

## **OC16 - Zooplankton diapause trade off between survival and hatching through the storage of lipids**

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Among other inhabitants of temporary ponds, zooplankton organisms must survive unsuitable periods through a diapause stage. The duration, survival and hatching success of this stage depends on the allocation of resources into it. In addition, the duration of the unsuitable period and the adversity of sediments exert divergent selection pressures on diapause duration. Because reserves cannot be reallocated without affecting the other diapause-related traits, trade-offs are expected to occur. In this study we performed an experimental approach to the analysis of population differentiation in survival, hatching propensity and the amount of lipid reserves stored in diapausing eggs of the rotifer *Brachionus plicatilis* along a gradient of habitat unpredictability, and explored potential trade-offs between these diapause-related traits. We found large differences among *B. plicatilis* populations in the three traits studied. A significant negative relationship between diapausing egg survival and the hatching fraction was observed at the population level. We also found a negative relationship between lipid content and diapausing egg survival, which is discussed in terms of the risks experienced by rotifers in a given habitat and the potential for dispersal provided by the lipids stored.