

Are sex differences in mobility all about mating?

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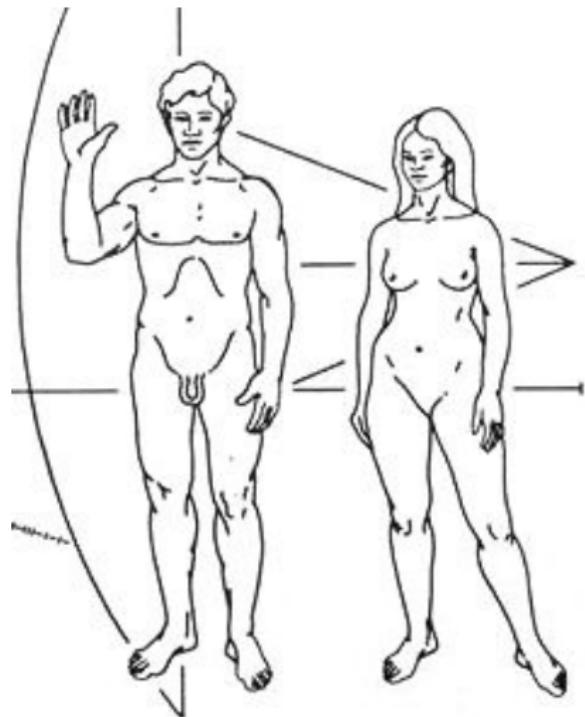
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Sexual dimorphism

Spatial ability, orientation,
navigation, anxiety...

Range size?

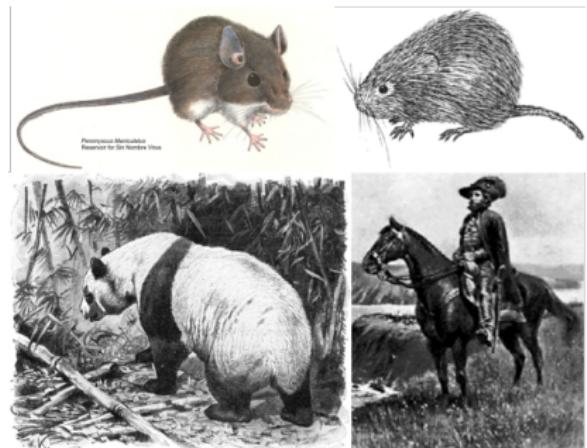


Looking for mates?

Hunting, warfare, energy and risk

Mating system and ranging

Humans?



Twe



Mobility Measures

Daily: GPS tracking

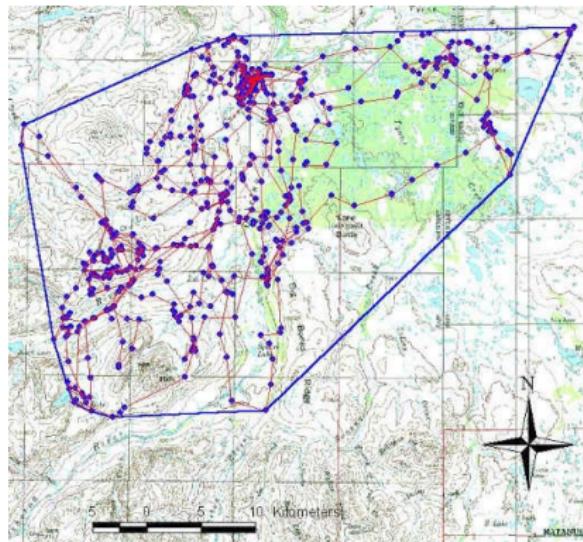
- MCP km²

Annual: Travel interviews

- Unique visits
- How many times?
- w/to whom? Why? Lover?

Lifetime: Regional checklist

- Once? Few? Many? (Ordinal)



Hypotheses

H1: Two men occupy larger ranges than women

H2: The sex difference in travel is explained by mate searching

H3: Range size predicts RS among men, but not women

Results: [H1] Do men travel more than women?

