



**Women's Roles in Polar Regions
Past, Present, and Future**

**PROGRAM,
ABSTRACTS
and
SPEAKER BIOGRAPHIES**

**Byrd Polar Research Center
The Ohio State University
Columbus Ohio**

October 9 – 10, 2003



DEDICATED TO

DR. LOIS M. JONES
(1934 – 2000)

This symposium is dedicated to Dr. Lois M. Jones (1934 - 2000). Dr. Jones was the leader of the first all-women field team (1969-70) to Antarctica. The expedition was sponsored by The Ohio State University's Institute of Polar Studies (now the Byrd Polar Research Center) and Department of Geological Sciences, with funding from the National Science Foundation.

ACKNOWLEDGEMENTS

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AND A SPECIAL THANK YOU TO:

THE BYRD POLAR RESEARCH CENTER AND ITS DIRECTOR, DR. W. BERRY LYONS
FOR AGREEING TO CO-HOST THE CONFERENCE AND PROVIDING NOT ONLY STAFF
ASSISTANCE BUT ALSO THE MEETING FACILITIES.

WOMEN'S ROLES IN POLAR REGIONS PAST, PRESENT, AND FUTURE

-- PROGRAM --

9 – 10 OCTOBER 2003

Wednesday, October 8 (Holiday Inn on the Lane)

6:00 – 10:00 PM *Icebreaker Reception (Cash Bar) / Registration (Buckeye II, III & IV Suite, 11th Floor)*

7:00 – 9:00 PM *American Polar Society Board Meeting (Buckeye I Suite, 11th Floor)*

Thursday, October 9 (Scott Hall, Room 240)

7:30 – 8:30 *Transportation/Registration/Coffee*

Morning Session: The Human Element: A Women's Touch

8:30 – 9:00 **K. Larson, J. Palais, B. Lyons, G. Dreschhoff (Outgoing APS President):** Welcome

9:00 – 9:30 **Gretel Ehrlich:** The Future of Ice

9:30 – 10:00 **Colin Bull:** Women in the Antarctic: Battering at Barriers

10:00 – 10:30 *Break*

10:30 – 11:00 **Elaine Abraham/Judy Ramos:** Native Women as Professionals in the North

11:00 – 11:30 **Nancy Chin:** Women in Antarctica: An Anthropological Perspective

11:30 – 12:30 **Panel Discussion:** Cultural Change in the Polar Regions: Implications for Women

12:30 – 1:30 *Lunch Break*

Afternoon Session: Pioneers in Polar Research

1:30- 2:00 **Peter Wilkniss:** Ladies in Red and Other Colors

2:00 – 2:30 **Ellen Mosley Thompson:** Two decades of Glaciology on the Polar Sheets

2:30 – 3:00 **Julie Brigham-Grette:** Empowering Moments & Entrusting Mentors

3:00 – 3:15 *Break*

3:15 – 3:45 **Nelia Dunbar:** From Africa to Antarctica: Adventures in Living and Working in Remote Deserts

3:45 – 4:15 **Rita Horner:** Women in Polar Regions: Some Experiences from the Past

4:15 – 4:45 **John Behrendt:** Contrasts in Antarctica since IGY; Without & With Women

6:00 – 7:00 *Cash Bar / Reception at the Holiday Inn on the Lane (in Salon CD, Ground Floor)*

7:00 – 10:00 *Banquet, APS Award Ceremony at the Holiday Inn on the Lane (in Salon CD, Ground Floor)*

-- PROGRAM (CONTINUED) --

Friday, October 10 (Scott Hall, Room 240)

7:30 – 8:30 *Transportation/Registration/Coffee*

Morning Session: The New Explorers

- 8:30 – 9:00 **Edith "Jackie" Ronne:** The First
9:00 – 9:30 **Special Guest:** Counting Flowers on the Wall: The Roses of a Bleak Continent
9:30 – 10:00 **Sheila Nickerson:** The Story of Tookoolito of Baffin Island
10:00 – 10:30 **Break**
10:30 – 11:00 **Mary Crawford:** The Sky's the Limit for Women in Polar Regions
11:00 - 12:00 **Book Signing:** all interested authors (Ehrlich, Behrendt, Nickerson, others TBA)
- 12:00 – 1:00 **Lunch Break**
- 1:00 – 1:30 **APS Rug Drawing**

Afternoon Session: Looking to the Future

- 1:30 - 2:00 **Edna MacLean:** A Minister and Two Presidents
2:00 – 2:30 **Susan Adie:** Polar Expedition Tourism: Designing an Ecologically and Environmentally Responsible Future
2:30 – 3:00 **Wendy Eisner:** Graceful Observation: Women, Science, and Community in Polar Regions
3:00 – 3:15 **Break**
3:15 – 3:45 **Terry Wilson:** International Polar Year 2007- 2008: Looking to the Future
3:45 – 4:15 **John Splettstoesser (Incoming APS President):** Concluding remarks, Images of the Polar Regions



