

PROJECT INFORMATION

Lead Principal Investigator	Jason Briner
Institute	University at Buffalo, Department of Geology
Project Title / Grant #	Collaborative research: Nonlinearities in the Arctic climate system during the Holocene (0909334)
NSF Program and Manager	NSFOD\OPPVARC\ARCSS, Dr. Neil Swanberg
PFS Project Manager	Susan Zager

LOGISTICS SUMMARY

This is a 10-institute collaborative led by N. Arizona U (Kaufman 0909332), and including U at Buffalo (Briner 0909334), UAF (Wooller 0909523), Lehigh (Yu 0909362), Alaska Pacific (Loso 0909322), U Pittsburgh (Abbott 0908200), U. Illinois (Hu 0907986), CU Boulder (Miller/Axford/Lehman 0909347), U Mass (Bradley 0909354), Idaho State (Finney 0909310).

The twelve PIs will use lacustrine sediments to produce fourteen new high-resolution climate records of the past 8000 years. The pattern of climate changes recorded in the proxy records can be studied and compared with the output of climate models to gain an understanding of the non-linear processes involved in system change. Most research groups plan separate field campaigns. Hence, logistics details are found under each individual grant.

In 2010 a team of five will conduct helicopter-based fieldwork staged out of Ilulissat in west-central Greenland. After arriving in Kangerlussuaq via the ANG logistics chain, the team will fly commercially to Ilulissat, where they will prepare for and then launch a field campaign, travelling to the first of three sites by helicopter. After put-in, the team will establish a tent camp base and spend about five days working, using an inflatable boat with a motor to access sites, before tearing down the camp and moving, again via helicopter, to a second camp. This pattern will repeat an additional time; then, around 14 August, the team will take-out of the field via helicopter and return to Ilulissat.

Next, the five researchers will split into two teams and work on projects unrelated to the NSF research, one at a lakes camp on the ice sheet, the other at Disko Island. CPS will not support these efforts.

The team will reunite in Ilulissat and travel via commercial air to Kangerlussuaq around 20 August. From there, they will access the ANG logistics chain to depart the island.

In 2011 a team of four will base out of Clyde River on Baffin Island and use snowmachines to travel to Foxtrap Lake. There they will establish a tent camp and collect long cores.

CPS support in Greenland includes: ANG coordination for personnel and cargo, commercial airline tickets and freight within Greenland, lodging in Ilulissat and Kangerlussuaq user days, helicopter support, an inflatable boat/motor, and camping/safety/communications equipment.

In Canada, CPS will provide:

- camping and safety equipment,
- maintenance for NSF-owned snowmachines.

All other logistics not mentioned above will be paid by the investigators from the grant.

For the complete CPS online project record for this grant, including science objectives, go to: http://www.polar.ch2m.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=0909334

For up-to-date information on the project's schedule, please view the online Greenland calendar (<http://www.polar.ch2m.com> > Greenland > Calendars/Schedules).

OUTSTANDING ACTIONS AND NOTES

Issue	Responsibility	Due	Completed
Review support plan for accuracy and distribute to all field team members	PI		
Obtain all necessary permits for fieldwork. The project is still in final discussions with the Bureau of Minerals for their permit. The team is prepared to move their camp location if necessary.	PI		Pending
Visit all hyperlinks and review all documents referred to in the support plan	Entire Field Team		
Note: Passports are required for Air National Guard and international travel. Also, please bring TWO copies of your passport to Greenland with you.	Entire field team		
Complete Critical Success Factors	PI		

ALLOCATIONS AND SERVICES

Allocations from Inventory

Quantity	Item
1	Kitchen Box
1	Sponge
1	Water Container
1	Coleman Stove
2	Coleman Fuel
1	Fuel Bottle
1	Lighter
1	MSR Whisperlite
1	PLB
1	Generator
1	Medical Kit
1	Extension Cord
1	Boat, Inflatable
1	Motor
1	Jerrycan
1	Action Packer
1	Battery
2	Phone, Iridium
3	Mt. Tent
3	Rope, Nylon
4	Matches
5	Chair, camp
5	Life Jackets

For more information on satellite phones, radios, manuals and other field communications support, please visit the CPS communications Web site at <http://www.polar.ch2m.com/>.

Other Services

Service	Comments
Lodging, Kangerlussuaq	KISS
Lodging, Ilulissat	Hotel Hvide Falk
Helicopter charter, Bell212	AirGreenland
Commercial tickets SFJ > JAV > SFJ	AirGreenland
Air transport, pax and cargo	NYANG 109 th
Air transport, cargo	AirGreenland

LOCATION INFORMATION

Please visit <http://www.polar.ch2m.com/> and navigate to the Greenland menu for en route and location-specific Greenland information. Prior to deployment, your entire field team should be familiar with the content of the *Greenland Guide*, available electronically via our Web site's Greenland menu.

