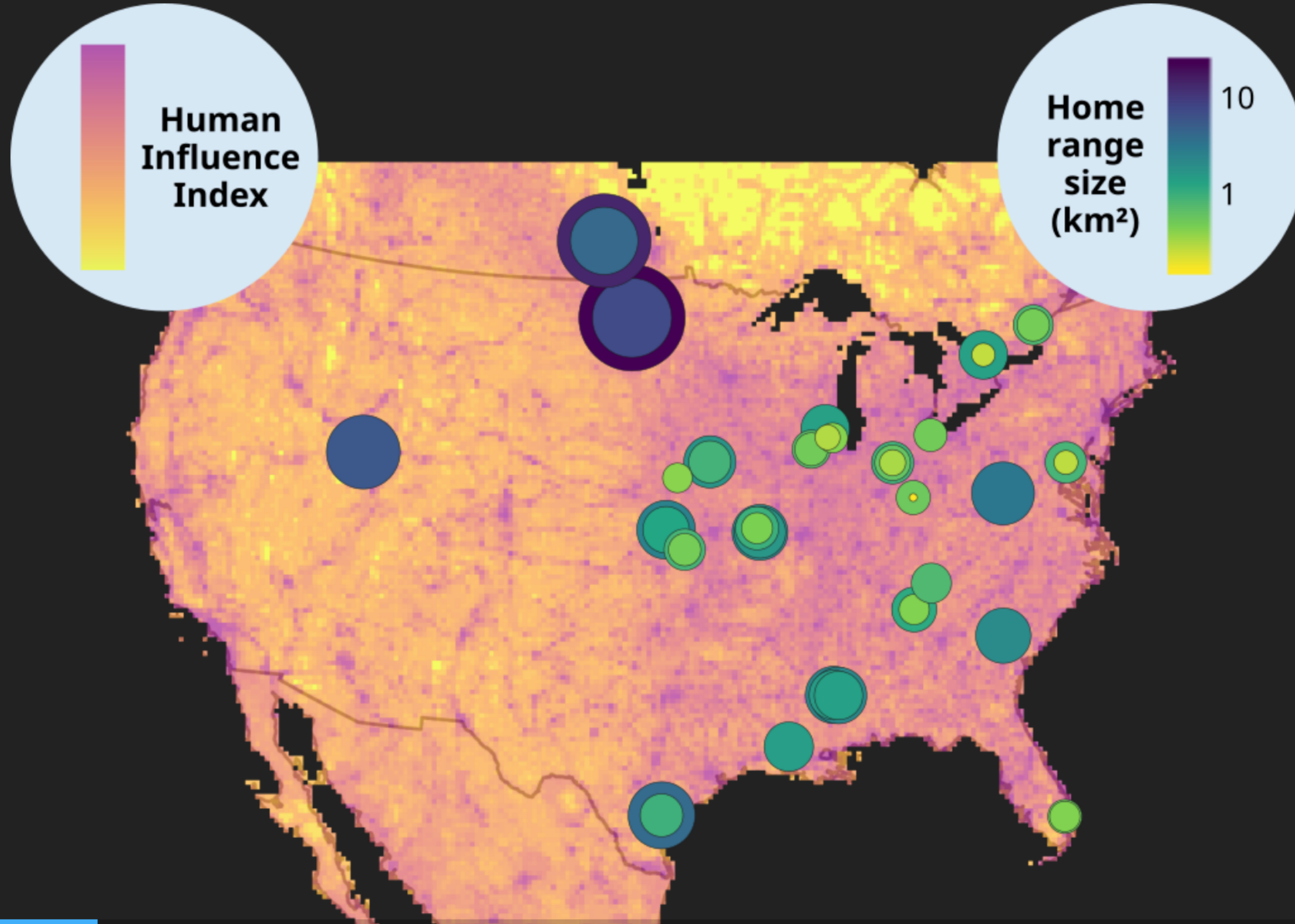
# UNITED STATES OF RACCOONS



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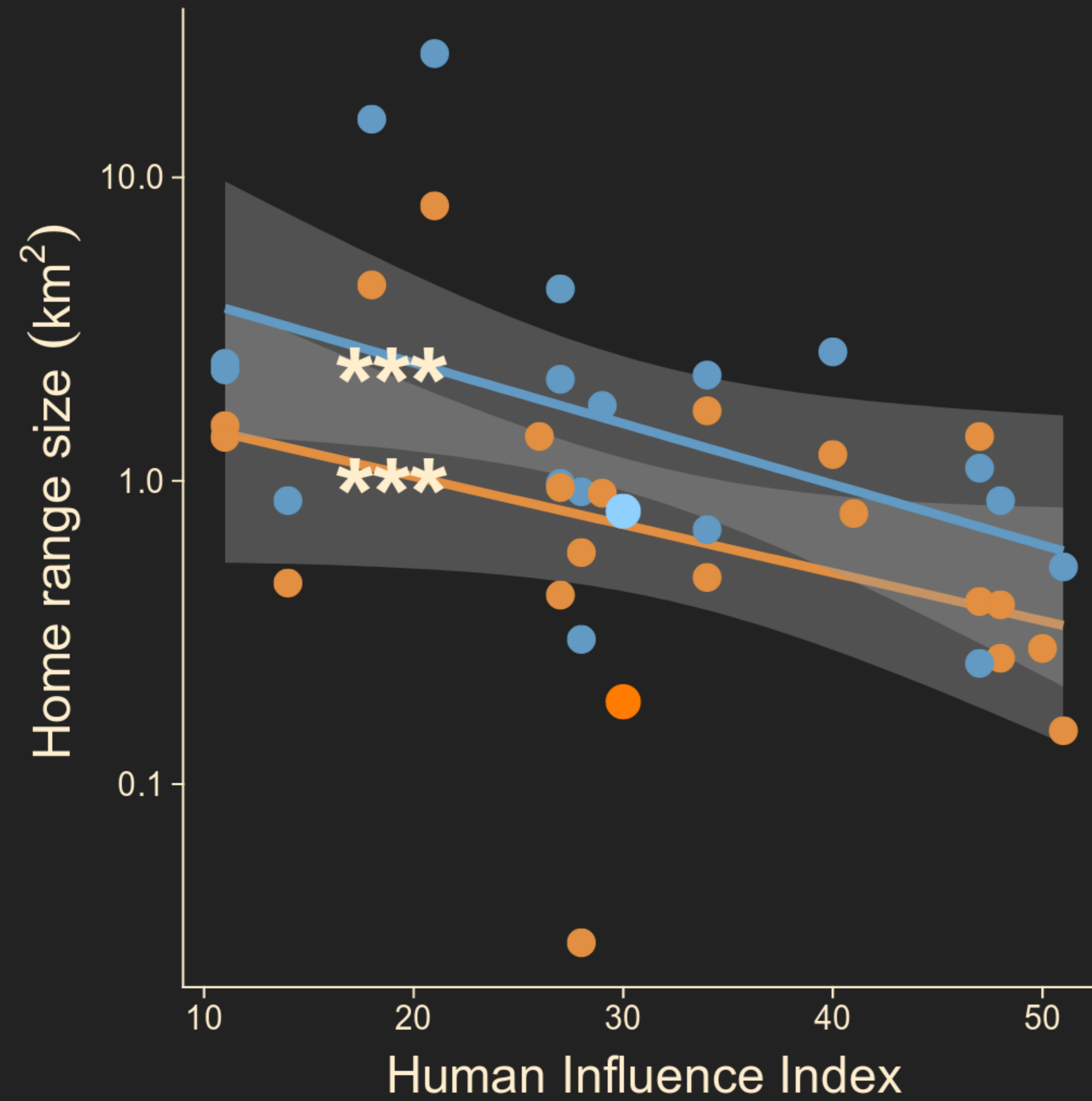