Native Women as Professionals in the North

Elaine Abraham and Judy Ramos

Owl House
Yakutat, Alaska

Drawing on her daunting experiences as one of the first Alaska Natives to become a Registered Nurse, Elaine will recount measures she undertook during major diphtheria and tuberculosis epidemics that hit many remote Alaskan communities in the 1950s. Additionally Elaine will discuss the central social and subsistence roles women play in Alaska Native communities, and how these roles are changing as traditional ways and norms are influenced by outside cultures. Elaine’s daughter, Judy Ramos, will add to this topic by discussing her role as a researcher in Subsistence and Traditional Ecological Knowledge Studies in Alaska, as Executive Director for the Yukon First Nations Education Commission in Whitehorse, and as an analyst for the Assembly of First Nation's Education Policy in Ottawa. Through these professional activities both Mother and Daughter have been helping Alaska Native communities identify and address their concerns about environmental contaminants, human health, and environmental change. Elaine and Judy have been very active in this arena and will discuss their Traditional Knowledge and Contaminants Project, which documents Alaska Native understanding of environmental changes and contamination. In contrast to the usual scientific methods used for collecting traditional knowledge (e.g., surveys, public hearings), locally meaningful practices and protocols were used to gather traditional knowledge about environmental concerns.



Polar Expedition Tourism: Designing an Ecologically and Environmentally Responsible Future

Susan Adie*

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Tourism in Polar Regions began in the 1900s, with government-sponsored vessels advertising for tourists to accompany them and thereby assist with the costs of transport. As an example, tourism in South Georgia began in December 1924 when mail, cargo, and passengers were transported between the Falkland Islands, South Georgia, and South Shetland Islands. Tourists often accompanied the vessels. Modern ship-borne tourism in Antarctica began in 1958 when an

Argentine vessel made two cruises to the Antarctic Peninsula area. In the late 1960s, Lars-Eric Lindblad, perhaps the pioneer of modern polar tourism had the ship *Lindblad Explorer* built, designed specifically for adventure-cruising in ice-filled waters and reaching remote destinations. By the 1990-2000 period, more than a dozen tour vessels operated in Antarctica, carrying some 10,000-15,000 tourists in the austral summer season (November – mid-March). Many of the same operators also charter cruises in the Arctic and sub-Arctic regions as well. Attractions of both Polar Regions include scenery, unique wildlife, ice, solitude, and visits to native settlements in the North. Self-regulating Codes of Conduct, along with regulations enacted by the Antarctic Treaty Parties, are practiced by tour operators, especially those companies that are members of the International Association of Antarctica Tour Operators (IAATO), a consortium of companies formed in 1991 to advocate, promote and practice safe and environmentally responsible private-sector travel to the Antarctic.

Women have been an integral part of this industry since its inception, although in earlier years it was noticeably a male world. Women now own or are corporate managers of commercial expedition companies, and others are boat captains or boat handlers, and serve in leadership and education roles as field-expedition staff. However, there are still relatively few women in upper-level management positions. Expedition Leaders, whether male or female, organize the expedition, working with the ship's bridge officers and the expedition team to present a safe and high-quality experience for clients. Working with clients from cultures and nationalities unaccustomed to a female leader has created interesting experiences.

The numerous benefits of polar tourism, including the new experience by the public of visiting remote places on Earth, gaining an awareness of the vulnerable wildlife in those areas, and thereby a greater appreciation for promoting safeguards to preserve those areas, are reason enough to conduct properly managed tourism. All visitors are invariably captured by the 'magic' of such experiences to become 'Polar Ambassadors.' Other benefits, those of exploration, include the establishment of new itineraries in Polar Regions, often cruising to areas that few, if any ships reach, thereby charting new terrain and producing valuable sounding information. Examples in the past decade include two complete circumnavigations of Antarctica (1996-97 and 2002-03), in which a Russian icebreaker visited many parts of the coast not seen in detail previously, visiting Emperor Penguin colonies with the aid of ship helicopters, and recording wildlife on the route (including the rarely seen Ross Seal). These and other voyages have resulted in observations published in the scientific literature, thus adding to information on statistics of wildlife distribution, for example. Similar itineraries in the Arctic (circumnavigation), also by Russian icebreakers, have resulted in comparable data. Much of this type of polar tourism is the result of the change of the Soviet Union in 1991 to individual states, which made icebreakers and other Russian vessels available for chartering for tourism. Tourism by aircraft is also popular in both Polar Regions, in one example carrying tourists to the interior of Antarctica, occupying a seasonal temporary camp, and then transporting clients to the South Pole, as well as supporting private expeditions in a variety of objectives.