CARGO AND CUSTOMS

All cargo required for your project should arrive in Scotia, NY, **no later than 2 weeks prior** to the desired northbound Air National Guard (ANG) flight, must be entered into our online Cargo Tracking System, and must be properly registered with Customs.

For the most current ANG flight schedule go to <http://www.polar.ch2m.com/> and navigate to Greenland > Calendars/Schedules.

If you are a **new user** requiring access to the Cargo Tracking System, contact [Jason Buenning](#). (If you need **technical support** with the Cargo Tracking System, contact [Mike Dover](#) .

Customs instructions are available on our Web site at <http://www.polar.ch2m.com/> (go to Greenland > Customs). More information is available via the *Greenland Guide*, under Greenland on the CPS site.

The following is our current understanding of your overall cargo requirements:

Items	Weight/Cube
One shipment of science and field equipment delivered by researchers to Stratton	Approx. 1/2 pallet, 500 lbs.

SUPPORT SCHEDULE

Date	Location	Activity
19 Jul	NY > SFJ	Jason Briner, Nicolas Young, Sam Kelley, Stefan Truex, Elizabeth Thomas travel via NYANG 109th Lodging: KISS
20 Jul	SFJ > JAV	Briner, Young, Kelley, Truex, Thomas travel via AirGreenland Lodging: HHF
21 Jul	JAV	Team gathers supplies in JAV for field camps
22 Jul	JAV > Camp A	Team travels to Camp A via S61
22-27 Jul	Camp A	Team deploys for field studies
27 Jul	Camp A > B	Team tears camp down and flies to Camp B via Bell 212
27 Jul – 03 Aug	Camp B	Team deploys for field studies
03 Aug	Camp B > C	Team tears camp down and flies to Camp C via Bell 212
03 -14 Aug	Camp C	Team deploys for field studies
14 Aug	Camp C > JAV	Team tears camp down and pulls out to JAV via Bell 212
14 Aug	JAV > field sites	Team splits into 2 groups, one participating in a non-NSF lakes camp, one to a non-NSF study at Disko Island
14 Aug	JAV > field sites	Team splits into 2 groups, one participating in a non-NSF lakes camp, one to a non-NSF study at Disko Island
14 - 19 Aug	Camp SWE; Disko Island	Camp SWE: 69° 27' 18.77" N, 50° 16' 23.38" W Disko Island: 69° 14' 45.74" N, 53° 32' 04.53" W
19 Aug	JAV	Team reunites in Ilulissat Lodging: HHF
20 Aug 10	JAV > SFJ	Team travels via AirGreenland
22 Aug 10	SFJ > NY	Jason Briner, Nicolas Young, Sam Kelley, Stefan Truex, Elizabeth Thomas travel via NYANG 109th

For the most up-to-date information on the project's schedule, please view the online Greenland calendar (<http://www.polar.ch2m.com/> > Greenland > Calendars/Schedules).

FIELD TEAM INFORMATION

Name	Email
Briner, Jason	jbriner@buffalo.edu
Young, Nicolas	nyoung2@buffalo.edu
Kelley, Sam	samuel.kelley@maine.edu
Truex, Stefan	srtruex@buffalo.edu
Thomas, Elizabeth	elizabeth_thomas@brown.edu

PROJECT CONTACT INFORMATION

Research Team

Role	Name	Email	Phone / Fax
Collaborator	Mark Abbott	mabbott1@pitt.edu	412 624.1408 /412 624.3914
Collaborator	Raymond Bradley	rbradley@geo.umass.edu	413 545.2120 /
Principal Investigator	Jason Briner	jbriner@buffalo.edu	716 645.6800 /716 645.3999
Collaborator	Bruce Finney	finney@isu.edu	208 2824318 /208 2824570
Collaborator	Feng Sheng Hu	fshu@life.uiuc.edu	217 244.2982 /217 244.7246
Collaborator	Darrell Kaufman	darrell.kaufman@nau.edu	928 523.7192 /928 523.9220
Collaborator	Michael Loso	mloso@alaskapacific.edu	907 564.8263 /
Collaborator	Gifford Miller	gmiller@colorado.edu	303 492.6962 /303 492.6388
Collaborator	Matthew Wooller	mjwooller@alaska.edu	907 4746738 /907 474.7979
Collaborator	Zicheng Yu	ziv2@lehigh.edu	610 758-6751 /610 758-3677