# UNITED STATES OF RACCOONS





# HOME RANGES IN NORTH AMERICA



**TRASH  
PANDAS!**



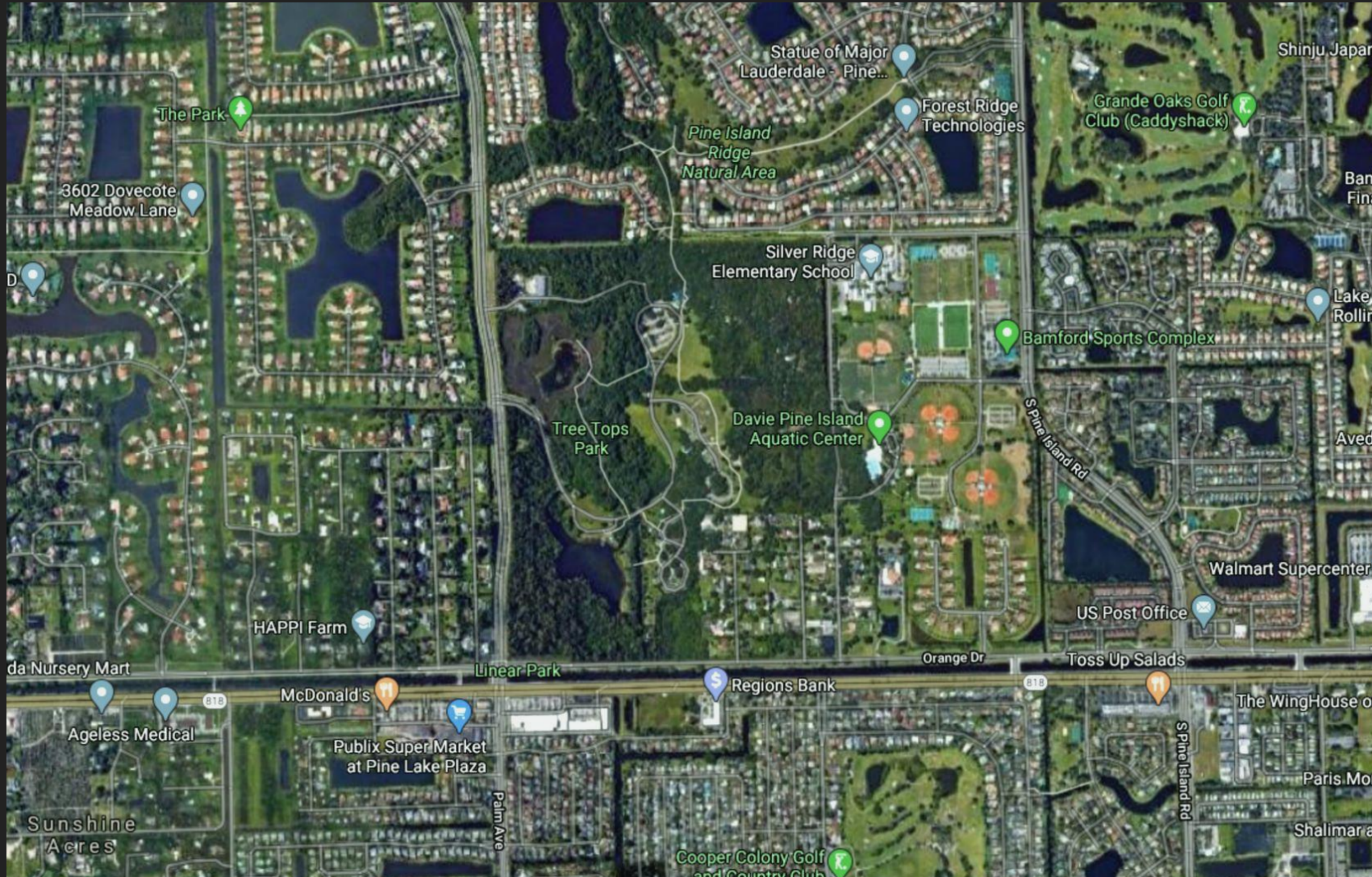
# TREE TOPS PROJECT



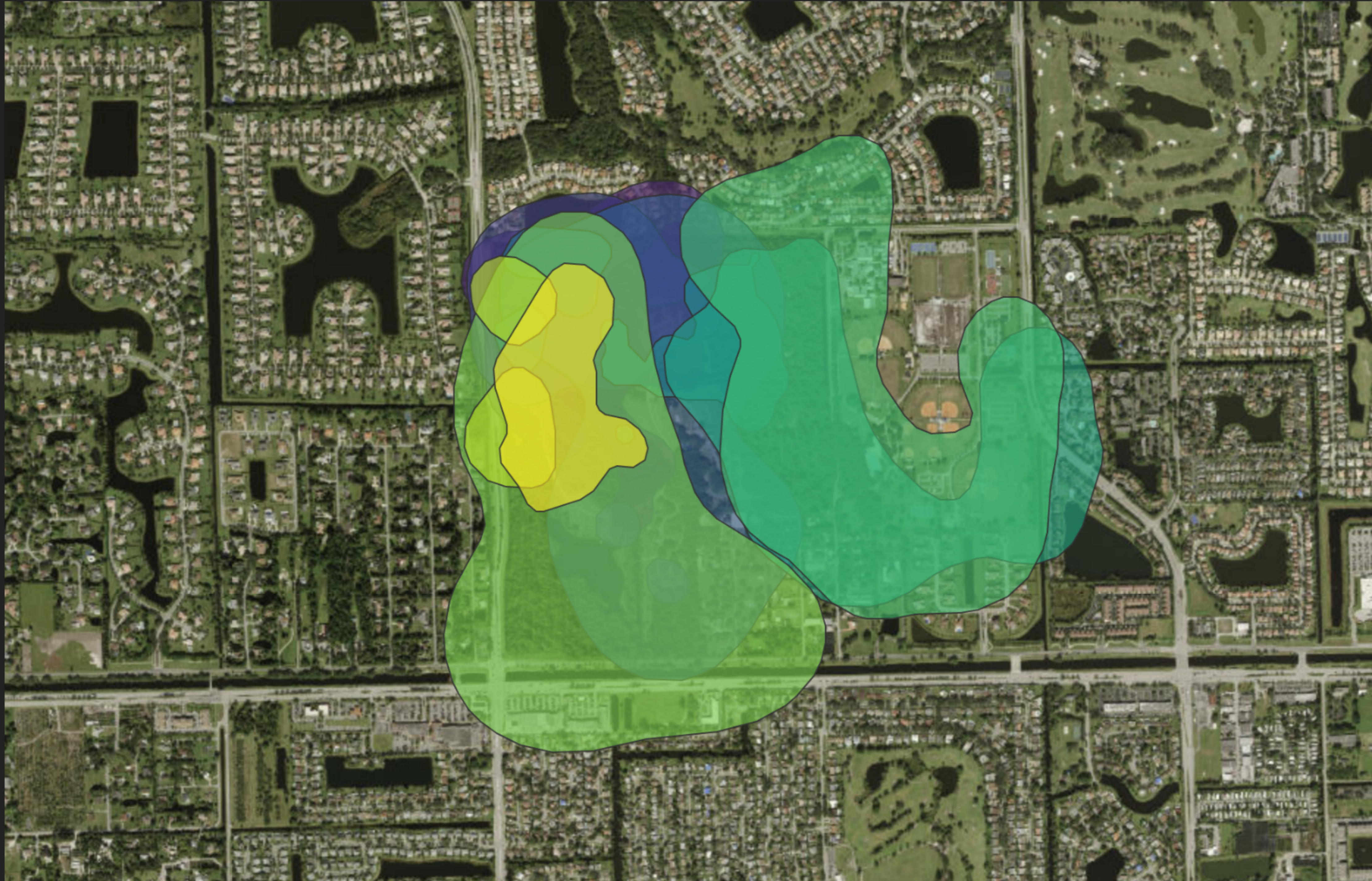
- suburban landscape
- 85 individual captured
- 17 GPS collars



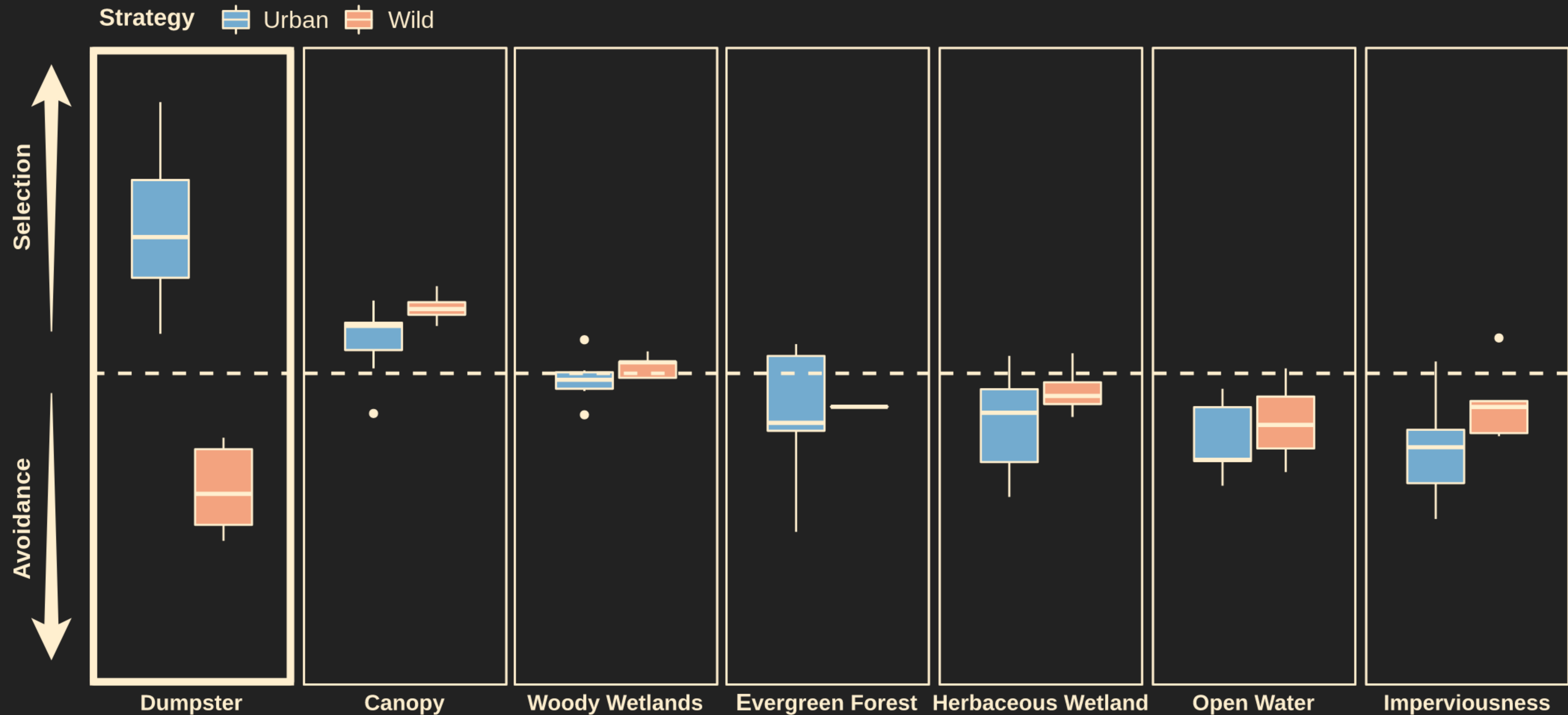
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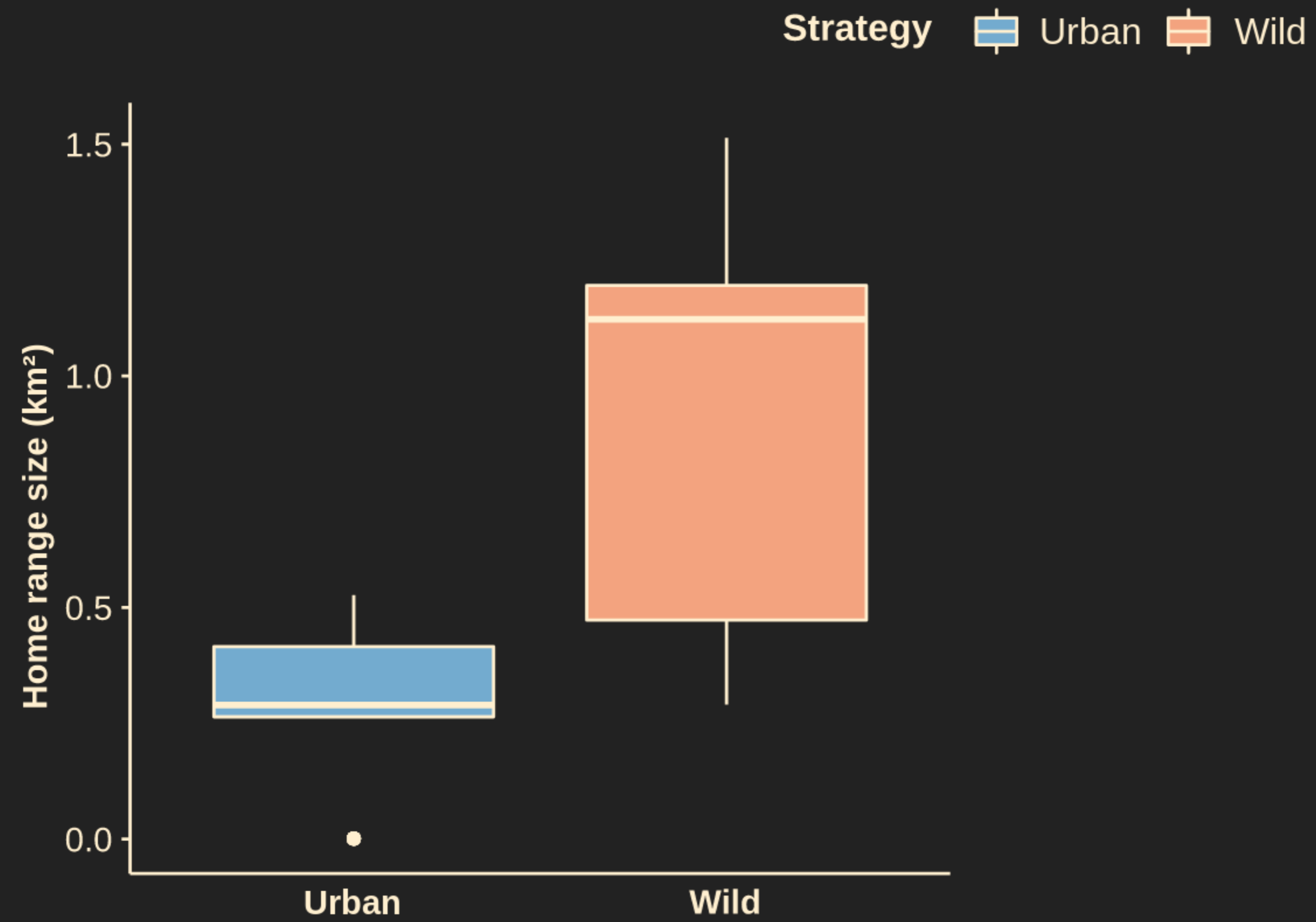
# TREE TOPS PROJECT



