

Current research program at UNCW

- Natural History
 - Taggart J. B. and Z. T. Long. 2012. Soil factors in three populations of endangered golden sedge (*Carex lutea* LeBlond). *Castanea* 77:136-145.
 - Hirsh, M. D., Long, Z. T and B. Song. 2011 Anammox bacterial diversity in various aquatic ecosystems based on the detection of hydrazine oxidase genes (*hzoA/hzoB*) *Microbial Ecology* 61:264-276
 - Long, Z. T. S. R. Fegley, and C. H. Peterson. Slow recovery of plant community composition and biodiversity on dredged fill of a hurricane-induced inlet through a barrier island *Journal of Coastal Conservation*.
 - Zhang et al (including Ramus, Long). Is coral richness related to resistance to and recovery from disturbance? to submit to PeerJ
 - Idol, Freshwater, Long. Algal diversity and biomass production and stability in North Carolina Hardbottoms.

Current research program at UNCW

- Theory

- Long, Z. T., S. J. Leroux, T. Faninger, and M. Loreau. 2012. Interactive effects of enrichment and the manipulation of intermediate hosts by parasites on infection prevalence and food web structure. *Ecological Modelling* 228: 1-7.
- Long et al. The effect of body size on the outcome of consumptive and interference competition. In prep
- Long et al. Top down versus bottom up control of food web stability: Plant dynamics “cascade” when predators are present. In prep

Current research program at UNCW

- Experimental work
 - Long, Z. T., M. I. O'Connor, and J. F. Bruno. 2012. The effect of predation and intraspecific aggregation on prey diversity at multiple spatial scales. *Journal of Experimental Marine Biology and Ecology* 416-417:115-120.
 - Parnell 2012. Diversity effects in coastal plant ecosystems: How do Soil amendments alter the net biodiversity effect? MS Thesis
 - Long, Z. T., J. F. Bruno, and J. E. Duffy. 2011. Food chain length and omnivory determine the stability of a marine subtidal food web. *Journal of Animal Ecology* 80: 586-594
 - Moran, E. R., Reynolds, P. L., Ladwig, L. M., O'Connor, M. I., Long, Z. T., and Bruno, J. F. 2010. Predation intensity is negatively related to plant species richness in a benthic marine community. *Marine Ecology Progress Series* 400: 277-282.
 - Taggart, J. B., and Z. T. Long. Effects of white-tailed deer on the maritime forest of Bald Head Island, North Carolina.. In review at *Journal of the Torrey Botanical Society*
 - **Long, Z. T. S. R. Fegley, and C. H. Peterson. Soil amendments and plant diversity accelerate the restoration of dune plant communities. *Plant Ecology***
 - The legacy of deer overabundance: long-term delays in wildflower community recovery. Pendergast et al. In prep
 - **Parnell and Long. Diversity influences dune plant above and below ground production by different mechanisms. In prep**
 - **Ramus and Long. The effects of an invasive species and algal diversity on the composition and functioning of subtidal food webs.**



- *"Science is facts; just as houses are made of stones, so is science made of facts; but a pile of stones is not a house and a collection of facts is not necessarily science." – Henri Poincaré*

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Functioning – a quantifiable process or outcome to which all species contribute (Standing stock, invasion resistance, disease resistance, Carbon sequestration...)

An aerial photograph of a coastal island with green vegetation and sandy beaches, surrounded by shallow, greenish water. A diagram is overlaid on the top left, featuring a central blue oval with the text 'Causes and consequences of diversity'. Three lines extend downwards from this oval to three rectangular boxes containing the words 'Natural History', 'Theory', and 'Experiment' respectively, arranged from left to right.

Causes and consequences of
diversity

Natural History

Theory

Experiment









