



# **CLIMATE CHANGE INSTITUTE**

## *Annual Report – FY2009*

*Research Activity for the period of July 1, 2008 to June 30, 2009*



# Climate Change Institute

## Annual Report - FY 2009

*Research Activity for the period of July 1, 2008 to June 30, 2009*

### Table of Contents

Climate Change Institute	
Introduction	3
Climate Change Institute Organizational Chart	4
Summary of Accomplishments (FY2009)	5
Research Grants Submissions Analysis	5
Major Awards/Recognition	7
Research Expeditions	7
Mentoring	8
Summary of Faculty Publications	8
Goals for Next Year (FY2010)	8
Challenges and Solutions	10
Full Roster of Climate Change Institute Faculty/Staff	12
Climate Change Institute E&G & MEIF Funded Positions	14
Special Recognition/Awards/Honors received for research, scholarship, creativity	15
Publications: Abstracts/Books/Book Chapters/Journal Articles/Posters Proceedings/Technical Reports	17
Presentations: International/National/Regional/State/Local	41
Conferences/Symposia/Meetings Attended: International/National/ Regional/State/Local	49
Research Expeditions and Field Trips	53
Other Indicators	55
Media Presentations Created	56

*FY2009 Annual Report • Climate Change Institute*



Creative Activities	56
Service – To Profession	57
Service – To Department	62
Service – To College	64
Service – To University	65
Service – To University System	68
Service – To State Legislature	68
Service – To State Government Agencies	69
Service – To General Public/Local Community	69
Service – To Pre-K-12 Education	70
Service – Manuscripts/Proposal Reviewed	71
Service – Television/Radio/Newspaper Interviews	75
Service – Other	76
Special Public Service Recognition/Awards/Honors Received	76
Other (e.g. special contacts)	78



# **The Climate Change Institute – University of Maine**

## ***Introduction, Summary of Accomplishments (FY2009), Goals for Next Year (FY2010), Challenges and Solutions***

### ***Introduction***

The Climate Change Institute (CCI) is an inter- and multi-disciplinary research unit that conducts world-class research, graduate education, and environmental outreach focused on the variability of Earth's climate system, and on the interaction between humans and the natural world. Research is supported through federal grants (NSF, NASA, NOAA, EPA), private foundations (Bingham Family Trust, W.M. Keck Foundation,) and individuals (Dan and Betty Churchill Exploration Fund and others).

The over 52 faculty and staff of the Institute and 38 graduate students provide immense multidisciplinary strength in a diverse range of research themes: physical and chemical climate reconstruction, paleoecology and environmental reconstruction, anthropology and archaeology, glaciology, marine geology, ecosystems and environmental change, renewable energy and environmental monitoring, cyberinfrastructure, climate prediction and modeling, climate change impacts, policy, and sustainability (see Climate Change Organizational Chart).

CCI researchers are world acclaimed as evidenced by their numerous publications which include thousands of peer reviewed journals and books. Members of the Institute have received major national and international honors (eg., National Academy of Sciences, First SCAR Medal for Excellence in Antarctic Research among a field of 35 countries and all disciplines, several honorary PhDs, the Explorer's Club Lowell Thomas Medal, AGU and AAAS Fellows), and are routinely sought to provide high profile media appearances addressing climate change (eg., NOVA, PBS, CBS 60 Minutes, Good Morning America, NY and LA Times, NPR).

CCI has a 35-year legacy of multi-disciplinary, high profile scientific contributions (<http://www.climatechange.umaine.edu/Research/Contrib/index.html>) to the understanding of natural climate variability, human impact on climate, and the impact of climate change on humans and ecosystems. CCI scientists conduct climate change research around the globe from the deserts and highlands of Peru throughout the Andes, to the diminishing glaciers of Greenland onto the summit of Greenland, throughout the Himalayas and the Tibetan Plateau, across the vast Antarctic continent, to the rocky shores of Maine. The fact that CCI is one of the oldest such research institutes in the world is a great credit to the University of Maine and CCI's founders.

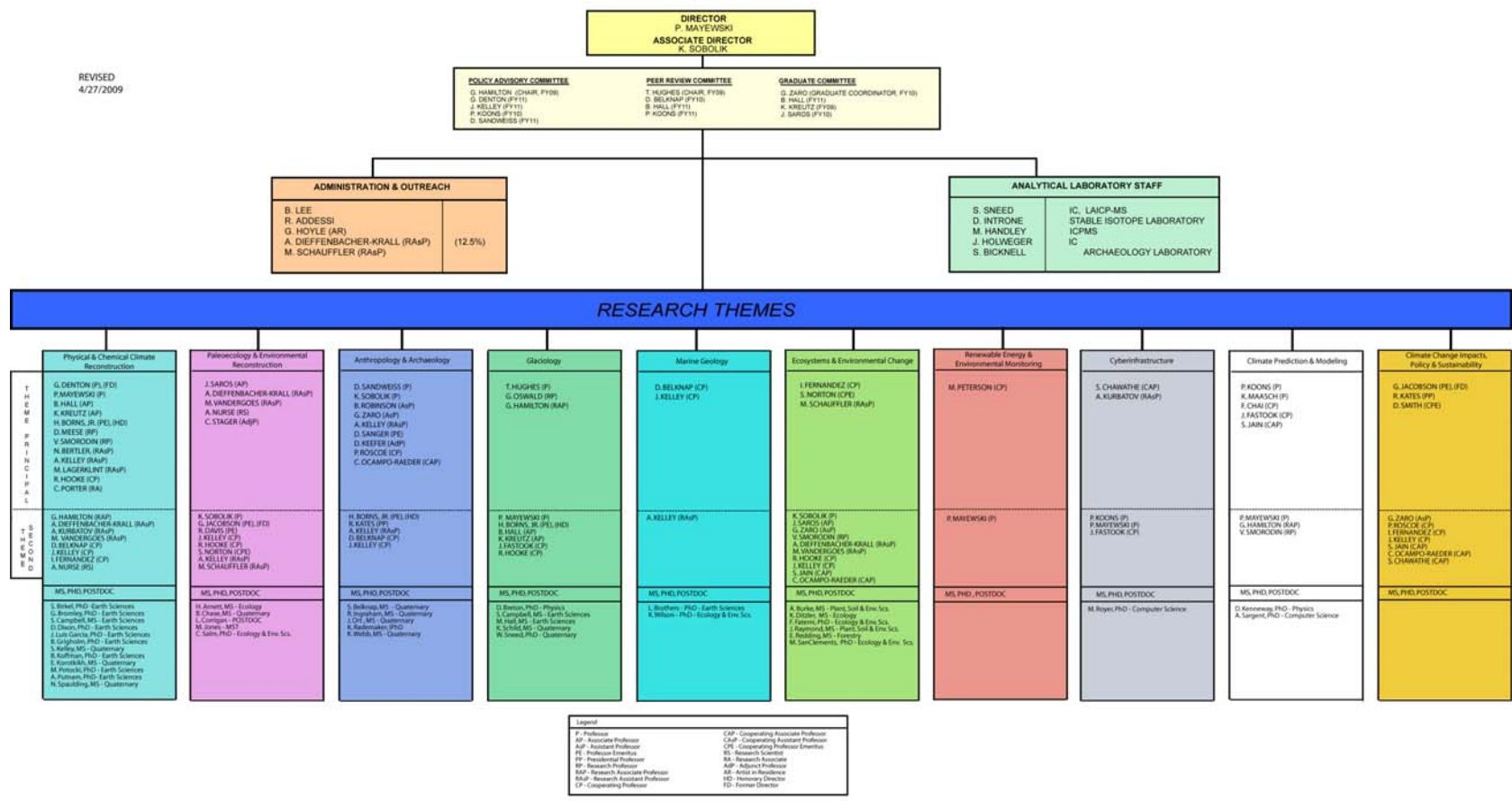


# CLIMATE CHANGE INSTITUTE



# ORGANIZATIONAL CHART

REVISED  
4/27/2009



Strong disciplinary linkages and shared faculty appointments exist between the Climate Change Institute and the following University of Maine units: Earth Sciences, Anthropology, Ecology and Environmental Sciences, Mechanical Engineering, Computer Science, Civil and Environmental Engineering, Biology and Ecology, Marine Sciences, and LAAST.

CCI researchers have extensive field experience and expertise to tackle critical, complex issues related to climate change and human adaptations to changing climates. These issues are extremely challenging, but they are particularly well suited to the character of the Institute. Physical and chemical climate change issues are deeply embedded within the fabric of local to global scale concerns over economy, health, and overall quality of life. Climate change is inevitable, but how much and its impact will define our reality and opportunities in the future. CCI's mission continues to evolve as its researchers probe further into the complexities and implications of Earth's changing climate. The Institute provides unique scientific products including:

*Long-term Perspective* in the form of records of past climate (ice cores, lacustrine cores, glacial deposits, human adaptation) from around the world.

*Climate Prediction and Planning* from local to global and long term to abrupt scales through highly detailed and innovative analysis of climate records within climate modeling perspectives.

*Positive Policy Implications* such as environmental and renewable energy planning founded on sound science.

*Technological Advances* in environmental monitoring, processing and analyses of archives containing physical and chemical climate information, and cyberinfrastructure needed to interpret climate data.

### ***Summary of Accomplishments (FY2009)***

#### **Research Grant Submissions – submitted in FY2009 – to cover period 2009 - 2011**

Research grant submissions for the Climate Change Institute totaled **\$33,785,226** for fiscal year 2009. This total reflects 108 submissions (includes new, supplemental, continuation, and pre-proposal submissions); and is exclusive of EPSCOR proposals that include Institute faculty participation.



### **New Research Grant Submission Awards – FY2009**

New research grant submissions awarded to the Climate Change Institute total **\$9,576,754** (56 grants). *Based on the FY 2008 University of Maine extramural total funding of \$45,318,451 (FY 2009 figures are not yet available) CCI contributes 21% of all such funding.*

### **Pending Research Grants Submissions – FY2009**

Research grant submissions pending for the Climate Change Institute total **\$20,635,224** (37 grants) covering FY2009 – FY2011.

### **Declined/Withdrawn Research Grant Submissions – FY2009**

Research grant awards declined for the Climate Change Institute totaled **\$3,573,248** (15 grants) during FY2009.

### **Percent Success Rate by all CCI Grant Writers for Research Grant Submissions – FY2009**

Climate Change Institute faculty and staff were **78.87% successful** in obtaining grant awards during FY2009

### **Funds via E&G and MEIF – FY2009**

E&G funding for salaries (minus fringe) totals: \$595,789

E&G funding for operating totals: \$5,877

MEIF funding for salaries (minus fringe) totals: \$463,144

MEIF funding for operating totals: \$28,350

TOTAL E&G and MEIF FUNDING: \$1,093,160



**Return on Investment (ROI) for CCI – E&G and MEIF**

FY2009 Research Grants <i>(includes all CCI faculty submissions)</i>	FY2009 Research Grants <i>(includes only faculty supported by E&amp;G and MEIF)</i>
FY2009 Research Grants Total      \$9,576,754 FY2009 E&G and MEIF Funding:    \$1,093,160	FY2009 Research Grants Total      \$7,821,271 FY2009 E&G and MEIF                \$1,093,160 Funding:
<b>ROI = CCI return on investment is \$9.79 dollars per \$1 invested in MEIF and E&amp;G</b>	<b>ROI = CCI return on investment is \$7.16 dollars per \$1 invested in MEIF and E&amp;G</b>

The table below includes all Climate Change Institute grant writers who receive E&G and or MEIF funds through CCI.

CCI Faculty/Staff	Grant Award Total FY2009	Number of Grants
Dieffenbacher-Krall	389,363	1
Denton, George	978,021	6
Hall, Brenda	337,735	5
Hamilton, Gordon	956,993	5
Hughes, Terence	223,096	1
Koons, Peter	566,716	3
Kreutz, Karl	265,762	2
Kurbatov, Andrei	407,668	1
Mayewski, Paul	3,383,082	7
Saros, Jasmine	312,835	8
<b># of Grant Writers = 10</b>		
<b>TOTAL</b>	<b>\$7,821,271</b>	<b>39</b>

The average amount raised by each CCI grant writer (10) supported by MEIF and/or E&G was \$782,127 in FY2009.

**Major Awards and Recognition:**

Twenty this year (10 last year) (maintaining CCI's high national and international standard of excellence)

**Research Expeditions:**

CCI takes great pride in its international reputation for research expeditions. All CCI graduate students are involved in at least one research expedition, many several,





during their graduate career. Students provide daily logs as part of CCI's outreach. CCI undertook 48 expeditions this past year. For details of several see: <http://climatechange.umaine.edu/Research/Expeditions/index.html>

### **Mentoring**

A total of 38 graduate students are associated with the Institute, 19 are PhD students. Research grants support 29 of the graduate students.

### **Summary of Faculty Publications – FY2009**

<b>PUBLICATION TYPE</b>	<b>FY 2009</b>	<b>FY 2008</b>
<b>Publications/Abstracts/Books/Book Chapters/Journal Articles/Posters/Proceedings/Technical Reports</b>	<b>267</b>	<b>169</b>
<b>Presentations: International/National/Regional/State Local</b>	<b>137</b>	<b>152</b>

### **Goals for Next Year (FY2010)**

CCI's future research is vitally linked to the widely accepted realization that an understanding of climate change and its implications is absolutely critical to the future of society, ecosystems, economy, and governance. As a consequence, CCI is and will continue to develop an ever-broadening agenda for interaction with other disciplines, other University of Maine research and academic units, and national and international partners. CCI is and will become even more responsive to rapidly emerging needs for the application of its findings to critical issues such as climate change induced: hazards (eg., flood, drought, heat); health (eg., heat, moisture, disease, dust, species in jeopardy); poverty (local to global); sustainability (eg., energy, agriculture, urbanization); and individual to private to governmental policy decision making.

The Institute's goals for next year are to provide:

- (1) *Long-term Perspective* in the form of records of past climate from around the world.

This goal is based on the continuation of the Institute's greatest legacy. Institute researchers have pending proposals for the collection of such records from throughout the world.



(2) *Climate Prediction and Planning* from local to global and long term to abrupt scales.

Institute researchers have a long history of developing innovative modeling (ice sheet, climate, ocean) achievements that have contributed to the understanding of, for example: ice sheet instability, sea level rise, and impact of iron fertilization on carbon sequestration. CCI has also made major strides in monitoring recent changes in the dynamics of the Greenland and Antarctic ice sheets as well as of glaciers in the Himalayas and Tibetan Plateau.

Climate models that have been used to predict future change have primarily been global scale climate circulation models designed to treat regions such as Maine with a small number of grid boxes. A new generation of climate models is emerging which allow climate simulations on scales of 10 km x 10 km and finer. CCI is currently funded through an NSF OPP research grant (Mayewski et al.) to model climate change over the Antarctic and surrounding Southern Ocean. This research will support a new CCI post-doc and two graduate students. CCI has also taken the lead in a Southern Hemisphere version of this activity under the auspices of the international research umbrella SCAR (Scientific Committee for Antarctic Research) and a version over central Asia in concert with colleagues at the British Antarctic Survey, Ohio State University, the University of Nebraska (Lincoln), and Oak Ridge National Laboratory.

CCI will also be hiring a climate modeler post-doc to undertake regional scale climate modeling centered over Maine and the Northeast. One of the most immediate intended products is to increase predictive capability for the assessment of wind strength over the Gulf of Maine as an aid to locating off shore wind power regions that are currently efficient, will continue to be so in the future, and sites that are environmentally suitable and sustainable. CCI has been a leader in assessing the state of major wind systems such as the Northern and Southern Hemisphere circumpolar westerlies. Assessing the state of the former is crucial to the future of Maine's offshore wind power plans.

(3) *Positive Policy Implications*, such as environmental and renewable energy planning founded on sound science.

During FY2009 CCI provided two major contributions to policy – the CC<sup>21</sup> conference (<http://climatechange.umaine.edu/CC21.html>) and “Maine’s Climate Future” document

(<http://climatechange.umaine.edu/mainesclimatefuture/index.html>).



The recent addition of Drs. Ivan Fernandez and Mick Peterson to CCI will greatly expand CCI's involvement in positive policy implications since they are providing leadership within CCI for two new CCI research themes: (a) ecosystems and environmental change and (b) renewable energy and environmental monitoring. In addition CCI members Drs. Fernandez, Jain, and Saros are directly associated with and will act as CCI liaisons to UM's newest EPSCoR project.

- (4) *Technological Advances* in environmental monitoring, processing and analyses of archives containing physical and chemical climate information, and cyberinfrastructure needed to interpret climate data.

CCI members Drs. Kurbatov and Chawathe have initiated a series of cyberinfrastructure activities developed to gather, synthesize, and interpret past and modern climate data (<http://www.icereader.org/icereader/>, <http://climatechange.umaine.edu/Research/software/icd.html>, <http://www.umcs.maine.edu/~chaw/p301/>). This research represents an emerging bold new approach to the field.

CCI in collaboration with LAAST will continue transformational development of equipment supported by W.M. Keck Foundation. We plan to celebrate the newly named W. M. Keck Ice Laser Facility in Fall 2009 as a major University event.

### ***Challenges and Solutions***

CCI has maintained its world class, cutting edge status as a climate change research facility. Notably it has continued to:

- (a) contribute substantially to the University's profile and federal funding,
- (b) maintained a high level of return on investment by the University and the State,
- (c) maintained an amazingly high level of proposal success rate in the most competitive federal funded agencies,
- (d) demonstrated impressive success with private foundations such as the highly competitive W.M. Keck Foundation,
- (e) and undertaken a highly active endowment and gift seeking collaboration with the University Development Office that included the first ever UM Alumni expedition to Antarctica (February 2009) and a planned expedition to Greenland for alumni in August 2010 plus numerous events and presentations for and with the Development Office, Alumni Office, and the University Foundation.



Stated plainly CCI is operating at a remarkably high level of productivity. This begs the question – how does CCI maintain this level and possibly even continue to expand its success?

CCI can maintain its high level of productivity through recognition and reward by the University. There is no doubt that Maine and the US are in budget crisis, but under existing budgetary knowledge CCI has the potential (with no additional funds from the University) to recognize and reward. The highly necessary activity is approval for a replacement glaciologist to be supported by CCI funds and jointly shared with the Department of Earth Sciences. The second is approval of research faculty positions. Currently Dr. Marci Sorg's position is pending and with CCI's increased capabilities for research in anthropology and climate impacted health. The third is approval of a title change for Ms. Betty Lee to Assistant Director with a pay increase to be supported by CCI funds in recognition of her outstanding contributions to CCI.

CCI can only continue to thrive and further expand its success with the addition of new researchers in the form of post-docs and research faculty. In this regard it is extremely important that a process be established for attracting partially funded research faculty.

Assuming CCI's proposal success of ~80% and taking just 50% of the average amount (~\$750,000) raised by each CCI grant writer supported by MEIF and/or E&G which is ~\$375,000, new research faculty, if carefully chosen and supported at 50% of the cost of an assistant professor plus benefits (~\$40,000) could likely provide a near 10:1 return on investment. CCI could easily attract several such individuals with an increase of several million dollars in research funding.



## FULL ROSTER OF CLIMATE CHANGE INSTITUTE FACULTY/STAFF

LastName	FirstName	Position in Research Unit	Home (Institute/Acad Dept)
Belknap	Daniel	Cooperating Professor	Earth Sciences/Climate Change Institute
Bertler	Nancy	Research Assistant Professor	Climate Change Institute
Borns	Harold	Professor Emeritus of Geological Sciences and Climate Change Institute	Earth Sciences/Climate Change Institute
Chai	Fei	Cooperating Associate Professor	School of Marine Sciences/Climate Change Institute
Chawathe	Sudarshan	Cooperating Assistant Professor	Computer Science/Climate Change Institute
Davis	Ronald	Professor Emeritus of Biology and Quaternary Studies	Biological Sciences/Climate Change Institute
Denton	George	Professor of Geological Sciences	Earth Sciences/Climate Change Institute
Dieffenbacher-Krall	Ann	Assistant Research Professor	Climate Change Institute/Biological Sciences
Fastook	James	Cooperating Professor	Computer Science/Climate Change Institute
Fernandez	Ivan	Cooperating Professor	Dept. of Plant, Soil & Environmental Sciences/Climate Change Institute/Climate Change Institute
Hamilton	Gordon	Research Associate Professor	
Hall	Brenda	Associate Professor of Glacial and Quaternary Geology	Climate Change Institute/Earth Sciences
Handley	Michael	Laboratory Manager - Inorganic Chemistry	Climate Change Institute/Sawyer Env. Chem. Research Lab.
Hooke	Roger	Cooperating Professor	Climate Change Institute
Hoyle	Gary	Artist in Residence	Climate Change Institute
Hughes	Terence	Professor of Quaternary Studies	Earth Sciences/Climate Change Institute
Introne	Douglas	Stable Isotope Technician	Climate Change Institute
Jacobson	George	Professor Emeritus of Quaternary Studies	Botany/Climate Change Institute
Jain	Shaleen	Cooperating Assistant Professor	Civil & Environmental Engineering/Climate Change Institute
Kates	Robert	Presidential Professor of Sustainability Science	Climate Change Institute/Senator George J. Mitchell Center for Environmental and Watershed Research
Keefer	David	Adjunct Professor	Climate Change Institute
Kelley	Alice	Research Assistant Professor	Earth Sciences/Climate Change Institute
Kelley	Joseph	Cooperating Professor	Earth Sciences/Climate Change Institute
Kellogg	Thomas	Professor Emeritus of Quaternary Studies	Earth Sciences/Climate Change Institute
Koons	Peter	Associate Professor	Earth Sciences/Climate Change Institute
Kreutz	Karl	Associate Professor	Climate Change Institute/Earth Sciences
Kurbatov	Andrei	Assistant Research Professor	Climate Change Institute
Lagerklint	Ingrid	Research Assistant Professor	Climate Change Institute
Lee	Betty	Financial & Outreach Manager	Climate Change Institute
Mayewski	Paul	Director/Professor of Climate Studies	Climate Change Institute/Earth Sciences
Maasch	Kirk	Professor of Climate Change Institute and Earth Sciences	Climate Change Institute/Earth Sciences
Meese	Debra	Research Professor	Climate Change Institute
Norton	Stephen	Cooperating Professor Emeritus	Earth Sciences/Climate Change Institute
Nurse	Andrea	Research Scientist	Climate Change Institute
Ocampo-Raeder	Constanza	Cooperating Assistant Professor	Anthropology/Climate Change Institute
Olsen	Brian	Research Assistant Professor	School of Biology & Ecology/Climate Change Institute
Oswald	Gordon	Research Professor	Climate Change Institute



## FULL ROSTER OF CLIMATE CHANGE INSTITUTE FACULTY/STAFF - continued

LastName	FirstName	Position in Research Unit	Home (Institute/Acad Dept)
Peterson	Michael	Cooperating Professor	Department of Mechanical Engineering/Climate Change Institute
Porter	Charles	Research Associate	Climate Change Institute
Robinson	Brian	Assistant Professor of Quaternary and Climate Studies	Anthropology/Climate Change Institute
Roscoe	Paul	Cooperating Professor	Anthropology/Climate Change Institute
Sandweiss	Daniel	Professor	Dean & Provost for Graduate Studies - Anthropology/Climate Change Institute
Sanger	David	Professor Emeritus of Anthropology and Quaternary Studies	Anthropology/Climate Change Institute
Saros	Jasmine	Associate Professor	Climate Change Institute/Biological Scs.
Schauffler	Molly	Research Assistant Professor	Climate Change Institute
Sobolik	Kristin	Professor/Associate Director	Anthropology/Climate Change Institute
Smith	David	Bird and Bird Professor Emeritus of History	Climate Change Institute/History
Smorodin	Vladimir	Research Professor	Climate Change Institute/Chemical & Biological Engineering
Sneed	Sharon	Laboratory Coordinator	Climate Change Institute
Stager	J.Curt	Research Associate	Climate Change Institute
Vandergoes	Marcus	Assistant Research Professor	Climate Change Institute
Zaro	Gregory	Assistant Professor of Anthropology & Climate Change	Anthropology/Climate Change Institute



## CLIMATE CHANGE INSTITUTE E&G & MEIF FUNDED POSITIONS

**Note: The Climate Change Institute faculty/staff roster numbers 52 people. Only those with CCI MEIF or CCI E&G support are listed here.**

<b>E&amp;G</b>		<b>Grant Home</b>
<b>Faculty &amp; Staff</b>		
Dieffenbacher-Krall, Ann	Assistant Research Professor (25%)	CCI
Denton, George	Libra Professor, Climate Change Institute & Earth Sciences (74%)	CCI
Hall, Brenda	Associate Professor, Climate Change Institute & Earth Sciences (70%)	CCI
Hughes, Terence	Professor, Climate Change Institute & Earth Sciences (55%)	CCI
Kreutz, Karl	Associate Professor, Climate Change Institute & Earth Sciences (100%)	CCI
Maasch, Kirk	Professor, Climate Change Institute & Earth Sciences (50%)	CCI
Robinson, Brian	Assistant Professor, Climate Change Institute & Anthropology (65%)	CCI
Saros, Jasmine	Associate Professor, Climate Change Institute & Biological Sciences (49.2%)	CCI
Sobolik, Kristin	Professor, Climate Change Institute & Anthropology (50%)	ANT
Zaro, Gregory	Assistant Professor, Climate Change Institute and Anthropology (50%)	CCI
<b>Staff (not grant writers)</b>		
Addessi, Rebecca	Account Manager (100%)	
Lee, Betty	Financial & Outreach Manager (100%)	

<b>MEIF</b>		<b>Grant Home</b>
<b>Faculty &amp; Staff</b>		
Dieffenbacher-Krall, Ann	Assistant Research Professor (12.5%)	CCI
Hamilton, Gordon	Associate Research Professor (43.49%)	CCI
Mayewski, Paul	Professor of Climate Change Institute (100%)	CCI
Koons, Peter	Associate Professor, Climate Change Institute & Earth Sciences (24.04%)	ERS
Kurbatov, Andrei	Assistant Research Professor (50%)	CCI
Saros, Jasmine	Associate Professor, Climate Change Institute & Biological Sciences (50.8%)	CCI
<b>Staff (not grant writers)</b>		
Holweger, Paul	Research Assistant (100%)	
Introne, Douglas	Stable Isotope Laboratory Manager (100%)	
Sneed, Sharon	Ion Chromatography Laboratory Manager (100%)	



## RESEARCH, SCHOLARSHIP, & CREATIVITY

### *Special Recognitions/Awards/Honors Received for Research, Scholarship, Creativity*

- Belknap, Daniel F. University of Maine Faculty Senate Outstanding Contribution Award for Chairing Academic Affairs Committee.  
Elected President of the Northeast Section, Geological Society of America 2009-2010.
- Chawathe, Sudarshan S. Inducted to Upsilon Pi Epsilon (UPE), Maine Alpha Chapter.  
UPE is the first and only existing international honor society in the Computing and Information Disciplines.
- Dieffenbacher-Krall, Ann Springer Scientific Press has renewed its invitation for me to author-edit a book about my research in northern Maine. The invitation resulted from the fact that my and Andrea Nurse's 2005 article in Journal of Paleolimnology received the most "views" of any paper published in the journal that year.
- Fernandez, Ivan CASE/Carnegie U.S. Professor of the Year (Maine-2008) – Washington DC
- Kelley, Alice Planning committee member for the Northeast Region Geological Society of America Meeting in Portland, Maine, March 2009  
Session co-chair, Northeast Region Geological Society of America Meeting in Portland, Maine, March 2009
- Kelley, Joseph American Federation Scholarship Foundation 2008 Honorary Award, Eastern Federation of Mineralogical and Lapidary Sciences  
University of Maine College of Natural Sciences, Forestry and Agriculture Graduate Student Mentor of the Year Award
- Mayewski, Paul Elected to Advisory Board, Marine Environmental Research Institute (MERI) Center for Marine Studies (2009)  
University of Maine, College of Natural Sciences, Forestry and Agriculture Outstanding Research Award (2009)  
Maine Environmental Hero Award (2008)  
Key to the City of Saco, Maine (2008)  
AAAS Fellow, American Association for the Advancement of Science (2008)
- Ocampo-Raeder, Constanza CLAS Junior Faculty Research and Creative Activity Fellowship, University of Maine (Awarded May 2008). Fellowship provided a course release for the Fall of 2008 with the purpose of developing my NSF grant application which is developed extensively and only needs complementary data from fieldwork that will be carried out this summer.  
Regular Faculty Research Fund Competition, University of Maine (Awarded December 2008). Grant for project entitled "The Waterless Realms of the Human Seascape." Funds will be used for a three-month fieldwork season in Northern Peru. Results will be incorporated into NSF Senior Research Grant to be submitted in January of 2010.  
Women in the Curriculum Research Grant, University of Maine (Awarded March 2008). Grant for Project entitled: "Señoras of the Sea, Señoras of the

*FY2009 Annual Report • Climate Change Institute*





Forest: Women and the Sustainable Management of Ocean and Rainforest Resources.” Funds were used for fieldwork in the Northern Coast and Amazon regions of Peru. Results from Amazonian research has been incorporated into an article and book project, and information collected in the Northern Coastal region is part of preliminary information needed for the preparation of NSF grant mentioned above.