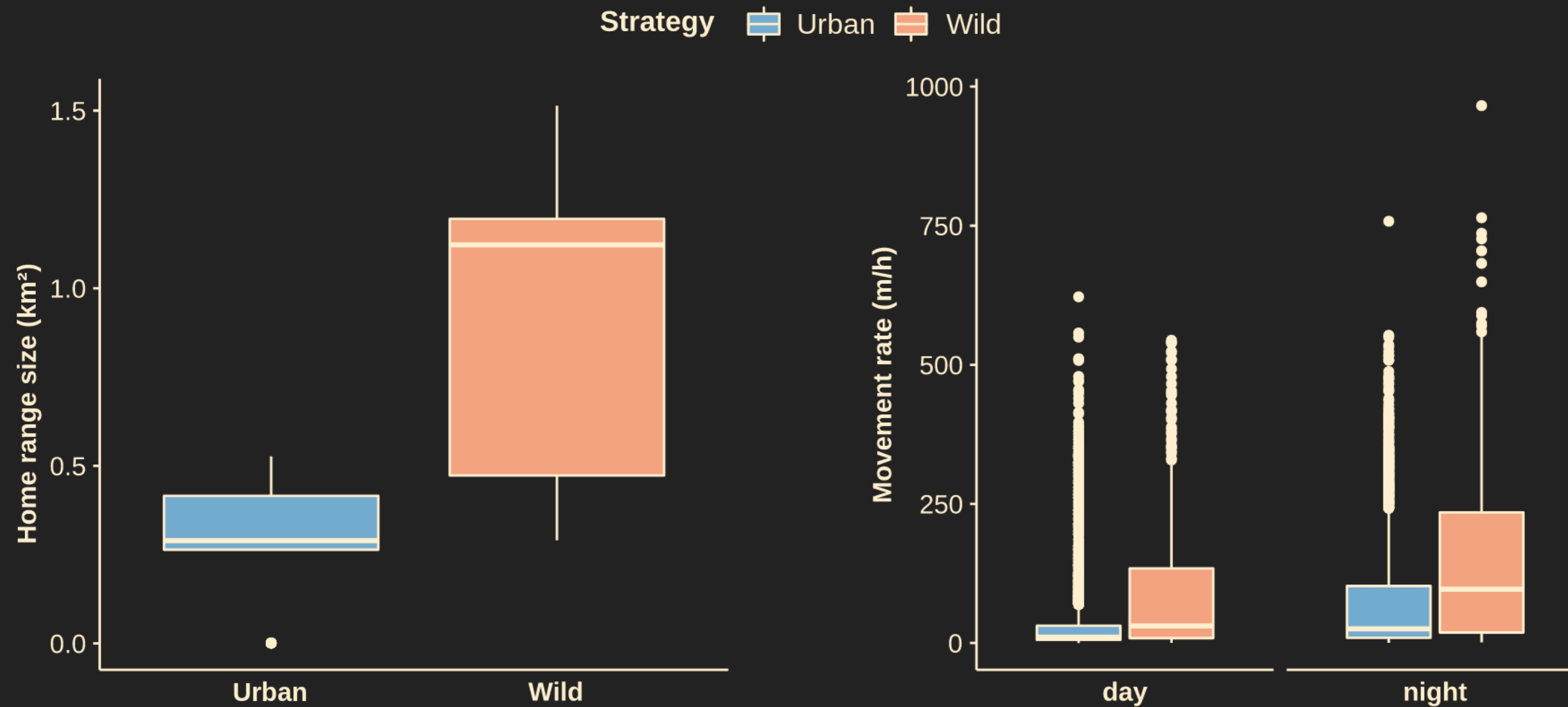
# HATE-LOVE RELATIONSHIP WITH TRASH



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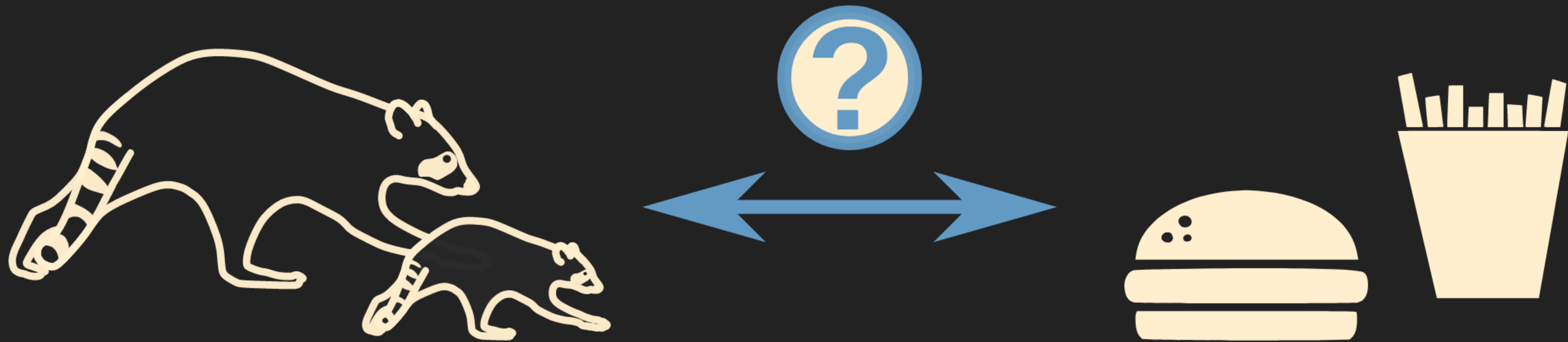


# HATE-LOVE RELATIONSHIP WITH TRASH





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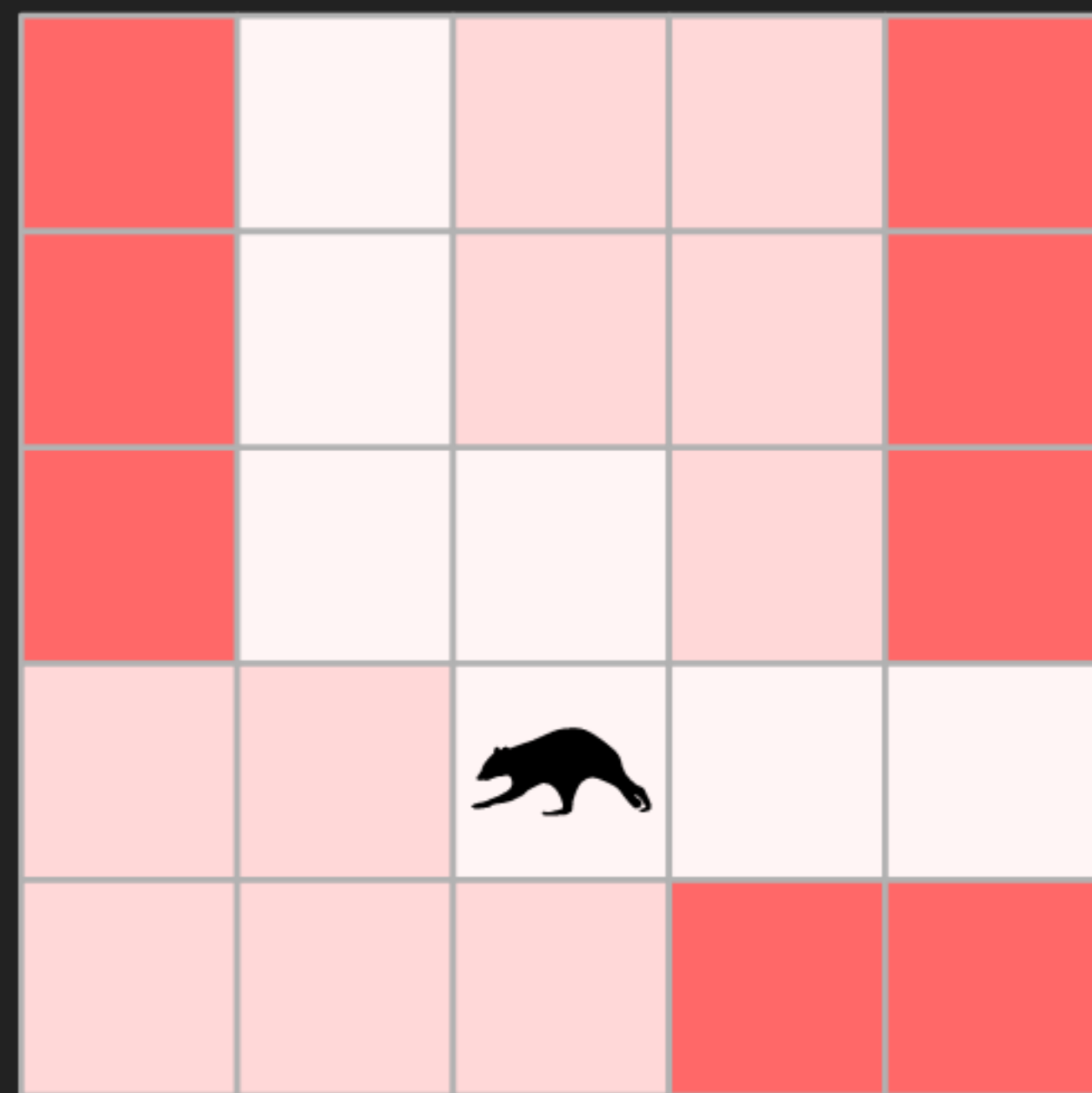


A close-up photograph of a raccoon's face, showing its dark eyes, black nose, and characteristic black and white fur. The raccoon is looking directly at the camera. The text "IMPACT ON SPACE USE" is overlaid in white, bold, sans-serif font across the center of the image.

