



## Linking physiology and ecology for fish in a changing climate

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Many population ecology questions require characterizing genetic and environmental impacts on an individual's physiology and how the effects combine to produce observed population changes. I will present our recent efforts to bridge the physiology-ecology gap for marine fish. First, we examine growth rates among populations of a temperate reef fish (banded morwong, *Cheilodactylus spectabilis*) in the Tasman Sea demonstrating that warming waters may have already exceeded the optimum temperature for growth. Second, we explore size of North Sea Atlantic cod (*Gadus morhua*) over the past 3 decades where changes in size have accompanied variability in production, maturation and temperature. By employing a physiologically relevant temperature metric (the growing-degree day, GDD; ° C·days), we determine increased growth rates are due to differences in thermal history among year-classes (i.e. increasing temperature) while declines in maturity are consistent with fishing effects. I will discuss our results with respect to possible future climate change effects on fish physiology and ecology.

Thursday 28 April at 12.15 at Zoophysiology