

Education and Outreach –Adrian Howkins and Diane McKnight

STEM Outreach: Through a partnership with CU's 'Learn More About Climate' program, Ph. D. student Alex Mass has been engaging students in the Denver/Boulder area and beyond through their interest in Antarctica to promote learning in STEM fields. Alex held a Chancellor's Fellowship for Excellence in STEM Education during 2012/2013. As an aspect of this fellowship Adrian Howkins will also serve as an advisor for this component of her thesis, building on her minor in Environmental Anthropology. Through these activities we have observed how the presence of a student scientist who has *been* to Antarctica can engage children and enable them to regard science, engineering, and remote fieldwork research as a tangible future possibility. Focusing on grades 4-8, Alex has met with classrooms to discuss concepts of polar and earth sciences as well as describe life for scientists in the field. This season Alex has used Skype and an engaging blog (<http://mcmsitereview.lternet.edu/node/24>) to connect with classrooms.

LTER Schoolyard Book Series: Antarctica has connections to many parts of the world through the Antarctic Treaty System. Our children's book, *The Lost Seal* is an International Polar Year publication, and a Spanish language and bi-lingual edition of the book are planned through the schoolyard LTER series. The target audiences for these new editions will be Spanish-speaking communities in the US, and also educators in Latin America.

The English edition presents a number of paintings by schoolchildren in the US, Britain, New Zealand and Australia. To help readers relate to the Spanish and bi-lingual editions, we will include paintings from school children in Latin America. Adrian Howkins presented material from *The Lost Seal* to children in eight different classes at three schools in Argentina and Chile in the spring of 2013 (The German School of Punta Arenas in Chile, The Escuela José Manuel Balmaceda of Viña del Mar in Chile, and the Cristoforo Colombo School of Buenos Aires in Argentina). Chile and Argentina have strong connections to the Antarctic continent, and the study of Antarctica is included in the curriculum.

After introducing himself and his connection to Antarctica, Howkins read *The Lost Seal* story in Spanish with pictures and videos from LTER work in the McMurdo Dry Valleys. Following lively question and answer sessions, the schoolchildren were asked to paint pictures related to the story, which are now posted to the *The Lost Seal* section of the MCM website (<http://mcmlter.org/lostseal/search.html>). These class visits offered an excellent opportunity to talk about LTER research in a cross-cultural learning environment. In total, over 100 pictures were drawn, and we will chose a number of these to be included in the published versions of the Spanish and bi-lingual editions.

LTER SOM/DOM Characterization Workshop: We have continued to collaborate with LTER investigators from several other sites (FCE, CAP, and HJA) in advancing the use of spectroscopic methods to characterize organic material. The most recent workshop was held on May 2013 in Boulder, CO. (<http://news.lternet.edu/Article2880.html>)



Guido, Cristoforo Colombo



Gustavo, German School of Punta Arenas



Javiera, German School of Punta Arenas



Brontis, Escuela José Manuel Balmaceda