

What's a girl to do when there aren't
enough boys?

"Monogamy" in Laysan albatross



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Monogamy

- Pair-bonding
- Rare in mammals
- Common in birds
- Obligate or facultative
- Social vs genetic
- 1983: EPC's in 115 socially monogamous birds



Albatross: an icon of monogamy

Laysan albatross:

Sexually monomorphic

Long-lived (~ 30 years)

Strong life-long pair-bonds

First breeding @ 7 - 8 years

Elaborate courtship dances

Obligate biparental care (cost of desertion)

One egg per year (never re-lay)



The mystery.....

How do you end up with two eggs in a Laysan albatross nest?



The population

- Oahu & Kauai islands, Hawaii
- Monitored albatross pairs for 4 years
- Genetic sexing and parentage analysis
- Female-biased adult sex ratio (59%)

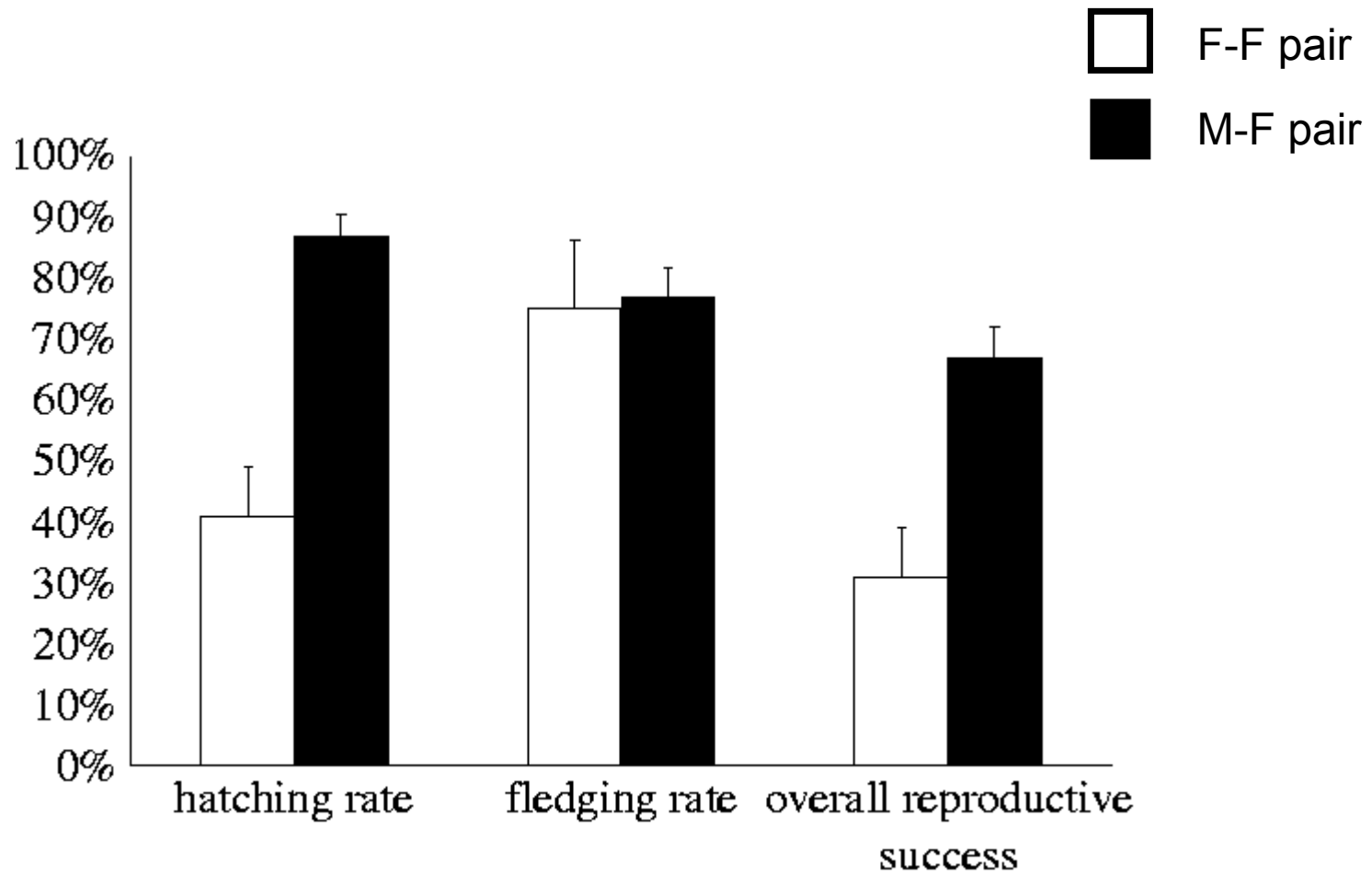


The discovery

- 31% nests female-female pairs
- All females unrelated (female-biased immigration)
- 44% of these nests: 2 eggs, but only 1 incubated



Reproductive success



Female-female pairing

- Long-term successful strategy for Laysan albatross
- Female-female pairs: higher reproductive success than unpaired females
- Pairs stay together over multiple years
- Half of pairs stayed together throughout study (4 years)
- 3/5 of these pairs raised young from both females (i.e. reciprocity)
- Longest known pairing: 19 years
- No males particularly successful



Why do I like this paper?



- Things aren't always as they seem
- Clear evolutionary basis for unusual behaviour
- Great example of behavioural flexibility - can't pigeonhole species
- Shows powerful influence of adult sex ratio on behavioural ecology
 - many examples of humans causing biased sex ratios (hunting, fishing, altering resource availability etc)
- Shows pathway to evolution of cooperative breeding among non-related individuals

Questions

- Which females pair with males? (age, condition, genotype....?)
- How do females choose female partners (age, experience.....?)
- Do female-female pairs engage in courtship dances?
- What maintains female-female loyalty across years (is it a selected trait?)
- Do females choose males to sire young?
- How do females decide which egg to incubate when both females lay?
- How do females decide which female will lay if only one does?
- What is the sex ratio of offspring of FF versus MF pairs?
- Why is hatching success of FF pairs lower?
 - do MF pairs have access to higher quality nesting sites?
 - do FF pairs incubate less successfully because of energetic demands on both females after laying?
 - is it related to whether nest had 2 or only 1 egg (do females incubate "better" if there is a chance it is their own egg)?

Successful same-sex pairing in Laysan albatross

Young et al. *Biology Letters* (2008) 4: 323 - 325

