

SUMMARY REPORT:

2014 MAAMUITAAU ILINNIA FIELD SCHOOL

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In February 2014, the University of Manitoba organized a field school entitled “Maamuitaa Ilinnia” (Gather Learn) in Kuujjuarapik-Whapmagoostui Quebec. The organizing committee consisted of Dr. Christine Barnard from Université Laval and Dr. Brent Else, Ms. Karley Campbell and Dr. John Iacozza from the University of Manitoba. The field school was hosted by the Centre d’Études Nordiques (CEN) facility in Kuujjuarapik. Sixteen students from various Canadian and international universities attended the field school (**Photo 1** and **Table 1**). The composition of the students varied and included students from a variety of disciplines, in both Masters and PhD programs, as well as new graduate students to students well advanced in their programme (**Table 2**).

Funding for this field school was generously provided by ArcticNet, Arctic Science Partnership (ASP), the Clayton H. Riddell Faculty of Earth, Environment and Resources Endowment Fund, Centre for Earth Observation Science (CEOS) and Department of Environment and Geography at the University of Manitoba. In kind support was provided by CEN and Air Inuit. The organizing committee would like to thank Mr. Claude Tremblay and Mr. Alexandre Truchon-Savard from the CEN facility who provided considerable assistance while at the field school.



Photo 1: A group photo of the 16 participants in the field school, along with Claude Tremblay (manager at the CEN facility).

Table 1: Demographics of students attending Maamuitaa Ilinnia field school.

Home University	# of Students
University of Alberta	1
University of British Columbia	1
University of Greenland	1
University of Guelph	1
Université Laval	3
University of Manitoba	3
University of Montreal	1
Université du Quebec à Rimouski	1
Université de Sherbrooke	1
University of Southern Denmark	1
University of Toronto	1

Program – Year of Study	# of Students
Masters – 1 st year	3
Masters – 2 nd year	4
Masters – 3 rd year	1

PhD – 1 st year	2
PhD – 2 nd year	3
PhD – 3 rd year	1
PhD – 5 th year	2

Table 2: Programmes represented at the Maamuitau Ilinnia field school.

Programme		# of Students
Social Science	Arctic Security	1
	Food Security	1
	Health	1
Physical/ Biological Science	Biogeochemistry	3
	Biology	3
	Geology/Geomorphology	2
	Oceanography	1
	Snow	2
Engineering		1
Interdisciplinary		1

The focus of each day of the field school changed and was mentored by individual faculty members from various Canadian universities. Mentors included Dr. Karla Williams (University of Saskatchewan) discussing the social aspects of the Arctic system, Dr. CJ Mundy (University of Manitoba) lecturing on marine system, Dr. Milla Rautio (Université du Québec à Chicoutimi) focusing on freshwater system, Dr. Michel Allard (Université Laval) lecturing on permafrost and Dr. Dominique Berteaux (Université du Québec à Rimouski) talking about animal and vegetation of the Arctic environment. Each mentor presented a half day lecture, followed by an experiential learning component. This field school was developed by the organizing committee to emphasize this component of education at the graduate level. For the social component, the experiential learning component involved each student standing in front of the class and telling their story to the other participants in the field school, simulating the inclusion of traditional knowledge into research (**Photo 2**). For the environmental topics, students participated in short field excursions into the Arctic environment (marine, freshwater or terrestrial) where the mentor led a hands-on activity. The pictures below show the students participating in the experiential learning component of this field school. For the marine and freshwater systems, students traveled to the sea ice and lake in a close proximity to the CEN facility (travelled by snow machine). At these sites, students took a sample of the ice and/or water and brought it back to the facility for analysis. Later in the day, the mentor lead a discussion on the analysis of the samples collected, and the students participated in the hands-on sampling (**Photo 3**). For the permafrost module, Dr. Allard took the students to the palsas around Kuujjuarapik where there is a permanent sampling structure. Students were able to observe the type of research that is currently being conducted on permafrost and Dr. Allard was able to show the students data from the field station (**Photo 4**). For the final module, Dr. Berteaux had the students conduct simple research based on the adaptations of animals and plants to the Arctic environment. Students collected data and presented the results to the entire class. As part of this course, students were also asked to work in groups of four and present a presentation to the class on the material learned during the field school (assignment II). This was designed to get the students working in groups and present on a topic related to one of the topics discussed in the field school in a way that would be appropriate to the general public. The objective was to develop skills in teaching as well as getting them to engage with non-scientists or scientists that are outside their discipline.



Photo 2: A field school student telling ‘their story’ to the other participants of the course.



Photo 3: A field school student analyzing freshwater in the lab facilities at the CEN facility.



Photo 4: Students listening to Dr. Allard in the field. Dr. Allard is explaining the permafrost features found in the area.

Another important component of the field school was community outreach. Ms. Campbell along with Alexandre Truchon-Savard (science coordinator at CEN facility) organized three community events. The first event matched each field school participant with a high school student from the community. The high school students (around 16) talked to their assigned graduate student about their community and involved a community tour where the students were shown the areas important to the students. The next community event was centred on the field school participants highlighting their research to the community. An evening was set aside during the week and involved the students setting up stations that highlighted different aspects of research in the Arctic. The community members were invited and interacted with the graduate students. Each station had a hands-on component. The third community event focused on inviting high school students (more than participated in the first community event) to the CEN facility and again they interacted with the field school students, however in this case, the field school students highlighted Arctic research. All three community events were well received by both the community and field school students.



Photo 5: Graduate students registered in the field school interacting with local students from the community during a community event.

Overall the field school was well received by the students. Each student was asked to complete a survey after the field school, and of the 16 participants, 14 returned completed surveys. The results, presented below in **Table 3** show the results of the survey. Some additional comments included:

“(The field school) has made me more confident talking in a group and sharing my research”.

“it allowed me to have a glimpse of what it is to do field work about other topic, of the communities living in the North and of this particular environment, very different of my field site or where I live. Also it introduced me to new science topic”

“it really highlighted the importance of collaborations between disciplines and allowed me to think more broadly about my own work. It also made me realize how much I missed by never going to summer camp”

“almost by accident or unexpectedly at least, speaking with some of the mentors gave me great insight into my own work; also made me happy to connect with the community, my colleagues, etc to discuss with interesting people”

“the discussions and presentations and outreach gave me new insight that I will actually take into account in my further life. The group dynamic was wonderful and I hope everyone had a great time. The interaction with people with different background in what makes this field school special.”

“overall it was a great experience. The knowledge we gained from John, the other invited teaches and from each other is really great. The experience with Inuit and Cree was wonderful to have and I will try to keep contact with some of them.”

“I really enjoyed the community night. I thought it was a great opportunity to share what we are doing as researchers in the Arctic. It was great to just chat with people”

Table 3: Results from surveys completed by the graduate students who participated in the Maamuitaau Ilinnia field school. 1 = poor, 2 = average, 3 = good, 4 = excellent. Sample size is 14.

Question	Median Response
<u>GENERAL</u>	
Information prior to departure	2
Overall organization	3
Accommodations	4
Group dynamics between students/staff/organizers	4
<u>EDUCATION PROGRAM</u>	
Clear expectations of course	3
Information provided in the handbook	4
Social and cultural dimensions	3
Marine systems	4
Freshwater systems	4
Permafrost	4
Animals and Vegetation	4
Group Activity I: Marine systems	4
Group Activity II: Group presentations	3
Group Activity III: School fieldtrip to CEN	4
Group Activity IV: Community presentation	4