IT Faculty Technology Stipend Award (Awarded May 2008). Grant for project entitled: “Ethno-Pods: An Interactive Multimedia Tool for The Understanding of Cultural Diversity.” Funds were used to purchase digital equipment and software programs to create stitched 3D spherical and cylindrical panoramic images with embedded audio, film and text links. Each ethno-pod allows students to digitally “enter” and explore the house, forest, agricultural field, or markets of a series of case studies. Results were presented at the IT Faculty Technology Fair in October, 2008, University of Maine, Orono, ME.

Roscoe, Paul B  
Sandweiss, Dan

2008 CLAS Research and Creative Achievement Award

Invited as the first Distinguished Lecturer to inaugurate Intersapiens, a university-wide, interdisciplinary program at the Pontificia Universidad Católica del Perú in Lima, Peru.



*Publications: Abstracts/Books/Book Chapters/Journal Articles/Posters/Proceedings/Technical Reports*

Name	Type	Status	Citation	Refereed	Category	GS	US
Belknap, Daniel F.	Journal Article	Published	Brothers, L.L., Belknap, D.F., Kelley, J.T. and Jantzen, C.D., 2008, Sediment transport and dispersion in a cool-temperate estuary and embayment, Saco River estuary, Maine, USA: <i>Marine Geology</i> , v. 251, p. 183-194. IF = 1.975 <a href="http://www.elsevier.com/wps/find/journaldescription.cws_home/503350/description#description">http://www.elsevier.com/wps/find/journaldescription.cws_home/503350/description#description</a>	Yes	Basic	1	0
Belknap, Daniel F.	Journal Article	Accepted	Wilson, K.R., Kelley, J.T., Croitoru, A., Dionne, M., Belknap, D.F. and Steneck, R.S., 2009 in press, Salt pools are secondary and dynamic features of the Webhannet Estuary Salt Marsh, Wells, Maine, USA: <i>Estuaries and Coasts</i> . <a href="http://www.erf.org/journal/">http://www.erf.org/journal/</a>	Yes	Basic	1	0
Belknap, Daniel F.	Journal Article	Accepted	Sandweiss, D.H., Kelley, A.R., Belknap, D.F., Kelley, J.T., Rademaker, K. and Reid, D.A., 2009 in press, GPR Identification of an early monument at Los Morteros on the Peruvian coastal desert: <i>Quaternary Research</i> , v. , p. IF = 2.224 <a href="http://www.elsevier.com/wps/find/journaldescription.cws_home/622937/description#description">http://www.elsevier.com/wps/find/journaldescription.cws_home/622937/description#description</a>	Yes	Basic	1	1
Belknap, Daniel F.	Journal Article	Submitted	Kelley, A.R., Kelley, J.T., Belknap, D.F., and Gontz, A.M., 2008 in review, Isostatically forced Holocene drainage divide shifts, Penobscot and Kennebec Rivers, Maine: <i>The Holocene</i> <a href="http://hol.sagepub.com/">http://hol.sagepub.com/</a> IF = 2.343 <a href="http://hol.sagepub.com/">http://hol.sagepub.com/</a>	Yes	Basic	0	0
Belknap, Daniel F.	Abstract	Published	Belknap, D.F., 2008, Non-invasive geoarchaeology of middens: <i>Geological Society of America Abstracts with Programs</i> , v. 40, no. 6, p. 523. (Invited Keynote). GSA Annual Meeting, Houston, TX. <a href="http://a-c-s.confex.com/crops/2008am/webprogram/Paper491117.html">http://a-c-s.confex.com/crops/2008am/webprogram/Paper491117.html</a>	Yes	Basic	0	0
Belknap, Daniel F.	Abstract	Published	Brothers, L.L., Kelley, J.T. and Belknap, D.F., 2008, An Estuarine Pockmark Field in Previously Glaciated Belfast Bay, Maine: <i>Vibracoring and Seismic Reflection Results: Geological Society of America Abstracts with Programs</i> , v. 40, no. 6, p. 225. <a href="http://a-c-s.confex.com/crops/2008am/webprogram/Paper48811.html">http://a-c-s.confex.com/crops/2008am/webprogram/Paper48811.html</a>	Yes	Applied	1	0
Belknap, Daniel F.	Abstract	Published	Wilson, K.R., Kelley, J.T. and Belknap, D.F., 2008, A characterization of salt pools and their role in significant coastal change over the past 50 years in Maine: <i>Geological Society of America Abstracts with Programs</i> , v. 40, no. 6, p. 19. <a href="http://a-c-s.confex.com/crops/2008am/webprogram/Paper48811.html">http://a-c-s.confex.com/crops/2008am/webprogram/Paper48811.html</a>	Yes	Applied	1	0
Belknap, Daniel F.	Abstract	Published	Wehmiller, J., Oches, E., Portell, R., Karrow, P., Sanford, P., Tiling, G., Belknap, D.F. and York, L., 2009, Aminostratigraphy of the marine Plio-Pleistocene of Florida – history and progress report: <i>Geological Society of America Abstracts with Programs</i> , v. 41. no. 2.	Yes	Basic	0	0



			p. 14-6. SE Section Meeting, St. Petersburg, FL, March 12-13, 2009. <a href="http://gsa.confex.com/gsa/2009SE/finalprogram/abstract_154764.htm">http://gsa.confex.com/gsa/2009SE/finalprogram/abstract_154764.htm</a>					
Belknap, Daniel F.	Abstract	Published	Belknap, D.F. and Kelley, J.T., 2009, Preservation potential and sourcing by glacial and proglacial sediments on the Maine Coast: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 84, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155741.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155741.htm</a>	Yes	Basic	0	0	
Belknap, Daniel F.	Abstract	Published	Belknap, D.F., Kelley, J.T., and Wilson, K.R., 2009, Geologic evolution of Northern New England salt marshes: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 18, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155749.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155749.htm</a>	Yes	Basic	1	0	
Belknap, Daniel F.	Abstract	Published	Brothers, L.L., Andrews, B.D., Barnhardt, W.A., Kelley, J.T. and Belknap, D.F., 2009, Pockmark field geomorphic trends from serial swath bathymetry, Belfast Bay, Maine, USA: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 84, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155989.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155989.htm</a>	Yes	Basic	1	0	
Belknap, Daniel F.	Abstract	Published	Kelley, A.R., Sandweiss, D.S., Kelley, J.T., Belknap, D.F., Rademaker, K. and Reid, D., 2009, An early monumental site at Los Morteros, Peru revealed by Ground-Penetrating Radar: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 10, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_156007.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_156007.htm</a>	Yes	Basic	1	1	
Belknap, Daniel F.	Abstract	Published	Kelley, J.T., Claesson, S.H., Belknap, D.F., Barnhardt, W.A. and Baker, A.L., 2009, A drowned, formerly inhabited bay/lake shoreline off Mount Desert Island, Maine: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 10, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155658.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155658.htm</a>	Yes	Basic	0	0	
Belknap, Daniel F.	Abstract	Published	Wilson, K.R., Kelley, J.T., Belknap, D.F., and Tanner, B.R., 2009, Salt pools in the stratigraphic record and their role in governing Surficial change in five Maine salt marshes: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 18, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155505.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155505.htm</a>	Yes	Basic	1	0	
Belknap, Daniel F.	Abstract	Published	Wilson, K.R., Kelley, J.T., Belknap, D.F., and Tanner, B.R., 2009, New salt pool description warrants reinterpretation of the stratigraphic records of Maine salt marshes: New England Estuarine Research Society, Spring Meeting, April 2-4, 2009, Salem, MA. <a href="http://www.neers.org/main/library/documents/programarchives/S2009Program.pdf">http://www.neers.org/main/library/documents/programarchives/S2009Program.pdf</a>	Yes	Basic	1	0	
Belknap, Daniel F.	Technical Report	Published	Belknap, D.F., 2008, Marine Geophysical Investigation of Proposed CAD Dredged Materials Disposal Site in Portland Harbor, Report to Transportation and Waterfront Division, City of South Portland, ME, 112 pp.		Applied	0	0	
Belknap, Daniel F.	Other	Published	Dickson, S.M., Slovinsk, P.A., Kelley, J.T., Belknap, D.F., and Brothers, L.L., 2009.		Basic	1	0	



			Coastal Storms, Sediment Budgets, and Mitigating Engineering in Saco Bay, Geological Society of America, Northeast Section Meeting, Field Trip 1, March 21, 2009, Portland, ME, 16 pp. <a href="http://www.geosociety.org/sectdiv/northe/09mtg/fieldTrips.htm">http://www.geosociety.org/sectdiv/northe/09mtg/fieldTrips.htm</a>					
Chai, F.	Journal Article	Published	Liu, G. and F. Chai (2009): Seasonal and interannual variability of primary and export production in the South China Sea: A three-dimensional physical-biogeochemical model study. ICES Journal of Marine Science, 66, 420-431.	Yes	Basic	0	0	
Chai, F.	Journal Article	Published	Polovina, J.J., F. Chai, E.A. Howell, D.R. Kobayashi, L. Shi, and Y. Chao (2008): Ecosystem dynamics at a productivity gradient: a study of the lower trophic dynamics around the northern atolls in the Hawaiian Archipelago. Progress in Oceanography, 77, 217-224	Yes		0	0	
Chai, F.	Journal Article	Published	Friedrichs, M.A.M, M-E Carr, R. T. Barber, M. Scardi, D. Antoine, R. A. Armstrong, I. Asanuma, M. J. Behrenfeld, E.T. Buitenhuis, F. Chai, J. R. Christian, A.M. Ciotti, S. C. Doney, M. Dowell, J. Dunne, B. Gentili, W. Gregg, N. Hoepffner, J. Ishizaka, T. Kameda, I. Lima, J. Marra, F. Mélin, J. Moore, A. Morel, R. T. O'Malley, J. O'Reilly, V. S. Saba, M. Schmeltz, T. J. Smyth, J. Tjiputra, K. Waters, T. K. Westberry, A. Winguth (2008): Assessing the Uncertainties of Model Estimates of Primary Productivity in the Tropical Pacific Ocean. Journal of Marine Systems, doi:10.1016/j.marsys.2008.05.010.	Yes	Basic			
Chai, F.	Journal Article	Published	Buesseler, K. O., S. C. Doney, D. M. Karl, P. W. Boyd, K. Caldeira, F. Chai, K. H. Coale, H. J. W. de Baar, P. G. Falkowski, K. S. Johnson, R. S. Lampitt, A. F. Michaels, S. W. A. Naqvi, V. Smetacek, S. Takeda, A. J. Watson (2008): Ocean Iron Fertilization--Moving Forward in a Sea of Uncertainty. Science, 11 January 2008: Vol. 319, No. 5860, p. 162?. DOI: 10.1126/science.1154305.	Yes				
Chai, F.	Journal Article	Published	Alexander, M., A. Capotondi, A. Miller, F. Chai, R. Brodeur, And C. Deser (2008), Decadal Variability In The Northeast Pacific In A Physical-Ecosystem Model: Role Of Mixed Layer Depth And Trophic Interactions. Journal Of Geophysical Research 113, C02017, Doi:10.1029/2007JC004359.	Yes				
Chai, F.	Journal Article	Accepted	Robert R. Bidigare, Fei Chai, Michael R. Landry, Roger Lukas, Cecelia C.S. Hannides, Stephanie J. Christensen, David M. Karl, Lei Shi And Yi Chao (In Press): Subtropical Ocean Ecosystem Structure Changes Forced By North Pacific Climate Variations. Journal Of Plankton Research.	Yes	Basic			
Chai, F.	Journal Article	Accepted	Fei Chai, Guimei Liu, Huijie Xue, Lei Shi, Yi Chao, Chun-Mao Tseng, Wen-Chen Chou, and Kon-Kee Liu (in press): Seasonal and Interannual Variability of Carbon Cycle in South China Sea: a Three-Dimensional Physical-Biogeochemical Modeling Study. Journal of Oceanography.	Yes	Basic			
Chai, F.	Journal Article	Accepted	Wen-Zhou Zhang, Hua-Sheng Hong, Shao-Ping Shang, Xiao-Hai Yan, Fei Chai (accepted): Strong Southward Transport Events due to Typhoons in the Taiwan Strait. Journal of Geophysical Research - Oceans.	Yes				

Chai, F.	Journal Article	Accepted	Masahiko Fujii, Fei Chai, Lei Shi, Hisayuki Inoue, and Masao Ishii (in press): Seasonal and interannual variation of oceanic carbon cycling in the western and central tropical-subtropical Pacific: A physical-biogeochemical modeling study. <i>Journal of Oceanography</i> .	Yes	Basic		
Chawathe, Sudarshan S	Proceedings	Published	Beacon placement for indoor localization using Bluetooth. Sudarshan S. Chawathe. In Proceedings of the 11th International IEEE Conference on Intelligent Transportation Systems (ITSC), Beijing, China, October 2008. <a href="http://cs.umaine.edu/~chaw/pubs/">http://cs.umaine.edu/~chaw/pubs/</a>	Yes	Basic	0	0
Chawathe, Sudarshan S	Proceedings	Accepted	Effective Whitelisting for Filesystem Forensics. Sudarshan S. Chawathe. In Proceedings of the 7th IEEE Intelligence and Security Informatics Conference (ISI), Richardson, Texas, June 2009. To appear. <a href="http://cs.umaine.edu/~chaw/pubs/">http://cs.umaine.edu/~chaw/pubs/</a>	Yes		0	0
Denton, George	Journal Article	Published	Huybers, P., and Denton, G.H., 2008, Antarctic temperature at orbital timescales controlled by local summer duration. <i>Nature Geoscience</i> 1, 787-792.	Yes	Basic	0	0
Denton, George	Journal Article	Published	Denton, G.H., and Broecker, W.S., 2008, Wobbly ocean conveyor circulation during the Holocene? <i>Quaternary Science Reviews</i> 27, 1939-1950.	Yes	Basic	0	0
Denton, George	Journal Article	Published	Massaferro, J.I., Moreno, P.I., Denton, G.H., Vandergoes, M., and Dieffenbacher-Krall, 2009, Chironomid and pollen evidence for climate fluctuations during the Last Glacial Termination in NW Patagonia. <i>Quaternary Science Reviews</i> 28, 517-525.	Yes	Basic	0	0
Denton, George	Journal Article	Published	Hall, B.A., Baroni, C., and Denton, G.H., 2008, The most extensive Holocene advance in the Stauning Alper, East Greenland, occurred in the Little Ice Age. <i>Polar Research</i> 27, 128-134.	Yes	Basic	0	0
Denton, George	Journal Article	Published	Kelly, M.A., Lowell, T.V., Hall, B.L., Schaefer, J.M., Finkel, R.C., Goehring, B.M., Alley, R.B., and Denton, G.H., 2008, A 10Be chronology of lateglacial and Holocene mountain glaciation in the Scoresby Sund region, East Greenland: implications for seasonality during lateglacial time. <i>Quaternary Science Reviews</i> 27, 2273-2282.	Yes	Basic	0	0
Denton, George	Journal Article	Published	Schaefer, J.M., Denton, G.H., Kaplan, M., Putnam, A., Finkel, R.C., Barrell, D.J.A., Andersen, B.G., Schwartz, R., Mackintosh, A., Chinn, T., and Schluchter, C., 2009, High-frequency Holocene glacier fluctuations in New Zealand differ from the northern signature, <i>Science</i> 234, 622-625.	Yes	Basic	1	0
Denton, George	Journal Article	Published	Hall, B., Baroni, C., Denton, G., Kelly, M.A., and Lowell, T., 2008, Relative sea-level change, Kjove Land, Scoresby Sund, East Greenland: implications for seasonality in Younger Dryas time. <i>Quaternary Science Reviews</i> 27, 2283-2291.	Yes	Basic	0	0
Dieffenbacher-Krall, Ann	Journal Article	Published	Massaferro, J.I., P.I. Moreno, G. Denton, M. Vandergoes, and A. Dieffenbacher-Krall. 2009. Chironomid and pollen evidence for climate fluctuations during the Last Glacial Termination in NW Patagonia. <i>Quaternary Science Reviews</i> 28: 517-525.	Yes		0	0
Dieffenbacher-Krall, Ann	Abstract	Published	Dieffenbacher-Krall, A.C., S. Birkel, H.W. Borns Jr., L. Cwynar, L.A. Doner, J. Fastook, G.L. Jacobson Jr., G.E. Chase Langlev. A.M. Nurse. and C. Savles. 2009. A multi-proxv			2	1

Fastook, James L	Journal Article	Published	reconstruction of Younger Dryas environmental conditions in Northern Maine and the validity of chironomid-inferred temperatures. GSA Abstracts with Programs 44: 42-4. James L. Fastook, James W. Head, David R. Marchant, and Francois Forget, "Tropical Mountain Glaciers on Mars: Altitude-Dependence of Ice Accumulation, Accumulation Conditions, Formation Times, Glacier Dynamics, and Implications for Planetary Spin-Axis/Orbital History", Icarus, 2008	Yes		
Fastook, James L	Proceedings	Published	R Jacobs, J L Fastook, and A Sargent, International Conference on Scientific Computing (CSC'08), 142-148, Applying SuperLU-DIST to a glacier ice sheet model, CSC3161, 2008		2	0
Fastook, James L	Proceedings	Published	MODELING NORTHERN MID-LATITUDE GLACIATION WITH GCM-DRIVEN CLIMATE: FOCUS ON DEUTERONILUS-PROTONILUS MENSAR VALLEY. J L Fastook, J W Head, J-B Madeleine, F Forget, and D Marchant, Lunar and Planetary Science Conference #40		0	0
Fastook, James L	Proceedings	Published	J. L. Fastook and J. W. Head and D. R. Marchant, DICHOTOMY BOUNDARY GLACIATION MODELS: IMPLICATIONS FOR TIMING AND GLACIAL PROCESSES, Lunar and Planetary Science XXXIX, 2008		0	0
Fastook, James L	Poster	Published	Dichotomy Boundary Glaciation Models: Implications for Timing and Glacial Processes. J. L. Fastook1 and J. W. Head, Fall AGU		0	0
Fastook, James L	Other	Published	J L Fastook, How to improve predictions of future WAIS behavior, West Antarctic Ice Sheet Initiative Workshop, 2008		0	0
Fastook, James L	Other	Published	A. Sargent and J L Fastook, Modified Morland-MacAyeal model for ice-stream flow, West Antarctic Ice Sheet Initiative Workshop, 2008		1	0
Fernandez, Ivan	Journal Article	Accepted	SanClements, Michael D., Ivan J. Fernandez, and Stephen A. Norton. 2009. Mechanisms defining spatial patterns in P fractions in a forest lake watershed at Acadia National Park, Maine, USA. For. Ecol. Manag. (in press)	Yes	1	0
Fernandez, Ivan	Journal Article	Accepted	Bethers, Suzanne, Michael E. Day, G. Bruce Wiersma, Ivan J. Fernandez and J. Alexander Elvir. 2009. Effects of chronically elevated nitrogen and sulfur deposition on sugar maple saplings: nutrition, growth and physiology. For. Ecol. Manag. (in press).	Yes	1	0
Fernandez, Ivan	Journal Article	Accepted	Dail, David Bryan, David Y. Hollinger, Eric A. Davidson, Ivan J. Fernandez, Herman C. Sievering, Neal A. Scott, and Elizabeth Gaige. 2009. Distribution of nitrogen-15 tracers applied to the canopy of a mature spruce-hemlock stand, Howland, Maine, USA. Global Change Biol. (in press).	Yes	1	0
Fernandez, Ivan	Journal Article	Published	Banaitis, Michael R., Ivan J. Fernandez, Cullen Wilson, Stephen A. Norton, and D. Bryan Dail. 2009. Biogeochemical response of a northern forest ecosystem to biosolids amendments. J. Environ. Qual. 38:792-803.	Yes	2	0
Fernandez, Ivan	Journal Article	Published	Evans, Chris D., Christine L. Goodale, Simon J.M. Caporn, Nancy B. Dise, Bridget A. Emmett, Ivan J. Fernandez, Chris D. Field, Stuart E.G. Findlay, Garv M. Lovett, Henning	Yes	0	0



			Meesenburg, Filip Moldan, and Lucy J. Sheppard. 2009. Does elevated nitrogen deposition or ecosystem recovery from acidification drive increased dissolved organic carbon loss from upland soil? A review of evidence from field nitrogen addition experiments. <i>Biogeochem.</i> 91:13–35.			
Fernandez, Ivan	Journal Article	Accepted	Navratil, Tom, Jan Rohovec, Aria Amirbahman, Stephen A. Norton, and Ivan J. Fernandez. 2009. Amorphous aluminum hydroxide control on sulfate and phosphate in sediment-solution systems. <i>Water Air Soil Pollut</i> (in press).	Yes	0	0
Fernandez, Ivan	Journal Article	Published	Campbell, John L., Lindsey E. Rustad, Elizabeth W. Boyer, Sheila F. Christopher, Charles T. Driscoll, Ivan J. Fernandez, Peter M. Groffman, Daniel Houle, Jana Kiekbusch, Alison H. Magill, Myron H. Mitchell, and Scott V. Ollinger. 2009. Consequences of climate change for biogeochemical cycling in forests of northeastern North America. <i>Can J For Res</i> 39:264-284.	Yes	0	0
Fernandez, Ivan	Journal Article	Published	Dale, Virginia H., Gregory R. Biddinger, Michael C. Newman, James T. Oris, Glenn W. Suter, Timothy Thompson, Thomas M. Armitage, Judith L. Meyer, Richelle M. Allen-King, G. Allen Burton, Peter M. Chapman, Loveday L. Conquest, Ivan J. Fernandez, Wayne G. Landis, Lawrence L. Master, William J. Mitsch, Thomas C. Mueller, Charles F. Rabeni, Amanda D. Rodewald, James G. Sanders, and Ivor L. van Heerden. 2008. Enhancing the ecological risk assessment process. <i>Integrated Environmental Assessment and Management</i> 4:306-313.	Yes	0	0
Fernandez, Ivan	Abstract	Published	Fernandez, Ivan J. 2009. Forest ecosystem response to a changing climate – Why nitrogen matters. 17th Annual Harold W. Borns, Jr. Symposium. Climate Change Institute, University of Maine, Orono, Maine. May 7-9, 2009.		0	0
Fernandez, Ivan	Abstract	Published	Norton, Stephen A., Jirí Kopáček, Tomáš Navrátil, Ivan J. Fernandez, and Aria Amirbahman. Evolution of controls on phosphorus availability in aquatic ecosystems: Peri-glacial to recent times. 17th Annual Harold W. Borns, Jr. Symposium. Climate Change Institute, University of Maine, Orono, Maine. May 7-9, 2009.		0	0
Fernandez, Ivan	Abstract	Published	SanClements, M.D., I.J. Fernandez, and S.A. Norton. 2009. Metal controls and acidity controls on forest floor and B-horizon extractable phosphorus in forested watersheds. 17th Annual Harold W. Borns, Jr. Symposium. Climate Change Institute, University of Maine, Orono, Maine. May 7-9, 2009.		1	0
Fernandez, Ivan	Abstract	Published	Norton, Stephen A., Jirí Kopáček, Tomáš Navrátil, Ivan J. Fernandez, and Aria Amirbahman. 2009. Evolution of controls on phosphorus availability in aquatic ecosystems: peri-glacial to recent times. <i>BIOGEOMON</i> 2009. June 29-July 3. Helsinki, Finland.		0	0
Fernandez, Ivan	Abstract	Published	Fatemi, Farrah R., Ivan J. Fernandez, Kevin S. Simon, D. Bryan Dail, and Lindsey E. Rustad. 2008. Response of forest soil CNP dynamics to N enrichment at the Bear Brook Watershed in Maine: Clues from extracellular enzyme activities. (Paper 596-4). Presented at the ASA-CSSA-SSSA International Meetings. Houston, Texas. October 5-9.		1	0

