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A DYNAMIC GAME THEORETICAL MODEL PREDICTS VARIANCE IN CHOOSINESS WHEN MATE AVAILABILITY **FLUCTUATES**

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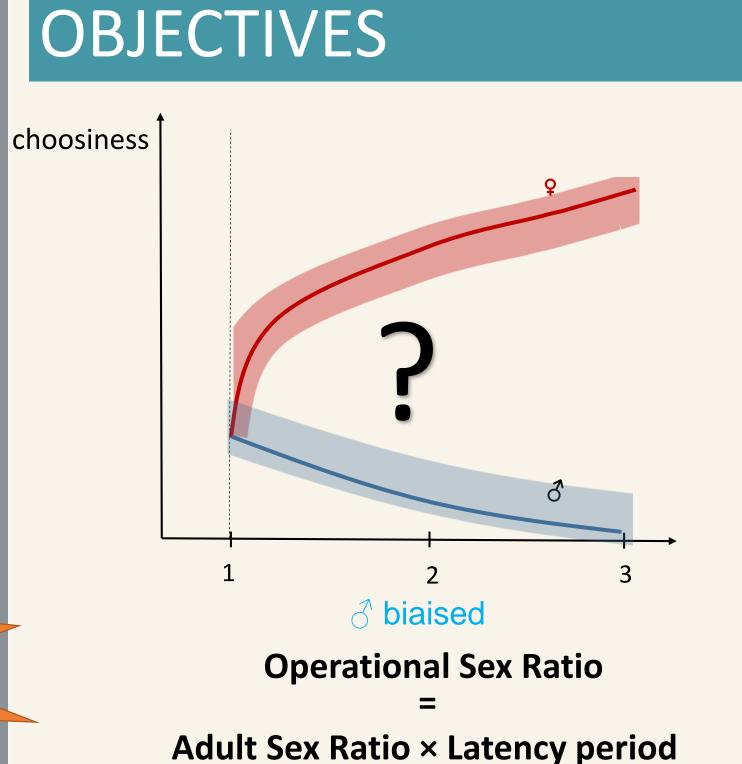
INTRODUCTION

You are in the market for love, you want a partner of good quality to have many and healty childrens. You have same sex competitors looking for mates therefore available partners become scarcer.

How choosy should you be?







Under what conditions should between sexes divergence evolve? Can choosiness evolve in the most common sex?

Do we observe intra-sex variance in choosiness and it is possible for both sexes?

Is flexibility in choosiness an optimal strategy for a large span of mating systems?

METHODS

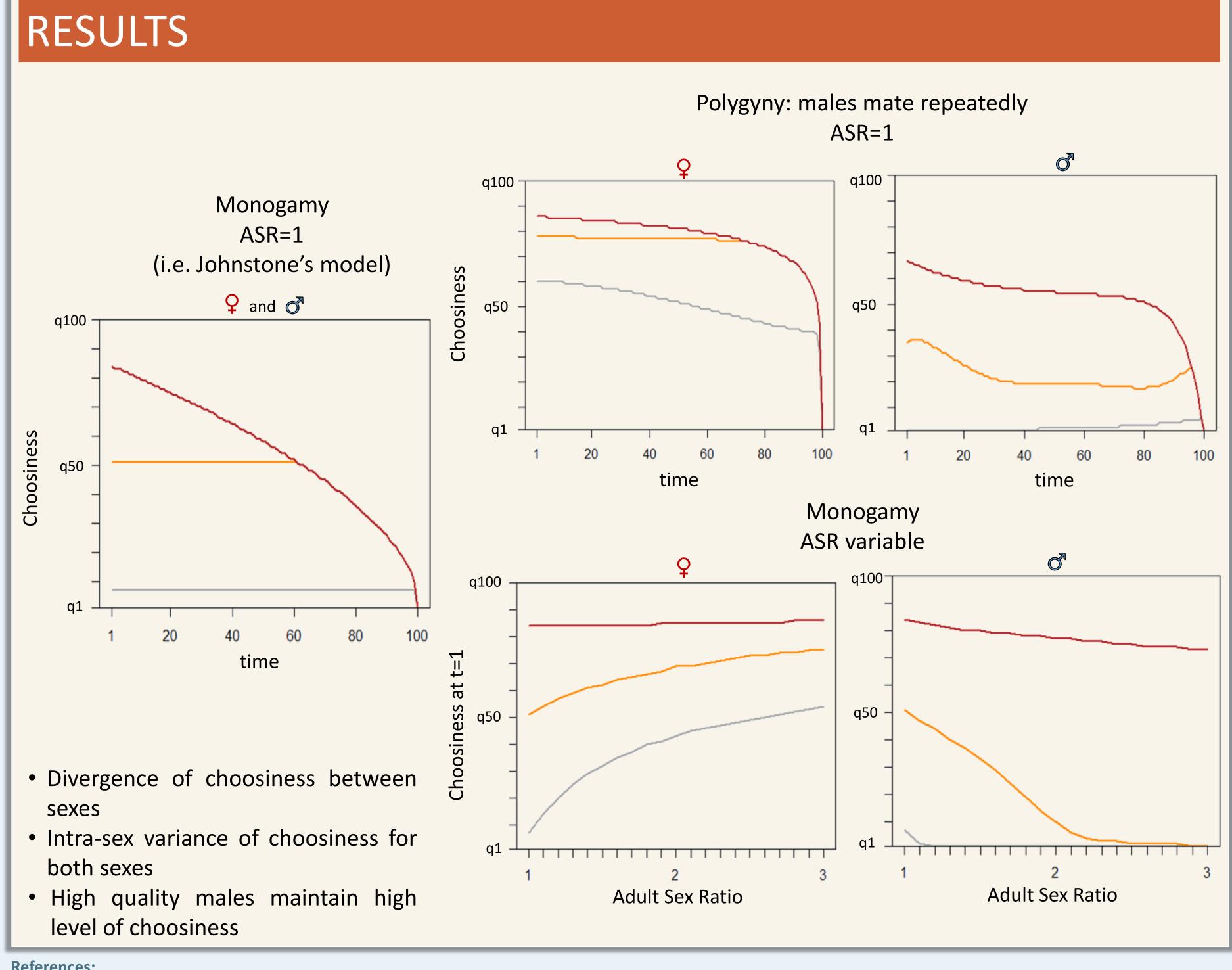
The theoretical game model (1-2)

- Individuals compete for mate
- The breeding season is finite
- The fitness payoff of an individual depends solely on the quality q of his mating partner.
- Different mating systems are considered:

Monogamy: individuals mate once

Repeated mating (from polygyny to polygynandry): males and females can mate repeatedly and become available again after a latency period

Dynamic Programming frequencies of sexual Optimal choosiness (acceptance probability) partners FORWARD Sexual partner quality q., q50 q., q., q., q100 0.04 -0.2 0.2 0.4 0.5 0.6 0.6 t=1 0.06 -0.04 -0.2 0.2 0.4 0.5 0.7 0.8 0.9 0.04 t=100 q.. q50 q.. q.. q.. BACKWARD Iterations until convergence to ESS



CONCLUSION choosiness ♂ biaised **Operational Sex Ratio Adult Sex Ratio** × **Latency period** Difference Maintenance of between the choosiness of males and intra-sex females arises in asymmetric variance and flexibility mating systems in choosiness Despite this divergence Consistency

between sexes, the model

does not predict lack of

choosiness in the most

common sex

References:

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our results with

empirical studies

(3-4)