



## Arthropods and climate change - arctic challenges and opportunities.

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**Abstract:** The harsh climate, limited human infrastructures, and basic autecological knowledge gaps represent substantial challenges for studying arthropods in the Arctic. At the same time, rapid climate change, low species diversity, and strong collaborative networks provide unique and underexploited Arctic opportunities for understanding species responses to environmental change and testing ecological theory. Here, I provide an overview of individual, population, and ecosystem level responses to climate change in Arctic arthropods. I focus on thermal performance, life history variation, population dynamics, community composition, diversity, and biotic interactions. The species-poor Arctic represents a unique opportunity for testing novel, automated arthropod monitoring methods. The Arctic can also potentially provide insights to further understand and mitigate the effects of climate change on arthropods worldwide.

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