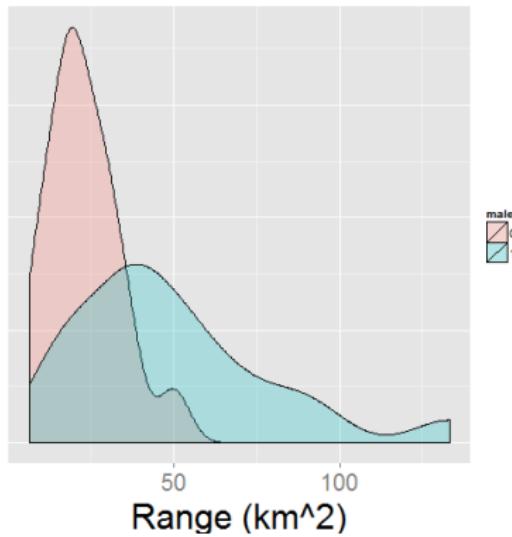


H1

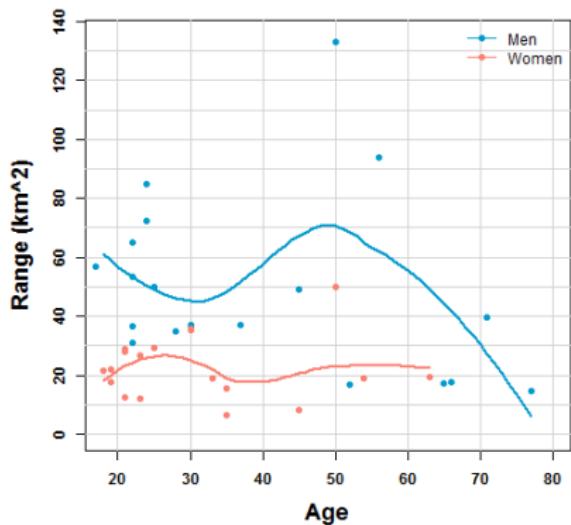
| Measure | M_m | SD_m | M_f | SD_f | p |
|--------------------------|-------|--------|-------|--------|------|
| Daily (km ²) | 49.6 | 30.3 | 22.6 | 10.9 | .001 |
| Annual (locations) | | | | | |
| Lifetime (0:3) | | | | | |

H1: Daily range

Daily range



Daily range size

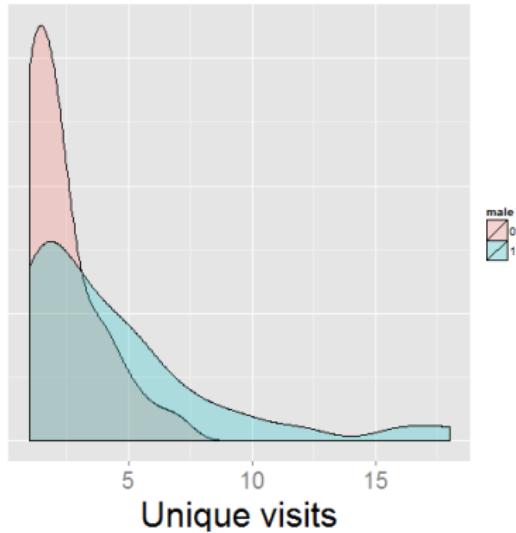


H1

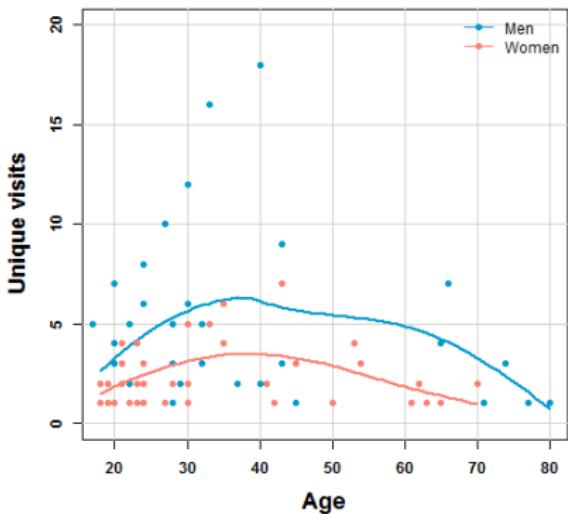
| Measure | M_m | SD_m | M_f | SD_f | p |
|--------------------------|-------|--------|-------|--------|------|
| Daily (km ²) | 49.6 | 30.3 | 22.6 | 10.9 | .001 |
| Annual (locations) | 4.4 | 4.0 | 2.3 | 1.5 | .003 |
| Lifetime (0:3) | | | | | |

