Local environmental parameters, such as temperature, pCO2, and salinity, are in flux due to broadscale climatic shifts. Sessile animals in established populations may have dramatic reactions to changes at local environmental scales. . For example, growth, development, and reproduction may be controlled by predictable temperature changes between seasons. Olympia oysters, *Ostrea lurida*, in Puget Sound, Washington are known to initiate reproduction at a specific temperature threshold. Bays along a latitudinal gradient within the Sound exhibit temporal variation in attaining this temperature. .

[sentence or two describing the set up of the experiment]

[sentence or two describing the results of the experiment]

[discussion—put it back in context of introductory remarks]

Oysters native to these diverse bays have conformed their spawn timing to the factors within each bay leading to the phenomenon known as local adaptation. From a reciprocal O. lurida transplant experiment from three oceanographically distinct bays, we have shown that southern populations show a distinct reproductive advantage based on sheer number of actively brooding females as compared to animals from Hood canal and northern bays in their first year.