[illegible]n1P[illegible]erbivorous

P. producta shows limited modulation in response to a range of endogenous neuromodulators that modulate the pyloric pattern in opportunistic-feeding *Cancer* crabs. It is unknown whether this loss in modulatory ability is related to their limited diet, or if it is a result of the phylogenetic distance between these species (Dickinson et al. 2008). It is hypothesized that the decreased modulation in *P. producta* is related to the species' diet. The diversity in foregut movements required to digest kelp is predicted to be less than that required to digest a wider variety of foods. Therefore, *P. producta* may have faced less selective pressure to maintain robust modulation of the STNS, or increased modulatory ability may have been selected for in related crab species that now have more diverse diets.

To test this hypothesis, the degree of STNS modulation in *P. producta* was compared to an opportunistic-feeding member of its same superfamily, *L. emarginata.* It was predicted that the patterned output of the STNS in *L. emarginata* would respond to a greater number of neuromodulators than did *P. producta* because of the differences in their diet. After dissecting the intact nerves out of the stomach, extracellular recordings from motor nerves were taken before, during, and after neuro