

Male Mate Choice and Sexual Selection: all of this in 12 minutes (and before dinner.....)

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Alexander von Humboldt
Stiftung / Foundation

SEXUAL SELECTION

FEMALE
CHOICE

MALE
COMPETITION

SHOULD MALES CHOOSE?

“Recent studies show that both intrasexual competition by females and male choice of mating partners are common”.

Tim Clutton-Brock 2007

THE ORPHANS OF SEXUAL SELECTION THEORY



FEMALE
CHOICE



MALE
CHOICE

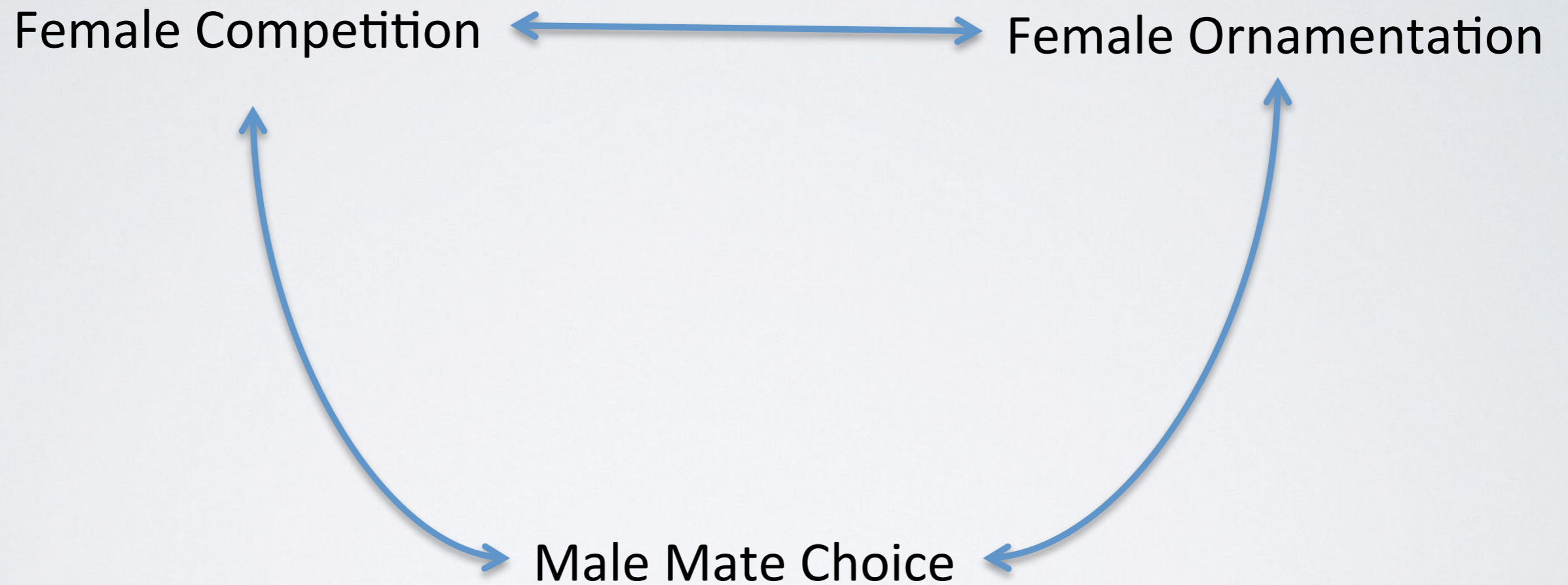


FEMALE
COMPETITION



MALE
COMPETITION

HOW ARE THESE TOPICS RELATED?

