Phenological change in Britain's hoverflies

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Abstract

Climate warming has resulted in shorter winters and warmer summers; changes to which Britain's hoverflies have responded in several ways. The most obvious change has been in the timing of species' emergence with many species occuring earlier in the year. The scale of phenological change is not uniform. Our analysis shows that, amongst normally univoltine species, the earliest-emerging species have not responded as dramatically as species that used to emerge in mid-April through to mid-May.

Phenological change is strongly related to both longitude and latitude, being most pronounced in south-east England and weakest in northern and western Scotland. Species that emerge later in the spring tend to have advanced timing to a lesser extent, whilst those that emerge after the middle of June seem not to have advanced their timing at all.

In this talk, we will use a series of examples to demonstrate the detected changes, based on both linear and quantile regression. This will include a visualisation of the pace of change in *Epistrophe eligans* over the decades 1980-2021.

Keywords: Phenology, climate change

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