**IMPACT ON SPACE USE**

# SIMULATIONS WITH IBM

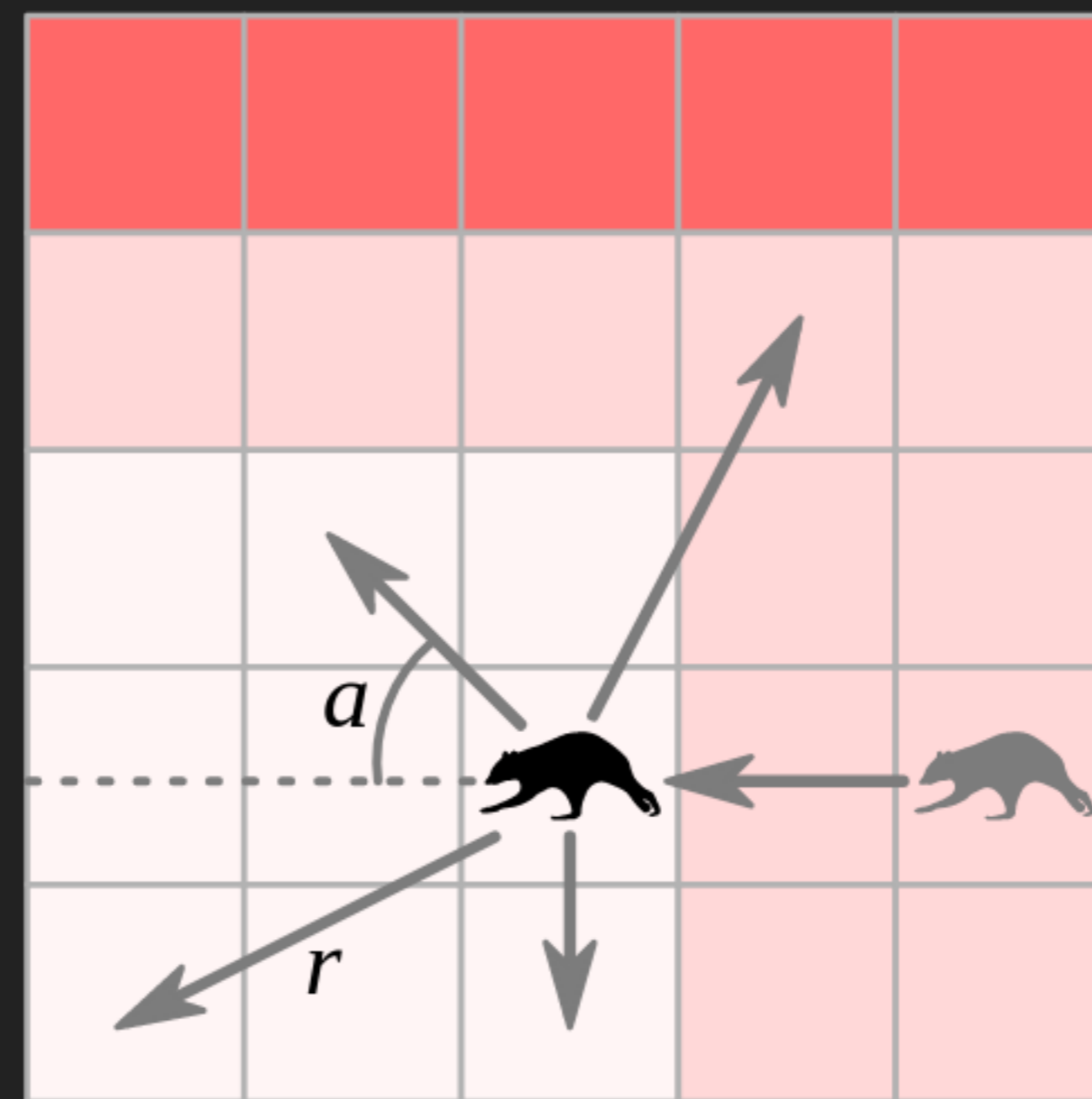
Resource selection



$$\omega(x_{i,j}, s)$$

×

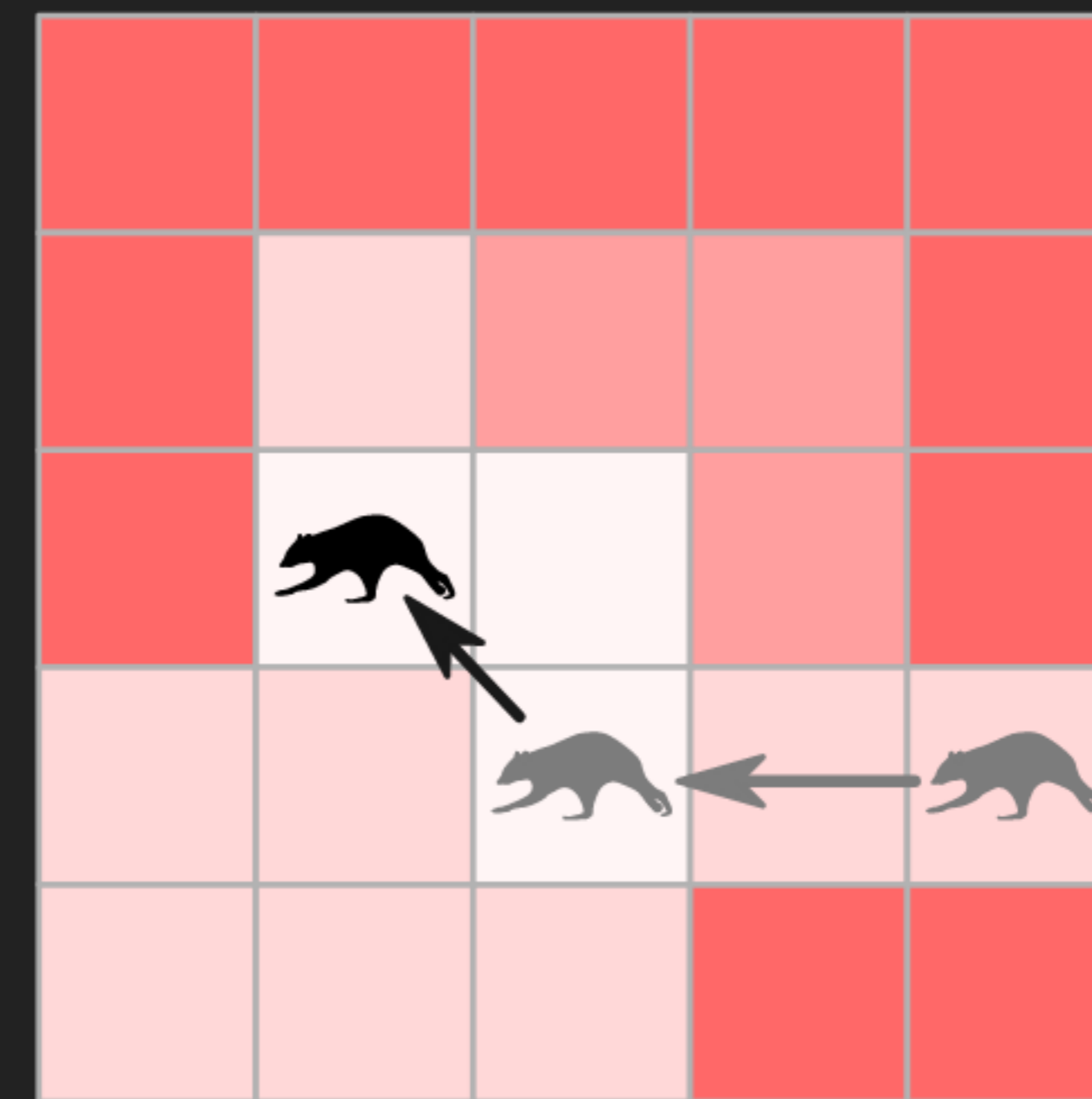
Movement kernel



$$\phi(r, a, s)$$

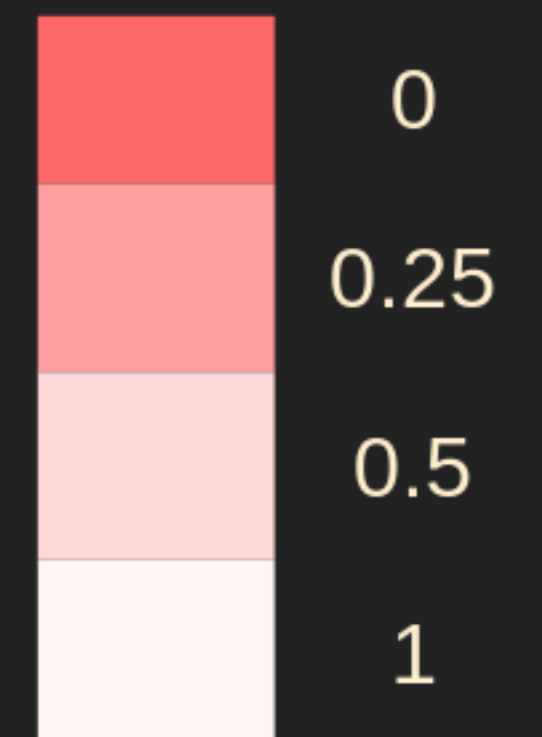
=

Outcome

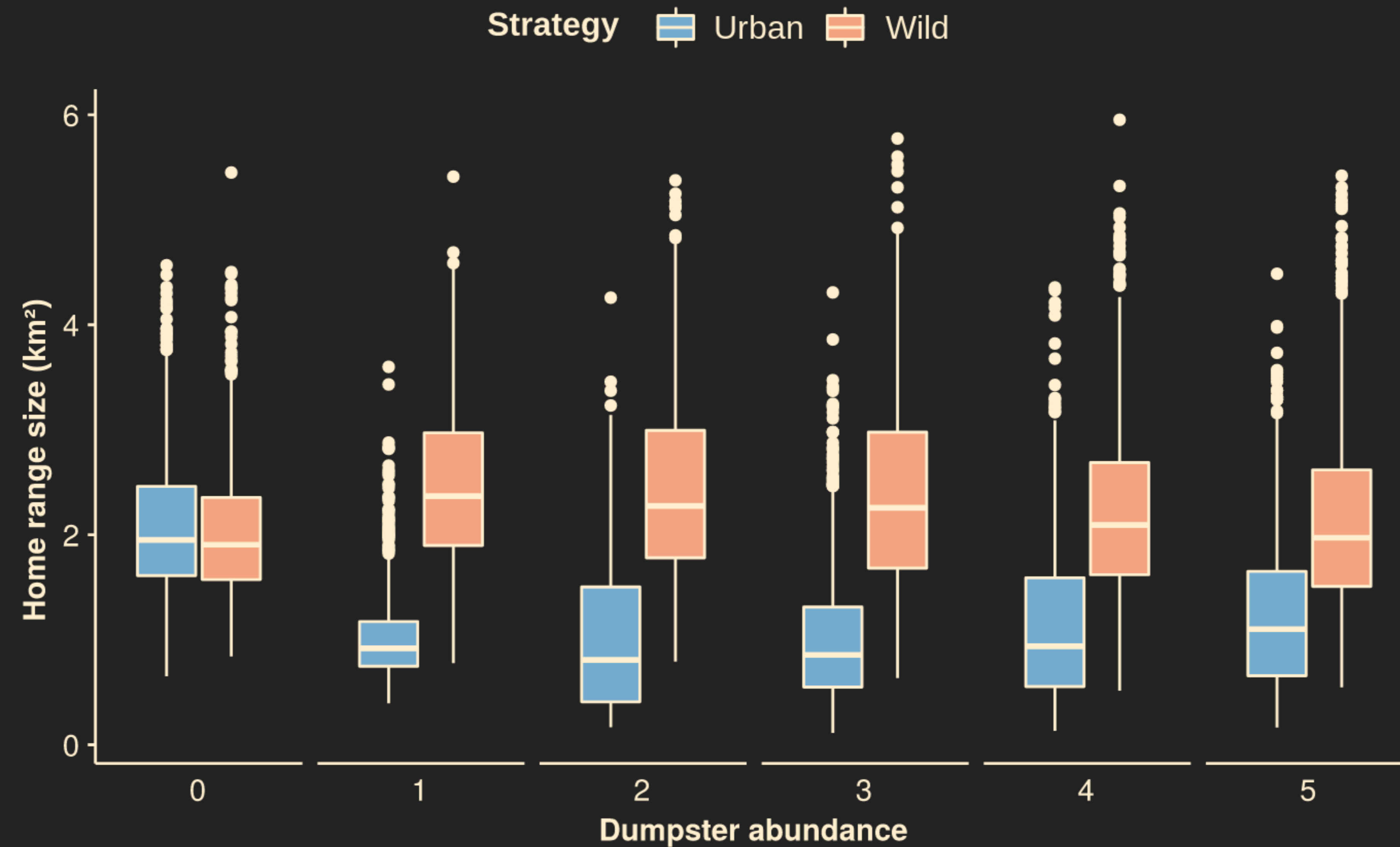


$$\omega(x_{i,j}, s) \times \phi(r, a, s)$$

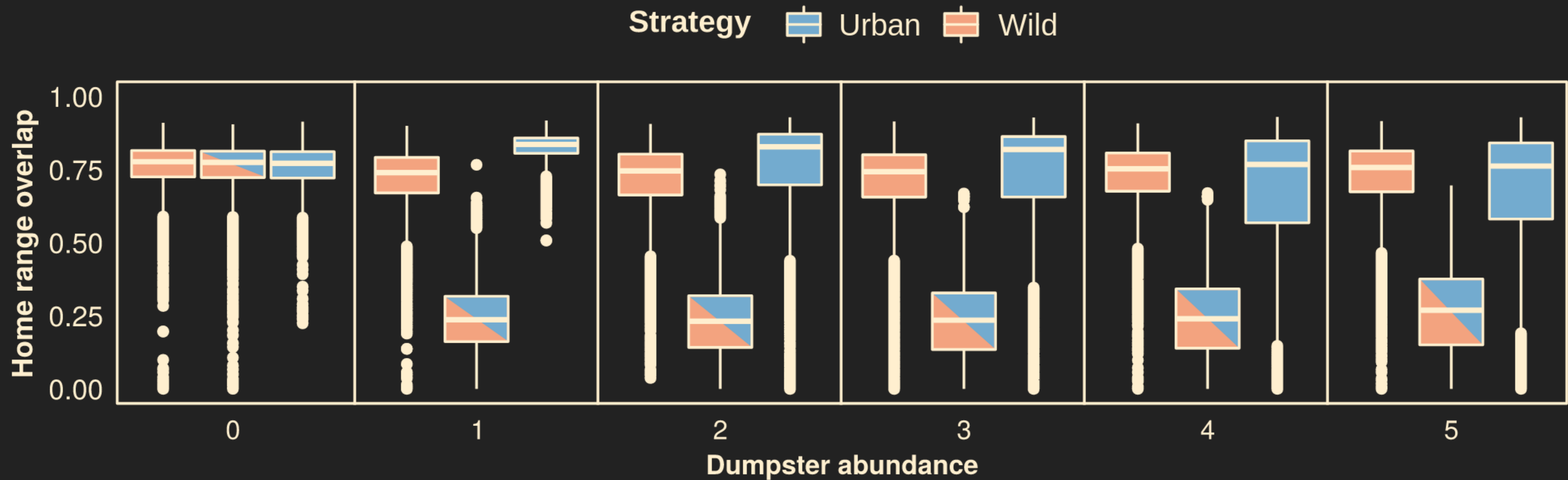