Fernandez, Ivan	Abstract	Published	SanClements, Michael D., Ivan J. Fernandez, Stephen A. Norton, Aria Amirbahman and Lindsey E. Rustad. 2008. Metal controls on forest floor and B horizon extractable phosphorus in forested watersheds. (Paper 596-2). Presented at the ASA-CSSA-SSSA International Meetings. Houston, Texas. October 5-9. [CD-ROM]. ASA, CSSA, SSSA, Madison, WI.			1	0
Fernandez, Ivan	Abstract	Published	Fernandez, Ivan J., Stephen A. Norton, Lindsey E. Rustad, G. Bruce Wiersma, and Kevin S. Simon. 2008. New challenges for the third decade of whole-ecosystem experimental manipulations at the Bear Brook Watershed in Maine (BBWM). (Paper 699-20). Presented at the ASA-CSSA-SSSA International Meetings. Houston, Texas. October 5-9. [CD-ROM]. ASA, CSSA, SSSA, Madison, WI.			0	0
Fernandez, Ivan	Abstract	Published	Fernandez, I.J. 2008. Carbon and nutrients in Maine forest soils. Abstract and presentation at the 11th North American Forest Soil Conference. Blacksburg, VA. p. 106.			0	0
Fernandez, Ivan	Abstract	Published	Fatemi, F.R., I.J. Fernandez, L.E. Rustad, K.S. Simon and S.A. Norton. 2008. The effects of N enrichment on forest CNP stoichiometry at the Bear Brook Watershed in Maine. Abstract and presentation at the 11th North American Forest Soil Conference. Blacksburg, VA. p. 66.			1	0
Fernandez, Ivan	Abstract	Published	SanClements, M.D., I.J. Fernandez, and S.A. Norton. 2008. Evolution of phosphorus fractions from an upland watershed to lake sediments. Abstract and presentation at the 11th North American Forest Soil Conference. Blacksburg, VA. p. 100.			1	0
Fernandez, Ivan	Abstract	Published	Nelson, S.J., I.J. Fernandez, J.S. Kahl. 2008. Mercury concentration and deposition in snow in eastern temperate North America. Eastern Snow Conference, Fairlee, VT, May 28-30, 2008.			0	0
Fernandez, Ivan	Technical Report	Published	Fernandez, Ivan J. 2008. Carbon and nutrients in Maine forest soils. Maine Agricultural and Forest Experiment Station Technical Bulletin 200. University of Maine, Orono, Maine. 24 pp.	Yes		0	0
Fernandez, Ivan	Technical Report	Published	Jacobson, G.L., I.J. Fernandez, P.A. Mayewski, and C.V. Schmitt (editors). 2009. Maine's Climate Future: An Initial Assessment. Orono, ME: University of Maine. 72 pp.	Yes		0	0
Fernandez, Ivan	Technical Report	Published	Jacobson, G.L., I.J. Fernandez, P.A. Mayewski, and C.V. Schmitt. 2009. Maine's Climate Yesterday, Today, and Tomorrow. Maine Policy Review Vol. 17, No. 2. pp. 16-23			0	0
Hall, Brenda	Journal Article	Submitted	Bromley, G., Hall, B., Stone, J., Conway, H., and Todd, C., 2009. Late Cenozoic deposits at Reedy Glacier, Transantarctic Mountains: implications for former thickness of the West Antarctic Ice Sheet. Quaternary Science Reviews, in review.	Yes	Basic	2	0
Hall, Brenda	Journal Article	Accepted	Bromley, G., Schaefer, J., Winckler, G., Hall, B., Todd, C., and Rademaker, K., 2009. Relative timing of last glacial maximum and late glacial events in the tropical Andes. Quaternary Science Reviews, in review.	Yes	Basic	2	0
Hall, Brenda	Journal Article	Accepted	Hall, B., and Stone, J., 2009 Holocene glacial history of Antarctica and the subantarctic islands. Quaternary Science Reviews, accepted pending minor revision [invited paper].	Yes	Basic	0	0



Hall, Brenda	Journal Article	Published	Esposito, R., Spaulding, S., McKnight, D., Van de Vijver, B., Koalova, K., Lubinski, D., Hall, B., and Whittaker, T., 2008. Inland diatoms from the McMurdo Dry Valleys and James Ross Island, Antarctica. <i>Botany</i> , 86, 1378-1392.	Yes	Basic	2	0
Hall, Brenda	Journal Article	Published	Hall, B., Baroni, C., and Denton, G., 2008. The most extensive Holocene advance in East Greenland occurred in the Little Ice Age. <i>Polar Research</i> , 27, 128-134.	Yes	Basic	0	0
Hall, Brenda	Journal Article	Published	Hall, B., Baroni, C., Denton, G., Kelly, M., and Lowell, T., 2008. Relative sea-level change, Kjove Land, East Greenland: Implications for seasonality in Younger Dryas time. <i>Quaternary Science Reviews</i> , 27, 2283-2291.	Yes	Basic	0	0
Hall, Brenda	Journal Article	Published	Kelly, M., Lowell, T., Hall, B., Schaefer, J., Finkel, R., Goehring, B., Alley, R., and Denton, G., 2008. A 10Be chronology of late glacial and Holocene mountain glaciation in the Scoresby Sund region, east Greenland: Implications for seasonality during late glacial time. <i>Quaternary Science Reviews</i> , 27, 2273-2282.	Yes	Basic	1	0
Hall, Brenda	Journal Article	Published	Jakobsson, M., Spiegelhagen, R., Thiede, J., Andreason, C., Hall, B., Ingolfsson, O., Kjaer, K., van Kolfshoten, T., Krinner, G., Long, A., Lunkka, J.P., Subetto, D., and Svendsen, J., 2008. Foreward to the special issue: Arctic Paleoclimate and its Extremes (APEX). <i>Polar Research</i> , 27, 97-104.	Yes	Basic	0	0
Hall, Brenda	Journal Article	Published	Whittaker, T., Hall, B., Henty, C., and Spaulding, S., 2008. Holocene surface-level changes and depositional environments at Lake Fryxell, Antarctica. <i>The Holocene</i> , 18, 775-786.	Yes	Basic	1	0
Hall, Brenda	Abstract	Published	Bromley, G., Hall, B., Stone, J., and Conway, H., 2008. Late Quaternary fluctuation of Scott Glacier in response to grounding-line retreat in the Ross Sea Embayment. 15th Annual West Antarctic Ice Sheet meeting, Sterling, VA		Basic	1	0
Hall, Brenda	Abstract	Published	Hall, B., Stone, J., Bromley, G., Conway, H., and Todd, C., 2008. History of the grounded ice sheet in the Ross Sea sector, Antarctica, at and since the LGM. 15th Annual West Antarctic Ice Sheet meeting, Sterling, VA.		Basic	2	0
Hall, Brenda	Abstract	Published	Hall, B., Bromley, G., Mietkiewicz, N., Stone, J., Conway, H., and Cowdery, S., 2008. Reconstructing Holocene ice-marginal fluctuations with relict algal mats at Reedy and Scott Glaciers. 15th Annual West Antarctic Ice Sheet meeting, Sterling, VA.		Basic	2	1
Hall, Brenda	Abstract	Published	Kelly, M., Hall, B., Lowell, T., Schaefer, J., and Denton, G., 2008. Changes in the Greenland Ice Sheet and nearby ice caps and mountain glaciers during latest Pleistocene and Holocene time. <i>Empirical Constraints on Future Sea-Level Rise</i> , Berne, Switzerland		Basic	0	0
Hall, Brenda	Abstract	Published	Hall, B., and Denton, G., 2009. Glacial chronology from the McMurdo Sound region, Antarctica: Implications for the history of the Ross Sea ice sheet. <i>Past Climates Symposium and Australasian INTIMATE meeting</i> , Wellington, New Zealand.		Basic	0	0
Hall, Brenda	Abstract	Published	Hall, B., Stone, J., Conway, H., Bromley, G., Todd, C., and Cowdery, S., 2009. History of the grounded ice sheet in the Ross Sea sector: New data from Scott and Reedy Glaciers. <i>Past Climates Symposium and Australasian INTIMATE meeting</i> , Wellington, NZ		Basic	3	0

Hamilton, Gordon	Journal Article	Submitted	Spaulding, N.E., D.A. Meese, I. Baker, P.A. Mayewski & G.S. Hamilton. A new technique for firn grain size measurements. <i>Journal of Glaciology</i> , submitted March 2009.	Yes	Basic	1	0
Hamilton, Gordon	Journal Article	Submitted	Breton, D.J. & G.S. Hamilton. Design, optimization and calibration of an automated density gauge for firn and ice cores. <i>Journal of Glaciology</i> , submitted January 2009.	Yes	Basic	1	0
Hamilton, Gordon	Journal Article	Published	Mayewski, P. A., M. P. Meredith, C. P. Summerhayes, J. Turner, A. Worby, P. J. Barrett, G. Casassa, N. A. N. Bertler, T. Bracegirdle, A. C. Naveira Garabato, D. Bromwich, H. Campbell, G. S. Hamilton, W. B. Lyons, K. A. Maasch, S. Aoki, C. Xiao, and T. van Ommen. 2009. State of the Antarctic and Southern Ocean climate system. <i>Reviews of Geophysics</i> , 47, RG1003, doi:10.1029/2007RG000231.	Yes	Basic	0	0
Hamilton, Gordon	Journal Article	Published	Nettles, M., T. Larsen, P. Elosegui, G.S. Hamilton, L.A. Stearns, A. Ahlström, J.L. Davis, M.L. Andersen, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. Step-wise changes in glacier flow speed coincide with calving and glacial earthquakes at Helheim Glacier, Greenland. <i>Geophysical Research Letters</i> , 35, L24503, doi:10.1029/2008GL036127.	Yes	Basic	0	0
Hamilton, Gordon	Journal Article	Published	Stearns, L.A., B.L. Smith & G.S. Hamilton. 2008. Increased flow speed on a large East Antarctic outlet glacier caused by subglacial floods. <i>Nature Geoscience</i> , 1, 827-831, doi: 10.1038/ngeo356.	Yes	Basic	1	0
Hamilton, Gordon	Abstract	Published	Sneed, W.A. and G.S. Hamilton. 2008. Light Field and Optical Properties Measurements of a Supraglacial Melt Pond, Eastern Greenland, <i>Eos Trans. AGU</i> , 89(53), Fall Meet. Suppl., Abstract C11E-07.		Basic	1	0
Hamilton, Gordon	Abstract	Published	Straneo, F., G.S. Hamilton, D. Sutherland, L.A. Stearns. 2008. Does Warming of the North Atlantic over the Last Decade Explain the Acceleration of Outlet Glaciers in Southeast Greenland? <i>Eos Trans. AGU</i> , 89(53), Fall Meet. Suppl., Abstract C31B-499.		Basic	0	0
Hamilton, Gordon	Abstract	Published	Khan, S.A., J. Wahr, G.S. Hamilton, L.A. Stearns, T. van Dam and O. Francis. 2008. Rapid crustal uplift due to unloading of ice from the main outlet glaciers in Greenland, <i>Eos Trans. AGU</i> , 89(53), Fall Meet. Suppl., Abstract C43A-06.		Basic	0	0
Hamilton, Gordon	Abstract	Published	Hamilton, G.S., L.A. Stearns, K.M. Schild, M. Nettles, T.B. Larsen, P. Elosegui, A.P. Ahlstrom, J.L. Davis, M.L. Andersen, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. Iceberg Calving and Flow Dynamics at Helheim Glacier, East Greenland, from Time-Lapse Photography. <i>Eos Trans. AGU</i> , 89(53), Fall Meet. Suppl., Abstract C13A-565.		Basic	1	0
Hamilton, Gordon	Abstract	Published	De Juan, J. P. Elosegui, J.L. Davis, G.S. Hamilton, L.A. Stearns, Nettles, M., T.B. Larsen, A.P. Ahlstrom, J.L. Davis, M.L. Andersen, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. Sub-daily glacier flow variations at Helheim Glacier, East Greenland, using GPS. <i>Eos Trans. AGU</i> , 89(53), Fall Meet. Suppl., Abstract C31C-518.		Basic	1	0
Hamilton, Gordon	Abstract	Published	P. Elosegui, J.L. Davis, G.S. Hamilton, L.A. Stearns, Nettles, M., T.B. Larsen, A.P. Ahlstrom, J.L. Davis, M.L. Andersen, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. Determining glacier flow with novel polar GPS svstems. <i>Eos Trans.</i>		Basic	0	0

			AGU, 89(53), Fall Meet. Suppl., Abstract G13B-657.						
Hamilton, Gordon	Abstract	Published	Nettles, M., T.B. Larsen, P. Elosegui, G.S. Hamilton, L.A. Stearns, A.P. Ahlstrom, J.L. Davis, M.L. Andersen, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. Glacier acceleration, glacial earthquakes, and ice loss at Helheim Glacier, Greenland. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract G23A-002.			Basic	0	0	
Hamilton, Gordon	Abstract	Published	Davis, J.L., P. Elosegui, G.S. Hamilton, L.A. Stearns, M.L. Andersen & T.B. Larsen. 2008. Determining the Timing of Helheim Glacial Earthquakes from Glacier-Based GPS Time Series. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract G53C-003.			Basic	0	0	
Hamilton, Gordon	Abstract	Published	Andersen, M.L., A. Ahlström, T. Larsen, Nettles, M., P. Elosegui, G.S. Hamilton, L.A. Stearns, J.L. Davis, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. Surface Energy Balance Model of the Helheim Glacier, Southeast Greenland. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract C42A-005.			Basic	1	0	
Hamilton, Gordon	Abstract	Published	Larsen, T.B., Nettles, M., P. Elosegui, G.S. Hamilton, L.A. Stearns, A.P. Ahlstrom, J.L. Davis, M.L. Andersen, J. de Juan, S.A. Khan, L. Stenseng, G. Ekstrom & R. Forsberg. 2008. East Greenland Glacier Dynamics: An Interdisciplinary Study of Helheim Glacier. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract C41A-0479.			Basic	0	0	
Hughes, Terence	Book	Published	Hughes, T., Holistic Ice Sheet Modeling: A First-Order Approach (Second Edition), 188 pages plus 16 appendices, 2009.				0	0	
Hughes, Terence	Journal Article	Published	Hughes, T., Variations in Ice-Bed Coupling Beneath and Beyond Ice Streams. Journal of Geophysical Research, Vol. 114, 20 pages, 2009.	Yes					
Hughes, Terence	Journal Article	Published	Hughes, T. Thermal Convection and the Origin of Ice Streams, Journal of Glaciology, Vol. 55, No. 191, 13 pages, 2009.	Yes					
Jain, Shaleen	Journal Article	Published	Jain, S., and J. K. Eischeid (2008), What a difference a century makes: Understanding the changing hydrologic regime and storage requirements in the Upper Colorado River basin, Geophys. Res. Lett., 35, L16401, doi:10.1029/2008GL034715.	Yes		Applied	0	0	
Jain, Shaleen	Technical Report	Published	Fernandez, I. J., G. Jacobson, S. Jain, K. Maasch, P. Mayewski, and S. Norton, Maine's Climate Yesterday, Today, And Tomorrow. In Jacobson, G. L., I. J. Fernandez, P.A. Mayewski, and C. V. Schmitt (editors). 2009. Maine's Climate Future: An Initial Assessment. Orono, ME: University of Maine.	Yes		Applied	0	0	
Jain, Shaleen	Technical Report	Published	Hart, D., S. Jain, J. Peckenham, and J. Royte, Freshwater Ecosystems. In Jacobson, G. L., I. J. Fernandez, P. A. Mayewski, and C. V. Schmitt (editors). 2009. Maine's Climate Future: An Initial Assessment. Orono, ME: University of Maine.	Yes		Applied	0	0	
Kelley, Alice	Abstract	Published	Kelley, A.R., Sandweiss, D.H., Kelley, J.T., Belknap, D.F., Rademaker, K., Reid, D., Early Monumental Site at Los Morteros, Peru Revealed by Ground-Penetrating Radar, 2009 Abstracts with Programs, vol. 41, no. 3, p 10.	Yes			1	1	
Kelley, Alice	Technical	Accepted	Sandweiss, D.H., Kelleev, A.R., Belknap, D.F., Kelleev, J. T., Rademaker, K., Reid, D.A.,	Yes			1	1	



	Report		GPR Identification of an Early Monument at Los Morteros in the Peruvian Coastal Desert, Quaternary Research					
Kelley, Alice	Technical Report	Submitted	Ground-Penetrating Radar Studies at Carroll House, report submitted to Acadia National Park, National Park Service, US Dept. of the Interior				0	0
Kelley, Alice	Other	Accepted	Kelley, A.R. and Caron, L., Surficial Geology of Pushaw Lake 7.5' Quadrangle, 1:24,000. Yes Maine Geological Survey, Augusta, Maine.				0	0
Kelley, Joseph	Book	Accepted	Kelley, J.T., Pilkey, O.H., and Cooper, J.A.G., eds., 2009, America's Most Vulnerable Shorelines. Geological Society of America Special Paper (in press).	Yes		Basic		0
Kelley, Joseph	Journal Article	Accepted	Wilson, K.R., Kelley, J.T., Croituru, A., Dionne, M., Belknap, D.F., and Steneck, R., Salt pools: mostly secondary and dynamic features of the Webhannet salt marsh, Wells, Maine, Estuaries and Coasts, under review	Yes		Basic	1	0
Kelley, Joseph	Journal Article	Submitted	Tanner, B., Uhle, M., Mora, C., Kelley, J.T., Schuneman, P., Lane, C.S., and Allen, E.S., Comparison of bulk and compound-specific <sup>13</sup> C analyses and determination of carbon sources to salt marsh sediments using n-alkane distributions, (Maine, USA), Estuarine, Coastal and Shelf Science, under review.	Yes		Basic	0	0
Kelley, Joseph	Book Chapter	Accepted	Kelley, J.T., and Brothers, L., 2009, Camp Ellis, ME: a small beach-front community with a big problem/jetty. In Kelley, J.T., Pilkey, O.H., and Cooper, J.A.G., eds., 2009, America's Most Vulnerable Shorelines. Geological Society of America Special Paper (in press).	Yes		Basic	1	0
Kelley, Joseph	Book Chapter	Published	Anderson, P., Chai, F., Kelley, J.T., Incze, L., Pershing, A., and Steneck, R., 2008, The meaning of a changed environment: Initial assessment of climate change in Maine: the Gulf of Maine, in Jacobson, G.L., Fernandez, I., Mayewski, P., and Schmidt, C., (eds.), Maine Climate Future, p. 16-22.	Yes		Applied	0	0
Kelley, Joseph	Abstract	Published	Kelley, J.T., 2008, Complex coupled human and natural systems: our inability to predict the future of developed beaches. Geological Society of America Annual Meeting Program, p. 186.	Yes		Basic	0	0
Kelley, Joseph	Abstract	Published	Wilson, K.R., Kelley, J.T., and Belknap, D.F., 2008, A characterization of salt pools and their role in significant coastal change over the past 50 years in Maine. Geological Society of America Annual Meeting Program, p. 164.	Yes			1	0
Kelley, Joseph	Abstract	Published	Brothers, L.L., Kelley, and Belknap, D.F., J.T., 2008, An estuarine pockmark fielding previously glaciated Belfast Bay, Maine: Vibracoring and seismic reflection results. Geological Society of America Annual Meeting Program, p. 195.	Yes		Basic	1	0
Kelley, Joseph	Abstract	Published	Kelley, J.T., Claesson, S., Belknap, D.F., Barnhardt, W.A. and Baker, A., 2009, A drowned, formerly inhabited bay/lake shoreline off Mount Desert Island, Maine. Geological Society of America Abstracts with Programs v 41.	Yes		Basic	1	0
Kelley, Joseph	Abstract	Published	Brothers, Laura L., Andrews, Brian D., Barnhardt, Walter A., Kelley, Joseph T., and Belknap, Daniel F., 2009. Pockmark field geomorphic trends from serial swath	Yes		Basic	1	0



			bathymetry, Belfast Bay, Maine, USA, Maine. Geological Society of America Abstracts with Programs v 41.					
Kelley, Joseph	Abstract	Published	Belknap, D.F., and Kelley, J.T., 2009, Preservation potential and sourcing by glacial and proglacial sediments on the Maine coast. Geological Society of America Abstracts with Programs v 41.	Yes	Basic	0	0	
Kelley, Joseph	Abstract	Published	Belknap, D.F., Kelley, J.T., and Wilson, K.R., 2009, Geologic evolution of northern New England salt marshes, Geological Society of America Abstracts with Programs v 41.	Yes	Basic	0	0	
Kelley, Joseph	Abstract	Published	Wilson, K.R., Kelley, J.T., Belknap, D.F. and Tanner, B., 2009, Salt pools in the stratigraphic record and their role in governing surficial change in five Maine salt marshes, Geological Society of America Abstracts with Programs v 41.	Yes	Basic	1	0	
Kelley, Joseph	Abstract	Published	Kelley, A.R., Sandweiss, D., Kelley, J.T., Belknap, D.F., and Rademaker, K., 2009, Geoarcheology, paleogeography and the search for paleoindian sites in the high Andes of Southern Peru. Geological Society of America Abstracts with Programs v 41.	Yes	Basic	1	0	
Kelley, Joseph	Abstract	Published	Kelley, J.T., Claesson, S., Belknap, D.F., Barnhardt, W.A. and Baker, A., 2009, A drowned, formerly inhabited bay/lake shoreline off Mount Desert Island, Maine. IGCP-495 Meeting in the Netherlands, June, 2009	Yes	Basic	0	0	
Kelley, Joseph	Other	Published	Dickson, S.M., Slovinsky, P.A., Kelley, J.T., Belknap, D.F., and Brothers, L., 2009, Coastal storms, sediment budgets and mitigating engineering in Saco Bay, Maine. Field trip for the Geological Society of America Northeast Section Meeting, 3/21/09.		Applied	1	0	
Koons, Peter	Journal Article	Published	Upton, P., P. O. Koons, D. Craw, C. M. Henderson, and R. Enlow (2009), Along-strike differences in the Southern Alps of New Zealand: Consequences of inherited variation in rheology, Tectonics, 28, TC2007, doi:10.1029/2008TC002353	Yes		1	0	
Koons, Peter	Journal Article	Submitted	Naus-Thijssen, F.M.J., Johnson, S.E. and Koons, P.O., in review. Modeling crenulation cleavage: a polymineralic approach, Journal Structural Geology	Yes		1	0	
Koons, Peter	Journal Article	Accepted	Johnson, S.E., Lenferink, H.J., Price, N.A., Marsh, J.H., Koons, P.O. West, D.P., Jr., and Beane, R., accepted. Clast-based kinematic vorticity gauges: the effects of slip at matrix/clast interfaces. Submitted to Journal of Structural Geology, January, 2009.	Yes		2	1	
Koons, Peter	Journal Article	Submitted	Koons, P.O. Hooks, B., Barker, A.D. Upton, P.O., Pavlis, T., 2009; Three-dimensional deformation of the southeastern Alaskan Plate Boundary; TECTONICS submission Jan, 2009	Yes		1	0	
Koons, Peter	Journal Article	Accepted	Johnson, S.E., Lenferink, H.J., Marsh, J.H., Koons, P.O. and West, D.P., Jr., in review. Kinematic vorticity analysis and evolving strength of mylonitic shear zones: new data and numerical results. Submitted to Geology, December, 2008			1	1	
Koons, Peter	Abstract	Published	Birkel, S.D., P.O.Koons, G. H. Denton, T.J. Hughes, J.L. Fastook, (2008) Climatic Implications of the Mechanical Collapse of the Laurentide Ice Sheet, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		1	0	

Koons, Peter	Abstract	Published	Perry, R.H., S.A. Norton, P.O. Koons (2008) Post-Wisconsinan Chemical Weathering Rates and Trajectories From a 13,400-Year Sediment Core Record of Lead Isotopic Ratios in Maine, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		1	0
Koons, Peter	Abstract	Published	Barker, A.D., P.O. Koons, P. Upton, B. Hallet, (2008) 3D Mechanical Models of Crustal Deformation and the Effect of Erosion on the Strain Pattern in SE Alaska, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		1	0
Koons, Peter	Abstract	Published	Hooks, B.P., P.O. Koons, T. Pavlis, P. Upton, (2008) Advective Thermal Influence on Crustal Deformation in the Southern Alaska Plate Corner, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		1	0
Koons, Peter	Abstract	Published	Price, N.A., S.E. Johnson, P.O. Koons, S.J. Seaman, (2008) Microstructural Evidence for Seismic Rupture, Post-seismic Creep, and Fluid Transport in the Frictional-to-Viscous Transition, Norumbega Fault System, Maine, USA, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		1	0
Koons, Peter	Abstract	Published	Pavlis, T.L., R. L. Bruhn, K. Ridgeway, E. Enkelmann, I. Shennan, P.O. Koons, (2008) Temporal Variations in the Structural Evolution of the St. Elias Orogen: Long term variations driven by dramatic exhumation vs short term uncertainty, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract	Yes		0	0
Koons, Peter	Abstract	Published	Price, N., S.E. Johnson, P.O. Koons, M. Yates., (2009) Microstructural record of coseismic/postseismic cycles near the base of the seismogenic zone, Sand Hill Corner mylonite zone, Norumbega fault System, Maine. Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 7.	Yes		1	0
Koons, Peter	Abstract	Published	Naus-Thijssen, F. M. J., S. E. Johnson, P.O. Koons, (2009) A polyminerallic approach to the modeling of crenulation cleavage development, Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 79.			1	0
Koons, Peter	Abstract	Published	Hooks, B. P., P.O. Koons, P. Upton, (2009) Modern Tectonics of Southern Alaska and implications to the Acadian Orogeny, Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 29.	Yes		1	0
Koons, Peter	Abstract	Published	Zeitler, P.K., P.O. Koons, (2009), Climate and rheological control in convergent margins from a geochronological perspective. Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 3.	Yes		0	0
Koons, Peter	Abstract	Published	Perry, R.H., S.A. Norton, P.O. Koons (2009), A 16.5Ka post-glacial lake sediment record of apatite weathering and depletion from Sargent Mountain Pond, Maine (USA): Implications for carbon flux and nutrient budgets on recently deglaciated landscapes. Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 5.	Yes		1	0
Kreutz, Karl	Journal Article	Published	Fisher, D., E. O. Osterberg, A. Dyke, D. Dahl-Jensen, M. Demuth, C. Zdanowicz, J. Bourgeois, R. Koerner, P. Mayewski, C. P. Wake, K. J. Kreutz, E. Steig, J. Zheng, K. Yalcin, K. Goto-Azuma, B. Luckman, and S. Ruppel (2008). The Mt. Logan Holocene-	Yes	Basic	2	0

