

NORTHWARD RANGE EXPANSION IN BUTTERFLIES

In recent years, a number of butterfly species with generally southern distributions have been observed with steadily increasing frequency on Martha's Vineyard and in southern New England generally. This apparent range expansion is presumably a result, at least in part, of anthropogenic climate change: milder winters and longer growing seasons make it possible for species that were formerly not hardy enough to persist in our region to become established.

We've extracted observation sets from iNaturalist to illustrate this process, using a series of three three-year periods and extracting observations from those periods both from Martha's Vineyard and from the Northeast. There are limitations to this method: most importantly, the number of iNaturalist observers has increased during the time period we explored, resulting in more observations for the species as time passes. But the pattern of observations alone illustrates the point we are trying to make: these butterflies have, in the course of about a decade, gone from being local rare to being fairly common on Martha's Vineyard.

While iNaturalist data need to be used with an awareness of their limitations and potential biases, the platform represents a huge body of information that can readily be used even by amateur naturalists as an analytical tool. The Martha's Vineyard Atlas of Life relies extensively on iNaturalist observations, and we encourage anyone interested in natural history to contribute sightings to this important resource.



Zabulon Skipper (Lon zabulon), male

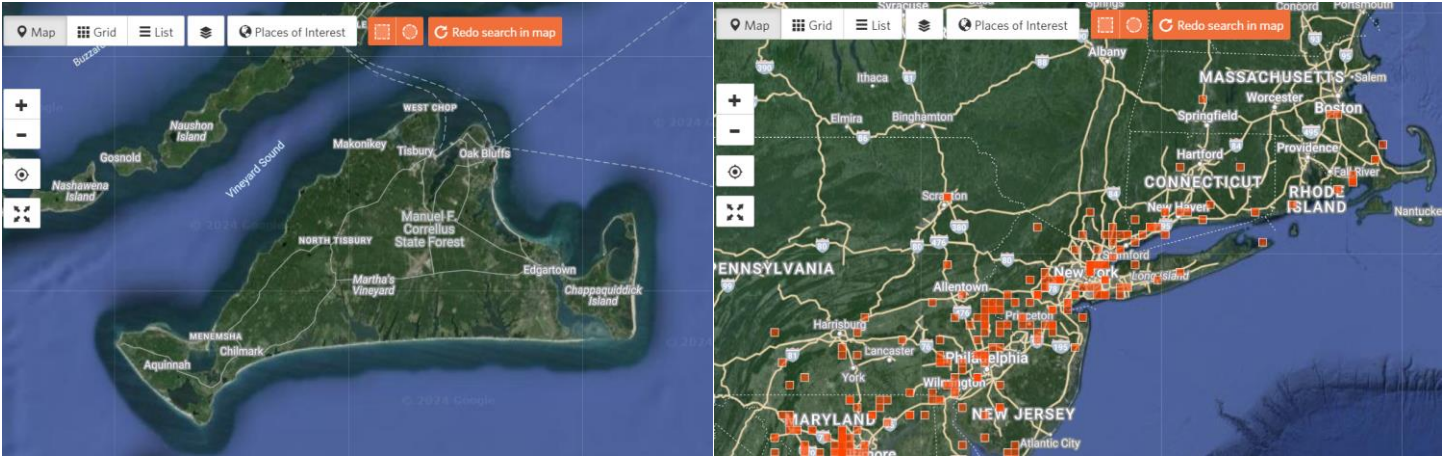


Red-banded Hairstreak (Calycopis cecrops)