CPS Team Members

Contact for	Name	Email	Primary Phone
Greenland science planning & support	Susan Zager	Susan@polarfield.com	Denver: 720.320.6159
Greenland science planning & support	Robin Abbott	Robin@polarfield.com	Denver: 303.748.8507
Kangerlussuaq base operations	Kathy Young	Kathy@polarfield.com	Denver: 720.320.6160 Greenland: 011.299.524218
Scotia (Stratton Air Base) operations & customs	Earl Vaughn	Earl.Vaughn@gmail.com	Scotia cell: 518.605.0979
Sat phones & comms	Roy Stehle	Roy.Stehle@sri.com	Menlo Park: 650.859.2552
Remote Medical (kits & service) and Medical/Dental Clearance (PQ)	Robbie Score	Robbie@polarfield.com	Denver: 303.906.0093

CPS Offices

Denver	Kangerlussuaq	Scotia
Polar Field Services 8110 Shaffer Parkway Suite 150 Littleton, CO 80127 Tel: 303.984.1450/1439 Fax: 303.984.1445	CH2M HILL Polar Services Attn: Name of Employee/Researcher Postboks 1015 DK-3910 Kangerlussuaq, Greenland Tel: 011.299.841598 Fax: 011.299.841599	Earl Vaughn C/O 109 th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Tel: 518.344.2635 Cell: 518.605.0979 Fax: 518.344.2537

Other

Organization	Internet	Phone
Medical Advisory Service (MAS) (see below for Remote Telemed #)	http://www.medaire.com/corp_medlink.html	Office: 480.333.3771

SAFETY, ENVIRONMENT, HEALTH and PERMITS

Effective January 1, 2010 the Government of Greenland assumed responsibility for the permitting process for research in Greenland. All science teams planning to conduct research in Greenland must complete an **annual application** in order to obtain approval from the Government of Greenland. The application forms are available from the Department of Domestic Affairs, Nature and Environment at <http://www.nanog.gl/expeditions> or by sending an email to [ekspeditioner at gh.gl](mailto:ekspeditioner@gh.gl). Applications are submitted directly through the Department of Domestic Affairs, Nature and Environment. Be advised that a new fee of 4000 DKK has been put in place for permits. For assistance with the application process, contact:

Martin Schiøtz, Head of Section
 Section of Nature, Department of Domestic Affairs, Nature and Environment
 P.O. Box 1614
 3900 Nuuk, Greenland
 e-mail: [ekspeditioner at gh.gl](mailto:ekspeditioner@gh.gl)

Medical Advisory Service (MAS) Support

If you need medical advice/assistance, do not hesitate to contact Medical Advisory Service (MAS) using the card included with the medical kit or the information below. Be sure that each team member knows where the kit is located and understands how to use the MAS service in the field. For further information on MAS, please visit our Web site <http://www.polar.ch2m.com/> and navigate to Medical>Remote Medical Services/Kits.

MAS 24/7 Telemed Service

Worldwide Phone: 1.480.333.3876
 Fax: 1.480.333.3821
 Member ID: CH2M HILL Polar Services

RISK ASSESSMENT

See Appendix for Risk Factors and Mitigation.

CRITICAL SUCCESS FACTORS

Please list the factors that are most important for the success of your science. We track these factors in order to measure the success of CPS' support. Examples might be the availability of the helicopter or camp gear.

Factors
Helicopter flight scheduling
Coordinating cargo from NY > Kanger > Ilulissat and return
Communication / ease to work with CPS
Suitability / quality of equipment provided by CPS

GOVERNMENT AND PERFORMANCE REPORTING ACT OF 1993 (GPRA)

NSF/OPP requires your help in complying with the Government Performance and Reporting Act of 1993 (GPRA). One measure of CPS' performance is a "facility-performance metric" which counts the number of productive days your project has in the field while relying on CPS facilities or support. Please keep track of any "lost days" and report these to us at the end of the season.

APPENDIX

Risk factors and mitigation for Ilulissat work.

Factor	Mitigation and Control
Cold Weather	<ul style="list-style-type: none"> -Team members attend a cold weather injury training course such as Wilderness First Aid or Wilderness First Responder -Proper clothing -Appropriate camping gear, insure sleeping bags are adequately rated -Check forecast before going out of camp/town.
Helicopter Travel	<ul style="list-style-type: none"> -Participate in helicopter training -Have a SAR plan in place -AHA working around aircraft -Carry survival bags on the aircraft if doing day trips, or if multiple put in flights insure people travel with survival items from camp supplies
Remote Camp	<ul style="list-style-type: none"> -Have a remote medical call in service -Have a SAR plan in place -Have a First Aid kit available -Participate in First Aid training- be sure that someone or all field personnel have -Basic First Aid training at a minimum -Have a communication/ check-out/check-in plan in place -Develop a list of current camp member's training levels and certifications -Maintain an emergency contact list, include all applicable agencies, field team members, provide camp location and description to local SAR groups -Develop a plan for general camp operations including camp hygiene and handling human waste -Participate in PLB training -Participate in GPS training
Water – Availability, Potability	<ul style="list-style-type: none"> -Filtration system -Carry in