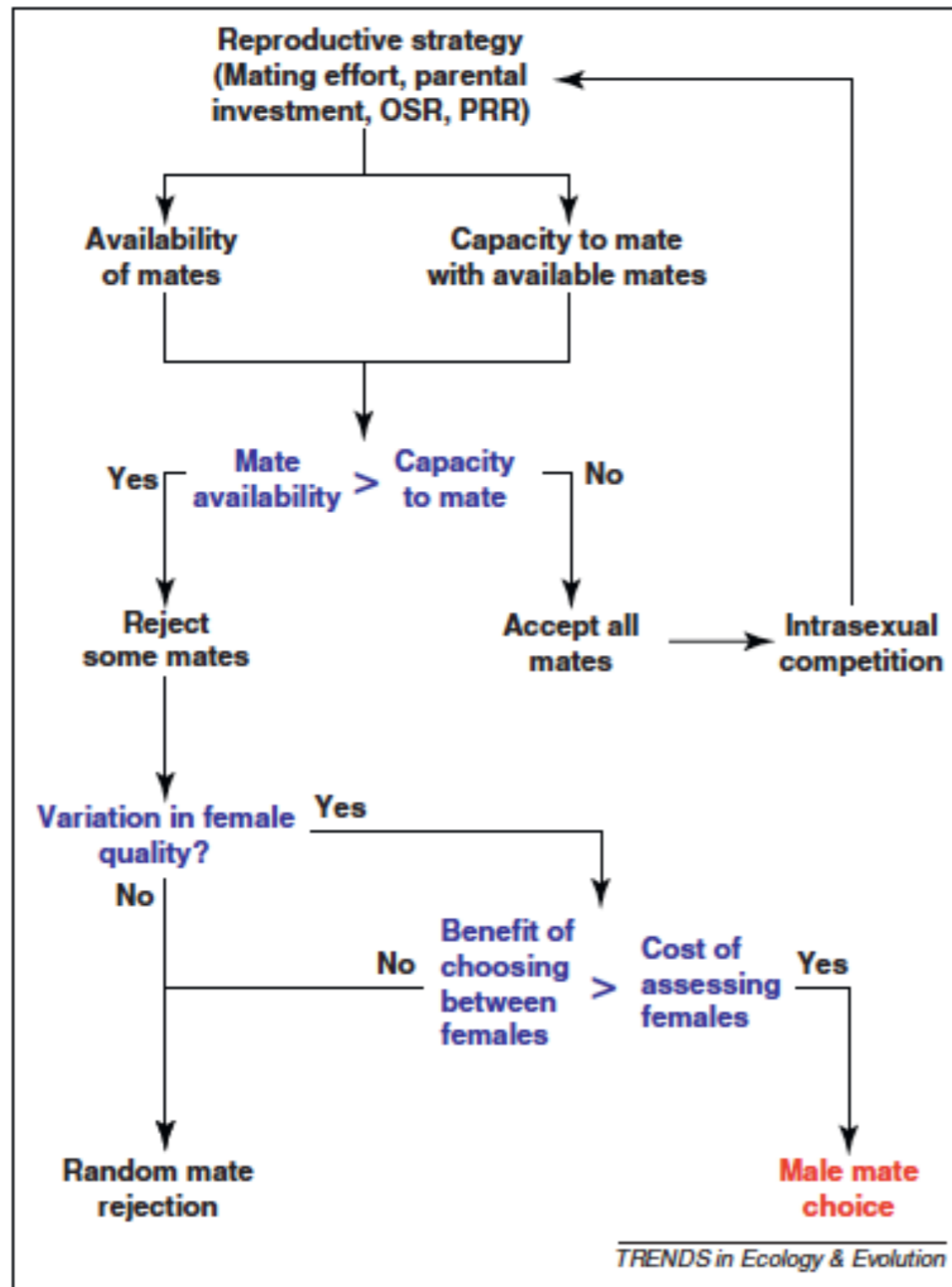


SHOULD MALES CHOOSE?

- Yes, if females vary in quality
- Yes, (or maybe) if males invest into courtship
- Yes, for several other reasons

Should males choose?

Trends in Ecology and Evolution December 2011, Vol. 26, No. 12



Edward & Chapman 2011,
TREE

EXAMPLE 1: AMAZON MOLLIES, FEMALES DIFFER IN QUALITY

- Amazon mollies are sperm parasites.
- Amazons are bad mates for males.



BACKGROUND ON AMAZON MOLLIES

Amazon mollies

- Sperm parasitism, internal fertilization
- use *P. mexicana*, *P. latipinna*
- all-female
- gynogenetic

ROLE OF MALE CHOICE

Males should evolve to avoid Amazon females!

and they seem to.....

- field study: fewer Amazon have sperm (Riesch et al. 2008)
- controlled study confirms that (Riesch et al. 2012)
- male choosiness changes over season (Heubel et al. 2008)
- Schlupp & Plath(2005): more sperm for conspecific females.

Example 2: Females differ in quality, larger females are more fecund

“It is well known that males of *Lebistes*, when exposed to several females of their own species tend to pay most attention to the largest individual....”

Haskins and Haskins (1960): *Evolution* 3, 160 - 169.