Relative probability



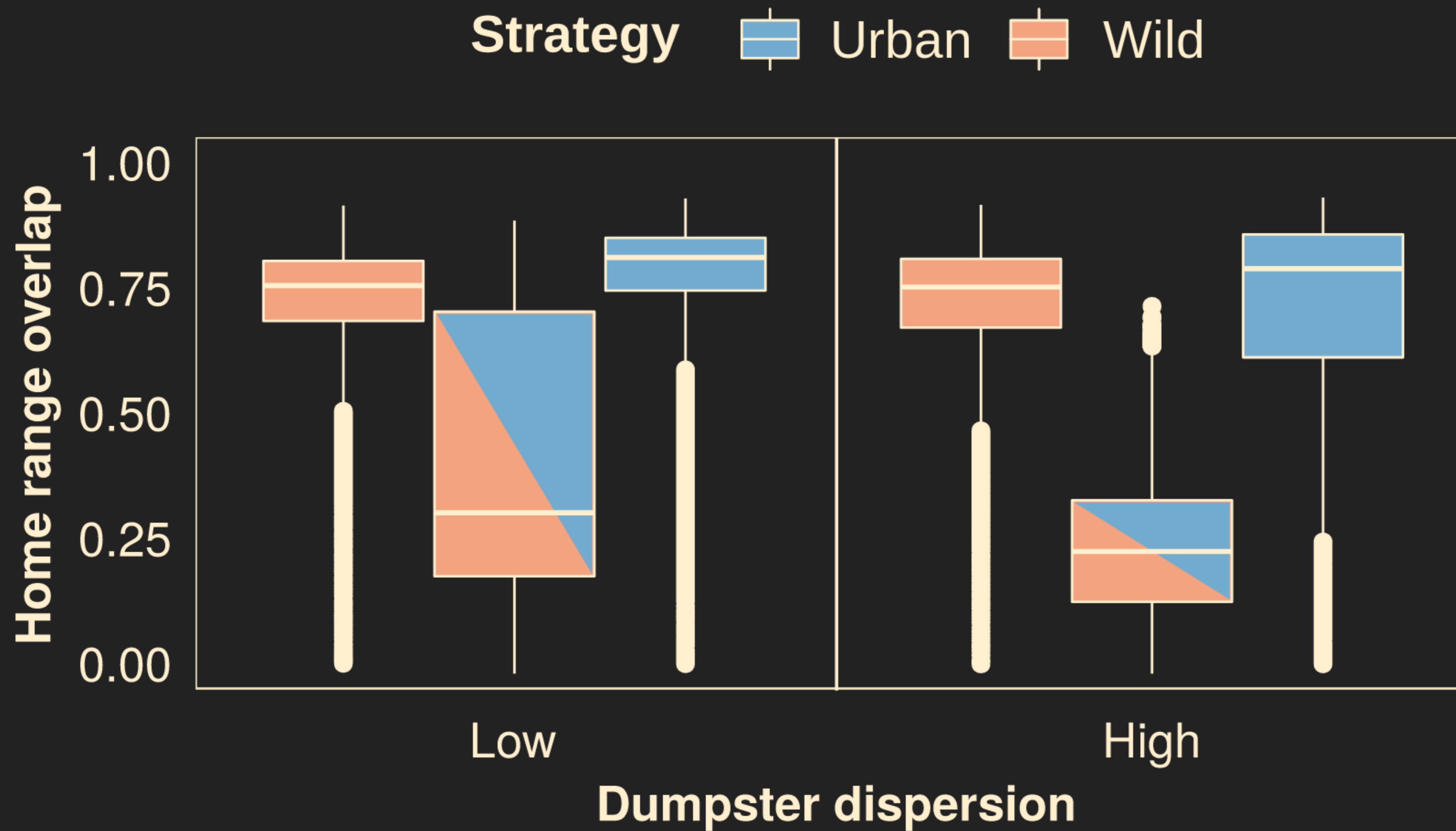
# SMALLER HOME RANGES WITH DUMPSTERS



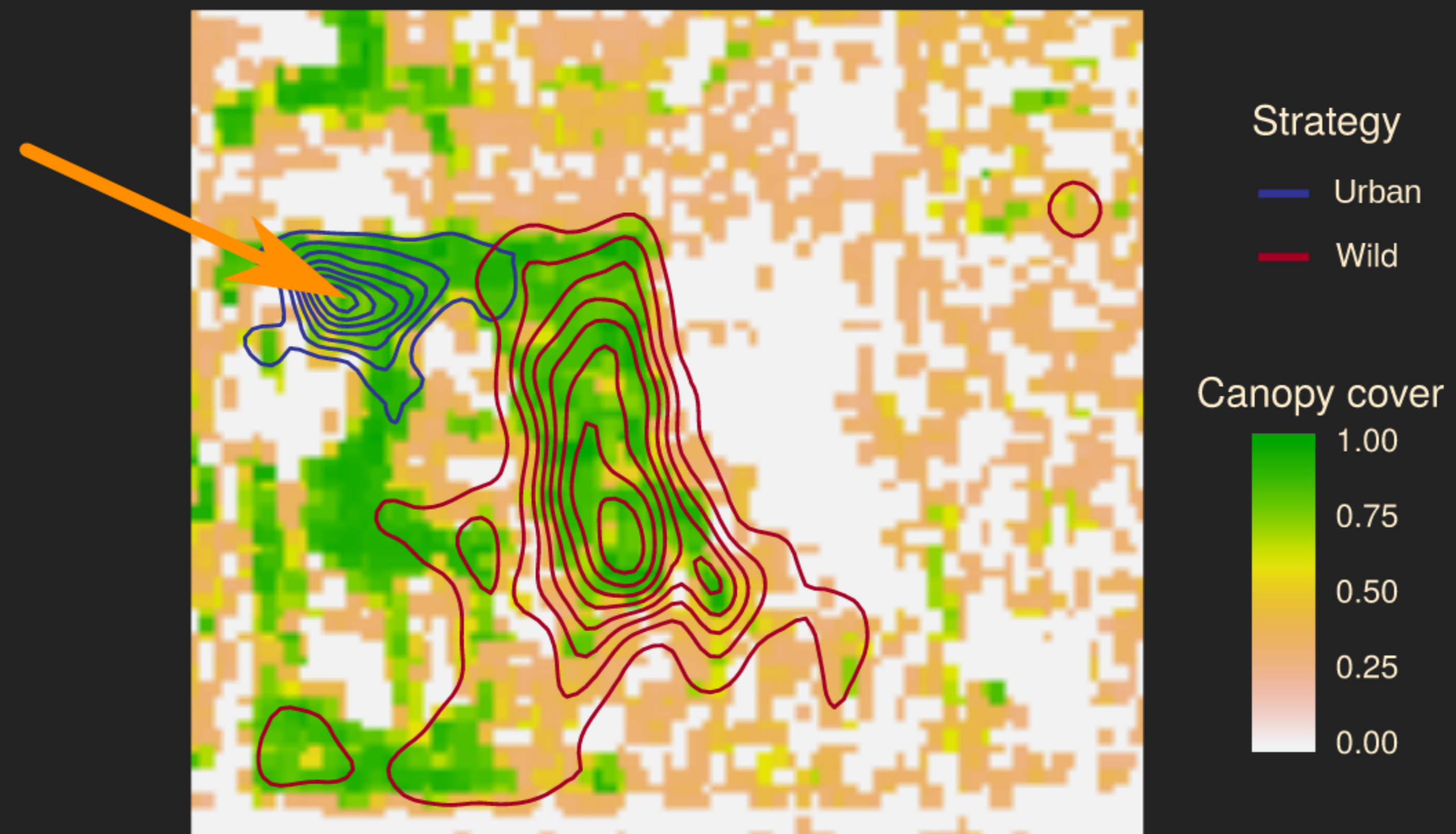
# LESS OVERLAP WITH DUMPSTERS



# LESS OVERLAP WITH DUMPSTERS



# SIMULATION WITH REAL DUMPSTER



A raccoon is climbing a large, textured tree trunk. The raccoon is positioned on the left side of the frame, facing right. Its body is pressed