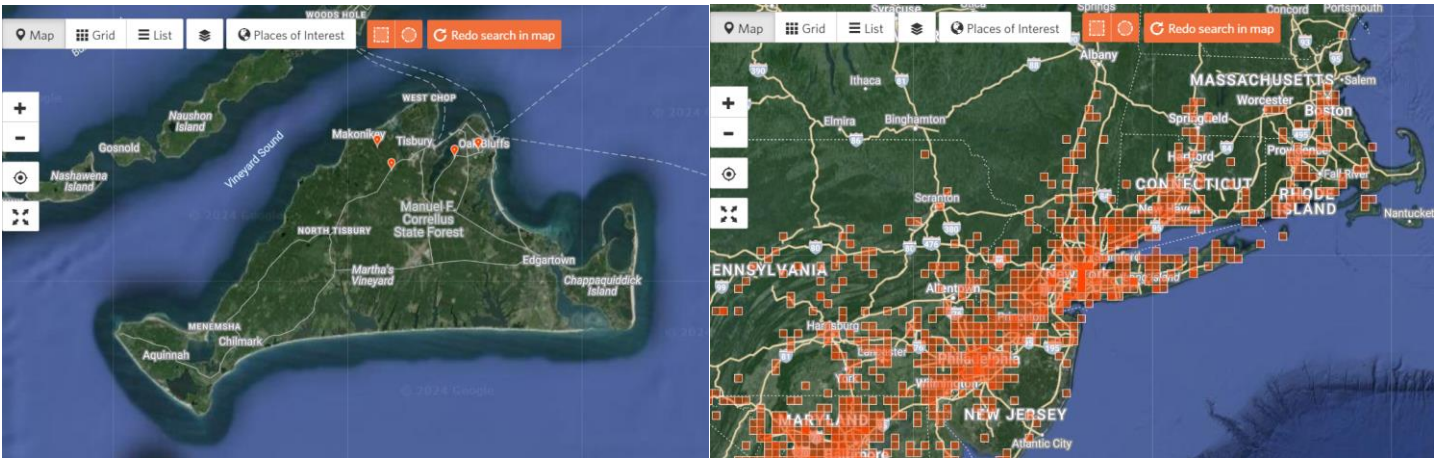


Sachem (Atalopedes huron), female

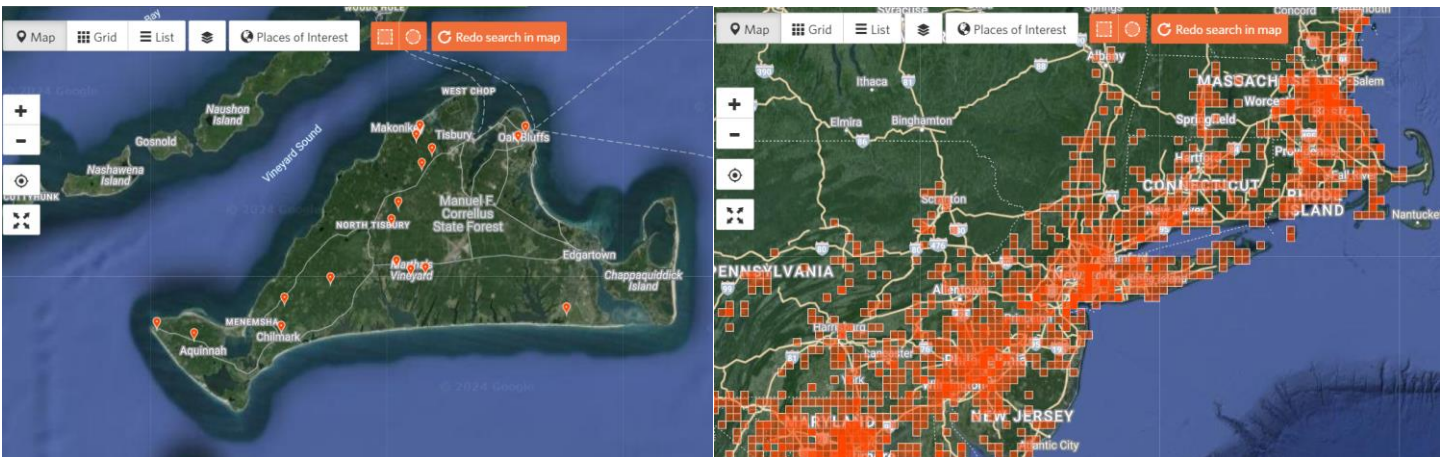
ZABULON SKIPPER: iNATURALIST OBSERVATIONS



