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**The Effect of Climate Change on Butterfly Phenology**

**Pre-Lab Assignment**

In our next lab, we’ll be investigating the effects of climate change on phenology. In preparation, please read the following article which inspired the lab exercise and answer the questions below.

[Kharouba, H.M. and M. Veland. 2015. Flowering time of butterfly nectar food plants is more sensitive to temperature than the timing of butterfly adult flight. Journal of Animal Ecology 88:1311-1321.](https://besjournals.onlinelibrary.wiley.com/doi/epdf/10.1111/1365-2656.12373)

1. What are the three objectives the authors stated in their introduction?
2. What are the three main sources of data used in this study?
3. Starting on page 1314, the authors discuss the limitations of collections-based data as opposed to direct field observation. What were the limitations? How could the use of natural history collections-based data affect the study?