			Wisconsinan isotope record: Tropical Pacific-Yukon connections, <i>Holocene</i> , 18(5), 667-677.					
Kreutz, Karl	Journal Article	Accepted	Arcone, S.A., and Kreutz, K.J., 2008, GPR reflection profiles of Clark and Commonwealth Glaciers in the Dry Valleys, Antarctica, <i>Annals of Glaciology</i> , in press.	Yes	Basic	0	0	
Kreutz, Karl	Journal Article	Published	Mann, J.L., Shuman, C.A., Kelly, W.R., and Kreutz, K.J., 2008, Measurement of $\delta^{34}\text{S}$ in two high-elevation snowpits by multiple-collector thermal ionization mass spectrometry (MC-TIMS) using a $^{33}\text{S}$ - $^{36}\text{S}$ double spike, <i>Geochimica et Cosmochimica Acta</i> , 72, 3907-3927.	Yes	Basic	0	0	
Kreutz, Karl	Journal Article	Published	Wanamaker, A.D., Kreutz, K.J., Wilson, T., Borns, H.W. Jr., Introne, D., and Feindel, S., 2008, Experimentally derived Mg/Ca and Sr/Ca ratios in juvenile bivalve calcite in <i>M. edulis</i> : implications for paleotemperature reconstruction, <i>Geo-Marine Letters</i> , DOI 10.1007/s00367-008-0112-8.	Yes	Basic	0	0	
Kreutz, Karl	Journal Article	Published	Crowley, T.J., Zielinski, G., Vinther, B., Udisti, R., Kreutz, K.J., Cole-Dai, J., and Castellano, E., 2008, Volcanism and the Little Ice Age, <i>PAGES News</i> , 16(2), 22-23.	Yes	Basic	0	0	
Kreutz, Karl	Abstract	Published	McConnell, J., Koch, D., Miller, R., Banta, R., Wake, C., and Kreutz, K., Assessment of Asian dust emission and transport variability to the Arctic during the past 120 years using the NASA GISS ModelE and an array of ice core records, <i>Geophysical Research Abstracts</i> , v. 11, EGU general assembly 2009.		Basic	0	0	
Kreutz, Karl	Abstract	Published	Wanamaker, A., Introne, D., Kreutz, K., and Schone, B., Reconstructing paleo-seasonality and ocean climate from the geochemistry of bivalve shells: A case study from the Gulf of Maine, AGU Fall Meeting, San Francisco, December 10-14, 2008.		Basic	0	0	
Kreutz, Karl	Abstract	Published	Osterberg, E., Sneed, S., Kreutz, K., Mayewski, P., and Fisher, D., Comparison of a 1500-year long ENSO sensitive ice core proxy record to modeled solar forcing mechanisms, AGU Fall Meeting, San Francisco, December 10-14, 2008.		Basic	0	0	
Kreutz, Karl	Abstract	Published	Dixon, D., Mayewski, P., Maasch, K., Handley, M., Sneed, S., Hamilton, G., Kreutz, K., and Carleton, A., Spatial concentration fields of trace elements and major ions over a large and highly inaccessible area of Antarctica, AGU Fall Meeting, San Francisco, December 10-14, 2008.			1	0	
Kreutz, Karl	Abstract	Published	Kreutz, K.J., Koffman, B., Mayewski, P., Kurbatov, A., Wells, M., Handley, M., and Sneed, S., Modeling Glacial- interglacial changes in dust and sea salt concentrations in West Antarctic deep ice cores: implications for Southern Hemisphere atmospheric dynamics, AGU Fall Meeting, San Francisco, December 10-14, 2008.			1	0	
Kreutz, Karl	Abstract	Published	Kelsey, E., Wake, C., Kreutz, K., and Yalcin, K., Eclipse ice core accumulation and stable isotope variability as an indicator of North Pacific climate, AGU Fall Meeting, San Francisco, December 10-14, 2008.		Basic	1	0	
Kreutz, Karl	Abstract	Published	Kreutz, K.J., Koffman, B., Mayewski, P., Kurbatov, A., Wells, M., Handley, M., and Sneed, S., Modeling Glacial- interglacial changes in dust and sea salt concentrations in		Basic	1	0	

			West Antarctic deep ice cores: implications for Southern Hemisphere atmospheric dynamics, PAGES third open science meeting, Corvallis, OR, July 5-8 2009.			
Kreutz, Karl	Abstract	Published	Lurie, M, Kreutz, K, Osterberg, E., Wake, C., Introne, D., Campbell, S., Kelsey, E., and Arcone, S., Relationship Between Snow Stable Isotope Ratios and Elevation, Denali National Park, Alaska, Arctic Workshop, Bates College, ME, April 22-23 2009.	Basic	2	1
Kreutz, Karl	Abstract	Published	Osterberg, E., Wake, C., Kreutz, K., Arcone, S., Kelsey, E., Campbell, S. and Lurie, M., Glaciochemical, Geophysical, and Stratigraphic Analyses from Kahiltna Pass, Alaska: A New Candidate Ice Core Site in Denali National Park, Alaska, Arctic Workshop, Bates College, ME, April 22-23 2009.	Basic	2	1
Kreutz, Karl	Abstract	Published	Kreutz, K., Gross, B., Osterberg, E., Handley, M., Wake, C., and Yalcin, K., Constraining recent lead pollution sources in the North Pacific using ice core stable lead isotopes, Borns Symposium, Orono, ME, May 8-9, 2009.		1	0
Kreutz, Karl	Abstract	Published	Koffman, B., Kreutz, K., Handley, M., Breton, D., Sneed, S., Wells, M., Kurbatov, A., and Mayewski, P., A snowpit record of atmospheric Fe deposition in West Antarctica at the WAIS Divide site, and updates on our continuous ice core melter system, WAIS Divide Science Meeting, Denver, CO, Oct. 4-5 2008.	Basic	2	0
Maasch, Kirk	Journal Article	Published	P.A. Mayewski, M.P. Meredith, C. P. Summerhayes, J. Turner, A. Worby, P.J. Barrett, G. Casassa, N.A.N. Bertler, T. Bracegirdle, A. C. Naveira Garabato, D. Bromwich, H. Campbell, G.H. Hamilton, W.B. Lyons, K.A. Maasch, S. Aoki, C. Xiao, 2009, State of the Antarctic and Southern Ocean climate system, Rev. Geophys., 47, RG1003, doi:10.1029/2007RG000231.	Yes	0	0
Maasch, Kirk	Journal Article	Published	McNally, L.K., III, K.A. Maasch, K.J. Zuill, 2008. The Use of Ships' Protests for Reconstruction of Synoptic-scale Weather and Tropical Storm Identification in the Late 18th Century, Weather, 63, 208-213.	Yes	0	0
Maasch, Kirk	Book Chapter	Published	Maasch, K.A., 2009. El Niño and interannual variability of climate in the western hemisphere, In El Nino, Catastrophes, and Culture Change in Ancient America, Quilter, J. and Sandweis, D. (Eds.), Dunbarton Oaks, Washington, D.C. , p. 33-55.	Yes	0	0
Maasch, Kirk	Book Chapter	Published	Oglesby, R.J., Maasch, K.A., 2009. Paleoclimate Modeling: Quaternary, In Encyclopedia of Paleoclimatology and Ancient Environments, Gornitz, Vivien (Ed.), Springer, Dordrecht, p.709-716.	Yes	0	0
Maasch, Kirk	Abstract	Published	Reusch, D.N. and Maasch, K.A., 2009. Ganderia, New Caledonia, the Carbonator, and Large Point Sinks, Geological Society of America Abstracts with Programs, Vol. 41, No. 3, p. 98.		0	0
Maasch, Kirk	Abstract	Published	Maasch, K.A., R.J. Oglesby, C.M. Rowe, and C.J. Hays, 2008. Validating WRF for North American Climate Studies: The Effects of Resolution, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract GC53A-0695.		0	0
Maasch, Kirk	Abstract	Published	Grigholm. B.. P.A. Mavewski. V. Aizen. S. Kang. S. Kaspari. and K.A. Maasch. 2008.		1	0





			Asian Ice Core Array (AICA): Climate and Environmental Reconstruction of Asia, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract GC41A-0702.				
Maasch, Kirk	Abstract	Published	Dixon, D.A., P.A. Mayewski, S.B. Sneed, M.J. Handley, K.A. Maasch, K.J. Kreutz, G.S. Hamilton, and A.M. Carleton, 2008. Asian Ice Core Array (AICA): Spatial Concentration Fields of Trace Elements and Major Ions Over a Large and Highly Inaccessible Area of Antarctica, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract C41C-0527.			2	0
Mayewski, Paul	Journal Article	Published	P.A. Mayewski, M. Meredith, C. Summerhayes, J. Turner, S. Aoki, Barrett, P. N.A.N. Bertler, T. Bracegirdle, D. Bromwich, H. Campbell, G. Casassa, A. N. Garabato, W.B. Lyons, K.A. Maasch, A. Worby, C. Xiao, 2009, State of the Antarctic and Southern Ocean Climate System (SASOCS), Reviews of Geophysics 47, RG1003, doi:10.1029/2007RG000231.	Yes		0	0
Mayewski, Paul	Journal Article	Submitted	Grigholm, B., Mayewski, P.A., Kang, S., Kaspari, S., Sneed, S., Zhang, Y., Zhang, Q., Cong, Z., in review, Atmospheric dust records from a Tibetan Ice Core: Proxy for Surface Pressure, Scalar Wind Velocity and Teleconnection with the PDO.	Yes		2	0
Mayewski, Paul	Journal Article	Accepted	Kaspari, S., P. A. Mayewski, M. Handley, E. Osterberg, S. Kang, S. Sneed, S. Hou, and D. Qin, 2009, Recent increases in atmospheric concentrations of Bi, U, Cs, S and Ca from a 350-year Mount Everest ice core record, J. Geophys. Res., 114, D04302, doi:10.1029/2008JD011088.	Yes		2	0
Mayewski, Paul	Journal Article	Submitted	Grigholm, B. Mayewski, P.A., Kurbatov, A., Sneed, S., Handley, M., and Introne, D., in review, Chemical composition of fresh snow chemistry from the Marinelli Glacier, Tierra del Fuego.	Yes		2	0
Mayewski, Paul	Journal Article	Published	Aizen, V. B., Mayewski, P.A., Aizen, E., Joswiak, D., Kaspari, S., Surazakov, A., Grigholm, B., and Finaev, A., 2009, Stable isotope and chemical time series from Fedchenko Glacier firn core, Pamir, J. Glaciol. 55, 190, 275-291	Yes		3	0
Mayewski, Paul	Journal Article	Submitted	Pang, H., Hou, S., Kaspari, S., Mayewski, P., Masson-Delmotte, V., Jouzel, J., Qin, D., He, Y., and Hong, S., in review, Change of atmospheric circulation in the late 1960s indicated by a Himalayan ice core deuterium excess record.			1	0
Mayewski, Paul	Journal Article	Accepted	ACCE (Antarctic Climate Change and the Environment), in press 2009, editors J.T. Turner, P. Convey, G. di Prisco, P.A. Mayewski, D. Hodgson, E. Fahrbach, R. Bindshadler, C. Summerhayes.	Yes		0	0
Mayewski, Paul	Journal Article	Accepted	Hodgson DA, Abram N, Anderson J, Bargelloni L, Barrett P, Bentley MJ, Bertler NAN, Chown S, Clarke A, Convey P, Crame A, Crosta X, Curran M, di Prisco G, Francis, J.E., Goodwin I, Gutt J, Massé G, Masson-Delmotte V, Mayewski PA, Mulvaney R, Peck L, Pörtner H-O, Röthlisberger R, Stevens MI, Summerhayes CP, van Ommen T, Verde C, Verleyen E, Vyverman W, Wiencke C, Zane, L., in press 2009, Antarctic climate and environmental history in the pre-instrumental period. In: Turner J, Convey P, di Prisco G, Mayewski PA, Hodgson DA, Fahrbach E, Bindshadler R (eds) Antarctic Climate Change and the Environment.	Yes		0	0

Mayewski, Paul	Journal Article	Submitted	Taylor, K.C., Alley, R.B., Conway, H., Holland, D., Mayewski, P.A., Severinghaus, J.P., and Shuman, C.A., in review, Rapid draw down of a portion of the West Antarctic Ice Sheet during the last deglaciation.	Yes	0	0
Mayewski, Paul	Journal Article	Submitted	Hou, S., Pang, H., Kaspari, S., Mayewski, P.A., Masson-Delmotte, V., Jouzel, J., Li, Z., He, Y., Hong, S., and Qin, D., in review, Change of atmospheric circulation in the late 1960s indicated by a Himalayan ice core deuterium excess record.	Yes	0	0
Mayewski, Paul	Journal Article	Accepted	John Turner, Rob Arthern, David Bromwich, Gareth Marshall, Tony Worby, James Bockheim, Guido di Prisco, Cinzia Verde, Pete Convey, Howard Roscoe, Anna Jones, David Vaughan, Philip Woodworth, Ted Scambos, Alison Cook, Andrew Lenton, Josifino Comiso, Mauro Gugliemin, Colin Summerhayes, Mike Meredith, Alberto Naveira-Garabato, Steve Chown, Mark Stevens, Byron Adams, Roger Worland, Françoise Hennion, Ad Huiskes, Dana Bergstrom, Dominic Hodgson, Robert Bindshadler, Roberto Bargagli, Nicolas Metzl, Kees van der Veen, Andrew Monaghan, Kevin Speer, Steve Rintoul, Hartmut Hellmer, Stan Jacobs, Karen Heywood, David Holland, Takashi Yamanouchi, Carlo Barbante, Nancy Bertler, Carole Boutron, Seok Hong, Paul Mayewski, Jim Fastook, Kevin Newsham, Sharon Robinson, Jaume Forcarda, Phil Trathan, Victor Smetacek, Julian Gutt, Hans-Otto Pörtner, Lloyd Peck, Josep-Maria Gili, NN (Pollution), Christian Wiencke, Eberhard Fahrbach, Angus Atkinson, David Webb, Enrique Isla, Covadonga Orejas, Sergio Rossi, Jon Shanklin, in press 2009, The instrumental period. In: Turner J, Convey P, di Prisco G, Mayewski PA, Hodgson DA, Fahrbach E, Bindshadler R (eds) Antarctic Climate Change and the Environment.	Yes	0	0
Mayewski, Paul	Journal Article	Submitted	Osterberg, E.C., Mayewski, P.A., Fisher, D.A., Kreutz, K.J., Maasch, K.A., and Sneed, S. B., in review, Coupled variability and forcing of El Niño and northern hemisphere atmospheric circulation over the last 1500 years, <i>Climate Dynamics</i> .	Yes	2	0
Mayewski, Paul	Journal Article	Submitted	Kurbatov, A., Mayewski, P.A., Introne, D., Sneed, S., Handley, M., West, A., Bunch, T., Wittke, J., Hamilton, D., Kennett, J., and Mercer, C., in review, Younger Dryas extraterrestrial event captured in Greenland ice.	Yes	1	0
Mayewski, Paul	Journal Article	Submitted	Dixon, D. A., Mayewski, P.A., Freeman, R., Goodwin, I., Maasch, K.A., Sneed, S.B., in review, Long term behavior of the Southern Hemisphere westerlies.	Yes	2	0
Mayewski, Paul	Journal Article	Submitted	Spaulding, N., Meese, D., Baker, I., Mayewski, P.A. and Hamilton, G., in review, A new technique for firn grain size measurements.		1	0
Mayewski, Paul	Journal Article	Published	Jacobson, G.L., I.J. Fernandez, P.A. Mayewski, and C.V. Schmitt (editors). 2009. <i>Maine's Climate Future: An Initial Assessment</i> , Orono, ME: University of Maine.	Yes	0	0
Mayewski, Paul	Journal Article	Accepted	Jacobson, G. L., Fernandez, I.J., Mayewski, P.A. and Schmitt, C.V., 2008, <i>Maine's climate yesterday, today, and tomorrow</i> , <i>Maine Policy Review</i> 17 (2), 16-23.		0	0
Mayewski, Paul	Journal Article	Submitted	Convey, P. Turner, J., DiPrisco, G., Mayewski, P.A., Hodgson, D.A., Fahrbach, E., Bindshadler, R., Gutt, J. and Summerhayes, C., in review, Antarctic climate change and the environment	Yes	0	0

Meese, Debra	Journal Article	Submitted	Spaulding, NE, D.A. Meese, I. Baker, P. A. Mayewski, G. S. Hamilton, submitted, A new technique for firn grain size measurements, <i>Journal of Glaciology</i> .	Yes		1	0
Norton, Stephen	Journal Article	Published	Kopáček, J., Hejzlar, J., and Norton, S. A., 2008, Proton production by transformations of aluminium and iron in lakes: <i>Water Research</i> , 42, 1220-1228.	Yes	Basic	0	0
Norton, Stephen	Journal Article	Published	Goss, H. V. and Norton, S. A., 2008, Contrasting chemical response to artificial acidification of three acid-sensitive streams in Maine, USA.: <i>Sci. Tot. Environ.</i> , 404, 245-252.	Yes	Basic	1	0
Norton, Stephen	Journal Article	Published	Norton, S. A., Coolidge, K., Amirbahman, A., Kopáček, J., and Bouchard, R. J., 2008, Speciation of Al, Fe, and P in recent sediment of three Maine lakes, USA: <i>Sci. Tot. Environ.</i> , 404, 276-283.	Yes	Applied	1	0
Norton, Stephen	Journal Article	Published	Wilson, T. A., Norton, S. A., Lake, B., Amirbahman, A., 2008, Sediment geochemistry of Al, Fe, and P for two oligotrophic Maine lakes during a period of acidification and recovery: <i>Sci. Tot. Environ.</i> , 404, 269-275.	Yes	Applied	2	0
Norton, Stephen	Journal Article	Published	Banaitis, M. R., Fernandez, I. J., Wilson, C., Norton, S. A., and Dail, D. B., 2009 Biogeochemical response of a northeastern forest ecosystem to biosolids amendments: <i>Tech. Rept. Waste Manahagement, J. Environ. Qual.</i> , 38, 792-803.	Yes	Applied	2	0
Norton, Stephen	Journal Article	Accepted	SanClements, M. D., Fernandez, I. J., and Norton, S. A., 2009, Soil and sediment phosphorus fractions in a forested watershed at Acadia National Park, ME, USA. <i>For. Ecol. Manag.</i> , 8p.	Yes	Basic	1	0
Norton, Stephen	Journal Article	Published	Navrátil, T., Rohovec, J., Amirbahman, A., Norton, S. A., and Fernandez, I. J., 2008, Controls of natural amorphous aluminum hydroxide on sulfate and phosphate anions in sediment-solution systems: <i>Water, Air, and Soil Poll.</i>	Yes	Basic	0	0
Norton, Stephen	Journal Article	Accepted	Kopáček, J., Hejzlar, J., Kana, J., Norton, S. A., Porcal, P., Turek, J., 2009 (in press), Trends in aluminium export from a glaciated mountain area to surface waters: Effects of soil development, atmospheric acidification, and nitrogen-saturation: <i>J. Inorg. Biochemistry</i> .	Yes	Basic	0	0
Norton, Stephen	Journal Article	Published	Porcal P., Amirbahman A., Kopáček J., Novák F., Norton S.A., 2009, Photochemical release of humic and fulvic acid-bound metals from simulated soil and streamwater. <i>J. Environ. Mon.</i> , 10.	Yes	Basic	0	0
Norton, Stephen	Abstract	Published	Fatemi, F. A., Fernandez, I. J., Rustad, L. R., Simon, K. S., and Norton, S. A., 2008, The effects of N-enrichment on forest CNP stoichiometry at the Bear brook Watershed in Maine: 11th North American Forest Soil Conference. Blacksburg, VA. p. 66.	Yes	Basic	1	0
Norton, Stephen	Abstract	Published	Perry, R. H., Koons, P. O., Norton, S. A., and Birkel, S., 2008, Post-LGM chemical weathering increase and atmospheric CO2 consumption: New insights from UMISM solutions and a proposed Malaspina Glacier water chemistry study. <i>Geol. Soc. Am. Northeast Section Annual Mtg. Buffalo, NY. Program vol. 40, #2.</i>	Yes	Basic	2	0
Norton, Stephen	Abstract	Published	Kopáček J., Norton, S. A., and Porcal, P., 2008. Phosphorus inactivation by aluminum in	Yes	Basic	0	0

			lakes and sediments: Ann. Mtg. Goldschmidt Conf., Vancouver, BC, CA.					
Norton, Stephen	Abstract	Published	Norton, S.A., Amirbahman, A., Wilson, T., and Kopáček, J., 2008, Water chemistry of lake inlets and outlet as a predictor of sediment characteristics and internal cycling of phosphorus. Ann. Mtg. Goldschmidt Conf., Vancouver, BC, CA.	Yes	Basic	1	0	
Norton, Stephen	Abstract	Published	SanClements, M., Fernandez, I., Norton, S., Amirbahman, A., and Rustad, L., 2008. Metal controls on Forest Floor and B Horizon Extractable Phosphorus in Forested Watersheds. (Paper 596-2). ASA-CSSA-SSSA International Meetings. Houston, Texas. October 5-9. [CD-ROM]. ASA, CSSA, SSSA, Madison, WI.	Yes	Basic	1	0	
Norton, Stephen	Abstract	Submitted	SanClements, M. D., Fernandez, I. J., and Norton, S. A., 2008, Evolution of phosphorus fractions from an upland watershed to lake sediments. 11th North American Forest Soil Conference. Blacksburg, VA. p.100.	Yes	Basic	1	0	
Norton, Stephen	Abstract	Published	Kahl, J. S., Diehl, M., Fernandez, I. J., Nelson, S., Norton, S. A., and Webster, K., 2008, Decadal patterns of retention of N and S in the experimental Bear Brook Watershed in Maine: Am. Geophys. Union Ann. Mtg., San Francisco.	Yes	Applied	1	0	
Norton, Stephen	Abstract	Published	Perry, R. H., Norton, S. A., Koons, P. O., 2008, Post-Wisconsinan Chemical Weathering Rates and Trajectories From a 13,400-Year Sediment Core Record of Lead Isotopic Ratios in Maine: Am. Geophys. Union Ann. Mtg., San Francisco.	Yes	Basic	1	0	
Norton, Stephen	Abstract	Published	Fernandez, Ivan J., Stephen A. Norton, Lindsey E. Rustad, G. Bruce Wiersma, and Kevin S. Simon. 2008. New challenges for the third decade of whole-ecosystem experimental manipulations at the Bear Brook Watershed in Maine (BBWM). (Paper 699-20). ASA-CSSA-SSSA International Meetings. Houston, Texas. October 5-9. [CD-ROM]. ASA, CSSA, SSSA, Madison, WI.	Yes	Basic	0	0	
Norton, Stephen	Abstract	Published	Perry, R., Norton, S., and Koons, P., 2009, A 16.5 ka post-glacial lake sediment record of apatite weathering and depletion from Sargent Mountain Pond, Maine (USA): Implications for carbon flux and nutrient budgets on recently deglaciated landscapes: Northeast Section Meeting of the Geological Society of America. Portland, Maine.		Basic	1	0	
Norton, Stephen	Abstract	Accepted	Kopáček, J. Hejzlar, J., Kana, J., Norton, S. A., 2009, Long-term trends in aluminium export from acidified, nitrogen-saturated, forest catchments and its impact on phosphorus cycling in lakes: BIOGEOMON2009, 7th International conference, Prague.	Yes	Applied	0	0	
Norton, Stephen	Abstract	Accepted	Norton, S. A., Kopáček, J., Navrátil, T., Fernandez, J., Amirbahman, A., 2009, Evolution of controls on phosphorus availability in aquatic ecosystems: peri-glacial to recent times: BIOGEOMON2009, 7th International conference, Prague.	Yes	Basic	0	0	
Norton, Stephen	Abstract	Accepted	Navrátil, T., Norton, S. A., Fernandez, I. J., 2009, Seasonal and long-term variation of stream water chemistry at Bear Brook Watershed, Maine USA: BIOGEOMON2009, 7th International conference, Prague.	Yes	Basic	0	0	
Norton, Stephen	Abstract	Accepted	SanClements, M. D., Fernandez, I. J., Norton, S. A., Rustad, L. E., 2009, Decadal responses in stream and soil Ca and Mg in an experimentally acidified and reference	Yes	Applied	1	0	

			watershed in the northeastern United States: BIOGEOMON2009, 7th International conference, Prague.						
Ocampo-Raeder, Constanza	Journal Article	Accepted	(accepted DTBA) "El Impacto de la Agricultura Indigena en la Biodiversidad del Bosque Tropical Humedo" Debate Agrario. Lima: Peru.					0	0
Ocampo-Raeder, Constanza	Book Chapter	Published	2008. Sin Culturas Nativas No Hay Papas Nativas. Editors Hancoo, J., Blas, R., Quispe, M. and R. Ugas. In Pampacorral: Catalogo de Sus Papas Nativas. Universidad Nacional Agraria La Molina: Lima.					0	0
Ocampo-Raeder, Constanza	Book Chapter	Published	2008. Embracing Ecotourism in the United States. Editors Amanda Stronza and William Durham. In Ecotourism and Conservation in the Americas. CABI Publications: Massachusetts. (Article written with Allison Pearce.)					0	0
Olsen, Brian	Journal Article	Accepted	Olsen, B.J., R. Greenberg, I.A. Liu, J.M. Felch, J.R. Walters. In Revision. Interactions between sexual and natural selection on the evolution of a plumage badge. <i>Evolutionary Ecology</i>	Yes	Basic			0	2
Olsen, Brian	Journal Article	Accepted	Greenberg, R, B.J. Olsen, M.A. Etterson. In Revision. Patterns of seasonal abundance and social segregation in inland and Coastal Plain Swamp Sparrow in a Delaware tidal marsh. <i>Condor</i> .	Yes	Basic			0	0
Olsen, Brian	Journal Article	Published	Olsen, B.J., R. Greenberg, R.C. Fleischer, and J.R. Walters. 2008. Extra-pair paternity in the swamp sparrow, <i>Melospiza georgiana</i> : Male access or female preference? <i>Behavioral Ecology &amp; Sociobiology</i> 63(2):285-294.	Yes	Basic			0	0
Olsen, Brian	Journal Article	Published	Olsen, B.J., J.M. Felch, R. Greenberg, and J.R. Walters. 2008. Causes of reduced clutch size in a tidal marsh endemic. <i>Oecologia</i> 15(3):421-435	Yes	Basic			0	1
Olsen, Brian	Book Chapter	Accepted	Etterson, M.A., B.J. Olsen, R. Greenberg, and W.G. Shriver. Solicited Manuscript under External Review. Sources, sinks, and model accuracy in Sources, Sinks, and Sustainability Across Landscapes (J. Liu, V. Hull, A. Morzillo, and John Wiens, eds.). Cambridge University Press, New York.	Yes	Basic			0	0
Olsen, Brian	Abstract	Accepted	Olsen, B.J., R. Greenberg, and J.R. Walters. August 2009. The selective forces behind bill dimorphism in the Swamp Sparrow: Natural or sexual? 127th stated meeting of the American Ornithologists' Union, Philadelphia, Pennsylvania.		Basic			0	0
Olsen, Brian	Poster	Published	Szalkowski, H.A., B.J. Olsen, and S. Warner. April 2009. The influence of relative nest predation risk on interspecific variation in parental nest defense behaviors. 2009 Joint Scientific Meeting of the Wilson Ornithological Society & the Association of Field Ornithologists, Pittsburgh, Pennsylvania.		Basic			1	1
Olsen, Brian	Other	Published	Greenberg, R., B. Olsen, B. Ballentine, S. Warner, and R. Danner. 2008. Temporal distribution of the Coastal Plain Swamp Sparrow: The importance of subspecies identification. <i>Birding Magazine</i> 40:42-49.		Basic			2	0
Oswald, Gordon	Journal Article	Submitted	Water Beneath the Greenland Ice Sheet, submitted to <i>Nature</i> , June 01 2009.		Applied			0	0