against the bark, and its tail is visible, showing characteristic dark and light rings. The background consists of green leaves and dark branches, suggesting a forest setting. The text "CONSEQUENCES ON POPULATION DYNAMICS" is overlaid on the right side of the image in a large, white, sans-serif font.

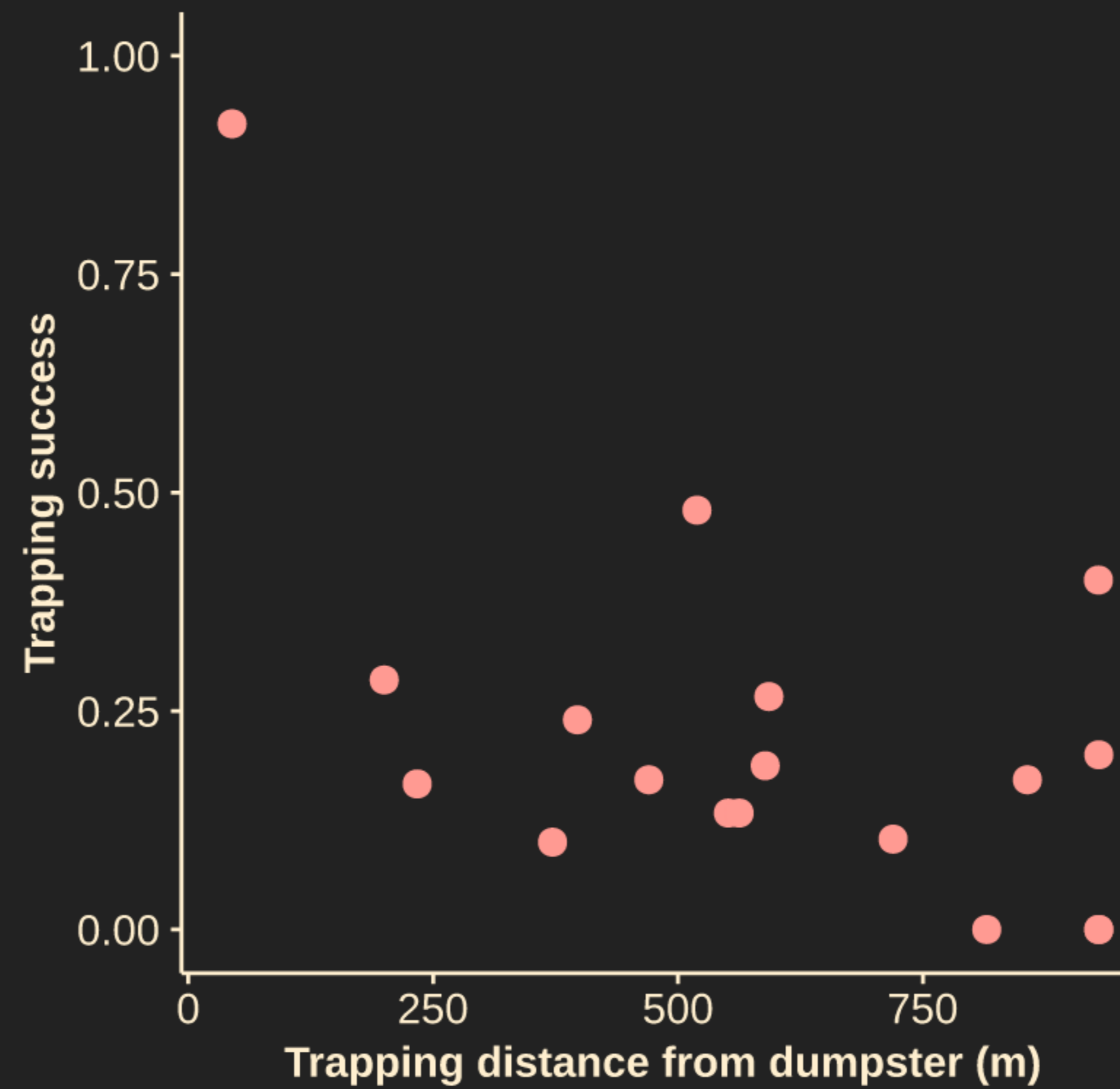
**CONSEQUENCES  
ON POPULATION  
DYNAMICS**



