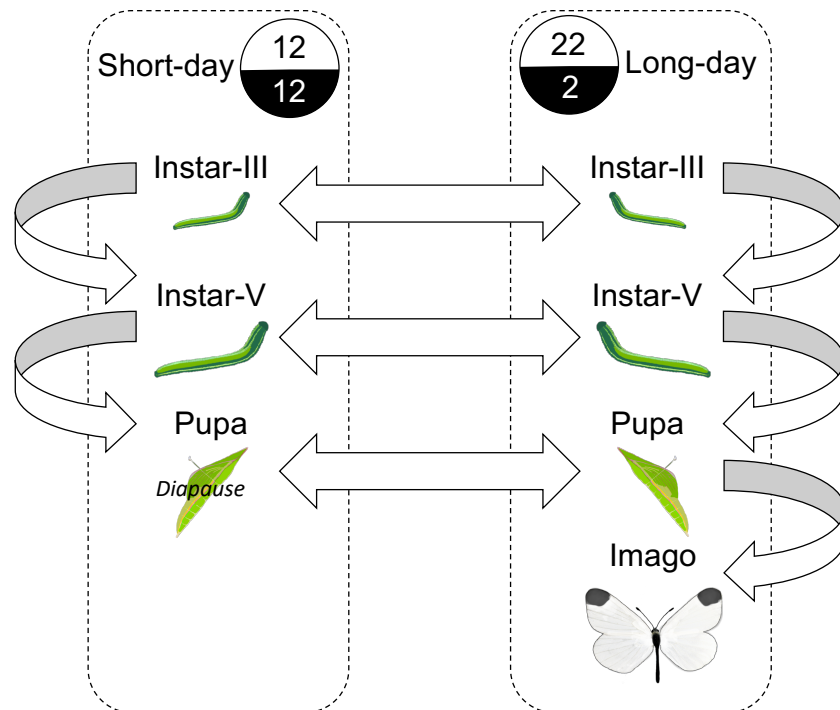


Degree project / Exjobb

“Alternative splicing and diapause in butterflies”

45 or 60 hp / ETCS



Background. If you are interested in the effects of molecular mechanisms and population genetic processes on adaptive potential of natural populations, this project might be perfect for you. Many butterflies enter diapause (arrested development) when environmental conditions are suboptimal. Preliminary analyses suggest that the decision to enter diapause is determined by external factors (light and temperature) that trigger a cascade resulting in lower metabolic rate and higher accumulation of fat. We are interested in investigating if expression of specific gene variants (i.e. splice variants) could be associated with this decision. To answer this, we have generated RNAseq data from multiple cohorts of wood whites (*Leptidea sinapis*) that have been induced to i) enter diapause, or ii) go to direct development. The data are at hand and ready for analysis.

Specific aim of project: Characterize the prevalence of alternative splicing in general and the potential association between expression of specific splice variants and diapause behavior in the wood white butterfly (*Leptidea sinapis*).

Time: Students can start any time of the year.

Contact: Niclas Backström, niclas.backstrom@ebc.uu.se