Oswald, Gordon	Proceedings	Published	Holographic Surveillance Radar, SPIE Defense, Security & Sensing Conference, Orlando, Fla., 13-17 April, 2009,	Yes	Applied	0	0
Peterson, Michael	Journal Article	Published	L. Lin, Z. Wang, M. L. Peterson, "Conditions for Bifurcation of the Longitudinal Wave in a Porous Medium", Acta Acustica United with Acustica, Volume 95, No. 2, March/April 2009, pp. 373-378.	Yes	Basic	1	0
Peterson, Michael	Journal Article	Published	Xinfeng Xie, Barry Goodell, Zhang, Dajie, Nagle, Dennis C., Qian, Yuhui, Peterson, Michael and Jody Jellison, "Characterization of carbons derived from cellulose and lignin and their oxidative behavior", Bioresource Technology, v 100, n 5, March, 2009, p 1797-1802	Yes	Applied	2	0
Peterson, Michael	Journal Article	Published	Xie, Xinfeng Goodell, Barry; Qian, Yuhui; Peterson, Michael; Jellison, Jody, "Significance of the Heating Rate on the Physical Properties of Carbonized Wood", Holzforschung, Vol. 62, (2008), pp. 591-596	Yes	Applied	2	0
Peterson, Michael	Journal Article	Published	Michael Peterson, C Wayne McIlwraith, Raoul F Reiser, System Development for In-Situ Characterization of Horse Racing Track Surfaces, Biosystems Engineering Vol. 101 No. 2 (October, 2008) 260 – 269	Yes	Applied	0	0
Peterson, Michael	Journal Article	Published	M. L. Peterson and C.W. McIlwraith, Effect of track maintenance on mechanical properties of a dirt racetrack: A preliminary study, Equine Veterinary Journal, Vol. 40, No. 6. (September 2008), pp. 602-605.	Yes	Applied	0	0
Peterson, Michael	Journal Article	Published	Jeffrey J. Thomason, Michael L. Peterson, Biomechanical and Mechanical Investigations of the Hoof-Track Interface in Racing Horses, Veterinary Clinics of North America, Equine Practice, 24 (2008) 53–77	Yes	Applied	0	0
Peterson, Michael	Journal Article	Published	Barry Goodell, Xinfeng Xie, Yuhui Qian, Geoffrey Daniel, Michael Peterson, and Jody Jellison, Carbon Nanotubes Produced from Natural Cellulosic Materials, Journal of Nanoscience and Nanotechnology, Vol.8, 2008, 1–3,	Yes	Applied	2	0
Robinson, Brian S	Journal Article	Accepted	Robinson, Brian S., Jennifer C. Ort, William E. Eldridge, Adrian L. Burke and Bertrand G. Pelletier, Paleoindian Aggregation and Social Context at Bull Brook American Antiquity.	Yes		2	0
Robinson, Brian S	Journal Article	Submitted	Robinson, Brian S., G.L. Jacobson Jr., M. Yates, A. Spiess, and E. Cowie. Atlantic Salmon, Archaeology and Climate Change in New England. Submitted to the Journal of Archaeological Science.	Yes		0	0
Robinson, Brian S	Book Chapter	Accepted	with Jennifer C. Ort. Paleoindian and Archaic Period Traditions: Particular Explanations from New England. In Hunter-Gatherer Archaeology as Historical Process, edited by Kenneth E. Sassaman and Donald H. Holly, Jr. Amerind Studies in Archaeology, University of Arizona Press.	Yes		1	0
Robinson, Brian S	Book Chapter	Accepted	Ritual and Archaeological Visibility in the Far Northeast of North America, for the Oxford Handbook of the Archaeology of Ritual and Religion. Oxford University Press.	Yes		0	0
Robinson, Brian S	Technical	Accepted	with Adrian L. Burke and Jennifer C. Ort. Testine for Paleoindian Aggregation at Bull			1	0



	Report		Brook: Final Report (BCS 0352918). Final report submitted to NSF on April 30, 2008.					
Robinson, Brian S	Technical Report	Submitted	Three-Year Progress Report for An Archaeological Coastal Research Program at the University of Maine. by Brian Robinson and List Neuman, Submitted to the Office of the Provost. May 1, 2009				0	0
Roscoe, Paul B	Journal Article	Published	Claas, Ulrike and Paul Roscoe 2009 Hot Air and the Colonialist 'Other': The German-English-Dutch Airship Expedition to New Guinea. Journal of the Royal Anthropological Institute 15:131-150. [No senior/junior author.]	Yes			0	0
Roscoe, Paul B	Journal Article	Published	Roscoe, Paul 2008 Settlement Fortification in Village and 'Tribal' Society: Evidence from Contact-era New Guinea. Journal of Anthropological Archaeology 27: 507-519.	Yes			0	0
Roscoe, Paul B	Journal Article	Published	Roscoe, Paul 2008 The Comparative Method. Compass: The Online Journal of Religious Studies 2(4):734-753. Oxford: Blackwell. [Edited and condensed version of chapter of same title in The Blackwell Companion to the Study of Religion.]	Yes			0	0
Roscoe, Paul B	Journal Article	Accepted	Roscoe, Paul 2009 Social Signaling and the Organization of Small-scale Society: The Case of Contact-era New Guinea. Journal of Archaeological Method and Theory. In press.	Yes			0	0
Roscoe, Paul B	Book Chapter	Accepted	Roscoe, Paul B. n.d. Symbolic Violence and Ceremonial Peace. In Dickhardt, M., Hermann, E., and Klenke, K. (eds.) Form, Macht, Differenz: Festschrift für Brigitta Hauser-Schäublin, Universitätsverlag Göttingen, Göttingen. In press.				0	0
Roscoe, Paul B	Book Chapter	Published	Roscoe, Paul 2008 Catastrophe and the Emergence of Political Complexity: Some Models from Social Anthropology. Climate and Catastrophe, Jeffrey Quilter and Daniel Sandweiss, eds. Washington, DC: Dumbarton Oaks.	Yes			0	0
Roscoe, Paul B	Other	Published	Roscoe, Paul 2009 Masculine Dilemmas. (Contribution to the Book Review Forum, Masculinity, Motherhood, Mockery.) Pacific Studies 32: 73-109	Yes			0	0
Roscoe, Paul B	Other	Published	Roscoe, Paul 2008 Review of: Rethinking Social Evolution: The Perspective from Middle-Range Societies, by Jérôme Rousseau, 2006. Montreal, Kingston, London, and Ithaca: McGill-Queen's University Press. Journal of Cognitive Archaeology.[Don't know page numbers because I'm in Germany]				0	0
Sandweiss, Dan	Book	Published	Sandweiss, D.H. and J. Quilter, editors 2008 El Niño, Catastrophism, and Culture Change in Ancient America. Washington, DC: Dumbarton Oaks/Harvard University Press.	Yes	Basic		0	0
Sandweiss, Dan	Journal Article	Published	Sandweiss, D.H., R. Shady S., M.E. Moseley, D.K. Keefer, and C.R. Ortloff 2009 Environmental change and economic development in coastal Peru between 5,800 and 3,600 years ago. Proceedings of the National Academy of Sciences 106:1359-1363. <a href="http://www.pnas.org/content/106/5/1359.abstract?sid=2682a6de-772f-4b17-b930-e5a6ad1891fe">http://www.pnas.org/content/106/5/1359.abstract?sid=2682a6de-772f-4b17-b930-e5a6ad1891fe</a>	Yes	Basic		0	0
Sandweiss, Dan	Book Chapter	Accepted	Sandweiss, D.H. Sandweiss, D.H. In press Early Fishing and Inland Monuments: Challenging the Maritime Foundations of Andean Civilization? In Foundations of Andean Civilization: Papers in Honor of Michael E. Moseley, ed. by J. Marcus, C. Stanish, and R. Williams. Los Angeles: Cotsen Institute of Archaeology.	Yes	Basic		0	0



Sandweiss, Dan	Book Chapter	Published	Sandweiss, D.H. and J. Quilter 2008 Climate, Catastrophe, and Culture in the Ancient Americas. In <i>El Niño, Catastrophism, and Culture Change in Ancient America</i> , ed. By DH. Sandweiss and J. Quilter, pp. 1-11. Washington DC: Dumbarton Oaks.	Yes	Basic	0	0
Sandweiss, Dan	Book Chapter	Submitted	Richardson, J.B. III and D.H. Sandweiss 2008 Climate Change, El Niño and the Rise of Complex Society on the Peruvian Coast during the Middle Holocene. In <i>El Niño, Catastrophism, and Culture Change in Ancient America</i> , ed. By DH. Sandweiss and J. Quilter, pp. 59-75. Washington DC: Dumbarton Oaks.	Yes	Basic	0	0
Sandweiss, Dan	Book Chapter	Accepted	Sandweiss, D.H. In press. Los fechados radiocarbónicos como «artefactos diagnósticos» en los primeros sitios marítimos peruanos. <i>Carbono-14 y la Arqueología Peruana</i> (working title), ed. by V. Falcón. Lima Peru: Museo Nacional de Arqueología, Antropología, e Historia.		Basic	0	0
Sandweiss, Dan	Other	Published	Sandweiss, D. and S. Delcourt 2009 The M.A. in Applied Archaeology and Current Trends in Graduate Education. <i>The SAA Archaeological Record</i> 9(1):27-28, 42. <a href="http://www.saa.org/Portals/0/SAA/Publications/thesaaarchrec/Jan09.pdf">http://www.saa.org/Portals/0/SAA/Publications/thesaaarchrec/Jan09.pdf</a>			0	0
Sandweiss, Dan	Other	Accepted	Guinea Pigs. In press in <i>Encyclopedia of Latin America</i> . Vol 1. "Amerindians through Foreign Colonization." (Washington: Facts on File), ed. by Michael J. Francis.		Basic	0	0
Saros, Jasmine	Journal Article	Published	Williamson, C.E., J.E. Saros & D.W. Schindler. 2009. Sentinels of change. <i>Science</i> 323: 887- 888.	Yes	Basic	0	0
Saros, Jasmine	Journal Article	Published	Salm, C.R., J.E. Saros, C. Martin & J.M. Erickson. 2009. Patterns of seasonal phytoplankton distribution in prairie saline lakes of the Northern Great Plains (USA). <i>Saline Systems</i> 5:1.	Yes	Basic	1	2
Saros, Jasmine	Journal Article	Published	Saros, J.E. 2009. Integrating neo- and paleolimnological approaches to refine interpretation of environmental change. <i>Journal of Paleolimnology</i> 42: 243-252.	Yes	Basic	0	0
Saros, Jasmine	Journal Article	Published	Scott, C.E., Saros, J.E., Williamson, C.E., Salm, C.R., Peters, S.C. & D.L. Mitchell. 2009. Effects of nutrients and dissolved organic matter on the response of phytoplankton to ultraviolet radiation: experimental comparison in spring versus summer. <i>Hydrobiologia</i> 619: 155-166.	Yes	Basic	2	0
Saros, Jasmine	Journal Article	Published	Kessler, K., Lockwood, R.S., Williamson, C.E. & J.E. Saros. 2008. Vertical distribution of zooplankton in subalpine and alpine lakes: Ultraviolet radiation, fish predation and the transparency-gradient hypothesis. <i>Limnology &amp; Oceanography</i> 53: 2374-2382.	Yes	Basic	0	1
Saros, Jasmine	Journal Article	Published	Peters, S.C., Lockwood, R., Williamson, C.E. & J.E. Saros. 2008. Using elemental ratios of calcium and strontium to track calcium availability in the freshwater zooplankton <i>Daphnia pulex</i> . <i>Journal of Geophysical Research-Biogeosciences</i> 113, G04023, doi:10.1029/2008JG000782.	Yes	Basic	0	1
Saros, Jasmine	Journal Article	Accepted	Salm, C.R., J.E. Saros, S.C. Fritz, C.L. Osburn & D.M. Reineke. Phytoplankton productivity across prairie saline lakes of the Great Plains (USA): A step toward deciphering patterns through lake classification models. <i>Canadian Journal of Fisheries &amp;</i>	Yes	Basic	1	0



			Aquatic Sciences, in press.					
Saros, Jasmine	Journal Article	Accepted	Williamson, C.E., C.R. Salm, S.L. Cooke & J.E. Saros. How do UV, temperature, and zooplankton influence the dynamics of alpine phytoplankton communities? <i>Hydrobiologia</i> , in press.	Yes	Basic	2	0	
Saros, Jasmine	Journal Article	Accepted	Winn, N., C.E. Williamson, R. Abbitt, K. Rose, W. Renwick, M. Henry & J.E. Saros. Modeling dissolved organic carbon (DOC) in subalpine and alpine lakes with GIS and remote sensing. <i>Landscape Ecology</i> , in press.	Yes	Basic	1	0	
Saros, Jasmine	Other	Published	Williamson, C.E. & J.E. Saros. 2008. What do lakes and reservoirs tell us about climate change? <i>EOS</i> 89 (52): 546.		Basic	0	0	
Sobolik, Kristin	Book	Accepted	Sutton, Mark Q., Kristin D. Sobolik, and Jill Gardner 2009 <i>Paleonutrition</i> . University of Arizona Press, Tucson, AZ. In Press.	Yes		0	0	
Sobolik, Kristin	Journal Article	Accepted	Leach, Jeff and Kristin D. Sobolik 2009 High Dietary Intake of Prebiotic Inulin-type Fructans from Prehistoric Chihuahuan Desert. <i>British Journal of Nutrition</i> . In Press.	Yes		0	0	
Vandergoes, Marcus	Journal Article	Published	Massaferro, J.I., P.I. Moreno, G. Denton, M. Vandergoes, and A. Dieffenbacher-Krall. 2009. Chironomid and pollen evidence for climate fluctuations during the Last Glacial Termination in NW Patagonia. <i>Quaternary Science Reviews</i> 28: 517-525.	Yes		0	0	
Vandergoes, Marcus	Journal Article	Submitted	Aaron Putnam; Joerg M Schaefer; Marcus Vandergoes; David Barrell; George H Denton; Michael R Kaplan; Roseanne Schwartz; Robert C Finkel; Brent M Goehring; Samuel E Kelley. In situ cosmogenic <sup>10</sup> Be production rate from the Southern Alps, New Zealand. Submitted to <i>Quaternary Geology</i>	Yes		0	0	
Vandergoes, Marcus	Abstract	Published	K.G. Zink, M. Vandergoes. From Oceans to the Land; Preliminary applications of TEX86 to develop paleotemperature estimates from New Zealand Lakes. <i>Geoscience 08 meeting</i> , November 08, Wellington New Zealand.			0	0	
Vandergoes, Marcus	Abstract	Published	D.J.A. BARRELL, G.H. DENTON, B.G. ANDERSEN, T.J.H. CHINN, A.M. DOUGHTY, R.C. FINKEL, C.H. HENDY, M.R. KAPLAN, S. KELLEY, T.V. LOWELL, A.E. PUTNAM, J.M. SCHAEFER, C. SCHLÜCHTER, R. SCHWARTZ, M.J. VANDERGOES; Records of past climate changes obtained from glacier landforms, central South Island, New Zealand – an overview. <i>Past Climates meeting</i> , May 2009, Wellington New Zealand.			0	0	
Vandergoes, Marcus	Abstract	Published	A. LORREY, J. GOFF, R. NEWNHAM, J. RENWICK, M. VANDERGOES, P. WILLIAMS, M. MCGLONE, J. WILMSHURST, D.N.T. KING, B. MCFADGEN, A. FOWLER. A mid-to-late Holocene regional climate regime reconstruction for New Zealand. <i>Past Climates meeting</i> , May 2009, Wellington New Zealand.			0	0	
Vandergoes, Marcus	Abstract	Published	A.E. PUTNAM, J.M. SCHAEFER, M. VANDERGOES, D.J.A. BARRELL, G.H. DENTON, M.R. KAPLAN, R. SCHWARTZ, R.C. FINKEL, B. GOEHRING, S.E. KELLEY. Rate of in situ <sup>10</sup> Be production over the last ~10,000 years at Macaulay valley, New Zealand. <i>Past Climates meeting</i> , May 2009, Wellington New Zealand.			0	0	

Vandergoes, Marcus	Abstract	Published	M.T. RYAN, G.B. DUNBAR, M.J. VANDERGOES, M.J. HANNAH, H. NEIL, H. BOSTOCK. A preliminary 210 ka terrestrial palynomorph record from a marine sediment core, West Coast, South Island. Past Climates meeting, May 2009, Wellington New Zealand.		0	0
Zaro, Gregory D	Journal Article	Published	Zaro, Gregory, H. Builth, C. Rivera, J. Roldan, and G. Suvires (2008). Landscape evolution and human agency: Archaeological case studies from western South America and Australia. Chungará, Revista de Antropología Chilena 40, Número Especial: 261-271.	Yes	0	0
Zaro, Gregory D	Other	Published	Zaro, Gregory (2008). Book Review: The Model-Based Archaeology of Socionatural Systems, Timothy A. Kohler and Sander E. van der Leeuw, eds. Journal of Anthropological Research 64(4).		0	0

### Presentations: International/National/Regional/State/Local

Name	Date	Scope	Description	GS	US
Belknap, Daniel F.	09/24/08	State	Belknap, D.F., and Kelley, J.T., 2008, Sea-level studies from salt marsh peats in Wells: Engaging Science in the Practice of Ecosystem-Based Management, Wells National Estuarine Research Reserve, Wells, ME.	0	0
Belknap, Daniel F.	10/08/08	Other/Special	D.F. Belknap: Penobscot Bay Pockmarks - presented to petroleum exploration geologists at Shell Research, Houston, TX. Invited by R. Craig Shipp for information for his research group and to form potential relationships of interest to Shell for methane gas pockmark formation processes in modern and ancient ocean margins.	0	0
Belknap, Daniel F.	10/08/08	International	Belknap, D.F., 2008, Non-invasive geoarchaeology of middens: Geological Society of America Abstracts with Programs, v. 40, no. 6, p. 523. (Invited Keynote). GSA Annual Meeting, Houston, TX. <a href="http://a-c-s.confex.com/crops/2008am/webprogram/Paper49117.html">http://a-c-s.confex.com/crops/2008am/webprogram/Paper49117.html</a>	0	0
Belknap, Daniel F.	03/22/09	Regional	Belknap, D.F., Kelley, J.T., and Wilson, K.R., 2009, Geologic evolution of Northern New England salt marshes: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 18, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155749.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155749.htm</a>	1	0
Belknap, Daniel F.	03/23/09	Regional	Belknap, D.F. and Kelley, J.T., 2009, Preservation potential and sourcing by glacial and proglacial sediments on the Maine Coast: Geological Society of America Abstracts with Programs, v. 41, no. 3, p. 84, NE Section Meeting, Portland, ME, March 22-24, 2009. <a href="http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155741.htm">http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155741.htm</a>	0	0
Belknap, Daniel F.	05/07/09	Local	Belknap, D.F., Kelley, J.T. and Wilson, K.R., 2009, Are Maine's marshes drowning - or could they soon?: Borns Symposium, Climate Change Institute, University of Maine, Orono. <a href="http://www.climatechange.umaine.edu/HaroldWBorns/index.html">http://www.climatechange.umaine.edu/HaroldWBorns/index.html</a>	1	0
Borns Jr., Harold W.		State	15 public lectures on Maine's Ice Age Trail and on the Ice Age in Maine: Down East to historical societies. and	0	0



			high schools, service clubs, etc.		
Chai, F.	10/2008	International	Ecosystem Modeling Intercomparison		
Chai, F.	10/2008	International	Modeling Marine Ecosystem and Carbon Cycle in the China Seas		
Chai, F.	12/2008	National	Modeling Peru Upwelling System, From Physics to Fish		
Chai, F.	3/2009	International	Modeling Marine Ecosystem and Carbon Cycle in the China Seas		
Chai, F.	8/2008	International	Ecosystem Forecasting for Coastal Regions		
Chawathe, Sudarshan S	October 2008	International	Beacon placement for indoor localization using Bluetooth. Sudarshan S. Chawathe. In Proceedings of the 11th International IEEE Conference on Intelligent Transportation Systems (ITSC), Beijing, China, October 2008. <a href="http://cs.umaine.edu/~chaw/pubs/">http://cs.umaine.edu/~chaw/pubs/</a>	0	0
Chawathe, Sudarshan S	10 June 2008	International	Effective Whitelisting for Filesystem Forensics. Sudarshan S. Chawathe. In Proceedings of the 7th IEEE Intelligence and Security Informatics Conference (ISI), Richardson, Texas, June 2009. <a href="http://cs.umaine.edu/~chaw/pubs/">http://cs.umaine.edu/~chaw/pubs/</a>	0	0
Denton, George	September, 2008	International	The timing of the last glacial maximum in the Southern Hemisphere, and its bearing on the Milankovitch Theory of Ice Ages. Talk given at the Annual Meeting of the Comer Science and Education Foundation at Soldiers Grove, Wisconsin.	1	0
Denton, George	September, 2008	Regional	The lessons of past climate change applied to ongoing global change. Public lecture given at the Chicago Public Library in Chicago, Illinois on behalf of the Comer Science and Education Foundation.	0	0
Denton, George	February, 2009	International	Abrupt climate change as viewed from Greenland. Lecture presented at Victoria University of Wellington, New Zealand	0	0
Denton, George	May, 2009	International	Antarctica and the ice age puzzle. S.T. Lee Lecture in Antarctic Studies given on behalf of Victoria University of Wellington at the National Museum of New Zealand (Te Papa) in Wellington New Zealand.	0	0
Denton, George	October, 2008	State	Lecture on past climate changes given at the Climate Change 21 Symposium at the University of Maine organized by the Climate Change Institute.	0	0
Dieffenbacher-Krall, Ann	03/23/09	International	Dieffenbacher-Krall, A.C., S. Birkel, H.W. Borns Jr., L. Cwynar, L.A. Doner, J. Fastook, G.L. Jacobson Jr., G.E. Chase Langley, A.M. Nurse, and C. Sayles. March 2009. A multi-proxy reconstruction of Younger Dryas environmental conditions in Northern Maine and the validity of chironomid-inferred temperatures. NEGSA Meeting, Portland, ME.	2	1
Hall, Brenda	November 2008	Other/Special	History of the grounded ice sheet in the Ross Sea: Implications for the West Antarctic Ice Sheet, invited presentation at the University of Michigan.	3	0
Hall, Brenda	September 2008	International	Ice extent in southernmost Chile during the Mystery Interval; Comer Science and Education Foundation meeting	1	0
Hall, Brenda	September 2008	International	Late-glacial and Holocene relative sea-level changes and ice fluctuations, Scoresby Sund, East Greenland; Comer Science and Education Foundation presentation	0	0
Hall, Brenda	May 2009	International	History of the grounded ice sheet in the Ross Sea: New data from Scott and Reedy Glaciers; Past Climates Symposium and Australasian INTIMATE Meeting	2	0



Hall, Brenda	May 2009	International	Glacial chronology of the McMurdo Sound region, Antarctica; Past Climates Symposium and Australasian INTIMATE meeting	0	0
Hamilton, Gordon	3/09/2009	National	Antarctic Grounding Line Mapping; NASA Workshop on Antarctic Glaciology, Greenbelt, MD.	1	0
Hamilton, Gordon	2/26/2009	International	Rapid transmission of subtropical warming to East Greenland glacial fjords; IASC Workshop on Arctic Climate, Calgary, Alberta, Canada.	0	0
Hamilton, Gordon	3/28/2009	National	Calving of mega icebergs from East Greenland outlet glaciers; Midwest Glaciology Meeting, Chicago, IL.	1	0
Hughes, Terence	13-19 December 2008	International	An imminent revolution in understanding the interaction of ice sheets with climate/glaciology and climatology Annual Fall Meeting of the American Geophysical Union, San Francisco	0	0
Hughes, Terence	October 2008	International	Glaciology of the Bottleneck/glaciology Annual Workshop of the West Antarctic Ice Sheet Initiative (WAIS), Algonkian Regional Park, Virginia	1	0
Jain, Shaleen	October 2008	National	Ricupero, K. and S. Jain, Sustainable water allocation and instream flow policy in the New England Region: Understanding the implications of climatic variability and change. FLOW 2008, San Antonio, October 2008.	1	0
Jain, Shaleen	October 2008	Regional	Ricupero, K. and S. Jain, Sustainable water allocation and instream flow policy in the New England Region: understanding the implications of climatic variability and change. Climate Change 21 -Choices for the 21st Century (CC21), University of Maine, October 2008.	1	0
Jain, Shaleen	October 2008	Regional	Sen Gupta A., S. Jain, and J.-S. Kim, Past climate, Future perspective: Using climate proxies and drought risk assessment to inform Maine's water allocation policy. Climate Change 21 - Choices for the 21st Century (CC21), University of Maine, October 2008. (Honorable Mention, Student Poster Competition)	1	0
Jain, Shaleen	October 2008	Regional	Chandler, J., S. Jain, and J. K. Eischeid, Alteration of the Columbia River Basin Hydrologic Regime by Nonstationary Climate and Flow Regulation. Climate Change 21 { Choices for the 21st Century (CC21), University of Maine, October 2008.	1	0
Jain, Shaleen	March 2009	International	Jain, S., J. Chandler, J. Eischeid, R. Pulwarty, T. Melis, and D. Topping, Sustainability of western North American hydrosystems: Use-inspired research to understand nonstationary climate, flow regulation, and ecological flow needs, Climate Change: Global Risks, Challenges and Decisions, 10-12 March 2009, Copenhagen, Denmark.	1	0
Jain, Shaleen	March 2009	International	Jain, S., J.-S. Kim, A. Sen Gupta, and K. Ricupero, Incorporating hydroclimatic variations and change into water allocation policy making and adaptation, Climate Change: Global Risks, Challenges and Decisions, 10-12 March 2009, Copenhagen, Denmark.	2	0
Jain, Shaleen	November 2008	National	The impact of hydroclimate variations and change on Water Resources Decision-Making and Adaptation, NSF Water Dynamics Workshop, University of Vermont, November 2008.	0	0
Jain, Shaleen	March 2009	Other/Special	The use of uncertain climate projections for environmental decision-making. Bhabha Atomic Research Center, Mumbai, India, March 6, 2009.	0	0
Jain, Shaleen	June 2009	National	Biophysical Science (Knowledge-to-Action Research), 10th Biennial Conference on Communication and Environment, University of Southern Maine, Portland. {Invited Panelist} <a href="http://usm.maine.edu/esd/coce/">http://usm.maine.edu/esd/coce/</a>	0	0