2015-2017

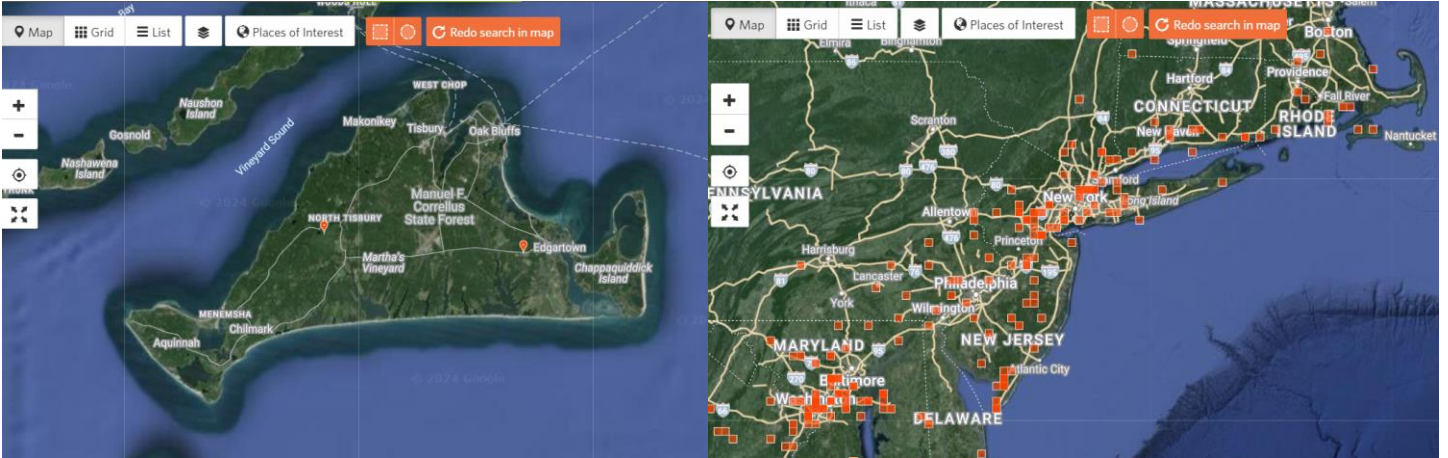


2018-2020

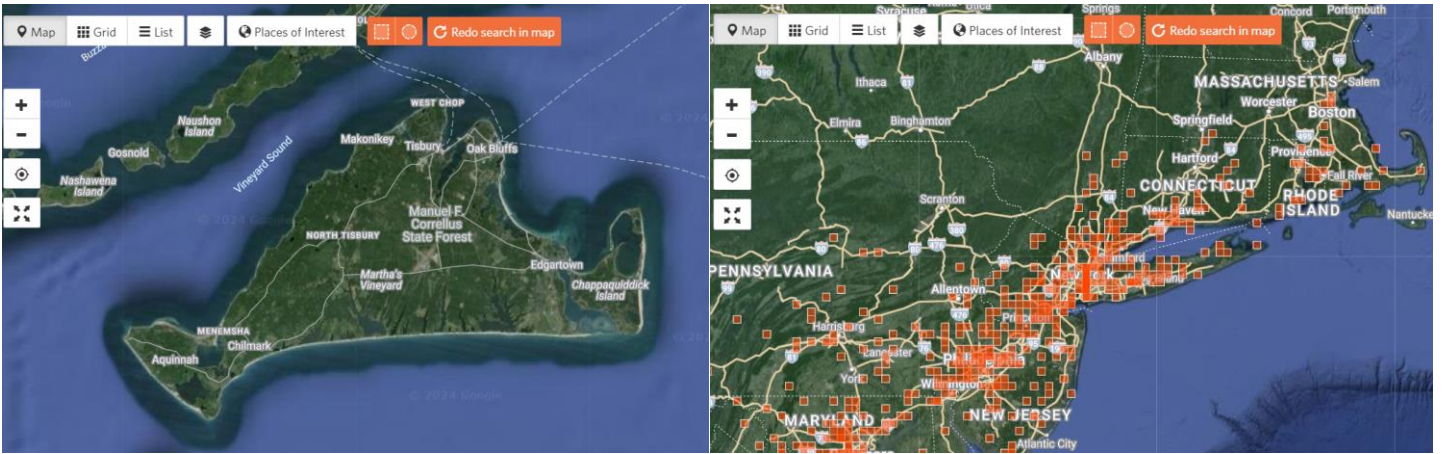


2021-2023

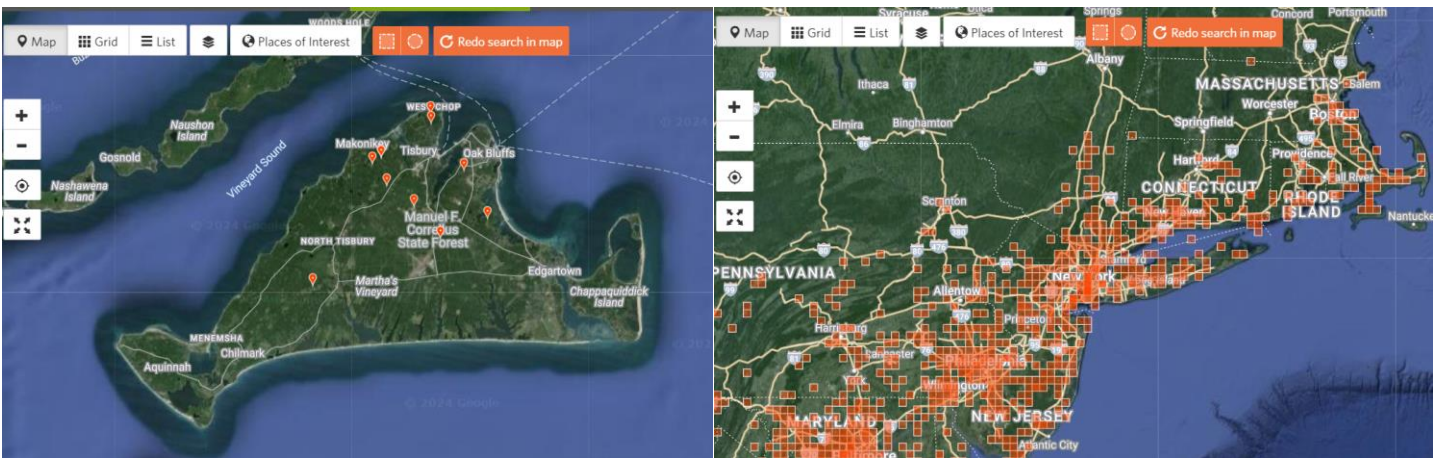
