

# Report on LTER working group proposal, “Coastal Wetland Ecology and Geomorphology”

Steven Pennings, University of Houston.

September 18, 2013

This working group grew out of a previous working group (Modeling Wetland Processes) organized by S. Pennings and A. Burd at the 2012 LTER ASM. The ASM working group was successful, with participants concluding that models of wetland processes had matured to the point that they could be a useful organizing framework for a synthesis that would explain geographic differences among wetland sites. The goal of the current working group was to integrate coastal LTER sites with other (non-LTER) coastal sites to develop a synthetic framework for understanding coastal wetland function. We convened two workshops to discuss relationships between geomorphology, ecosystems processes and community ecology, and how these relationships might vary geographically. The group developed a conceptual framework for understanding coastal wetland function along the Atlantic, Gulf and West Coasts of the United States. Participants felt that the hypotheses we discussed were compelling, and that modeling and remote sensing approaches had both matured to the point that a geographic synthesis at the continental scale was possible; however, critical data needed for such a synthesis are currently lacking. The group submitted a Macrosystems Biology proposal to NSF in March 2013 requesting funds to collect data and conduct a continental synthesis of our hypotheses. In addition, with help from a number of the workshop participants, Pennings organized a distributed graduate course, “Linking biology and geomorphology in coastal wetlands (and other habitats)”, that is currently (Fall semester 2013) being taught over the internet with over 140 participants.

*Workshop 1: Athens Georgia, January 9-11, 2013*

## **Attending in person**

Steven Pennings, University of Houston  
Zoe Hughes, Boston University  
Christine Hladik, University of Georgia  
Adrian Burd, University of Georgia  
Mark Page, University of California Santa Barbara  
John Schalles, Creighton University  
Kazimierz Wieski, University of Houston  
Brian Silliman, University of Florida

## **Attending by video-conference**

Jim Morris, University of South Carolina  
Sergio Fagherazzi, Boston University

*Workshop 2: Houston Texas, February 28 to March 3, 2013*

## **Attending in person**

Steven Pennings, University of Houston  
Zoe Hughes, Boston University  
Christine Hladik, University of Georgia  
Kazimierz Wieski, University of Houston  
Britt Argow, Boston University  
Linda Blum, University of Virginia