Summary Notes from GLORIA First Working Group Discussion

North American Chapter: Global Observation Research Initiative in Alpine Environments

millar, 3.17.05

Convened at MTNCLIM 2005 Conference, Chico Hot Springs Resort, Pray, MT
MTNCLIM website with Working Group postings: http://www.fs.fed.us/psw/mtnclim/

Working Group Leaders
Connie Millar          Dan Fagre
USDA Forest Service    USGS Biological Resources Division
Sierra Nevada Research Center USGS Science Center
800 Buchanan St.      Glacier National Park
Albany, CA 94706      W. Glacier, MT 59936
ph: 510-559-6435      ph: 406-888-7922
email: cmillar@fs.fed.us  dan_fagre@usgs.gov

Participants (including others who have expressed interest in participating)
Ababneh, Linah, University of Arizona linah@ltrr.arizona.edu
Bowman, Bill, Univ of Colorado bowman@spot.colorado.edu
Callaway, Ray, Univ Montana callaway@selway.umt.edu
Crawford, Grand Canyon National Park columbine_julie@yahoo.com
Dahms, Dennis, Univ of N Iowa dennis.dahms@uni.edu
Dennis, Ann, CalFlora dennis@calflora.org
Jamison, Glen, Fisheries & Oceans Canada JamiesonG@pac.dfo-mpo.gc.ca
Hik, David, Univ Alberta dhik@ualberta.ca
Jorgenson, Janet, Arctic Nat'l Wildlife Refuge janet_jorgenson@fws.gov
Schrag, Ann, Montana State Univ aschrag@montana.edu
Landry, Chris, Ctr Snow & Avalanche Studies clandry@snowstudies.org
Millar, Bruce, Yoho National Park, BC millar@monarch.net
Mitchell, Steve, Oregon State Univ Stephen.Mitchell@oregonstate.edu
Moore, Peggy, Yosemite National Park peggymoore@usgs.gov
Nydick, Koren, Mountain Studies Institute koren@mountainstudies.org
Peterson, Dave, USFS, PNW Research Stn wild@u.washington.edu
Pritchett, Daniel, Univ California skysailors@wmrs.edu
Rochefort, Regina, National Park Service regina_rochefort@nps.gov
Safran, Hugh, US Forest Service hughsafran@fs.fed.us
Smiley, John, Univ California jsmiley@wmrs.edu
Smith, Dan, Univ Victoria smith@uvic.ca
Swerhun, Kristina, Arrowsmith Bio Reserve kswerhun@hotmail.com
Welker, Jeff, Univ Wyoming Jeff@uwyo.edu

GLORIA-International Program Office
Grabherr, Georg, Univ Vienna, Austria georg.grabherr@univie.ac.at
Pauli, Hari, Univ Vienna, Austria pauli@pflaphy.pph.univie.ac.at

International GLORIA Website: http://www.gloria.ac.at/res/gloria_home/

The Global Observation Initiative in Alpine Environments (GLORIA) is an international science program based in Vienna, Austria that promotes monitoring the responses of high-elevation plants to longterm climate change. GLORIA capitalizes on standardized protocols developed by a wide collaboration of scientists, and exploits the relative comparability of alpine summit environments worldwide. The basic
GLORIA approach depends on “Multi-Summit Target Regions”, for which inventory and monitoring are prescribed on four mountain summits per target region. The summits are selected to be within a single bioclimatic region and to extend from treeline elevation to the nival zone. Sites are instrumented with temperature dataloggers, and are extensively photo-documented. All data are archived at the international headquarters and data are available to all interested scientists. To date, over 30 multi-summit target regions have been installed in Europe and elsewhere. With the completion of the first target regions in the United States (Glacier National Park, MT; Sierra Nevada, CA; and White Mountains, CA), CIRMOUNT proposes a North American GLORIA Chapter.

Working Group Goals

Establish a North American GLORIA Chapter to:

1. Promote coordinated and integrated monitoring of alpine floral response to climate change in western North American mountains using the GLORIA multi-summit Target Region approach.

2. Promote research on other aspects of alpine ecology beyond those in the standard GLORIA approach, including additional floral diversity assessments, animal ecology, carbon issues, substrate relationships, etc.

Working Group Actions – 2-Year-Horizon

By 2007, the Working Group seeks to:

1. Install 2-3 new GLORIA Target Regions strategically located in western North American mountains.

2. Develop a research approach for extending Target Regions to investigate other aspects of alpine ecology, provide examples.

3. Coordinate fund-raising to support installation and analysis of existing and new GLORIA sites in North America.

Sites (and Coordinators) with Interest to Install New GLORIA Multi-Summit Target Regions (* = high intent)

1. *North Cascades, WA: Steve Mitchell and Regina Rochefort (1 or 2 new Target Regions)
2. *Vancouver Island and Mainland, BC: Kristina Swerhun with Glen Jamison & Dan Smith (1 or 2 new Target Regions)
3. Wind River Mtns, WY: Dennis Dahms (1 or 2 new Target Regions)
4. *San Juan Mtns, CO: Koren Nydick & Chris Landry (1 or 2 new Target Regions)
5. *Niwot LTER, Rocky Mtns, CO: Bill Bowman
6. Greater Yellowstone National Park: Anne Kunzig
7. White Mountains, CA: John Smiley, Ann Dennis, Daniel Pritchett

Coordination Needed

The CIRMOUNT GLORIA Working Group will benefit by coordinating with other CIRMOUNT Working Groups:

- Mountain Monitoring Network (Redmond)
- Hydrologic Observatories (Bales, Dettinger)
- International Collaborations (Greenwood)
- Ecosystem Responses (Littell, Hicke)

and with the International GLORIA Program Office (Grabherr and Pauli)