

Studying mechanisms of adaptation to seasonality in wild butterflies in the post-genomic era

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Seasonal environments provide an excellent opportunity to study mechanisms behind adaptation, since many insects show strongly heritable patterns in various traits as a function of latitude. I will present an overview of a project studying how the butterflies *Pieris napi* and *Pararge aegeria* are adapted to seasonally variable environments in Europe. Some focal parts of the project are 1) the characterization of physiological development during pre-diapause and diapause termination, 2) eco-physiological constraints faced by the butterflies during diapause in different parts of their range and 3) ways to understand and study time-keeping mechanisms in non-model insects, utilizing the potential of forward genetics.