Ant attendance and conservation of western prairie butterflies
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Ant attendance is a form of myrmecophily
Myrmecophily in the Lepidoptera

**Lycaenidae**
- Of approx. 6,000 described lycaenid species:
  - Approx. 4,500 (75%) are myrmecophilous
  - Approx. 1,800 (40%) are obligate
  - Approx. 2,700 (60%) are facultative

**Riodinidae**
Puget blue
Makah copper
Johnson’s hairstreak
Juniper hairstreak
Chinquapin hairstreak
Seaside hoary elfin
Coastal greenish blue
Fenders blue
Leona’s little blue
Lotis blue
San Bruno elfin
Mission blue
Smith’s blue
El Segundo blue
Palos Verde blue
Hermes copper

Does not include Xerces, Heritage Program or USFS Lists
Fender’s blue butterfly
*Plebejus icarioides fenderi*

Work on myrmecophily in 2016
Some of the things we investigated relative to myrmecophily in Fender’s blue (2016)

1. Effect of dense, invasive vegetation on ant recruitment and recruitment time

2. Variability of ant assemblages among vegetation communities

3. Effect of ant attendance on larval survival
Ant species recruited by Fender’s blue (2016)

- Aphaenogaster occidentalis (25/98 obs)
- Lasius alienus (12/98 obs)
- Prenolepis imparis (39/98 obs)
- Formica lasioides (10/98 obs)
- Tapinoma sessile (4/98 obs)
- Brachymyrmex depilis (3/98 obs)
- Camponotus modoc (2/98 obs)
- Liometopum occidentale (1/98 obs)

Background
Species Overview
Previous Work
Ongoing Work
Vegetation type at the base of plant predicts recruitment time
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Vegetation community and physical structure affects which ant species are recruited
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% Variance Explained = 21.4, r² = 0.33, eigenvalue = 0.5

% Variance Explained = 63.3, r² = 0.59, eigenvalue = 1.5
Ant attendance increases larval survival

- 0-33%
- 34-66%
- 67-100%
Puget blue butterfly
*Plebejus icarioides* blackmorei

Work on myrmecophily in 2018+

Photo Credit: Caitlin LaBar 2011
Acknowledgements

Chad Tillberg  Joey Smokey  Meagan Gombart
Tillberg Lab (Linfield)  Aryana Ferguson
Amy Thomas  Theresa Huang  Katy Kachmarik
Sierra McComas  Norah Warchola  Kim Harless
Zach Freed  Rachel Glaeser  Robby Lundergan
Leslie New  John Bishop

Funding Sources

U.S. Bureau of Land Management
Joan Mosenthal DeWind Award (Xerces)
Carl H. Elling Endowment (WSU SBS)
WSU College of Arts and Sciences
Jane Clair Dirks-Edmunds Research Fellowship (Linfield College)
Questions?