Grant Awards - Fiscal Year 2005

Ecology of the Copper River Delta

PI: Sean Powers
Contract No: 05-10-09
Award Amount: $39,270
Term: 1/1/05-12/31/05
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Read Report

Scope of Work:
The goal of this multi-year project is to understand the special and temporal dynamics of the biological community of the Copper River Delta in order to predict how this community would respond to anthropogenic or naturally induced changes in the physical/chemical environment. Our approach to achieve this goal has been to focus on the central part of the food web (benthic invertebrates) and then to add components that focus on higher (predators) and lower trophic levels (primary producers). A collaboration among Drs. Sean Powers, U. of South Alabama, Mary Anne Bishop, PWSSC, Charles H. Peterson, UNC Chapel Hill. All field work is based out of Cordova.

The field program is designed to address four objectives.

1. Characterize the spatial abundance of macrobenthic species inhabiting intertidal sediments within the Copper River Delta and Orca Inlet, Southeast Prince William Sound.
2. Determine and quantify those factors that best serve as predictors for primary production in the overlying water and within the sediments of tidal flat communities.
3. Quantify the special and temporal abundance of demersal and avian predators and assess the role of epibenthic predation on recruitment of intertidal macroinvertebrates.
4. Develop a cost-effective strategy and sampling design for long-term monitoring of the intertidal sedimentary habitats.