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Heat of the Moment: How Climate Change Impacts Insects in Our Garden

Take Home Messages

- Climate change is happening & accelerating.
- Increased and variable temperature, precipitation, drought represents a danger to (specialist) insects and their ecosystems.
- Insects are changing behavior, phenology, geographic range.
- Specialist insects and insects at higher trophic levels most at risk.
- Increased prevalence of insect outbreaks
- Urban and suburban areas have a key role to play in adaptation to climate change / mitigation of climate change impacts.
 - Extensive use of green technologies
 - Depaving urban areas, where it makes sense
 - Increased efforts to plant native plants ~ help extend range for specialist insects?
- [Research shows that small habitat fragments can maintain biodiversity ~ if those fragments are connected.]

Links and References Used in Talk

- IPCC Sixth Assessment Report (AR6): <https://www.ipcc.ch/assessment-report/ar6/>
 - Working Group 1: <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>
 - Working Group 2: <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>
 - Working Group 3: <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/>
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- Art Shapiro's butterfly monitoring site: every two weeks, since 1972! <https://ucdavis.github.io/butterfly.ucdavis.edu/index.html>
- LA Times Story on Art Shapiro's butterfly monitoring efforts: <https://www.latimes.com/science/story/2019-11-12/california-butterflies-scientist-art-shapiro>
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- Oregon Flora Gardening with Natives website: <https://oregonflora.org/garden/index.php>
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- Skendžić S, Zovko M, Živković IP, Lešić V, Lemić D. The Impact of Climate Change on Agricultural Insect Pests. *Insects*. 2021; 12(5):440. <https://doi.org/10.3390/insects12050440>