

Arctic Wildlife Observatories Linking Vulnerable EcoSystems (Arctic WOLVES)

Diversity and Plant Use of Butterflies on Herschel Island and Yukon North Slope

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Background

Climate change is occurring rapidly in the Arctic. Herschel Island and Yukon North Slope are within an Arctic area rich in butterfly species. As butterflies are short-lived, highly visible, and can respond rapidly to changes in habitat, they are good indicators of climate change

Purpose

- 1) Establish a database of butterfly species and their abundance to compare to past records and measure change in butterfly species diversity in the future.
- 2) Document host-plant associations for butterfly species in this region.
- 3) Document butterflies with photographs for public education.

Study Area and Methods

- Field work at Herschel Island and Komakuk Beach in June and July 2007-2009.
- Transects walked through different habitats.
- Butterfly sightings, specimens and records of behaviour recorded along transects.
- Specimens added to Royal British Columbia Museum collection

Results

- Komakuk – 15 species; Herschel Island – 19 species.
- Several species recorded in 2007-09 not previously recorded on Herschel I., including Mourning Cloak (*Nymphalis antiopa*) and Compton Tortoiseshell (*Nymphalis vaualbum*).
- Strong association of Alpines (*Erebia* spp.) with wet, sedge-rich drainage channels.
- Strong association of butterfly abundance with warmer temperatures in June/July.

Acknowledgements: Funding from Northern Research Endowment Grant (Northern Research Institute, Yukon College) and Yukon Parks Branch. Arctic WOLVES project provided logistic support. Thanks to C. Eckert, C. Guppy, N. Kondla, J. Verhulst, R. Cannings, A. Langlois, S. Cannings, C. Reid, F. Reid, F. Doyle, S. Gilbert, W. Halliday, E. Hofer, D. Reid, A. Blachford, F. Mueller, D. Gallant, and E. McLeod.

