Describe briefly what you plan to do during the next reporting period to accomplish the goals and objectives.

During the next reporting period we will finish writing and analysis of current projects and work to get them in the publication pipeline.

Currently, there are 5 papers which are in the review / revision cycle:

Zhen F, Meier AR, Epstein B, **Bergland AO**, Castillo Carrillo CI, Cooper W, Cruzado RK,

Horton DR, Jensen AS, Kelley JL, Rashed A, Reitz SR, Rondon S, Thinakaran J,

Wenninger EJ, Wohleb CH, Crowder DW, Snyder WE. Host plants and endosymbionts

shape the population genetics of sympatric vectors. In review at Evolutionary

Applications.

**Erickson PA, Weller CA, Song DY**†**, Bangerter-Black A**, Schmidt PS, **Bergland AO**.

Unique genetic signatures of local adaptation over space and time for diapause, an

ecologically relevant complex trait, in Drosophila melanogaster. In review at PLoS

Genetics, 2nd round.

**Weller CA & Bergland AO**. Accurate, ultra-low coverage genome reconstruction and

association studies in Hybrid Swarm mapping populations. In revision at Genetics. bioRxiv: 671925

Machado\* H, **Bergland AO\*,** Taylor R, Tilk S, Behrman E, Dyer K, *et* al. 2018. Broad

geographic sampling reveals predictable and pervasive seasonal adaptation in Drosophila. In revision at eLife, 2nd round. bioRxiv: 337543.

Kapun M, Aduriz MGB, Staubach F, Vieira J, Obbard D, Goubert C, *et* **Bergland AO** *et al*.

2018. Genomic analysis of European Drosophila populations reveals longitudinal structure and continent-wide selection. In review at Molecular Biology and Evolution, 2nd round. bioRxiv, 313759

There are 4 ongoing papers which will be far along in the review/publication process in the next year:

1. **Yu Y** & **Bergland AO.** A meta-analysis suggests distinct genetic architectures underlying clinal and seasonal adaptation in *D. melanogaster*. To be submitted to Frontiers in Genetics (invited MS due 07/2020)
2. **Black A & Bergland AO**. Fine-scaled population structure in Drosophila melanogaster. To be submitted to TBD.
3. **Becker D, Edwards A, Barnard-Kubow K, Porter R**, Beckerman A, **Bergland AO.** Mutational variance and stabilizing selection on predator induced plasticity.
4. **Barnard-Kubow K, Becker D, Porter R**, Beckerman A, **Bergland AO.** Local ecology shapes the evolution of reproductive polymorphism in *Daphnia pulex*.