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Room: Seminar Room

## Offspring fitness and the optimal propagule size in a fluctuating environment

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Propagule size is an important maternal effect on offspring fitness and phenotype. The performance of propagules often increases with size, but a fluctuating environment may introduce temporal variation in the optimal phenotype. We investigated the interaction between propagule size and environmental conditions on offspring mortality and phenotype in a Norwegian house sparrow population. Increased propagule size reduced nestling mortality, with more pronounced effects under heavy precipitation. However, the lowest mortality until recruitment was found along the diagonal between large propagules at low temperature and small propagules at high temperature. Propagule size had no significant effect on nestling body mass and tarsus length. These results reveal a potential for eco-evolutionary dynamics in propagule size, as populations adapt to fluctuating environmental conditions. The ultimate outcome of this dynamic process will also depend on variation in parental fitness and interactions with other life-history traits.