

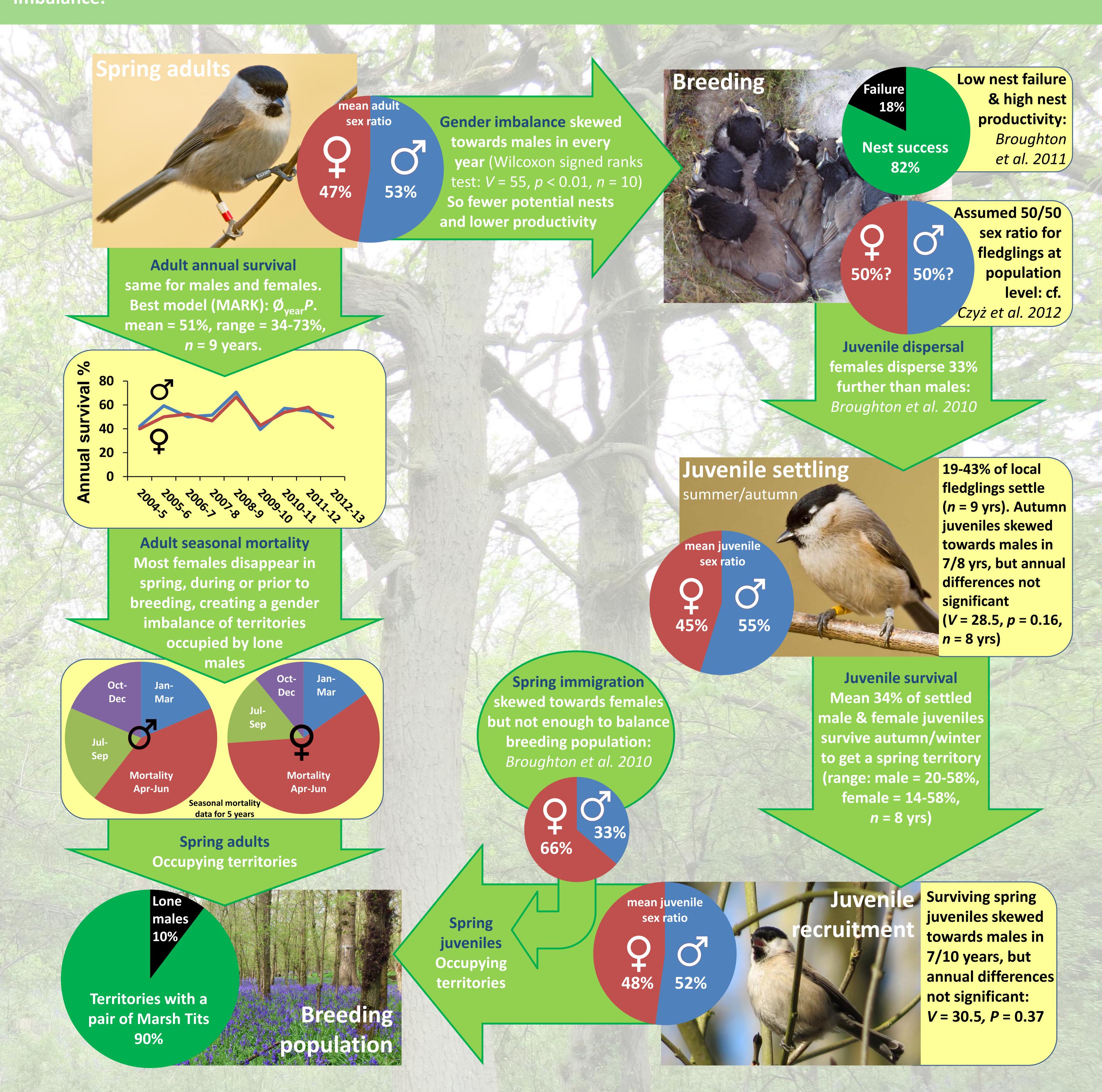
Variation in Marsh Tit recruitment & survival creates gender imbalance

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Summary: our population of 18-31 Marsh Tit territories in eastern England had a gender imbalance in every spring. Up to 28% of potential breeding territories (mean 10%, minimum 3%) were occupied by lone males only, reducing potential productivity.

Adult annual survival was similar for both sexes, but most females disappeared during spring. Juvenile settling and survival tended towards a male bias, but female-biased spring immigration was too little to balance the breeding population.

This schematic shows how variation in mortality and recruitment at key stages of the annual cycle creates this gender imbalance.



References:

- 1. Broughton R.K., Hill R.A., Bellamy P.E., Hinsley S.A. (2010) Dispersal, ranging and settling behaviour of Marsh Tits *Poecile palustris* in a fragmented landscape in lowland England. *Bird Study* 57:4, 458-472.
- 2. Broughton R.K., Hill R.A., Bellamy P.E., Hinsley S.A. (2011) Nest-sites, breeding failure, and causes of non-breeding in a population of British Marsh Tits *Poecile palustris*. Bird Study 58: 229-237.
- 3. Czyż B., Rowiński P., Wesołowski T. (2012) No evidence for offspring sex ratio adjustment in Marsh Tits *Poecile palustris* breeding in a primeval forest. Acta Ornithologica 47: 111–118.

