Cortez 2016 points out that there are currently three bodies of eco-evolutionary theory, representing three different approaches to considering how genetic variation influences both ecological and evolutionary dynamics:

* adaptive dynamics (Geritz et al. 1998) and mutation-limited evolution (Doebeli 1997) focus on the case where standing genetic variation is small and ecological changes occur much faster than evolutionary changes;
* the work of Cortez and Ellner (2010) focuses on the case where standing genetic variation is very large and evolutionary changes occur much faster than ecological changes;
* quantitative genetics theory (Abrams et al. 1993, Abrams and Matsuda 1997) focuses on the case where standing genetic variation is moderate.