

# ***Arctic Antarctic and Alpine Research***

## **Special Issue Information Form**

**Title of proposed Special Issue:** Impacts of the 2008 eruption on the terrestrial and nearshore marine ecosystems of Kasatochi Island

**Guest Editors:** Anthony DeGange (US Geological Survey), Vernon Byrd (US Fish and Wildlife Service), and Lawrence Walker (University of Nevada, Las Vegas)

**Source of Special Issue:** On August 7, 2008, the dormant volcano, Kasatochi, in the central Aleutian Islands, erupted three times. This former emerald island in the southern Bering Sea was blanketed with meters-thick deposits of hot pyroclastic surge and fall deposits that apparently obliterated the rich terrestrial and nearshore marine biotic communities on and near the island. Kasatochi Island had been an annual biological monitoring site of the US Fish and Wildlife Service since the mid-1990s and much was known of the islands' bird and marine mammal, vegetative, terrestrial arthropod and nearshore marine communities. Seizing on the opportunity to document the impacts and long-term response to the eruption, the US Fish and Wildlife Service, US Geological Survey and the University of Alaska sought funding and collaborated on four brief expeditions to Kasatochi during summer 2009. We propose to develop a series of papers that summarize our observations from these visits one-year after the eruptions and that set the stage for a longer term ecological study.

### **Preliminary list of contributors and manuscript titles:**

The 2008 eruption of Kasatochi Island: an opportunity to better understand the role of volcanoes in shaping terrestrial and marine ecosystems in the Aleutian Islands by Vernon Byrd (US Fish and Wildlife Service), Anthony DeGange (US Geological Survey), Lawrence Walker (University of Nevada, Las Vegas), and Christopher Waythomas (Alaska Volcano Observatory)

The geology of Kasatochi Island and the physical impacts of the 2008 eruption by Chris Nye (Alaska Volcano Observatory), Christopher Waythomas (AVO) and Willie Scott (Cascade Volcano Observatory)

Erosion and re-deposition of pyroclastic flow and fall deposits one year after the 2008 eruption of Kasatochi Island by Christopher Waythomas (Alaska Volcano Observatory) and Willie Scott (Cascade Volcano Observatory)

Soils by Bronwen Wang (US Geological Survey), Chien Ping (University of Alaska, Fairbanks) and Gary Michaelson (University of Alaska, Fairbanks)

Legacy effects and their implications for long-term recovery of the vegetation on Kasatochi Island by Stephen Talbot (US Fish and Wildlife Service), Sandra Talbot (US Geological Survey) and Lawrence Walker (University of Nevada, Las Vegas)

The terrestrial arthropods of post-eruptive Kasatochi Island by Derek Sikes (University of Alaska, Museum of the North) and F. Christian Thompson (University of Alaska, Museum of the North)

A comparison of breeding bird and marine mammal populations on Kasatochi Island before and after the 2008 eruption by Jeff Williams (US Fish and Wildlife Service)

Comparative at-sea observations of birds, marine mammals and fish before and after the 2008 eruption of Kasatochi Island by Gary Drew (US Geological Survey) and Don Dragoo (US Fish and Wildlife Service)

The benthic community around Kasatochi Island, one year after the 2008 volcanic eruption by Stephen Jewett (University of Alaska, Fairbanks), James Bodkin (US Geological Survey), Heloise Chenelot (University of Alaska, Fairbanks), Max Hoberg (University of Alaska, Fairbanks), and George Esslinger (US Geological Survey)

Summary and synthesis by (TBA - someone outside the team respected in volcanology and ecology)

**Proposed Timelines:**

- Submission date of manuscripts (deadline): November 13, 2009
- Revision due date: January 30, 2010
- Final manuscripts: February 26, 2010