Kelley, Alice	March 23, 2009	Regional	Kelley, A.R., Sandweiss, D.H., Kelley, J.T., Belknap, D.F., Rademaker, K., Reid, D., Early Monumental Site at Los Morteros, Peru Revealed by Ground-Penetrating Radar	1	1
Kelley, Alice	May 8, 2009	Local	Chronology of Late Pleistocene/Early Holocene Landscape Development in the Central Penobscot River Valley: Geoarchaeology and OSL Chronology (With Roger LeB. Hooke)	0	0
Kelley, Joseph	10-08	International	Kelley, J.T., 2008, Complex coupled human and natural systems: our inability to predict the future of developed beaches. Geological Society of America Annual Meeting Program, p. 186.	0	0
Kelley, Joseph	10-08	International	Wilson, K.R., Kelley, J.T., and Belknap, D.F., 2008, A characterization of salt pools and their role in significant coastal change over the past 50 years in Maine. Geological Society of America Annual Meeting Program, p. 164.	1	0
Kelley, Joseph	10-08	International	Brothers, L.L., Kelley, and Belknap, D.F., J.T., 2008, An estuarine pockmark fielding previously glaciated Belfast Bay, Maine: Vibrocoring and seismic reflection results. Geological Society of America Annual Meeting Program, p. 195.	1	0
Kelley, Joseph	3-09	Regional	Kelley, J.T., Claesson, S., Belknap, D.F., Barnhardt, W.A. and Baker, A., 2009, A drowned, formerly inhabited bay/lake shoreline off Mount Desert Island, Maine. Geological Society of America Abstracts with Programs v 41.	0	0
Kelley, Joseph	3-09	Regional	Brothers, Laura L., Andrews, Brian D., Barnhardt, Walter A., Kelley, Joseph T., and Belknap, Daniel F., 2009, Pockmark field geomorphic trends from serial swath bathymetry, Belfast Bay, Maine, USA, Maine. Geological Society of America Abstracts with Programs v 41.	1	0
Kelley, Joseph	3-09	Regional	Belknap, D.F., and Kelley, J.T., 2009, Preservation potential and sourcing by glacial and proglacial sediments on the Maine coast. Geological Society of America Abstracts with Programs v 41.	0	0
Kelley, Joseph	3-09	Regional	Wilson, K.R., Kelley, J.T., Belknap, D.F. and Tanner, B., 2009, Salt pools in the stratigraphic record and their role in governing surficial change in five Maine salt marshes, Geological Society of America Abstracts with Programs v 41.	1	0
Kelley, Joseph	3-09	Regional	Kelley, A.R., Sandweiss, D., Kelley, J.T., Belknap, D.F., and Rademaker, K., 2009, Geoarcheology, paleogeography and the search for paleoindian sites in the high Andes of Southern Peru. Geological Society of America Abstracts with Programs v 41.	1	0
Kelley, Joseph	6-09	International	Kelley, J.T., Claesson, S., Belknap, D.F., Barnhardt, W.A. and Baker, A., 2009, A drowned, formerly inhabited bay/lake shoreline off Mount Desert Island, Maine. IGCP-495 Meeting in the Netherlands, June, 2009	0	0
Kelley, Joseph	February, 19, 2009	Local	Bangor Public Library, Rise and fall of the Maine coast: people and a drowning shoreline. Sponsored by the Climate Change Institute	0	0
Kelley, Joseph	April 9, 2009	Local	Dartmouth College, Gas-escape Pockmarks in the Guld of Maine.	0	0
Kelley, Joseph	11/5/08	Local	Hermon Middle School, Geology of Maine	0	0
Kelley, Joseph	9/2/09	State	The Geology of the Grand Canyon, Geological Society of Maine Meeting	0	0
Kelley, Joseph	11/5/08	Local	Geology of Maine to Hermon Middle School	0	0
Koons, Peter		Regional	Zeitler. P.K.. P.O. Koons. (2009). Climate and rheological control in convergent margins from a	0	0



			geochronological perspective. Northeast Section Meeting, Geological Society of America, Abstracts with Programs, Vol. 41, p 3.		
Kreutz, Karl	April 7, 2009	National	Denali ice core project; US Ice Core Working Group	2	1
Kreutz, Karl	April 25, 2009	Regional	WAIS Divide ice core project; NSF outreach effort	1	0
Kreutz, Karl	Dec. 14, 2008	International	Modeling glacial-interglacial changes in dust and sea salt concentrations in West Antarctic deep ice cores: implications for southern hemisphere atmospheric dynamics	1	0
Kreutz, Karl	Oct. 2 2008	National	WAIS Divide microparticle record	1	1
Maasch, Kirk	December 2008	National	Validating WRF for North American Climate Studies: The Effects of Resolution <a href="http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c79">http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c79</a>	0	0
Maasch, Kirk	December 2008	National	Asian Ice Core Array (AICA): Climate and Environmental Reconstruction of Asia <a href="http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c62">http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c62</a>	1	0
Maasch, Kirk	December 2008	National	Spatial Concentration Fields of Trace Elements and Major Ions Over a Large and Highly Inaccessible Area of Antarctica <a href="http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c56">http://www.agu.org/cgi-bin/SFgate/SFgate?language=English&amp;verbose=0&amp;listenv=table&amp;application=fm08&amp;convert=&amp;converthl=&amp;refinequery=&amp;formintern=&amp;formextern=&amp;transquery=maasch&amp;_lines=&amp;multiple=0&amp;descriptor=%2fdata%2fepubs%2fwais%2findexes%2ffm08%2ffm08%7c56</a>	2	0
Maasch, Kirk	March 19, 2009	Local	"Climate Change and Global Warming: From Down East, to The County, to Southern Maine - What's in Store for Us?" - part of "Climate Change on Planet Earth: A monthly public lecture series" held at the Bangor Public Library	0	0
Maasch, Kirk	October 23, 2008	State	"Maine's Climate: Past, Present, and Future" presented at Climate Change 21 -- Choices for the 21st Century, University of Maine, Orono ME	0	0
Maasch, Kirk	May 7, 2009	Local	"Assessing the Fidelity of Climate Downscaling for North America Using the WRF Model" / 16th Hal Borns Symposium	0	0
Mayewski, Paul	31 May 2008	Local	UM Class of '68 - Global Climate Change	0	0
Mayewski, Paul	10 June 2008	International	SCAR St. Petersburg, Russia) - ITASE Summary	0	0
Mayewski, Paul	28 August 2008	Regional	Pot and Kettle Club (Hull's Harbor, Maine) - Climate Change	0	0
Mayewski, Paul	4 September 2008	International	ITASE Overview to all ITASE Delegates (Castine, Maine)	0	0
Mayewski, Paul	19 September 2008	Regional	Chewonki Foundation - Climate change	0	0



Mayewski, Paul	24 September 2008	State	WBRC Co. (Bangor, Maine) - Climate change	0	0
Mayewski, Paul	10 October 2008	State	MERI (Blue Hill Maine) - Climate change	0	0
Mayewski, Paul	19 October 2008	State	UMA Convocation Address	0	0
Mayewski, Paul	23 October 2008		CC^21 (UM) - Climate change	0	0
Mayewski, Paul	29 October 2008	Regional	UM Foundation - Climate change	0	0
Mayewski, Paul	3 November 2008	International	Cambridge, UK - Antarctic Climate Change and the Environment	0	0
Mayewski, Paul	12 November 2008		Bangor Public Library - CCI lecture Series - Climate change	0	0
Mayewski, Paul	13 December 2008	International	San Francisco - Asian Ice Core Array	0	0
Mayewski, Paul	8 January 2008	State	New Hampshire Geological Survey - Climate change	0	0
Mayewski, Paul	8 January 2008	State	Geological Society of New Hampshire - Climate Change	0	0
Mayewski, Paul	31 January 2009	International	Southern Ocean - Antarctica and global climate change	0	0
Mayewski, Paul	1 February 2009	International	Southern Ocean - Introduction to Antarctica	0	0
Mayewski, Paul	5 February 2009		Antarctic Peninsula - Climate change	0	0
Mayewski, Paul	21 March 2009		Portland Museum of Art - Climate change	0	0
Mayewski, Paul	22 March 2009	Regional	NE Geological Society of America - Climate change	0	0
Mayewski, Paul	16 April 2009	Local	UM Honors Program - Climate change	0	0
Mayewski, Paul	24 April 2009	International	Dunbarton Oaks, Washington DC - Climate during the Roman Empire	0	0
Mayewski, Paul	18 May 2009	Local	Waterfall Arts (Belfast, Maine) - Climate change	0	0
Mayewski, Paul	28 May 2009	National	UCAR - CCI Overview	0	0
Mayewski, Paul	30 May 2009	Regional	UM Class of '44 - Climate change	0	0
Ocampo-Raeder, Constanza	Oct 2008	National	"Somos Camaroneros: Insights from the Ethnographic Record." Paper Presented at the 27th Northeast Conference on Andean Archaeology and Ethnohistory, October 2008, University of Maine, Orono, ME.	0	0
Ocampo-Raeder, Constanza	Nov 2008	International	"When the Rainbows Bring the Crawfish: Resilience and Vulnerability in the Communal Management of Crawfish in an Andean River Valley." Paper Presented at the American Anthropological Association Meetings, November 2008, San Francisco, CA.	0	0
Ocampo-Raeder, Constanza	Nov 2008	International	Chaired and Co-Organized (with Flora Lu-Holt from UCSC) Panel at the AAA entitled "Resilience in Human-Environmental Systems: Case Studies from Latin America." November 2008, San Francisco, CA.	0	0
Ocampo-Raeder, Constanza	March 2009	Regional	"The Waterless Realms of the Human Seascape." Invited Guest Lecture for the School of Marine Sciences Seminar Series, March 2009, University of Maine, Orono, ME.	0	0
Ocampo-Raeder, Constanza	March 2009	Local	"Women without History: The Lives of Amazonian Women." University of Maine Women's History Guest Speaker Series and the Marxist and Socialist Lecture Series, March 2009, University of Maine, Orono, ME.	0	0

*FY2009 Annual Report • Climate Change Institute*



Olsen, Brian	August 2008	National	Olsen, B.J., J.F. Husak, I.T. Moore, P.J. Sharp, and R. Greenberg. Interpopulation variation in parental aggression: Hormonal and behavioral correlates in Swamp Sparrows. 126th stated meeting of the American Ornithologists' Union, Portland, Oregon.	0	0
Olsen, Brian	August 2008	National	Liu, I.A., B. Lohr, B.J. Olsen, and R. Greenberg. Macrogeographic vocal variation in subspecies of swamp sparrow ( <i>Melospiza georgiana</i> ). 45th Annual Meeting of the Animal Behavior Society, Snowbird, Utah.	0	1
Olsen, Brian	September 2008	Local	"As Fashion or Fatigues: The selection for feather color in the swamp sparrow". School of Biology & Ecology Seminar Series: Orono, Maine.	0	0
Olsen, Brian	October 2008	Local	"Color me birdy: The story behind plumage color". Penobscot Valley Chapter of the Maine Audubon Society: Bangor, Maine.	0	0
Olsen, Brian	February 2009	Other/Special	M. Etterson, R. Bennett, B. Olsen, & R. Greenberg. "Classical Markov Chains: A unifying framework for understanding avian reproductive success". Department of Mathematics and Statistics: Duluth, Minnesota	0	0
Olsen, Brian	April 2009	Local	Olsen, BJ, M Etterson, & R Greenberg. "Calculations on the back of an envelope model: A demographic approach to species' range boundaries". Climate Change Institute.	0	0
Olsen, Brian	May 2009	Local	"Dressing Fancy: The story behind bird colors". Fields Pond Audubon Center of the Maine Audubon Society: Holden, Maine.	0	0
Olsen, Brian	May 2009	Local	"The Sparrows of Orono Bog". Orono Bog Boardwalk, Bangor City Forest: Bangor, Maine.	0	0
Peterson, Michael	10-08-2008	Regional	"Regional Energy and the Needs of Maine", New England Regional National Society of Professional Engineering,	1	0
Peterson, Michael	10-13-08	National	Laboratory and In-Situ Testing for Safety of the Horse", Presentation to the Board of the Jockey Club, Lexington KY,	0	0
Peterson, Michael	Feb 2, 2009	National	Safety of the Horse and the Role of Surface Testing", National HBPA Congress, Invited Talk, Hollywood Florida, Jan. 29-Feb. 3, 2009	0	0
Peterson, Michael	02-05-2009	National	"Racing Surfaces", Invited Talk, Fifth Racing Congress, Bellagio Resort and Casino, Las Vegas, February 2-6, 2009.	0	0
Peterson, Michael	06-24-09	National	Michael "Mick" Peterson, C. Wayne McIlwriath, "Laboratory Testing for Racing Surfaces", Invited Talk, 9th annual Racetrack Superintendents' Meeting, Des Moines, Iowa , June 23-25, 2009	1	0
Robinson, Brian S	April 24, 2009	National	Cultural Organization in the Far Northeast and the Northeast, in the symposium Navigating Transformations: Social Complexity in the Native Northeast, organized by Elizabeth S. Chilton and Brian D. Jones for the 74th Annual Meeting of the Society for American Archaeology, April 22-26, 2009, Atlanta, Georgia.	0	0
Robinson, Brian S	Oct. 25, 2008	National	(and Jennifer Ort) Archaeological Tradition and Explanation in New England, for the Amerind Seminar "Transformative Hunter-Gatherer Archaeology in North America," chaired by Kenneth Sassaman and Donald Holly, October 25-29, 2008, Amerind Foundation, Dagoon, Arizona.	1	0
Roscoe, Paul B	2009		2009 Remembering the Dead. Paper presented to the Evolutionary Psychology Group, University of New England, Saco ME.	0	0
Roscoe, Paul B	2008		2008 Intelligence and the Origins of War. Paper presented at the University of Iceland, Reykjavik.	0	0

*FY2009 Annual Report • Climate Change Institute*





Sandweiss, Dan	July 26, 2008	International	25 Años Después: El Sitio Anillo En Su Contexto Histórico. Congreso Contisuyo, Moquegua, Peru.	0	0
Sandweiss, Dan	March 18, 2009	Local	Life in a Bicultural Family/La vida en una familia bicultural (with Maria Sandweiss), In Diversity Dialogue series.	0	0
Sandweiss, Dan	March 20, 2009	National	Jim Richardson: Paleodisaster Pioneer For Peru. In Symposium "Winds, Mountains, Oceans, Rivers: Ecologies And Their Social Impacts In The New World" In Honor Of James B. Richardson III. University Of Pittsburgh. <a href="http://www.anthropology.pitt.edu/richardson3.html">http://www.anthropology.pitt.edu/richardson3.html</a>	0	0
Sandweiss, Dan	March 22, 2009	Regional	Coastal Change And Cultural Change In Late Prececeramic Peru. In Symposium "Geoarchaeology: Sites, Substrate, Sources, And Context." Northeastern Section, Geological Society Of America, 44th Annual Meeting, Portland, Me.	0	0
Sandweiss, Dan	April 15, 2009	International	2009 Tras la Historia de El Niño. Innaugual Distinguished Lecturer, InterSapiens program, Pontificia Universidad Católica del Perú, Lima, Perú.	0	0
Sandweiss, Dan	April 23, 2009	International	Things That Go Bump in the Past: JBR and the Geoarchaeology of the Peruvian Coast. In Symposium "A Life in the Pitt, The Career and Influence of James B. Richardson, III as Seen from his Disciples." 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.	0	0
Saros, Jasmine	September 2008	International	Saros, J.E. Lakes as Sentinels and Integrators of Climate Change: Identifying Key Mechanisms by Merging Experimental and Paleolimnological Approaches. Chapman Conference on "Lakes and Reservoirs as Sentinels, Integrators, and Regulators of Climate Change", Lake Tahoe.	0	0
Saros, Jasmine	September 2008	International	Salm, C.R., Saros, J.E., Williamson, C.E. & D.L. Mitchell. Alpine lakes as sentinels of climate change: investigating the effects of ultraviolet radiation and temperature on plankton dynamics. Chapman Conference on "Lakes and Reservoirs as Sentinels, Integrators, and Regulators of Climate Change", Lake Tahoe.	1	0
Saros, Jasmine	November 2008	International	Kessler, K., Lockwood, R.S., Williamson, C.E. & J.E. Saros. Vertical distribution of zooplankton in subalpine and alpine lakes: does ultraviolet radiation play a role? North American Lake Management Society annual meeting, Alberta, Canada.	0	1
Saros, Jasmine	January 2009	International	Rose, K.C., Williamson, C.E. & J.E. Saros. Transparency patterns of high elevation lakes in the Beartooth Moutains, MT/WY, USA. Global Lakes Ecological Observatory Network annual meeting, New Zealand.	1	0
Saros, Jasmine	January 2009	International	Williamson, C.E., Kessler, K., Saros, J.E. & R.S. Lockwood. Vertical distribution of zooplankton in subalpine and alpine lakes: Ultraviolet radiation, fish predation, and the transparency-gradient hypothesis. American Society of Limnology and Oceanography annual meeting, France.	0	1
Saros, Jasmine	January 2009	International	Saros, J.E., Williamson, C.E., & A.P. Wolfe. Response of alpine versus subalpine lakes to nitrogen deposition: similar but asynchronous community and ecosystem-level changes. American Society of Limnology and Oceanography annual meeting, France.	0	0
Saros, Jasmine	April 2009	National	Saros, J.E. How to determine biotic thresholds using diatoms from sediment cores and enclosure experiments. National Atmospheric Deposition Program annual meeting, Pensacola, FL.	0	0
Saros, Jasmine	March 2009	Regional	Lake, B., Amirbahman, A. & J.E. Saros. Does paleolimnological evidence support the fish removal project in East Pond? Northeast Geological Society of America annual meeting, Portland, ME.	1	0
Saros, Jasmine	March 2009	Regional	Saros, J.E., Nurse, A., & G. Fulford. Using glacially-derived nitrogen pulses into alpine lakes ecosystems as	0	1

*FY2009 Annual Report • Climate Change Institute*



Saros, Jasmine	September 2009	Regional	indicators of climate change. Northeast Geological Society of America annual meeting, Portland, ME.		
Saros, J.E.			Nitrogen effects on phytoplankton. Northeast Regional Air Quality Committee annual meeting, Acadia National Park.	0	0
Sobolik, Kristin	May, 2009	Local	Prehistoric Dietary Intake of Prebiotic Inulin-type Fructans. Borns Symposium, Climate Change Institute.	0	0
Zaro, Gregory D	April 2009	National	Houk, Brett A., G. Zaro, and Débora Trein (2009). Evidence for "ritual engineering" in the royal precinct plan of La Milpa, Belize. Paper to be presented at the 74th Annual meeting of the Society for American Archaeology, Atlanta, GA, April 22-26.	1	0
Zaro, Gregory D	October 2008	Regional	Zaro, Gregory and K.C. Nystrom (2008). Tierras olvidadas: Chiribaya landscape engineering and marginalization in southern Peru. Paper presented at the 27th Northeast Conference on Andean Archaeology and Ethnohistory. University of Maine, Orono, ME, October 11-12, 2008.	0	0
Zaro, Gregory D	September 2008	International	Zaro, Gregory (2008). Agriculture, landscape evolution, and desertification along the Peruvian south coast. Paper presented at the 3rd Southern Deserts Conference: Climate Change and the Peopling of the Southern Deserts. Molopo Lodge, Northern Cape, South Africa, September 16-19, 2008.	0	0
Zaro, Gregory D	July 2008	International	Zaro, Gregory, C. Dayton, and A. Bar (2008). La agricultura y el manejo de recursos naturales en el Departamento de Moquegua, Perú. Paper presented at the conference titled "25 Años de Investigaciones Arqueológicas del Programa Contisuyo," Moquegua, Peru, July 25-26, 2008.	0	0

*Conferences/Symposia/Meetings Attended: International/National/Regional/State/Local :*

Name	Date	Scope	Conference	Location	GS	US
Belknap, Daniel F.	September 24, 2008	State	Engaging Science in the Practice of Ecosystem-Based Management <a href="http://www.wellsreserve.org/">http://www.wellsreserve.org/</a>	Wells, ME	1	0
Belknap, Daniel F.	October 5-9, 2008	International	Geological Society of America Annual Meeting <a href="http://a-c-s.confex.com/crops/2008am/webprogram/Paper49117.html">http://a-c-s.confex.com/crops/2008am/webprogram/Paper49117.html</a>	Houston, TX	2	0
Belknap, Daniel F.	October 23-24, 2008	State	Climate Change '21 <a href="http://www.climatechange.umaine.edu/CC21.html">http://www.climatechange.umaine.edu/CC21.html</a>	University of Maine, Orono, ME	3	0
Belknap, Daniel F.	March 22-24, 2009	Regional	Northeast Section Geological Society of America Annual Meeting <a href="http://www.geosociety.org/sectdiv/northe/09mtg/index.htm">http://www.geosociety.org/sectdiv/northe/09mtg/index.htm</a>	Portland, ME	2	6
Belknap, Daniel F.	April 03, 2009	State	Geological Society of Maine Spring Meeting, Student research symposium <a href="http://www.gsmmaine.org">www.gsmmaine.org</a>	Colby College, Waterville, ME	1	0

FY2009 Annual Report • Climate Change Institute



Belknap, Daniel F.	May 7-8, 2009	Local	Climate Change Institute Harold W. Borns Symposium <a href="http://www.climatechange.umaine.edu">http://www.climatechange.umaine.edu</a>	University of Maine, Orono	3	0
Chai, F.	10/2008	International	2008 PICES Annual Meeting	Dalian, China		
Chai, F.	3/2009	International	Carbon Cycling in the China Seas	Xiamen, China		
Chai, F.	8/2008	International	7 <sup>th</sup> Cross-Strait Conference on Marine Research	Hangzhou, China		
Chawathe, Sudarshan S	October 2008	International	The 11th International IEEE Conference on Intelligent Transportation Systems (ITSC). <a href="http://cs.umaine.edu/~chaw/pubs/">http://cs.umaine.edu/~chaw/pubs/</a>	Beijing, China.	0	0
Denton, George	September, 2008	International	Annual meeting of the Comer Science and Education Foundation	Soldiers Grove, Wisconsin	1	0
Denton, George	May, 2009	International	Paleoclimates INTIMATE Meeting	National Museum (Te Papa), New Zealand	1	0
Dieffenbacher-Krall, Ann	March 21-23, 2009	International	Geological Society of America, Northeast Section	Portland, ME	0	0
Fastook, James L	sept 2008	National	West Antarctic Ice Sheet Workshop	Washington, DC	1	0
Fastook, James L	dec 2008	International	Fall AGU	San Francisco, CA	0	0
Fastook, James L	march 2009	International	Vernadsky Micro Symposium	Houston, TX	0	0
Fastook, James L	march 2009	International	Lunar and Planetary Science Conference	Houston, TX	0	0
Hall, Brenda	September 2008	International	Comer Science and Education Foundation Abrupt Climate Change Meeting	Soldiers Grove, Wisconsin	1	0
Hall, Brenda	May 2009	International	Past Climates Symposium/Australasian INTIMATE meeting	Wellington, New Zealand	0	0
Hamilton, Gordon	December 15-19, 2008	International	American Geophysical Union, Fall meeting	San Francisco, CA	0	0
Hamilton, Gordon	February 26-28, 2009	International	IASC Workshop on Arctic Climate	Calgary, Alberta, Canada	0	0
Hamilton, Gordon	March 10-12, 2009	International	NASA Workshop on Antarctic Glaciology	Greenbelt, MD	1	0
Hamilton, Gordon	March 26-28, 2009	National	Midwest Glaciology Meeting	Chicago, IL	0	0
Jain, Shaleen	October 2008	Regional	Climate Change 21	University of Maine, Orono	0	0
Jain, Shaleen	November 2008	National	NSF Water Dynamics Workshop	University of Vermont	0	0
Jain, Shaleen	March 2009	International	Climate Change: Global Risks, Challenges and Decisions	Copenhagen, Denmark	0	0
Jain, Shaleen	June 2009	Regional	NSF/CUAHSI Hydrologic Information Systems Workshop	University of Vermont	0	0
Jain, Shaleen	June 2009	National	10th Biennial Conference on Communication and Environment <a href="http://usm.maine.edu/esd/coce/">http://usm.maine.edu/esd/coce/</a>	University of Southern Maine, Portland	0	0
Kelley, Alice	March 22-24, 2009	Regional	Northeastern Section, Geological Society of America	Portland, Maine	0	0
Kelley, Joseph	05/10/08	International	Geological Society of America Annual Meeting	Houston, TX	2	0
Kelley, Joseph	03/21/09	Regional	Northeast Section Geological Society of America	Portland, ME	2	0