H1: Annual travel

Annual travel



Annual ranging

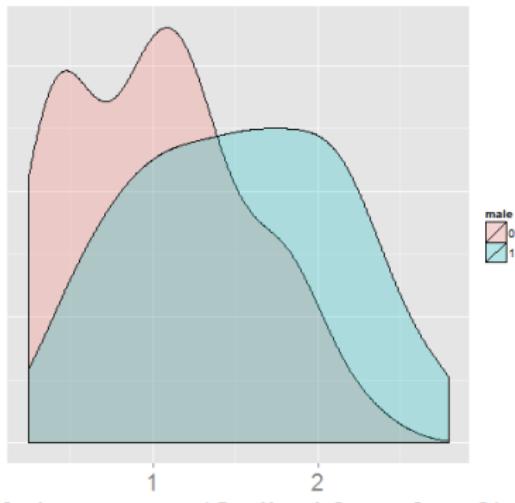


H1

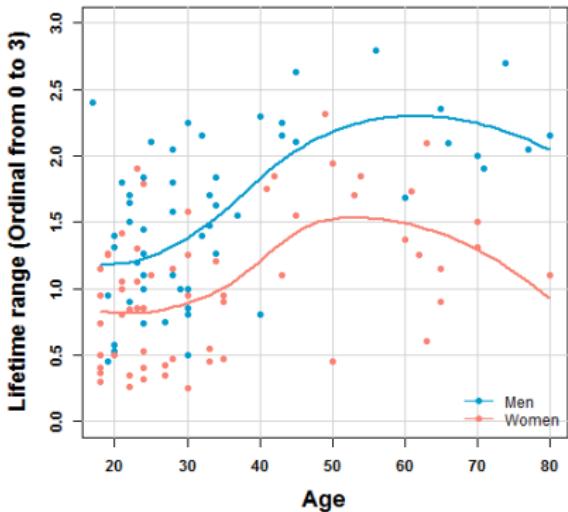
| Measure | M_m | SD_m | M_f | SD_f | p |
|--------------------------|-------|--------|-------|--------|------|
| Daily (km ²) | 49.6 | 30.3 | 22.6 | 10.9 | .001 |
| Annual (locations) | 4.4 | 4.0 | 2.3 | 1.5 | .003 |
| Lifetime (0:3) | 1.5 | 0.6 | 1.0 | 0.5 | .000 |

H1: Lifetime range

Lifetime range



Lifetime range



Lifetime range (Ordinal from 0 to 3)

H2: Do men travel to visit mates?

Travel has many functions

Do traveling men find more mates?

Does mate searching explain sex difference?



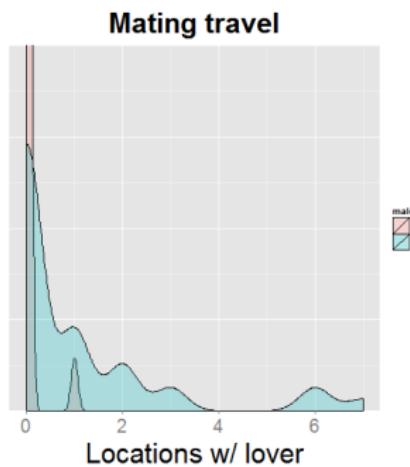
H2: Do men travel to visit mates?

24% locations visited by men had lovers.