RED-BANDED HAIRSTREAK: iNATURALIST OBSERVATIONS



2015-2017

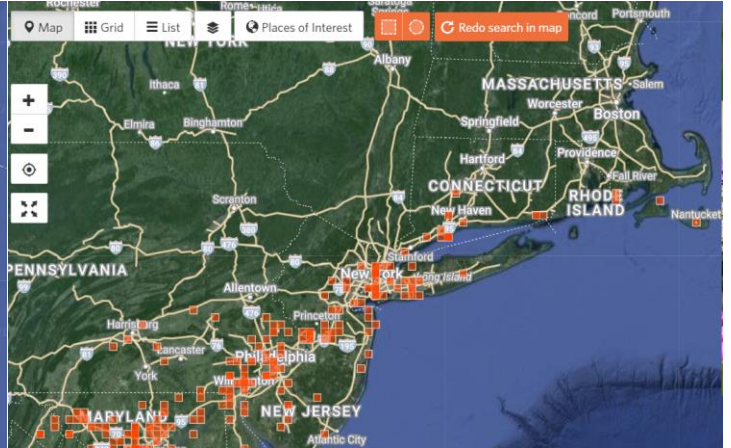
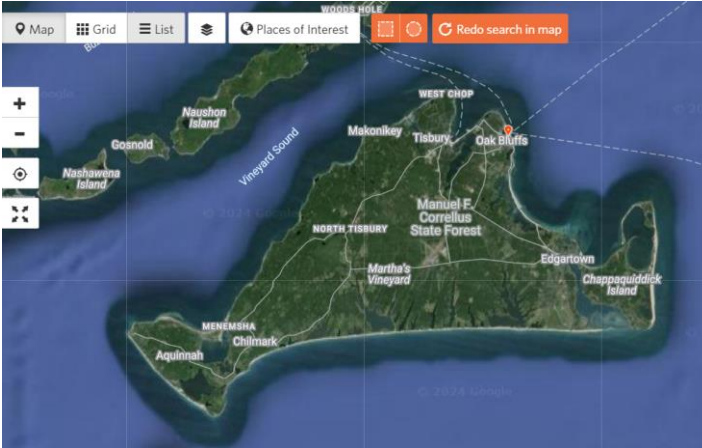


