

MSc project:

A test for anticipatory maternal effects in a precocial bird

Whether mothers can prepare their offspring to better cope with a challenging developmental environment is a question of great interest. Testing this question requires offspring of mothers that anticipate either a benign or a challenging environment to be randomly distributed across those environments. While various studies have focused on whether a mother's environment during reproduction acts as a cue to prepare offspring for a similar environment, we here focus on whether the environment a mother experienced during her own development is used as a cue to prepare the offspring for a similar environment.

To this end we will use females of domesticated Japanese quail (*Coturnix japonica*) that either grew up in a challenging environment (with a low-protein diet), or a benign environment (with a standard rearing diet), but that since sexual maturity live in a standard environment. We will let these females reproduce, and then randomly distribute their offspring across the same challenging and benign postnatal developmental environment. This way, we will have a full factorial experiment, in which the offspring's developmental environment will be either matched or mismatched with that of their mother. Japanese quail are ideal for such an experiment because they easily reproduce in captivity, eggs can be artificially incubated and chicks can be reared without parents.



I am searching for a dedicated MSc student who can start in the spring of 2020. The student will be participating in breeding quail, monitoring artificial incubation, raising quail chicks and measuring their growth and age of maturity. The student will therefore experience a lot of close interaction with the birds, and learn handling, breeding and measurement of domesticated birds. Moreover, the project has a clear experimental setup with a fundamental question within the field of evolutionary ecology that allows training in advanced statistical skills. No prior experience with birds is required.

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