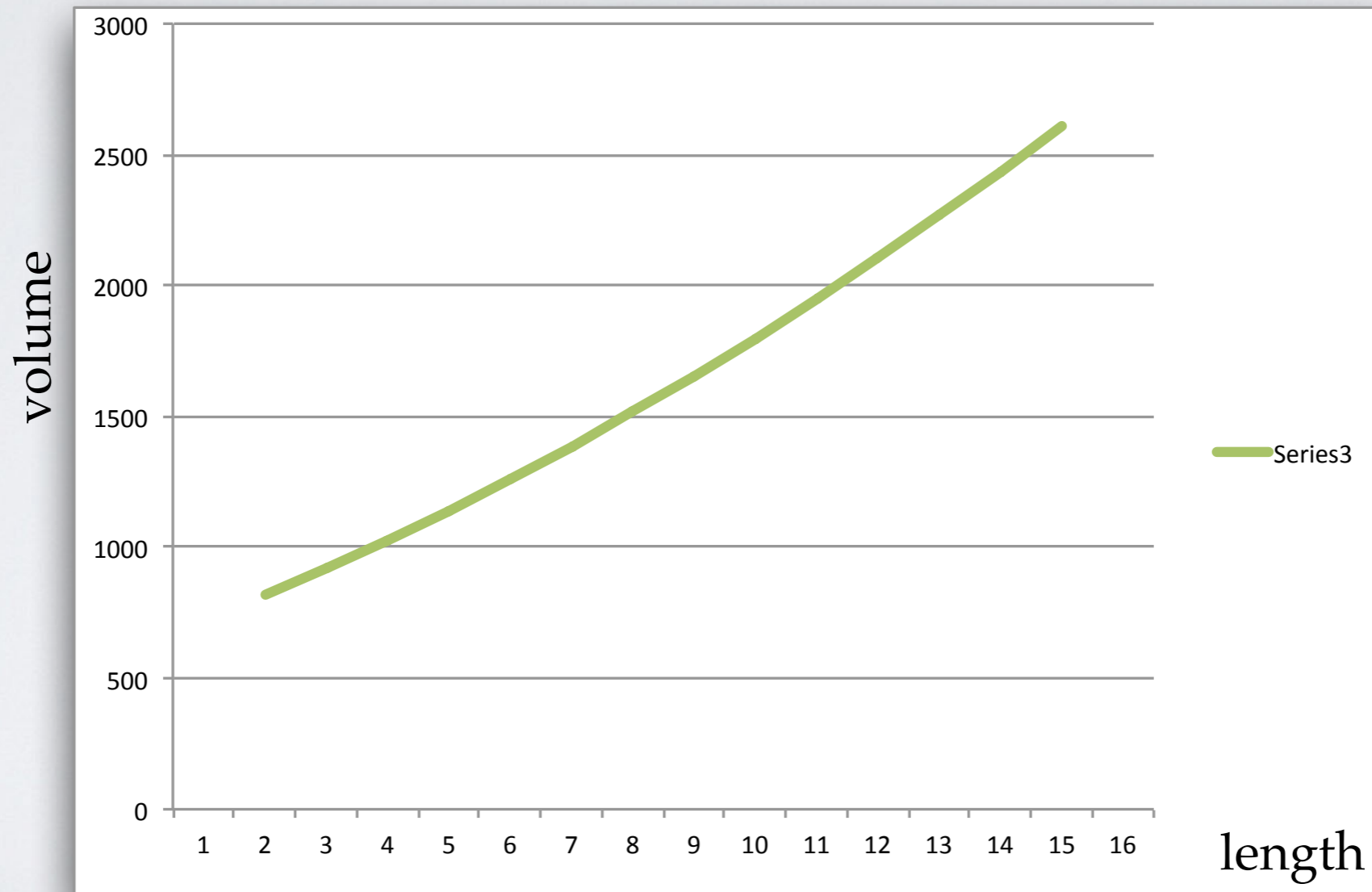
Example 2: Females differ in quality, larger females are more fecund

Similar preferences for larger mating partners: different reasons?

Ptacek & Travis (Evolution, 1997) found male preference for larger males and females in Sailfin mollies (*Poecilia latipinna*) using binary choice tests.

Larger males expressed stronger preferences.

WHY MALES SHOULD PREFER LARGER FEMALES: MORE OFFSPRING



hypothetical relationship between size and fecundity

A MORE COMPLETE VIEW OF SEXUAL SELECTION



FEMALE
CHOICE



MALE
CHOICE



FEMALE
COMPETITION



MALE
COMPETITION