**MAIN CAUSE OF DEATH: COLLISIONS + DISEASES**

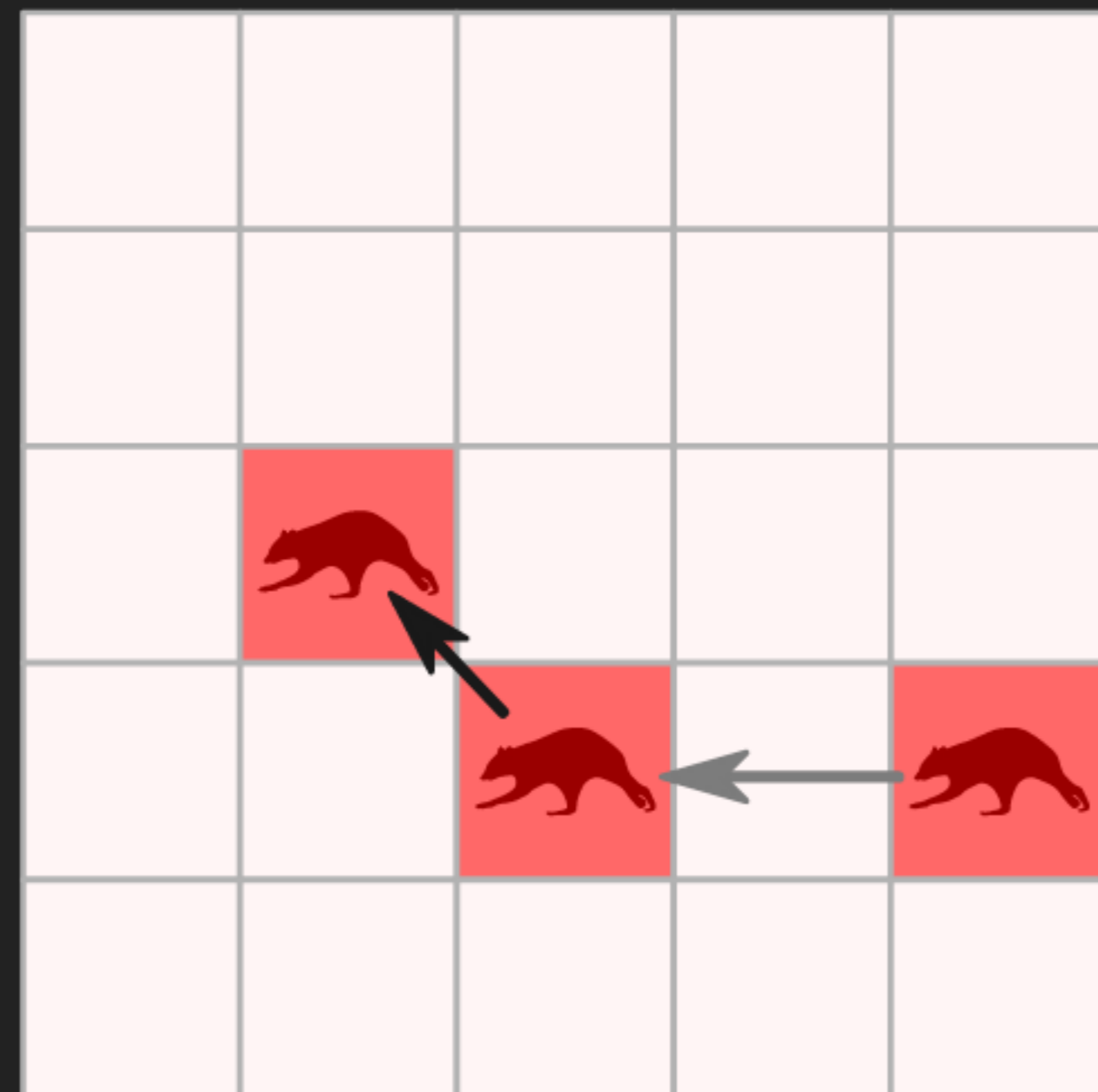


# HIGH DENSITY AT DUMPSTER

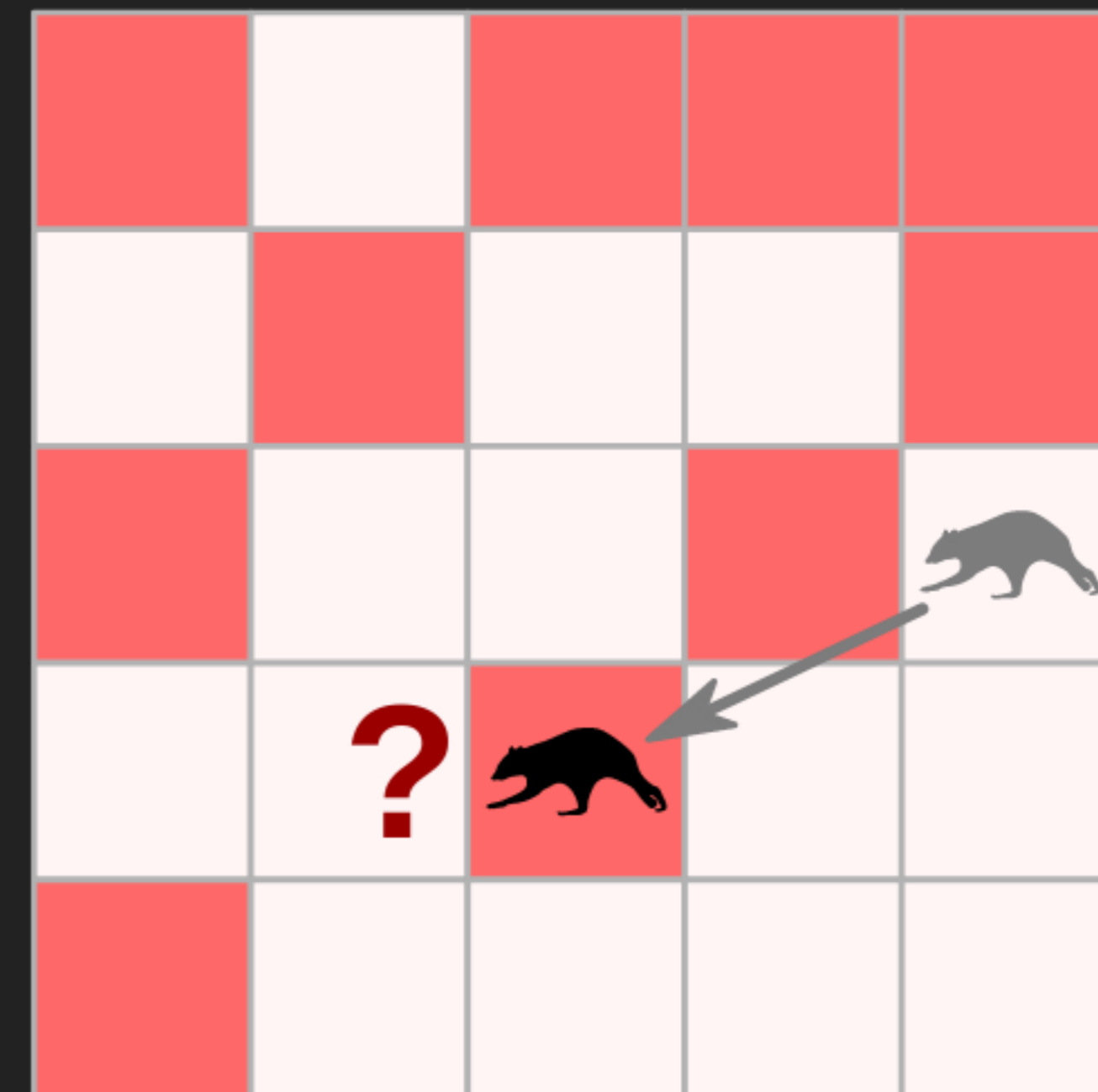


# DISEASE SPREAD IN SIMULATION

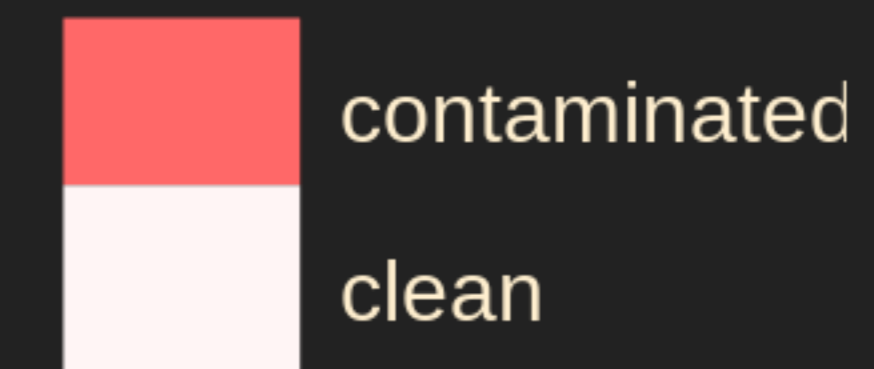
Contamination



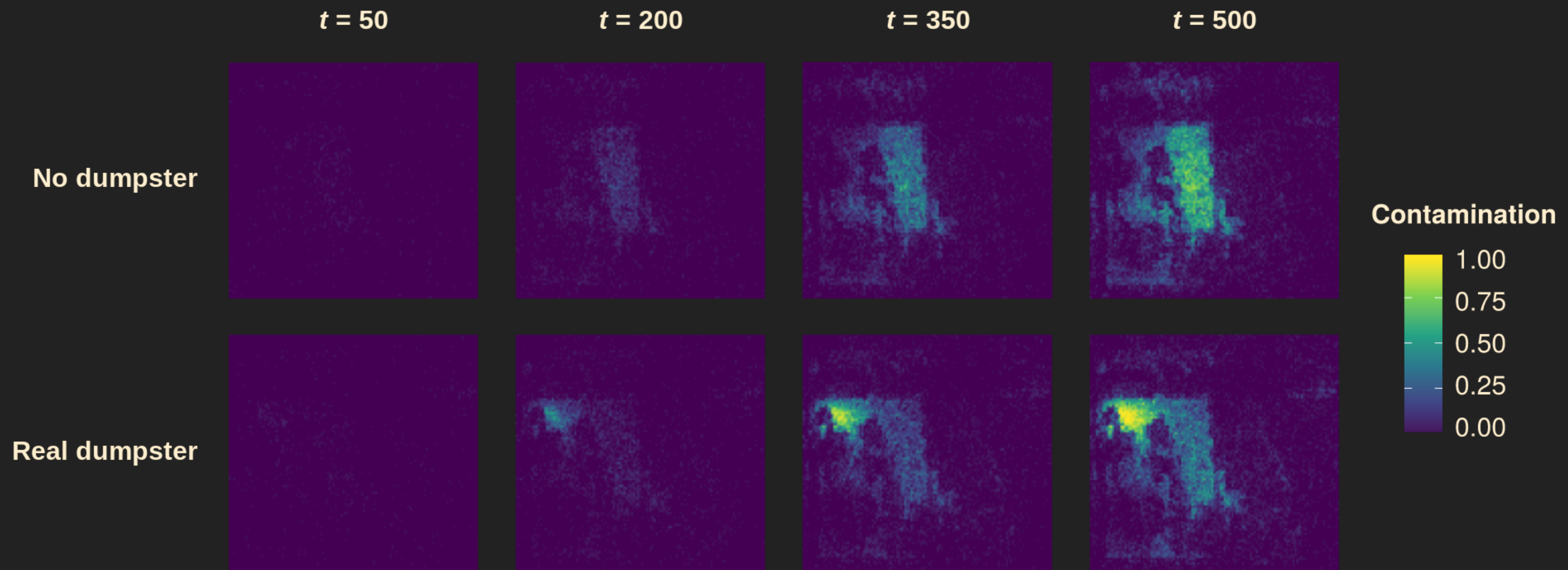
Infection



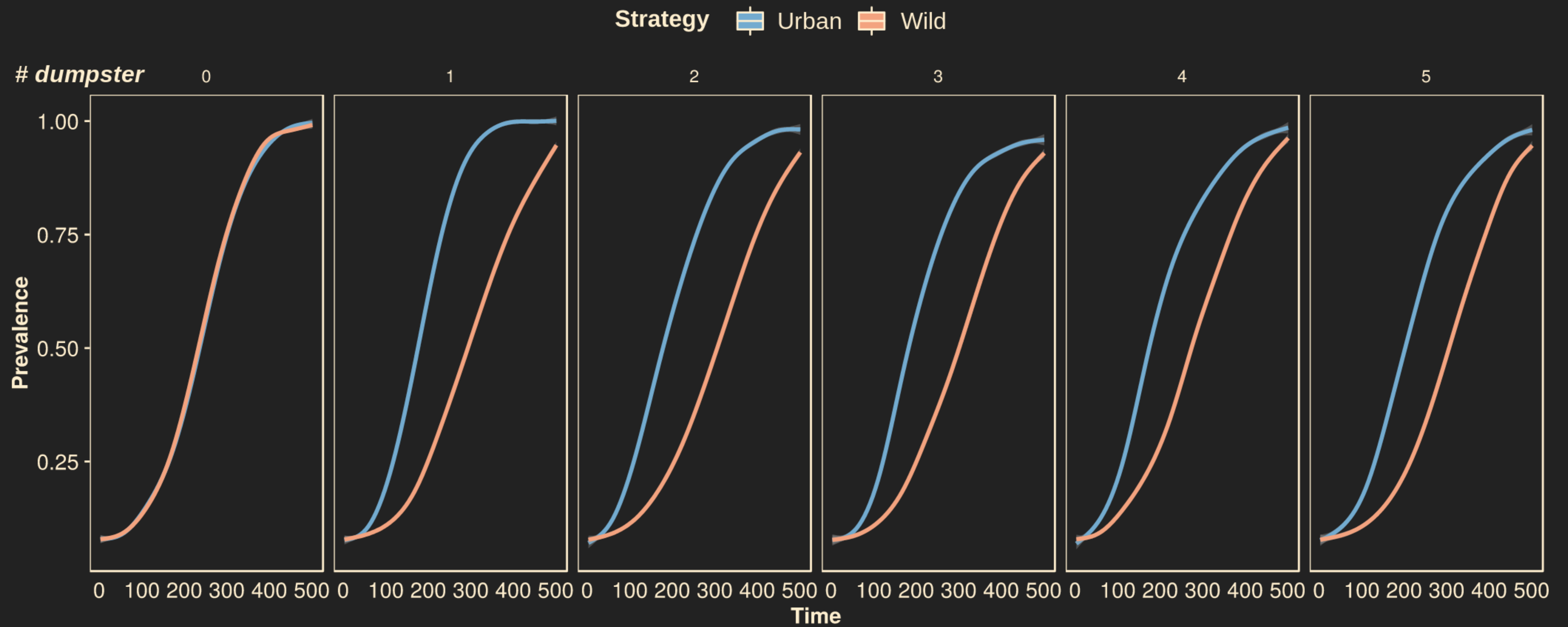
Environment



# DUMPSTER INCREASES LOCAL CONTAMINATION



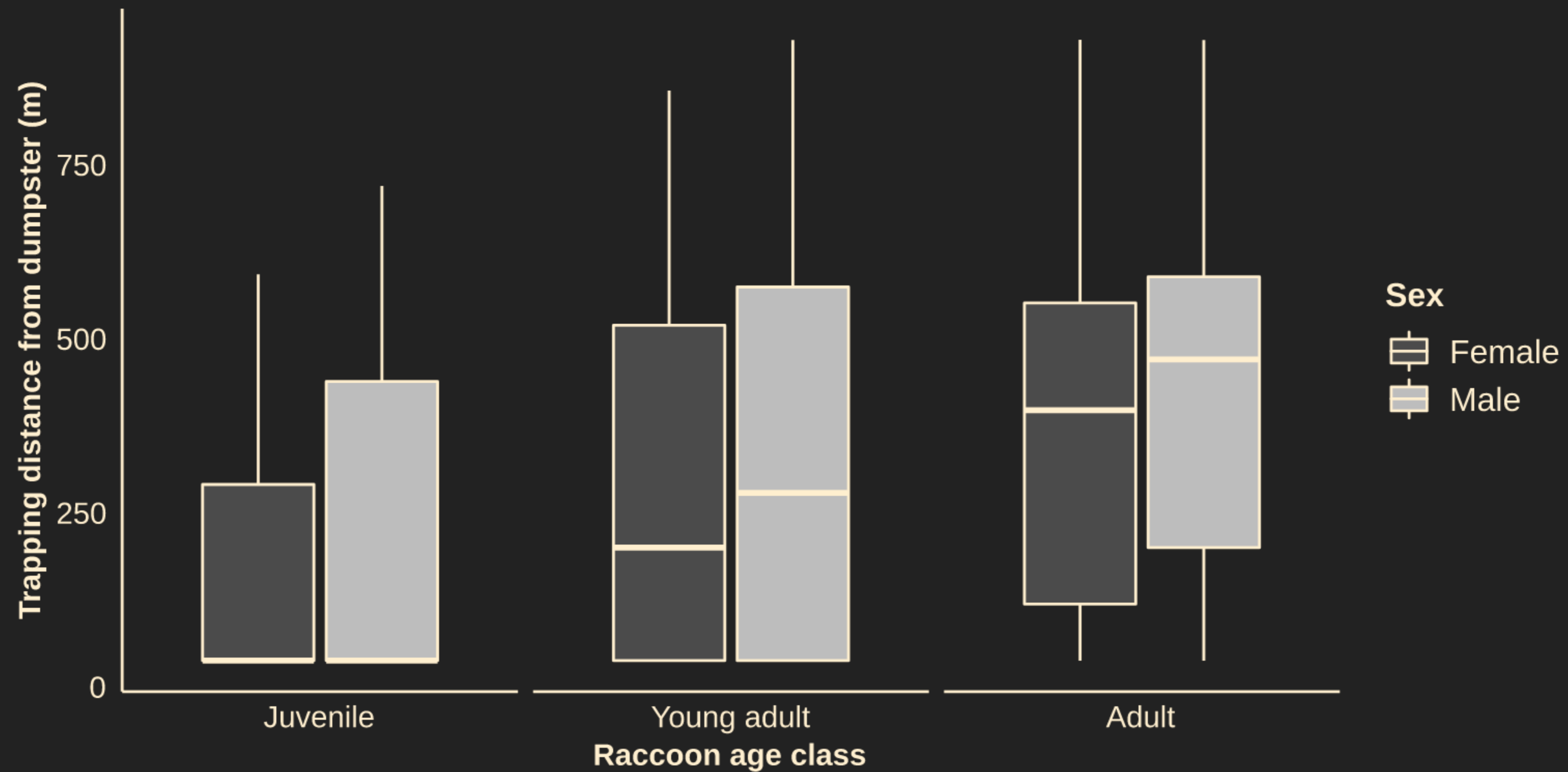