FY2009 Annual Report • Climate Change Institute



Kelley, Joseph	20/06-09	International	International Geological Correlation program 495/INQUA, NW Europe Sea level Group, Holocene land-ocean interactions: driving mechanisms and coastal responses	Egmond Ann Zee, Netherlands	0	0
Kelley, Joseph	M5/5/09	Local	Climate Change Institute Borns Symposium	Orono, ME	2	0
Kelley, Joseph	9/2/08	State	Geological Society of Maine	Poland Springs, ME	0	0
Koons, Peter	12/08	International	American Geophysical Union Annual Meeting	San Francisco	4	0
Koons, Peter	3/2009	Regional	NE Geol. Soc. America	Portland Maine	4	0
Kreutz, Karl	May 6-9 2009	International	German DFG Interdynamik review panel	Bonn, Germany	0	0
Kreutz, Karl	April 25-26, 2009	Regional	NSF/GE Conversations from Antarctica	Schnectady NY	0	0
Kreutz, Karl	April 9-10 2009	National	Ice drilling program office senior advisory board meeting	Arlington, VA	0	0
Kreutz, Karl	April 7-8 2009	National	Ice core working group meeting	Arlington, VA	0	0
Kreutz, Karl	April 22-23 2009	National	Arctic Workshop	Lewiston, ME	1	1
Kreutz, Karl	March 12, 2009	State	State House hall of flags event	Augusta ME	0	0
Kreutz, Karl	Feb. 23-26 2009	International	German Interdynamik meeting	Bremen, Germany	0	0
Kreutz, Karl	Dec. 15-19 2008	International	American Geophysical Union meeting	San Francisco, CA	1	0
Kreutz, Karl	Oct. 1-4 2008	National	WAIS Divide science meeting	Denver, CO	1	0
Kreutz, Karl	July 13-18 2008	International	Goldschmidt meeting	Vancouver, Canada	1	0
Maasch, Kirk	December 2008	National	American Geophysical Union Fall Meeting <a href="http://www.agu.org/meetings/fm08/index.php/Program/HomePage">http://www.agu.org/meetings/fm08/index.php/Program/HomePage</a>	San Francisco, CA	2	0
Maasch, Kirk	May 8-9 2009	Local	17th Hal Borns Symposium	Orono, ME	4	0
Maasch, Kirk	October 23-24 2008		Climate Change 21 -- Choices for the 21st Century (CC21)	Orono, ME	0	0
Mayewski, Paul	6 July 2008	International	Scientific Committee for Antarctic Research	St. Petersburg, Russia	0	0
Mayewski, Paul	1-5 September 2008	International	International Trans Antarctic Scientific Expedition	Castine, Maine	0	0
Mayewski, Paul	13 December 2009	International	Central Asian Deep Ice coring Project	San Francisco	0	0
Mayewski, Paul	23-24 April 2009	International	Roman Empire	Dunbarton Oaks, Washington DC	0	0
Ocampo-Raeder, Constanza	Oct 2008	National	Northeast Conference on Andean Archaeology and Ethnohistory	University of Maine, Orono	0	0
Ocampo-Raeder, Constanza	Nov 2008	International	American Anthropological Association	San Francisco	0	0
Olsen, Brian	August 2008	National	126th Stated Meeting of the American Ornithologists' Union	Portland, Oregon	0	0
Robinson, Brian S	Oct. 25 - 29 2008	National	Archaeological Tradition and Explanation in New England, for the Amerind Seminar "Transformative Hunter-Gatherer Archaeology in North America."	Amerind Foudation, Dragoon, Arizona	0	0

FY2009 Annual Report • Climate Change Institute



			chaired by Kenneth Sassaman and Donald Holly, October 25 – 29, 2008, Amerind Foundation,			
Robinson, Brian S	April 22-26, 2009	National	symposium Navigating Transformations: Social Complexity in the Native Northeast, organized by Elizabeth S. Chilton and Brian D. Jones for the 74th Annual Meeting of the Society for American Archaeology	Atlanta, Georgia	0	0
Sandweiss, Dan	May 20-22, 2008	National	2008 IGERT Institutional Meeting	National Science Foundation, Arlington, VA	0	0
Sandweiss, Dan	July 25-27, 2008	International	Congreso Contisuyo	Moquegua, Peru	0	0
Sandweiss, Dan	December 3-6, 2008	National	Council of Graduate Schools 48th Annual Meeting <a href="http://www.cgsnet.org/Default.aspx?tabid=363">http://www.cgsnet.org/Default.aspx?tabid=363</a>	Washington, DC	0	0
Sandweiss, Dan	February 23, 2009	Regional	“What's Wrong with Public Service? A Challenge for Higher Education” A Conference Co-sponsored by the University of Maine and Dickinson College <a href="http://itech.dickinson.edu/clarkeforum/cms/wp-content/uploads/smaller-schedule-for-web.pdf">itech.dickinson.edu/clarkeforum/cms/wp-content/uploads/smaller-schedule-for-web.pdf</a>	Dickinson College, Carlisle, PA	0	0
Sandweiss, Dan	March 20, 2009	National	Winds, Mountains, Oceans, Rivers: Ecologies and Their Social Impacts in the New World <a href="http://www.anthropology.pitt.edu/richardson3.html">http://www.anthropology.pitt.edu/richardson3.html</a>	Pittsburgh, PA (University of Pittsburgh)	0	0
Sandweiss, Dan	March 22, 2009	Regional	Northeastern Section, Geological Society Of America, 44th Annual Meeting	Portland, ME	0	0
Sandweiss, Dan	April 1-4, 2009	Regional	Northeastern Association of Graduate Schools Annual Meeting <a href="http://www.neags.org/static/Conference.html">http://www.neags.org/static/Conference.html</a>	Newark, DE	0	0
Sandweiss, Dan	April 22-26, 2009	International	Society for American Archaeology 74th Annual Meeting	Atlanta, GA	0	0
Schauffler, Molly	July 21-25, 2008	Regional	Josselyn Botanical Society	Edmunston NB	0	0
Schauffler, Molly	October 10, 2008	State	Maine Science Teachers Association Annual meeting	Gardiner HS	0	0
Schauffler, Molly	June 21-23, 2009	State	No Questions Left Behind: Center for Science & Math Edu Research bi-annual teaching conference	Schoodic Education and Research Center	1	0
Sobolik, Kristin	April 3, 2009	State	Women’s Leadership Conference, Sponsored by the American Council on Education	UMaine-Augusta	0	0
Sobolik, Kristin	February 12-14, 2009	National	Seminar for Department Chairs, Council of Colleges of Arts and Sciences	Atlanta, GA	0	0
Vandergoes, Marcus	November 2008	National	Geoscienc 08	Wellington, New Zealand	0	0
Vandergoes, Marcus	May 2009	International	Past Climates meeting	Wellington, New Zealand	0	0
Zaro, Gregory D	July 2008	International	Moquegua Archaeology Conference	Moquegua, Peru	0	1
Zaro, Gregory D	September 2008	International	3rd Southern Deserts Conference	Upington, South Africa	0	0
Zaro, Gregory D	October 2008	Regional	27th NE Conference on Andean Archaeology and Ethnohistory	Orono, Maine	0	0



### *Research Expeditions & Field Trips*

<b>Name</b>	<b>Date</b>	<b>Description</b>	<b>GS</b>	<b>US</b>
Belknap, Daniel F.	July 14-15, 2008	Marine vibracoring off vessel M/V "Triton" out of Southwest Harbor, for Kelley et al. geoarchaeology project in BAss Harbor-Blue Hill Bay, ME.	2	0
Belknap, Daniel F.	August 6-8	Marine vibracoring off research vessel "R/V Argo Maine" out of Castine, for Kelley and Belknap project supporting Ph.D. candidate Laura L. Brothers, coring in estuary and pockmark fields of Belfast Bay.	2	2
Belknap, Daniel F.	October 4, 2008	Geological Society of America Annual Meeting Field Trip, John Anderson and Tony Rodriguez, Galveston Island and the effects of Hurricane Ivan. General continuing educational trip in support of teaching and research.	2	0
Belknap, Daniel F.	October 10, 2008	Marine Seismic reflection and sidescan sonar profiling, R/V "Ira C" of UM Darling MARine Center, Walpole. Contract work on CAD site in Portland Harbor (see list of research proposals and contracts).	0	0
Belknap, Daniel F.	October 30, 2008	Ground Penetrating Radar over possible paleo-dunes at Cape Cod Hill, New Sharon, ME. Fieldwork for Ph.D. candidate Patti Millette, and mentoring of two of her high school earth science students for a class project.	1	0
Belknap, Daniel F.	November 2, 2008	Marine seismic reflection profiling, R/V "Ira C" of UM Darling Marine Center, Walpole. Contract work on CAD site in Portland Harbor (see list of research proposals and contracts).	0	0
Belknap, Daniel F.	March 21, 2009	Co-leader of field trip, Northeast Section Geological Society of America, Portland, ME (see Other in publications list - Dickson et al.). FT-1: Coastal Storms, Sediment Budgets, and Mitigating Engineering in Saco Bay	0	0
Denton, George	June and July, 2008	My research group carried out fieldwork on dating the moraine sequence dating from the Last Glacial maximum in the Wind River Range of western Wyoming. Two graduate students were involved in the field research.	2	0
Denton, George	January and February, 2009	Fieldwork was carried out by my research group on the moraines deposited during the Last Glacial Maximum in the Southern Alps of New Zealand. Two graduate students were involved in the fieldwork, as they gathered information for their advanced degrees.	2	0
Denton, George	March and April, 2009	My research team carried out research on the Holocene moraine system in the western reaches of Lago Argentino, South Patagonian Icefield	0	0
Denton, George	June 2009	My research team carried out field investigations on the moraine systems of the Sierra Nevadas of California.	3	0
Dieffenbacher-Krall, Ann	08/2008	Led collection of sediment cores from Moulton Pond, Dedham, Maine, to support graduate research of M.S. student Brenda Chase, August 2009.	1	0
Fastook, James L	Oct 2008	Climate Change Institute Field trip to Northern Maine	2	0



Hall, Brenda	12/6/2009-2/1/2009	Glacial geologic field work at Scott Glacier, Antarctica	2	0
Hall, Brenda	March 2009	Glacial geologic field work at Torres del Paine, Chile	1	0
Hamilton, Gordon	June 24-July 4, 2009	Helheim Glacier, East Greenland	1	0
Hamilton, Gordon	July 20-27, 2009	Helheim Glacier, East Greenland	0	0
Hamilton, Gordon	August 14-September 4, 2009	Helheim Glacier, Kangerdlugssuaq Glacier, Ibsen Glacier; East Greenland	1	0
Jain, Shaleen	September 2008	Climate Change Institute Annual Field Trip (Northern Maine Woods)	0	0
Kelley, Alice	May 12-19, 2009	UMaine Geology Club Field Trip to Central and Northern Arizona Co-Leader	0	10
Kelley, Joseph	7/14 to 7/17/08	Underwater vibracoring aboard barge in Bass Harbor, ME	1	1
Kelley, Joseph	8/6 to 8/10/08	Underwater vibracoring aboard R/V ARGO-Maine in Belfast Bay, ME	1	1
Kelley, Joseph	8/17 to 8/24/08	River Rafting trip down the Grand Canyon with the Geological Society of Maine	0	0
Kelley, Joseph	10/4/08	Field trip to view damage from Hurricane Ike in Galveston, TX; Geological Society of America meeting	2	0
Kurbatov, Andrei	July 11-17, 2008	Greenland margin field work together with NOVA documentary team	0	0
Kurbatov, Andrei	September 6-13, 2009	Greenland II trip to study particles and Ir in ice	0	0
Mayewski, Paul	28 January - 11 February 2009	Led UM Alumni Antarctica and Southern Ocean Cruise	0	0
Mayewski, Paul	12-15 February 2009	Field reconnaissance in NZ Alps	0	0
Mayewski, Paul	9-18 July 2008	Field research western Greenland	0	0
Mayewski, Paul	6-12 April 2009	Field reconnaissance Chilean Andes	0	0
Ocampo-Raeder, Constanza	Summer 2008	Amazon Rainforest: Human Ecology of the Ese eja People of NorthEastern Peru	0	0
Ocampo-Raeder, Constanza	Summer 2008	Northern Peruvian Coast: Human Ecology of Traditional Fishing communities	0	0
Ocampo-Raeder, Constanza	Summer 2008 & Dec 2008	Andean River Valley: Human Ecology of Traditional Crawfish Harvesters	0	0
Olsen, Brian	Weekly 10/01/2008 - 05/15/2009	Surveys of boreal chickadees along the Stud Mill Road to preliminarily investigate seasonal movements/residency	0	1
Olsen, Brian	05/01/2009 - 08/31/2009	Studies of rails in wetlands in Downeast Maine and the Penobscot Valley	1	1
Olsen, Brian	05/28/09-05/30/09	Preliminary field site description of Nulhegan Division of the Silvio O. Conte National Wildlife Refuge in	0	0



Vermont's Northeastern Kingdom				
Olsen, Brian	06/05/2009	Preliminary field site description of Moosehorn National Wildlife Refuge in Downeast Maine	0	0
Olsen, Brian	Weekly 05/01/2009 - 07/15/2009	Preliminary description of the breeding bird and terrestrial invertebrate community in the Bear Brook Experimental Watershed in Maine.	0	1
Sandweiss, Dan	July, 2008	Visit to archaeological sites around Taltal, Chile to assess potential for future field work	0	0
Sandweiss, Dan	August, 2008	Field work in north central Peru on climatic and environmental change and effects on cultural collapse at end of Late Preceramic Period	0	0
Saros, Jasmine	July 3-15, 2008	Field research in the Beartooth Mountains of Montana, conducting comparative lake sampling and experiments to decipher links between climate and diatom community structure	1	1
Saros, Jasmine	July 19-30, 2008	Field research in alpine lakes of Washington, to determine the effects of nitrogen deposition on the biota of these lakes and establish a critical nitrogen load	1	2
Saros, Jasmine	August 1-31, 2008	Field research in the Beartooth Mountains of Montana, conducting a large scale lake experiment to decipher links between climate and diatom community structure. A crew of six additional collaborators from Miami University of Ohio participated in the field research.	1	2
Vandergoes, Marcus	01/9/2009	Collection of sediment cores from lakes in glaciated regions Tasmania, Australia. In collaboration with Les Cwynar, University of New Brunswick, Canada.	0	0
Vandergoes, Marcus	01/19/2009	Collection of sediment cores and surface samples from lakes along with rock samples from glaciated regions of Eastern New Zealand. In collaboration with Aaron Putnam, U Maine/LDEO; Rewi Newnham and Louise Callard, University of Plymouth U.K.	0	0
Vandergoes, Marcus	03/19/2009	Collection of sediment cores and wood samples for glacial geochronology from glaciated regions in Southern Patagonia, Argentina. In collaboration with Jorge Strelin, University of Cordoba	0	0
Zaro, Gregory D	May 2008	La Milpa Archaeological Research Program, Belize, Central America	0	0
Zaro, Gregory D	July 2008	Tambo-Ilo Soils Project, Peru, South America	0	1

### *Other Indicators*

Belknap, Daniel F. Planning with Kristen Whiting-Grant of Maine Sea Grant, Stephen M. Dickson of Maine Geological survey and others for 2009 biennial State of Maine's Beach Conference to be held this July.

Dieffenbacher-Krall, Ann Our Internet guide to New Zealand subfossil chironomid taxonomy experienced 12808 "hits" and 146 actual visits

*FY2009 Annual Report • Climate Change Institute*





during a single month, 1/25/09-2/25/09, the only time period for which this data was collected.

### *Media Presentations Created*

<b>Name</b>	<b>Type</b>	<b>Description</b>	<b>GS</b>	<b>US</b>
Kurbatov, Andrei	CASA web site	CASA project web site <a href="http://www.casa.aq">http://www.casa.aq</a>	0	0
Ocampo-Raeder, Constanza	Multimedia Teaching tool	“Ethno-Pods: An Interactive Multimedia Tool for The Understanding of Cultural Diversity.” Funds were used to purchase digital equipment and software programs to create stitched 3D spherical and cylindrical panoramic images with embedded audio, film and text links. Each ethno-pod allows students to digitally “enter” and explore the house, forest, agricultural field, or markets of a series of case studies. Results were presented at the IT Faculty Technology Fair in October, 2008, University of Maine, Orono, ME.	0	0
Schauffler, Molly	Computer kiosk exhibit	The Science of Climate Change: A journey to Reedy Glacier, Antarctica. An interactive electronic exhibit featuring University research in Antarctica (PI Brenda Hall), the process of scientific investigation, research findings, and how research in Antarctica links to Acadia National Park and Maine. (Exhibited at Acadia National Park and the Maine Discovery Museum). Includes a printed Discussion Guide for use in classrooms and other educational settings.	0	0

### *Creative Activities*

Dieffenbacher-Krall, A. 2008. Botanical editor for book of poetry: Hutchison, S. 2008. The Art of Nesting. George Ronald Publisher, Herts, UK.



*Service – To Profession/Department/College/University System/State Government Agencies/General Public & Local Communities/Pre-K-12 Education*

To Profession:

<b>Name</b>	<b>Type</b>	<b>Description</b>
Belknap, Daniel F.	Professional Association Officer	Vice-President 2008-2009, President 2009-2010 of Northeast Section Geological Society of America
Belknap, Daniel F.	Conference Section Chair	Northeast Section Geological Society of America, Co-Chair (with former student Ilya Buynevich) of Theme Session 6: Glacial and Paraglacial Coasts: Stratigraphy, Processes and Geomorphology, March 23, 2009, Portland, ME.
Belknap, Daniel F.	Grant Review Board Member	National Science Foundation - Marine Geology and Geophysics, Grant Selection Panel Member, May 14-18, 2009, Washington, DC.
Belknap, Daniel F.	General/Other	Review of 32 NSF proposals, 3 journal articles
Chai, F.	Award Committee Member	College Graduate Award Committee
Chai, F.	Advisory Board	International Advisory Committee for the State Key Lab at the Xiamen University
Chai, F.	Program Committee Member	London Convention Scientific Group on Ocean Iron Fertilization
Chai, F.	Grant Review Board Member	NASA Biodiversity Panel
Chawathe, Sudarshan S	Program Committee Member	The 28th ACM SIGMOD International Conference on Management of Data (SIGMOD 2008).
Chawathe, Sudarshan S	Program Committee Member	The 19th International Conference on Database and Expert Systems Applications (DEXA 2008).
Chawathe, Sudarshan S	Program Committee Member	The International Workshop on RFID Data Management (RFDM 2008).



Chawathe, Sudarshan S	Program Committee Chair	Program Chair, the 10th IEEE International Conference on Intelligent Transportation Systems (ITSC 2007).
Chawathe, Sudarshan S	Program Committee Member	The 18th International Conference on Database and Expert Systems Applications (DEXA), September 2007.
Chawathe, Sudarshan S	Professional Association Officer	1/2007-12/2008. IEEE Intelligent Transportation Systems Society (ITSS). Vice President for Financial Activities.
Chawathe, Sudarshan S	Professional Association Officer	1/2005–present. IEEE Intelligent Transportation Systems Society (ITSS). Member of the Board of Governors.
Chawathe, Sudarshan S	Award Committee Member	2/2007–present. IEEE Intelligent Transportation Systems Society (ITSS). Member, Dissertation Award Committee.
Chawathe, Sudarshan S	Professional Association Officer	1/2008--12/2008. IEEE Maine Section. Chair, Communication and Computer Societies' joint chapter.
Chawathe, Sudarshan S	Professional Association Officer	1/2006–12/2007. IEEE Maine section. Membership Chair, Communication and Computer Societies' joint chapter.
Chawathe, Sudarshan S	Professional Association Committee	1/2009--present. IEEE Intelligent Transportation Systems Society (ITSS). Vice President for Administrative Activities.
Chawathe, Sudarshan S	Program Committee Member	3/2009. The 7th IEEE Intelligence and Security Informatics Conference (ISI).
Chawathe, Sudarshan S	Professional Association Committee	10/2008--present. ITSS Award Selection Committee for IEEE ITSS Best Practice Award for Engineers.
Denton, George	Advisory Board	Served on three-member board to decide grants from the Comer Science and Education Foundation
Denton, George	Advisory Board	NOAA/Comer advisory group on abrupt climate change
Fernandez, Ivan	Professional Association Committee	Soil Science Society of America - Division S-7, Forest, Range and Wildland Soils; Past Chair and member of Executive Committee



Fernandez, Ivan	Editorial Board	Environmental Monitoring and Assessment
Fernandez, Ivan	Professional Association Committee	Council of Soil Science Examiners (CSSE), Soil Science Society of America, Maine representative (1998 to present) – develops testing instruments for SSSA and U.S. states to use in licensure in soil science.
Fernandez, Ivan	Professional Association Committee	Soil Science Society of America - Division S-7, Forest, Range and Wildland Soils; Past Chair and member of Executive Committee
Fernandez, Ivan	Editorial Board	Environmental Monitoring and Assessment
Fernandez, Ivan	Professional Association Committee	Executive Committee University Liaison - Maine Association of Professional Soil Scientists
Fernandez, Ivan	General/Other	Maine Liaison to the Smithsonian Institution Museum of Natural History Soils Exhibit
Hall, Brenda	General/Other	Reviewer for more than 20 different journals, as well as for proposals from NSF and the New Zealand Antarctic Research Programme.
Hall, Brenda	General/Other	Steering Committee Member and US Representative, Arctic Paleoclimate Extremes (APEX)
Hall, Brenda	General/Other	Governing board member, West Antarctic Ice Sheet Initiative
Hamilton, Gordon	Editorship	Journal of Geophysical Research (Earth Surface)
Hamilton, Gordon	Grant Review Board Member	NASA ICESat-II mission science definition panel
Jain, Shaleen	Editorial Board	Journal of the American Water Resources Association
Jain, Shaleen	Editorial Board	International Journal of Ecological Economics & Statistics
Kelley, Alice	Advisory Board	Science Advisory Committee, Penobscot River Restoration
Kelley, Alice	Conference Chair/Co-Chair	Archeological Geology Sessions (Morning and Afternoon) and Post Session, Northeastern Section, Geological Society of America, Portland, Maine, March 23 and 24, 2009
Koons, Peter	Grant Review Board Member	NSF Continental Dynamics Panel



Koons, Peter	Grant Review Board Member	Reviewer for NSF proposals to programs in Continental Dynamics, Geophysics, Tectonics, Land Dynamics
Koons, Peter	General/Other	Reviewer/Associate Editor: for Earth and Planetary Sciences Letters, GEOLOGY, Journal of Geophysical Research, TECTONICS
Kreutz, Karl	Grant Review Board Member	German Science Foundation INTERDYNAMIC program review panel
Kreutz, Karl	Professional Association Committee	NSF U.S. Ice Core Working Group elected member, stable isotope representative
Kreutz, Karl	Advisory Board	Senior advisory board member, Ice Drilling Program Office
Kreutz, Karl	Panel Chair	Chair, U.S. Ice Core Working Group
Kurbatov, Andrei	Conference Chair/Co-Chair	Harold W. Borns Symposium
Mayewski, Paul	General/Other	Organized International Trans Antarctic Scientific Expedition 21 nation meeting
Mayewski, Paul	General/Other	Organized overview report for Antarctic and Southern Ocean Climate Change Report
Mayewski, Paul	General/Other	Co-Editor and Organizer for Antarctic Climate and Environmental Change International Report
Norton, Stephen	Editorial Board	Environmental Monitoring and Assessment
Roscoe, Paul B	General/Other	Reviewer, Austrian Science Foundation
Roscoe, Paul B	General/Other	MS review, University of California Press
Roscoe, Paul B	General/Other	Article review, Oceania
Sandweiss, Dan	Editorship	Founding Editor, Andean Past (Cornell Latin American Studies Program)
Sandweiss, Dan	Editorial Board	Editorial Board Member, Chungará Revista de Antropología Chilena
Sandweiss, Dan	Editorial Board	Editorial Board Member, Latin American Antiquity (published by the Society for American Archaeology)
Sandweiss, Dan	Professional	Committee on the Americas, Society for American Archaeology



	Association Committee	
Sandweiss, Dan	Conference Chair/Co-Chair	27th Annual Northeast Conference on Andean Archaeology and Ethnohistory, University of Maine, Orono, Oct. 10-12, 2008
Sandweiss, Dan	General/Other	Tenure evaluation letter for Scott M. Fitzpatrick, North Carolina State University
Sandweiss, Dan	General/Other	Support letter for Scott M. Fitzpatrick for Alumni Association Outstanding Research Award, North Carolina State University
Sandweiss, Dan	General/Other	Letter of support for Calogero Santoro for Dumbarton Oaks (8 month) fellowship
Sandweiss, Dan	General/Other	Letter of support for Mario Rivera for Dumbarton Oaks visiting (one month) fellowship
Sandweiss, Dan	General/Other	I operate an Andean Studies email information distribution list.
Saros, Jasmine	Editorial Board	Associate editor for the journal <i>Hydrobiologia</i>
Saros, Jasmine	Editorial Board	Associate editor for the journal <i>Saline Systems</i>
Saros, Jasmine	Professional Association Officer	Elected board member of the International Society for Salt Lake Research
Saros, Jasmine	Conference Chair/Co-Chair	Co-convenor of the AGU Chapman Conference on "Lakes and Reservoirs as Sentinels, Integrators, and Regulators of Climate Change", Lake Tahoe, September 2008.
Saros, Jasmine	Conference Section Chair	Co-organizer of a special session at the 2009 annual meeting of the American Society of Limnology and Oceanography, Nice, France.
Zaro, Gregory D	Conference Chair/Co-Chair	Co-organized (with Dan Sandweiss) the 27th Annual Meeting of the Northeast Conference on Andean Archaeology and Ethnohistory, Orono, ME, October 2008
Zaro, Gregory D	General/Other	Manuscript reviewer, <i>Latin American Antiquity</i>
Zaro, Gregory D	General/Other	Book reviewer, <i>Journal of Anthropological Research</i>



To Department:

<b>Name</b>	<b>To Department</b>
Belknap, Daniel F.	Earth Sciences: Member of Peer Review and Policy Advisory Committee Climate Change Institute; Member of Peer Review Committee (and acting Chair of PRC as of May 1, 2009)
Chawathe, Sudarshan S	Computer Science Department Committees, University of Maine. * Curriculum * Space & equip (chair) * Colloquium * Graduate * PAC * PEER * Faculty Recruiting (chair) * Stillman Scholarship Committee.
Denton, George	Policy Advisory Committee, Climate Change Institute
Dieffenbacher-Krall, Ann	Serve as building manager for Climate Change Institute portions of Sawyer Research Center, and emergency response coordinator for ice core freezer and Earth Sciences walk-in cooler.
Fastook, James L	Graduate, Peer
Fernandez, Ivan	-Peer Committee -Graduate Faculty -Chair, Environmental Soil Science position development and justification committee -Building Manager, Potato Storage Building
Hall, Brenda	Peer Review Committee - Climate Change Institute Graduate Committee - Climate Change Institute Joint Anthropological/Climate Change Peer Review Committee Joint Tenure and Promotion Committee (Anthropology and Climate Change) Graduate Committee - Earth Sciences Curriculum Committee - Earth Sciences



Hamilton, Gordon	Chair, Policy and Advisory Committee; Climate Change Institute Chair, Ad Hoc Committee on Website; Climate Change Institute
Jain, Shaleen	Coordinator, Environmental and Water Resources Engineering Seminar Series, University of Maine (Fall 2006 & Fall 2008).
Kelley, Alice	Undergraduate Coordinator Attended Admissions Open House
Kelley, Joseph	Department Chair Oversaw new website proposal Oversaw new curriculum development
Koons, Peter	Curriculum Committee Undergraduate Adviser Chair : Peer Committee Peer Committee: Climate Change Institute Policy Action Committee: Climate Change Institute
Kreutz, Karl	CCI graduate committee ERS undergraduate advisor ERS Strategic planning committee CCI Churchill Fund committee
Maasch, Kirk	Department of Earth Sciences Graduate Committee
Norton, Stephen	Advising graduate and undergraduate research
Ocampo-Raeder, Constanza	Curriculum Development
Olsen, Brian	Curriculum Committee Member Chair, Animal Graduate Student Award Committee
Robinson, Brian S	Serves on Policy Advisory Committee to the Anthropology Department and advisory to the Anthropology Club
Roscoe, Paul B	Drafting activities, meetings related to Anthropology's plans for a PhD in Anthropology and Environmental Policy
Sandweiss, Dan	For Anthropology Department:





	Chair, Peer Review Committee for Gregory Zaro (2009) Member, Peer Review Committee for Brian Robinson For Climate Change Institute: Co-chair, Churchill Exploration Fund Selection Committee Member, Policy Advisory Committee
Saros, Jasmine	Member of the SBE Curriculum Committee Chair of the sub-committee that developed a new concentration in Ecology for the Biology B.S. SBE seminar co-coordinator Member of the SBE Associate Director Search Committee Member of Graduate Admissions Committee for CCI
Sobolik, Kristin	Chair, Department of Anthropology Associate Director, Climate Change Institute
Zaro, Gregory D	Graduate Coordinator, M.S. in Quaternary and Climate Studies, Climate Change Institute Graduate Board representative for Climate Change Institute

To College:

<b>Name</b>	<b>To College</b>
Chai, Fei	Graduate Award Committee
Chawathe, Sudarshan S	2009-04--present. CLAS instructional technology committee. 2009-01--present. CLAS Committee on Admissions, Advising, and Retention. 11/2005--present. Support for Science Students, University of Maine. Member, Faculty Advisory Board. Advising a residential education and support program for students studying science. 2/2007--5/2007. College of Liberal Arts and Sciences, University of Maine.



