



## Freshwater snails' resilience to heatwaves

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In a laboratory experiment, Eawag ecologists studied how the pond snail *Lymnaea stagnalis* is affected by heatwaves, which are expected to become more frequent as a result of climate change. Snails exposed to temperature stress showed a greater investment in reproduction, egg production increasing by 60 per cent on average. However, a trade-off was observed with immune defence: the activity of phenoloxidase – an enzyme offering protection against parasites – was reduced by 36 per cent. Stress responses were also investigated in snails concomitantly exposed to low concentrations of micropollutants – and the combined effects of high temperature and chemicals were mainly additive. As the effects observed were transient, the researchers conclude that pond snails are highly resilient to environmental changes – but this finding is not automatically applicable to other aquatic organisms.

### Original publication

Salo T. et al. (2017): Resilience to heat waves in the aquatic snail *Lymnaea stagnalis*: Additive and interactive effects with micropollutants. *Freshwater Biology* online  
<https://dx.doi.org/10.1111/fwb.12999>

<https://www.eawag.ch/en/info/portal/news/news-archive/archive-detail/freshwater-snails-resilience-to-heatwaves>