# DUMPSTER INCREASES INFECTION RISK



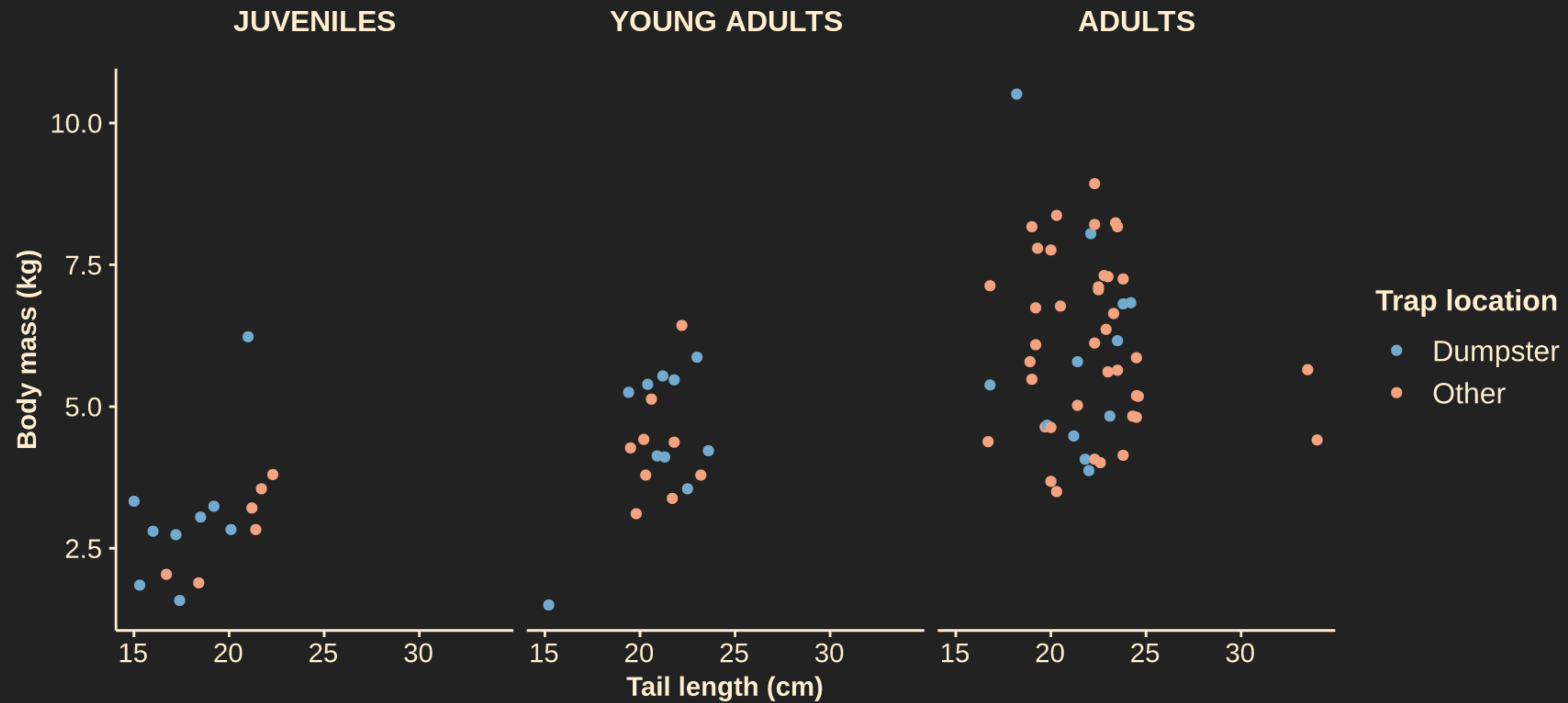


**ARE DUMPSTER RACCOONS  
DIFFERENT?**

# AGE EFFECT IN TRAPPING SUCCESS



# JUNK FOOD AND OBESITY?





# CONCLUSIONS

- Clear human impact at fine scale
- Smaller home ranges
- Higher disease prevalence
- *Impact on fitness?*



**THANK YOU!**

**Not a panda**

**Cute bandit mask**

**Stripes, just because**

**Trash in**

**Trash detectors**

**Floof**

**Trash out**

