

EDG 2013 Reading List

Theme: adaptation to spatially and temporally variable environments, especially the genetic basis of plasticity and local adaptation.

Concepts/approaches as possible topics: Reciprocal transplant, measuring selection in contrasting environments, Fst/Qst, GxE for QTL, plasticity itself as a trait vs. as a trait expressed in diff environments.

Reviews/conceptual papers: Anderson et al., 2011, Bossdorf et al., 2005, Bradshaw 1965, Hereford 2009, Kawecki and Ebert 2004, Kingsolver et al. 2002, Leinonen et al. 2008, Travisano and Shaw 2013, four Via papers.

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- Anderson, J. T., J. H. Willis, and T. Mitchell-Olds. 2011. Evolutionary genetics of plant adaptation. *Trends in Genetics* 27:258-266.
- Anderson, J. T., C.-R. Lee, C. A. Rushworth, R. I. Colautti, and T. Mitchell-Olds. 2013. Genetic trade-offs and conditional neutrality contribute to local adaptation. *Molecular Ecology* 22:699-708.
- Bossdorf, O., H. Auge, L. Lafuma, W. E. Rogers, E. Siemann, and D. Prati. 2005. Phenotypic and genetic differentiation between native and introduced plant populations. *Oecologia* 144:1-11.
- Bradshaw, A. D. 1965. Evolutionary significance of phenotypic plasticity in plants. *Advances in Genetics* 13:115-155.
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- Callahan, H. S., N. Dhanooolal, and M. C. Ungerer. 2005. Plasticity genes and plasticity costs: a new approach using an *Arabidopsis* recombinant inbred population. *New Phytol.* 166:129-140.
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- Donohue, K., and J. Schmitt. 1999. The genetic architecture of plasticity to density in *Impatiens capensis*. *Evolution* 53:1377-1386.
- Dudley, S. A. 1996. The response to differing selection on plant physiological traits: Evidence for local adaptation. *Evolution* 50:103-110.
- Dudley, S. A., and J. Schmitt. 1996. Testing the adaptive plasticity hypothesis: Density-dependent selection on manipulated stem length in *Impatiens capensis*. *Am. Nat.* 147:445-465.
- Etterson, J. R. 2004a. Evolutionary potential of *Chamaecrista fasciculata* in relation to climate change. I. Clinal patterns of selection along an environmental gradient in the great plains. *Evolution* 58:1446-1458.
- Etterson, J. R. 2004b. Evolutionary potential of *Chamaecrista fasciculata* in relation to climate change. II. Genetic architecture of three populations reciprocally planted along an environmental gradient in the great plains. *Evolution* 58:1459-1471.
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- Fox, C. W., M. E. Czesak, T. a. Mousseau, and D. A. Roff. 1999. The evolutionary genetics of an adaptive maternal effect: Egg size plasticity in a seed beetle. *Evolution* 53:552-560.
- Franks, S. J. 2011. Plasticity and evolution in drought avoidance and escape in the annual plant *Brassica rapa*. *New Phytol.* 190:249-257.
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