2018-2020

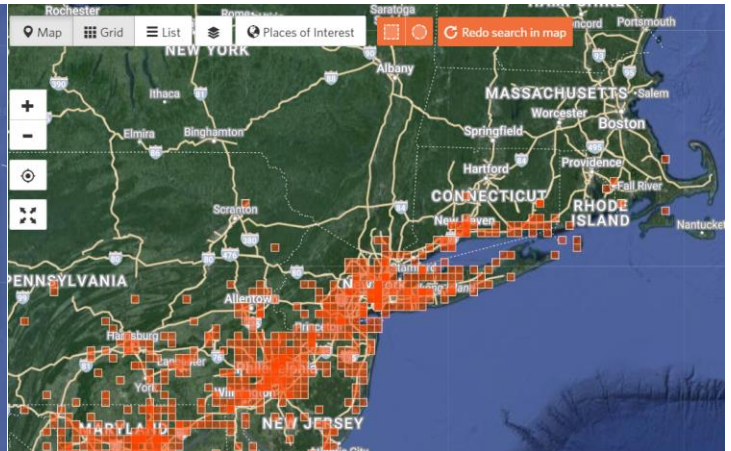
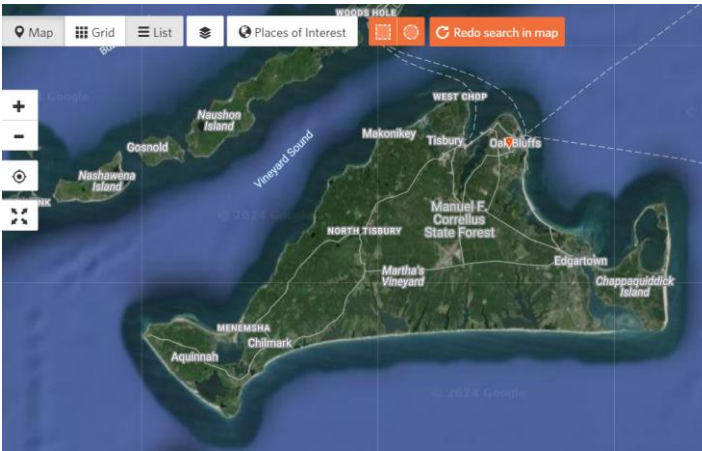


2021-2023

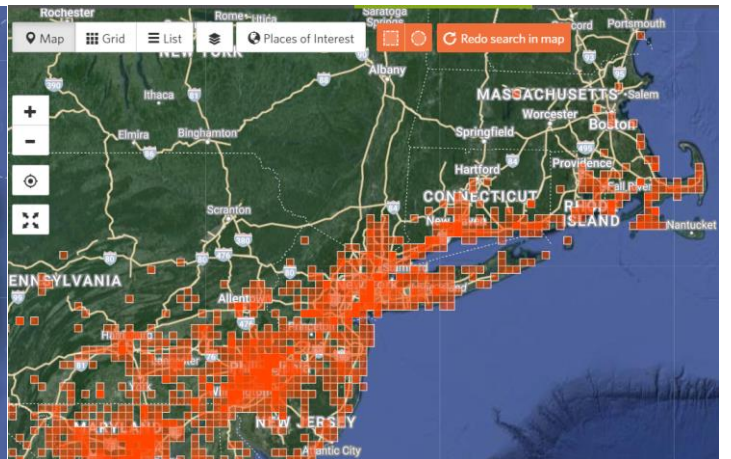
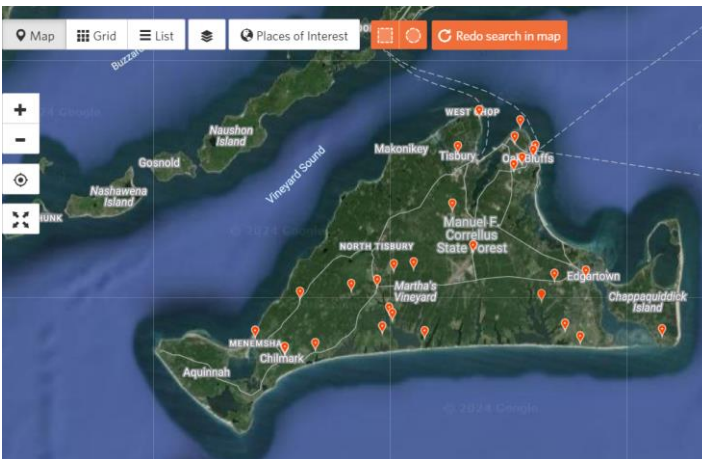
SACHEM: iNATURALIST OBSERVATIONS



2015-2017



2018-2020



2021-2023