13.5% of visits explicitly for mating

Only loveless trips sex-diff drops .5

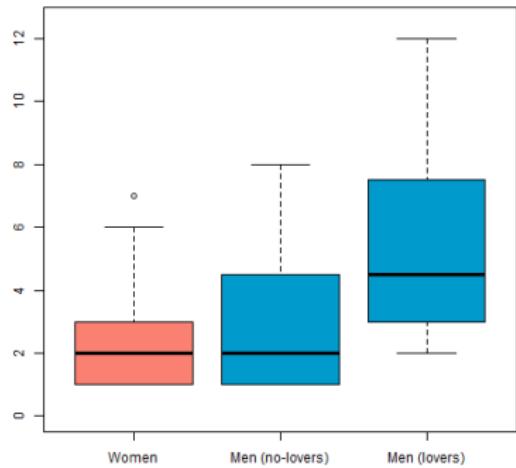
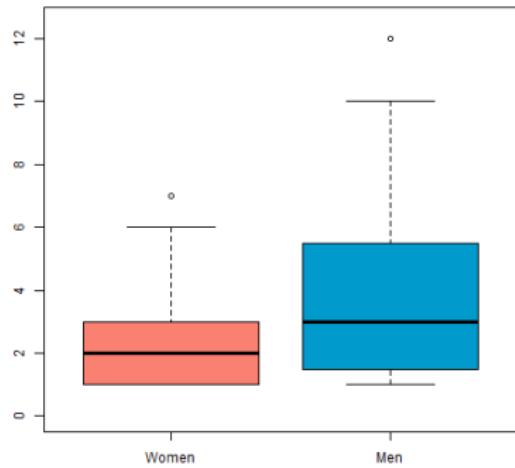
Lovers and frequented locations



H2: Men travel facultatively

$$M_f = 2.3, M_m = 4.4$$

$$M_f = 2.3, M_{m1} = 2.8, M_{m2} = 6.3$$



H3: Does mobility translate into reproductive success?

Does the added MS of mobility translate into RS?

If so, is the relationship unique to men?

RS = # of children (self report)



H3: Does mobility translate into reproductive success?

| Men | | | | |
|----------|------|---------|------|--|
| Scale | Kids | Std Err | p | |
| Daily | 1.83 | 0.77 | .030 | |
| Annual | | | | |
| Lifetime | | | | |
| Women | | | | |
| Scale | Kids | Std Err | p | |
| Daily | 0.61 | 0.64 | .354 | |
| Annual | | | | |
| Lifetime | | | | |

Expected “children added” by a standard deviation increase in range size at each scale. Controlling for age.

H3: Does mobility translate into reproductive success?

| Men | | | | |
|----------|------|---------|------|--|
| Scale | Kids | Std Err | p | |
| Daily | 1.83 | 0.77 | .030 | |
| Annual | 1.44 | 0.51 | .008 | |
| Lifetime | | | | |
| Women | | | | |
| Scale | Kids | Std Err | p | |
| Daily | 0.61 | 0.64 | .354 | |
| Annual | 1.05 | 0.40 | .014 | |
| Lifetime | | | | |

Expected “children added” by a standard deviation increase in range size at each scale. Controlling for age.

H3: Does mobility translate into reproductive success?

| Men | | | |
|----------|------|---------|------|
| Scale | Kids | Std Err | p |
| Daily | 1.83 | 0.77 | .030 |
| Annual | 1.44 | 0.51 | .008 |
| Lifetime | 1.53 | 0.59 | .012 |

| Women | | | |
|----------|------|---------|------|
| Scale | Kids | Std Err | p |
| Daily | 0.61 | 0.64 | .354 |
| Annual | 1.05 | 0.40 | .014 |
| Lifetime | 0.56 | 0.37 | .132 |

Expected “children added” by a standard deviation increase in range size at each scale. Controlling for age.

Summary

Men travel more than women at every scale

Mate searching explains \approx half of this difference

Rangier men have higher RS. Some positive relationship among women as well

Acknowledgments

