Effect of the Caernarvon Diversion on Grazing

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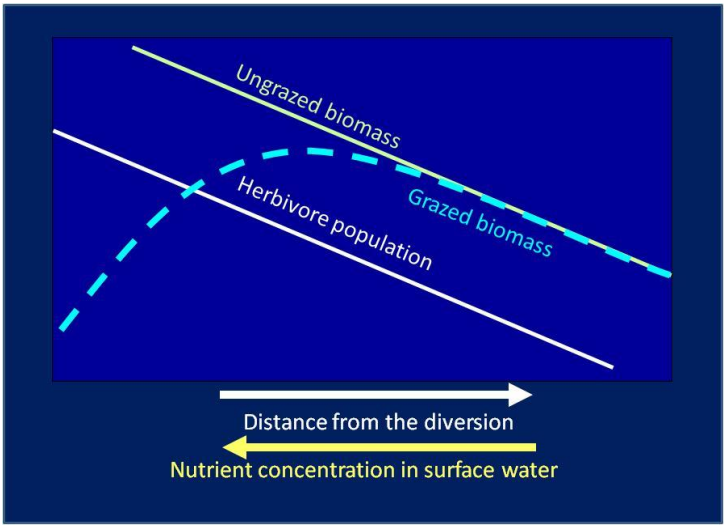
Project type: Faculty Research

Funding sources: Lake Pontchartrain Basin Foundation

Status: In progress

Summary

It is well known that herbivores are attracted to vegetation of high nutritional value. In addition, high quality forage allows herbivores to increase their population size. It is therefore suspected that grazing intensity may be higher closer to river introduction sites, where water with higher nutrient concentrations enters the system. As nutrients are removed, grazing intensity is expected to decline.

