



## Alternative Life Histories

### Linking genes to phenotypes to demography

The goal of this project is to understand how and why animals develop strikingly different life histories in variable environments, using facultative anadromy in brown trout *Salmo trutta* as an excellent model system.

Trout in Irish rivers often display an intriguing mix of migratory strategies, including anadromous individuals (that go to sea) and non-anadromous individuals (that remain in freshwater their whole lives).

Previously independent perspectives from evolutionary ecology, ecophysiology and genomics are being integrated to investigate the underlying causes using a combination of laboratory experiments, field experiments and observational approaches.

These results will then feed into a predictive model to explore the consequences of rapid environmental change for trout populations. In addition to their value for conservation and management of an iconic and key species in European freshwaters and coastal seas, the results will generate novel insight into the evolution of migratory behaviour and phenotypic plasticity in animals in general.

#### Quick Facts

**Start:** 2015

**End:** 2020

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