Member, Chair Search Committee.

9/2006–present.

College of Liberal Arts and Sciences, University of Maine

Member, Faculty Awards Committee.

Fernandez, Ivan

-Maine Agricultural and Forest Experiment Station Research Council (2005-present)

-Member – Search Committee, Assistant Professor in Geochemistry, Dept of Earth Sciences. 2007-2008.

Hall, Brenda

Center for Teaching Excellence Faculty Mentor for Teresa Johnson (Marine Sciences)

Koons, Peter

Curriculum Committee

Kreutz, Karl

S3 advisory board

SECRL advisory board

Honors college lectures, Fall 2008

Ocampo-Raeder, Constanza

Center For Undergraduate Research: Development of Research Seminars and Independent Research Opportunities

Roscoe, Paul B

On sabbatical

Sandweiss, Dan

Bailey Professorship Selection Committee

Sobolik, Kristin

Developed Maine Heritage Initiative

### *To University:*

#### **Name**

#### **To University**

Belknap, Daniel F.

Faculty Senator

Chair: Faculty Senate Academic Affairs Committee

Member: Faculty Senate Environment Committee

Member: Faculty Senate Executive Committee (meets 2 times/month)

Chai, Fei

Faculty Senate

Chawathe, Sudarshan S

9/2006–present.

University Club. University of Maine

*FY2009 Annual Report • Climate Change Institute*



	Member, Executive Committee. (Vice-president, 2008)
Fastook, James L	Stand in Senator for Roy Turner on Sabbatical
Fernandez, Ivan	-Co-organizer, with George Jacobson, Maine Climate Change Assessment, An initial assessment of priority climate change issues for Maine by request of Governor Baldacci (2007-2009) -Co-organizer, with Paul Mayewski, a conference Climate Change 21 - Choices for the 21st Century, October 23-24, 2008 -Co-PI: 2008 EPSCoR Proposal – The Center for Integrative Environmental Solutions: Linking Research with Action to Shape Maine’s Changing Landscape -University of Maine Research Council (2006-present) Chair: Faculty Subcommittee on Faculty Salary Incentives Program (2007- 2008) -Search Committee, Grants and Contracts Specialist, ORSP (2007-2008) -Army ROTC Faculty Academic Advisory Committee (2003-present) -University of Maine Representative to the National Park Service North Atlantic Cooperative Ecosystem Studies Unit (2005-present) -Advisory Board: Environmental Chemistry Laboratory (2004-present)
Hamilton, Gordon	Faculty representative, UMaine Sustainability Alliance Faculty representative, UMaine Green Loan Fund
Jain, Shaleen	Faculty Representative, UMaine President's Council on Disabilities Co-chair (Organizing Committee), 2009 Hal Borns Symposium, Climate Change Institute, University of Maine Team Member for the recently completed assessment activity at Governor Baldacci's request, "Maine's Climate Future: An Initial Assessment." Contributed to this effort at the University of Maine by completing the analysis of Maine's climate change projections for the 21st century and co-authored two chapters in the assessment report. I was part of a faculty group of ten lead authors (led by Prof. George Jacobson) who were invited to the State Capitol to present the report to Governor's cabinet in February 2009.
Kelley, Alice	Member, Gulf of Maine Offshore Wind Energy Development Initiative Presentor, University of Maine NSFA at the Hall of Flags, Augusta
Kelley, Joseph	Hudson Museum Board of Cooperating Curators, Hudson Museum, University of Maine, 2006-present.



	Contributed Data to Offshore Wind Energy Committee Contributed Text to Maine's Climate Future Sea Grant Sea Level Video reviewer
Kreutz, Karl	Faculty Senate, elected member Center for Teaching Excellence New Faculty mentor program High Tech Equipment Committee
Maasch, Kirk	Member, Hudson Museum Advisory Board
Mayewski, Paul	Director, CCI Organized CC <sup>21</sup> - Climate Change for the 21st Century Led UM Alumni Cruise to Antarctica and the Southern Ocean Organized CCI and UM application for membership in UCAR (University Corporation for Atmospheric Research)
Norton, Stephen	Nothing specific, but contribute to the MST program and a contributed talk at the Climate Change Institute's program (CCI21)
Ocampo-Raeder, Constanza	Honors Council and Development of Undergraduate Research program
Peterson, Michael	NEASC Accreditation Topic Area 1, Faculty Chair, resulted in new University Mission Statement
Robinson, Brian S	The MAPI Archaeological Field School represents a University outreach program.
Roscoe, Paul B	On sabbatical
Sandweiss, Dan	Co-Chair, Cultural Affairs/Distinguished Lecture Series Committee Co-Chair, Associate Provost and Dean of Undergraduate Education Search Committee Chief Cooperating Curator, Hudson Museum Board of Cooperating Curators Chair, Provost's International Advisory Team Member, Provost's Tenure & Promotion Advisory Committee Member, Shared Governance Committee Member, University Research Council Member, Provosts Council Member, NEASC Executive Committee Member, Collins Center for the Arts Advisory Board (ex officio) Member, Academic Affairs Budget Advisory Group



Member, Student Learning Outcomes Assessment (SLOA-I) Committee  
 Member, Graduate Rate and Retention Improvement Committee (GRRIT)  
 Member, BIW Professorship Review Committee  
 Etc.

Schauffler, Molly      Drafted an education and outreach vision for EPSCoR Director, Vicki Nemeth (Winter 2007-2008)

Sobolik, Kristin      Developed Celebration of Darwin  
 Executive Committee, NEASC Accreditation Review

Zaro, Gregory D      Invited lecturer, School of Biology and Ecology Lecture Series, organized by Dr. Jasmine Saros, February 13, 2009  
 Invited lecturer, PSE 121, Human Societies, Soil, and Water: the Unbreakable Link, Dr. Sue Erich, March 17, 2009

To University System:

<b>Name</b>	<b>To University System</b>
Roscoe, Paul B	On sabbatical
Schauffler, Molly	Provided input for the Hutchinson Center Building Committee and Interim Director Lavon Bartel about building design and cost estimates for construction of new science labs at the Hutchinson Center. (Jan - May 2008)

To State Legislature:

<b>Name</b>	<b>To State Legislature</b>
Kreutz, Karl	Hall of Flags event participant
Mayewski, Paul	Co-Editor Maine's Climate Future
Roscoe, Paul B	On sabbatical



To State Government Agencies:

Name	To State Government Agencies
Belknap, Daniel F.	Gubernatorial Appointee to Reserve Management Authority of the Wells National Estuarine Research Reserve (since 1999, reappointed for 3 yrs in 2009), meets quarterly.
Fernandez, Ivan	-Maine State Board of Certification for Geologists and Soil Scientists – Augusta, Maine (1992 to present), Reappointed by Governor Baldacci through 2009.
Kelley, Joseph	Maine Geological Survey StateMap Review Committee
Norton, Stephen	Consultations with the Department of Environmental Protection
Schauffler, Molly	1. Advisory Board member for the GENIQUEST Project, Maine Math and Science Alliance. (2007-2010) (A program involving bioinformatics training and (high school) student work with cutting-edge scientific data and tools currently in use by scientists at the Jackson Laboratory and elsewhere. Collaboration with the Jackson Laboratory and the Concord Consortium, funded by a National Science Foundation grant to the Maine Mathematics and Science Alliance)

To General public/local community:

Name	To General public/local community
Hall, Brenda	Answer emails and field phone calls from public
Hamilton, Gordon	Board of Directors, Maine Global Climate Change, Inc.
Kelley, Joseph	Bangor Public Library, Rising Sea Level talk, 2/19/09
Kreutz, Karl	Interview with Maine Campus paper on local energy issues Climate literature presentation, Asa Adams school



- Norton, Stephen Contributed talks at Bangor and Eastern Maine Salmon groups
- Olsen, Brian Orono Bog Boardwalk – May 2009. “The Sparrows of Orono Bog”. Bangor City Forest: Bangor, Maine.  
Fields Pond Audubon Center – May 2009. “Dressing Fancy: The story behind bird colors”. Maine Audubon Society: Holden, Maine.  
Bangor Public Library – October 2008. “Color me birdy: The story behind plumage color”. Penobscot Valley Chapter of the Maine Audubon Society: Bangor, Maine.
- Robinson, Brian S Board member of the Maluhsi-hikon Petroglyph Foundation  
Board of Trustees of the Wilson Museum, Castine
- Sandweiss, Dan Board member, Bangor Foreign Policy Forum
- Schauffler, Molly 1. Belfast Bay Watershed Coalition, founding Board member. (2006-2010)  
2. Organized stenciling of Belfast City storm drains by Troy Howard Middle School sixth grade class (June 2008)  
3. Work with Middle school faculty and watershed coalition to develop community trail around the City of Belfast
- Zaro, Gregory D Organizer and founder, Bangor Monthly Public Lecture Series “Climate Change on Planet Earth,” November 2008 to April 2009, Bangor Public Library, Bangor, ME.  
Presented “Archaeology, Ancient Civilizations, and Environmental Change” at the Bangor Monthly Public Lecture Series “Climate Change on Planet Earth,” January 14, 2009

To Pre-K - 12 Education:

**Name**

**To Pre-K to 12 Education**

- Belknap, Daniel F. Mentor and research collaborator with 2 high school students from Mount Blue HS, Farmington and their teacher (see Research Expeditions and Mentoring)
- Chai, Fei Workshop speaker on oceans and climate change
- Chawathe, Sudarshan S 12/1999–present. Intel Science Talent Search Science Service.  
Judge 2000–present; evaluator 1999–2000. Judging the week-long Science Talent Institute and evaluating entries for the Science Service’s Intel Science Talent Search (formerly, the Westinghouse Competition).  
10/2006--present. "Classbooks": A Web-based data management system for tracking student reading and outcomes.

*FY2009 Annual Report • Climate Change Institute*



	currently used in a 1st grade class at the Palmyra school, Maine, (MSAD 48).
Hall, Brenda	Visit elementary and middle schools to talk about Antarctica, Greenland, and climate change Meet one-on-one with interested students (middle school age)
Hamilton, Gordon	Multiple presentations in local schools; 4 school/youth group visits hosted in our lab
Kelley, Alice	Maintain traveling rock/mineral sample collection Participant, CCI/Dept. Earth Sciences Science Day, April 17, 2009
Kelley, Joseph	Hermon Middle School talk on Geology of Maine 9/28/08
Koons, Peter	Workshop development and presentation for IDEAS-ITEST project
Kreutz, Karl	Stillwater River chemical sampling and analysis project, Asa Adams fourth grades classes Antarctica lectures, Stillwater Montessori School
Sandweiss, Dan	Archaeology Presentation, 5th Grade, William S. Cohen School, Bangor (November 14, 2008)
Schauffler, Molly	1. Troy Howard Middle School, Belfast: collaboration and mentoring with science teachers in local watershed and carbon footprint studies (Sept - June 2007) 2. Initiated long term temperature study with middle and high school science teachers (Fall 2007 - ongoing). Three 2.5-hour workshops for teachers each year to frame new research questions, develop data skills, and analyze, interpret and present temperature data.
Sobolik, Kristin	Climate Change Science Day

*Service – Manuscripts/Proposal Reviewed*

<b>Name</b>	<b>Manuscripts</b>	<b>Proposals</b>	<b>Description</b>
Belknap, Daniel F.	2	32	1 manuscript for Geological Society of America Special Publication 1 manuscript for Quaternary Science Reviews 30 NSF proposals (10 for leader of panel discussion) for Marine Geology and Geophysics





			2 other NSF proposal
Chawathe, Sudarshan S	10		[numbers are approximate... don't have all records handy; the manuscripts reviewed is almost certainly an underestimate.]
Denton, George	8	12	Manuscripts were from refereed journals. Proposals were from the Comer Science and Education Foundation.
Fastook, James L	2	2	J. Glac: 1) The impact of parametric uncertainty and DEM error in ice sheet modelling. 2) On Fundamental Limits to Glacier Flow Models: Computational Theory and Implications. NSF: 1) Model Investigation of Ice Stream/Subglacial Lake Systems 2) PostDoctoral Research Fellowship
Fernandez, Ivan	16	5	I periodically review manuscripts for a wide range of journals in natural and environmental sciences as well as proposals for the National Science Foundation, the US Department of Agriculture and the US Environmental Protection Agency.
Hall, Brenda	24	6	I regularly review manuscripts for more than a dozen journals at a rate of about two per month, and proposals for several governmental agencies, mostly the National Science Foundation.
Hamilton, Gordon	14	7	Manuscript reviews for Nature, Journal of Glaciology, Annals of Glaciology, IEEE Transactions on Geoscience and Remote Sensing, Geology, Geophysical Research Letters, Remote Sensing of the Environment.
			Proposal reviews for NASA, NSF, Netherlands National Research Office, UK Natural Environment Research Council.
Jain, Shaleen	5	4	Manuscript Reviews A. Journal of Hydrometeorology B. Journal of the American Water Resources Association C. Geophysical Research Letters D. Water Resources Research E. Mitigation and Adaptation Strategies for Global Change



v. Proposal Reviews

A. National Oceanic and Atmospheric Administration, Climate Program Office

B. U.S. Geological Survey, National Institutes of Water Resources Research Program

C. North Carolina Sea Grant

Kelley, Alice	1		Pilkey, O.H. and Neal, W.J. North Topsail Beach, North Carolina: A Model for Maximizing Coastal Hazard Vulnerability Chapter in Geological Society of America Publication, America's Most Vulnerable Beach-Front Communities
Kelley, Joseph	4	1	National science Foundation Journal of Coastal Research (2) American Journal of Science Antarctic Science
Koons, Peter	10	10	As a member of NSF CD panel, I review the integrated science proposals, with multi institutional collaboration with an average request/ proposal of ~\$3Ma. (number of proposals is approximate). I review ~ 5 proposals for NSF TECTONICS.
Kreutz, Karl	14	13	Elsig et al., Nature Stenni et al., Quaternary Science Reviews Schwikowski, Swiss Science Foundation Stenni et al., European Science Foundation Field et al., Geophysical Research Letters Roberts et al., Journal of Glaciology Fritzsche and Wagenbach, German DFG 6 proposals as part of German DFG panel Bar Matthews and Valley, US-Israel Binational Science Foundation Gabrielli et al., Geochimica et Cosmochimica Acta Fortner et al., Hydrological Processes Field et al., Geophysical Research Letters (original) Baker et al., NSF-OPP Antarctic Glaciology Petit and Delmonte, Tellus Thamban et al.. Applied Geochemistry



Rothlisberger et al., *Climate of the Past*  
 Wang et al., *Geology*  
 Kellerhals et al., *Geophysical Research Letters*

Kurbatov, Andrei	2	1	AGU two manuscript was reviewed
Maasch, Kirk	5		Five manuscripts (3 <i>Paleoceanography</i> , 2 <i>Geophysical Research Letters</i> , 1 <i>Climatic Change</i> )
Mayewski, Paul	10	12	For peer reviewed journals and national and international funding agencies
Meese, Debra	4	5	
Norton, Stephen	20	3	For various journals and the National Science Foundation and the Czech Academy of Science
Peterson, Michael	7	2	Manuscripts ranged from separation science, ultrasonics to testing of surfaces and equine biomechanics.
Roscoe, Paul B	2	1	See under Other/General
Sandweiss, Dan	8	10	Manuscripts reviewed: <i>Latin American Antiquity</i> - 3 <i>Altamira Press</i> (book) - 1 <i>Journal of Archaeological Science</i> - 1 <i>Journal of Field Archaeology</i> - 1 <i>Proceedings of the National Academy of Sciences</i> - 1 <i>Quaternary Research</i> - 1 Proposals reviewed: <i>National Geographic Society</i> - 4 <i>National Science Foundation</i> - 3 <i>Chilean National Science Foundation (FONDECYT)</i> - 1 <i>Louisiana Board of Regents</i> - 1 <i>National Endowment for the Humanities</i> - 1
Saros, Jasmine	12	2	
Schauffler, Molly	0	6	US EPA Environmental Education Grants, reviewed 6 proposals (March 2007)

*FY2009 Annual Report • Climate Change Institute*



Zaro, Gregory D	2	0	Reviewed one manuscript for Latin American Antiquity; topic related to Historical Ecology in western Amazonia/Eastern Andes. Published book review; topic related to modeling human-environment dynamics in socio-natural settings, Journal of Anthropological Research
-----------------	---	---	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

*Service – Television/Radio/Newspaper Interviews*

<b>Name</b>	<b>Interviews</b>
Belknap, Daniel F.	5 e-mail and telephone interviews for newspapers
Chai, Fei	2
Denton, George	Radio New Zealand, May, 2008. Interview on global climate change broadcast throughout New Zealand.  Filmed in New Zealand for documentary on climate change.
Hamilton, Gordon	Bangor Daily News; Portland Press Herald; Associated Press; Science Today; Canadian Broadcasting Corporation; BBC; Maine Public Radio; State of the State/Maine Public TV
Kelley, Joseph	7/1/08, Tory Rydan, ABC TV News 8, Portland 9/1/08 New Scientist, Jeff Hecht 9/11/08, Wall St Journal 10/28/08, Lincoln County News, Jeff Ferta
Koons, Peter	Interviewed by DISCOVERY Channel on Coupled climate and tectonics
Kreutz, Karl	Interview and story with Maine Campus newspaper Interviews with TV2 (WLBZ) and TV5 Bangor Denali footage featured in UMaine promotional TV spots
Kurbatov, Andrei	NOVA show:NOVA Last Extinction on PBS <a href="http://www.pbs.org/wgbh/nova/clovis/">http://www.pbs.org/wgbh/nova/clovis/</a>
Peterson, Michael	1. Jeffrey McMurray, Associated Press, “Robotic hoof aides in track conditioning” Daily Racing News, <a href="http://www.dailyracingnews.com/horseracingnews.aspx?id=33564">http://www.dailyracingnews.com/horseracingnews.aspx?id=33564</a>



2. T.D. Thornton, Globe Correspondent, For horses' safety, he thinks outside the hocks,  
[http://www.boston.com/sports/other\\_sports/horse\\_racing/articles/2009/04/29/for\\_horses\\_safety\\_he\\_thinks\\_outside\\_the\\_hocks/](http://www.boston.com/sports/other_sports/horse_racing/articles/2009/04/29/for_horses_safety_he_thinks_outside_the_hocks/), April 29, 2009
3. John Matson, “After tragedy in last year's Kentucky Derby, is horse racing safer?,”  
<http://www.scientificamerican.com/blog/60-second-science/post.cfm?id=after-tragedy-in-last-years-kentuck-2009-05-01>, in 60-Second Science Blog
4. T.D. Thornton, “Cutting Through the Safety Jargon“ The Race for the Triple Crown, New York Times, April 29, 2009,  
<http://therail.blogs.nytimes.com/2009/04/29/cutting-through-the-safety-jargon/?pagemode=print>
5. Shayla Reaves, World's Top Researcher Tests Churchill Downs Track,  
<http://www.wave3.com/Global/story.asp?S=10209967>, Posted: Apr 19, 2009 5:47 PM EDT Updated: Apr 20, 2009 10:59 AM EDT ,

*Service – Other*

<b>Name</b>	<b>Other</b>
Chawathe, Sudarshan S	Numbers for manuscripts reviewed are my best estimates.
Fernandez, Ivan	Part of a leadership team that developed a climate change assessment for the Governor and delivered it in February, 2009. That was a key element in the Legislature passage of LD460 which was a climate change adaptation initiative for Maine. Currently I participate in that state process.
Peterson, Michael	2009 Steve Gould Award for Service to the University

*Special Public Service Recognition/Awards/Honors Received*

<b>Name</b>	<u><i>Special Recognition, Awards, Honors</i></u>
Belknap, Daniel F.	University of Maine Faculty Senate Outstanding Contribution Award for Chairing Academic Affairs Committee. Elected President of the Northeast Section, Geological Society of America 2009-2010.



- Chawathe, Sudarshan S Inducted to Upsilon Pi Epsilon (UPE), Maine Alpha Chapter.  
UPE is the first and only existing international honor society in the Computing and Information Disciplines.
- Denton, George See previous section for honors received in previous years.
- Dieffenbacher-Krall, Ann Springer Scientific Press has renewed its invitation for me to author-edit a book about my research in northern Maine. The invitation resulted from the fact that my and Andrea Nurse's 2005 article in Journal of Paleolimnology received the most "views" of any paper published in the journal that year.
- Fernandez, Ivan CASE/Carnegie U.S. Professor of the Year (Maine-2008) – Washington DC
- Kelley, Alice Planning committee member for the Northeast Region Geological Society of America Meeting in Portland, Maine, March 2009  
Session co-chair, Northeast Region Geological Society of America Meeting in Portland, Maine, March 2009
- Kelley, Joseph American Federation Scholarship Foundation 2008 Honorary Award, Eastern Federation of Mineralogical and Lapidary Sciences  
University of Maine College of Natural Sciences, Forestry and Agriculture Graduate Student Mentor of the Year Award
- Mayewski, Paul Elected to Advisory Board, Marine Environmental Research Institute (MERI) Center for Marine Studies (2009)  
University of Maine, College of Natural Sciences, Forestry and Agriculture Outstanding Research Award (2009)  
Maine Environmental Hero Award (2008)  
Key to the City of Saco, Maine (2008)  
AAAS Fellow, American Association for the Advancement of Science (2008)
- Ocampo-Raeder, Constanza CLAS Junior Faculty Research and Creative Activity Fellowship, University of Maine (Awarded May 2008). Fellowship provided a course release for the Fall of 2008 with the purpose of developing my NSF grant application which is developed extensively and only needs complementary data from fieldwork that will be carried out this summer.  
Regular Faculty Research Fund Competition, University of Maine (Awarded December 2008). Grant for project entitled “The Waterless Realms of the Human Seascape.” Funds will be used for a three-month fieldwork season in Northern Peru. Results will be incorporated into NSF Senior Research Grant to be submitted in January of 2010.  
Women in the Curriculum Resrach Grant, University of Maine (Awarded March 2008). Grant for Project entitled: “Señoras of the Sea. Señoras of the Forest: Women and the Sustainable Management of Ocean and Rainforest



Resources.” Funds were used for fieldwork in the Northern Coast and Amazon regions of Peru. Results from Amazonian research has been incorporated into an article and book project, and information collected in the Northern Coastal region is part of preliminary information needed for the preparation of NSF grant mentioned above. IT Faculty Technology Stipend Award (Awarded May 2008). Grant for project entitled: “Ethno-Pods: An Interactive Multimedia Tool for The Understanding of Cultural Diversity.” Funds were used to purchase digital equipment and software programs to create stitched 3D spherical and cylindrical panoramic images with embedded audio, film and text links. Each ethno-pod allows students to digitally “enter” and explore the house, forest, agricultural field, or markets of a series of case studies. Results were presented at the IT Faculty Technology Fair in October, 2008, University of Maine, Orono, ME.

Roscoe, Paul B  
Sandweiss, Dan

2008 CLAS Research and Creative Achievement Award

Invited as the first Distinguished Lecturer to inaugurate Intersapiens, a university-wide, interdisciplinary program at the Pontificia Universidad Católica del Perú in Lima, Peru.

*Other: (e.g. special contracts)*

<b>Name</b>	<b>Other</b>
Fernandez, Ivan	Part of a leadership team that developed a climate change assessment for the Governor and delivered it in February, 2009. That was a key element in the Legislature passage of LD460 which was a climate change adaptation initiative for Maine. Currently I participate in that state process.
Peterson, Michael	2009 Steve Gould Award for Service to the University

