

Insects and Climate Change

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This article is based on several resources I found in my research including: The Revelator Environmental Truth & Justice (April 14, 2023, Proceedings of National Academy of Sciences (January 11 2021)

Do you remember when your windshield was covered with insects at certain times of the year? The population of bumblebees is down 90% in the last 25 years! Did you know that climate change poses a change in the lives of insects? Or that insect species are disappearing more quickly than mammals? This is because their life cycles and their success as survivors are directly related to temperature. (I have relatives living in North Carolina who send me pictures of insects that are larger than the same species here in the north) Why is this happening? Habitat loss, pollution, invasive species, deforestation urbanization, and industrial agriculture (monocultures) are causes. Climate change adds to an already bad situation.

Insects cannot regulate their body temperatures as we can, so they respond to climate change more quickly than mammals. Some insects, however, are already doing better (for themselves, not us) in warmer climates. This is especially true for what we call “pests”—insects that eat plants we want and insects that spread disease (malaria, for example). This is because generalist insects have a better chance of surviving than those that rely on a single species (think of monarch butterflies).

The production of proteins in Insects that live in tropical regions with increasing temperatures can have a negative effect on their life cycles. Those living in lowlands where temperatures are rising survive better than areas of the tropics where temperatures are rising.

I found it fascinating to learn that insects in the order Diptera (flies for example) do not survive well when subjected to higher temperatures. However, members of the order Orthoptera (grasshoppers, crickets) survive better at higher temperatures!

What to do? Create a diverse landscape...open meadows, shrubby areas, pollinator gardens, open areas for ground nesting bees, bee hotels, planting butterfly larval host plants reduce light pollution on your property, don't pour chemicals down your drains, don't spray, live with some insect damage.



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