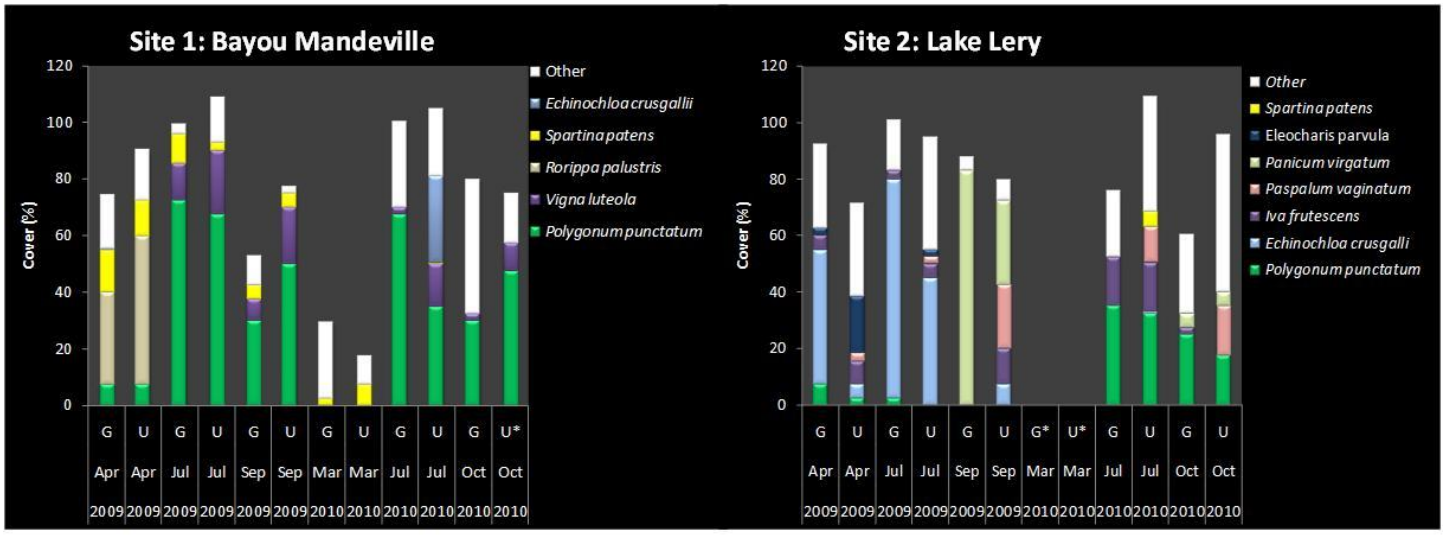


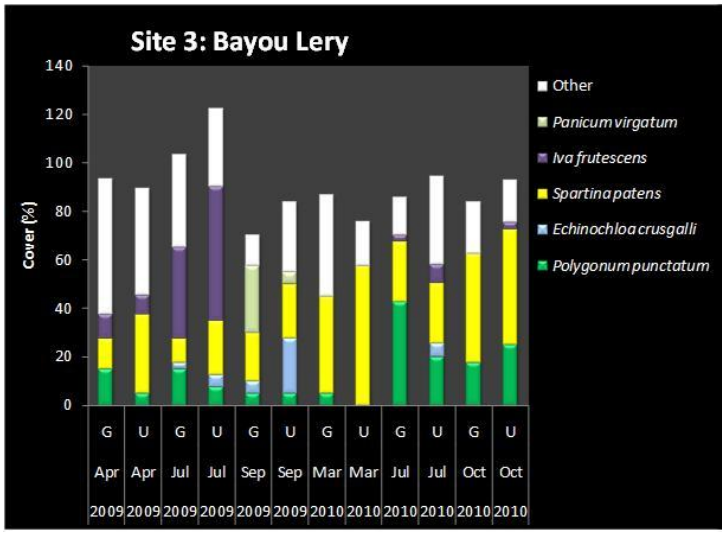
To test the hypothesis that grazing intensity increases with proximity to river introduction site, grazing exclusion treatments were established at 4 sites that vary in distance to the Caernarvon Diversion in the spring of 2009 At each site, two ungrazed and two grazed plots were established randomly along a 50m transect. Plots are approximately 4m on each side.

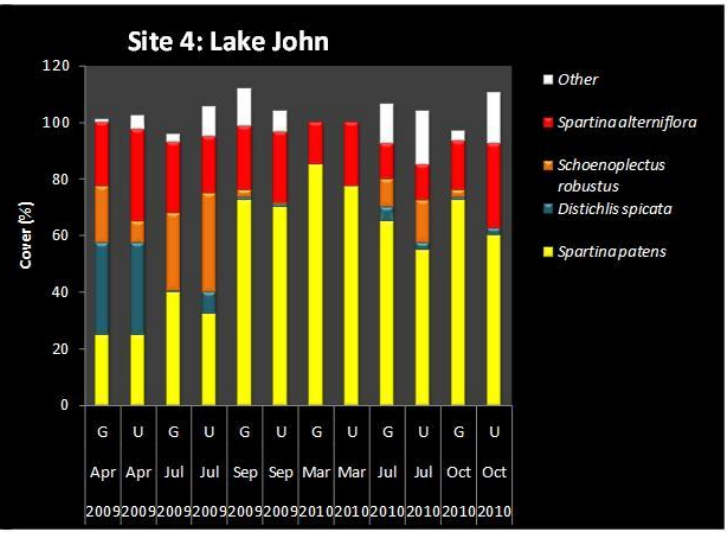
Cover of all species is estimated to the nearest five percent for each plot three times during the growing season. To describe the sites in more detail, two 0.25 m^2 plots are harvested from each plot in 2010 and 2011. Aboveground biomass is brought to Lafayette and stored under refrigeration before processing. Samples were sorted into species for the living material (green plants and attached dead material) and dead plant material. The material for each species was dried to constant weight in a 70 ºC oven.

Preliminary results show no indication that the hypothesis is correct. This is primarily due to the presence of annual species at the sites that are closer to the diversion. These sites show a rapid turnover of species and low end-of-season biomass.

Cover Data Through 2010







Biomass data October 2010