Tourism will increase in both Polar Regions. To help facilitate a safe and environmentally responsible experience, the Arctic would benefit from a consortium of countries and companies that agree on methods and procedures for responsible tourism.

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Contrasts in Antarctica Since IGY: Without and With Women

John C. Behrendt

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When I first traveled to Antarctica in 1956 to participate in the International Geophysical Year (IGY) over snow traverse program, there were no women on the U.S. Navy ships, at the Scientific Stations (or Navy bases--opinions differed as to their status), or on the over snow geophysical-glaciological traverses. Larry Gould, Antarctic geologist and the chairman of the U.S. National Committee for the IGY, got red in the face and pounded the table to object to the idea of women going to Antarctica. Admiral George Dufek, the first commanding officer of Operation Deep Freeze, was reported to have said that women would go to Antarctica in the U.S. program "over his dead body." This seemed strange to me, after the mountaineering expeditions, backpacking vacations, and wilderness and rapids canoe trips I had participated in for the previous four years, as a student at the University of Wisconsin, where at least a third of my companions were women. Spending eighteen months in an all-male environment was even stranger. This was the pattern for my Antarctic trips through 1965. Although the U.S. Navy position changed shortly thereafter, at first no women scientists in Antarctica had NSF grants.

After a hiatus of 13 years, I was pleasantly surprised at the contrast when I returned to Antarctica in 1978; women were well integrated into the program with about ten years of active participation. Women had been doing geologic fieldwork in the USGS since at least as far back as World War II and had been participating on USGS research ships since 1972. From about 1955 to 1966 there were 3.8 deaths per year in U.S. aircraft accidents in Antarctica. Since the 1970s there have been only 0.3 deaths per year. Of course, correlation is not causation, but these statistics do make an interesting footnote on the subject of women in Antarctica.



Empowering Moments, Entrusting Mentors

Julie Brigham-Grette

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Questions concerning the late Cenozoic climate evolution of the Arctic continuously feed the inner passion I have for reconstructing the paleo-environmental history of Beringia. It's a career choice molded as much by remarkable mentors, as by personal experiences that defined my physical limits and mental will. While the contributions we as women make to arctic science differ little in content from the contributions of our male colleagues, societal barriers still exist and are necessarily overcome by, what I argue is a special sense of determination common to "polar women".

In 1959-60 Colin Bull and his mentor, Professor Robin Clarke, nearly managed to change all this. In organizing the second Antarctic expedition from the Victoria University of Wellington, New Zealand, to south Victoria Land, they planned a five-person party that included one woman geologist. Approval and permission for such a bold innovation was gained from all the relevant bodies including the New Zealand Government but the party needed a one-hour ride by U.S. helicopter from the New Zealand Antarctic base to the field area and the U.S. Navy commander in Antarctica vehemently refused this. Dawn stayed in New Zealand and married an Antarctic geologist.

The U.S. Navy's refusal struck Bull as being such an asinine action that after he had moved to Columbus, Ohio in 1961, he tried repeatedly to include women scientists in the U.S.A.R.P. parties from The Ohio State University. Some years he had a real woman to include and in other years the party was graced with a virtual woman. Eventually, for the 1969-70 season, he gained permission from the U.S. Navy, via N.S.F. to send a four-woman party to the ice-free valleys to conduct geochemical sampling as long as all the members had Antarctic experience!

Only one of Bull's friends, in writing about his accomplishment, used the word Traitor.



Women in Antarctica: An Anthropological Perspective

Nancy Chin, PhD, MPH and Tim Dye, PhD
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University of Rochester
Rochester, New York

It used to be said that you could find a woman behind every tree in Antarctica. Of course there are no trees on the ice continent. When McMurdo Station was established in 1956, the US Navy would not transport women to the ice, nor would the National Science Foundation fund female scientists. In 1969 the ban on women was lifted, but it wasn't until 1990 that women became a significant presence there, now constituting a third of the summer population. So how do women integrate themselves into a previously all-male, mostly military community? What are the expectations, barriers, motivators, and strategies of women involved in this unusual landscape? What are the gender dynamics of daily life on the ice? In this paper we focus on women who serve as support workers, rather than scientists, and examine the great heterogeneity among women who work in McMurdo.

A fundamental task of anthropology is to understand the workings of a society from the perspective of the people who live it. Anthropology presumes that all people possess valuable knowledge about their own culture and society that can be accessed through immersion in the study community, acting as participant-observers as people go about their daily lives at work, school, home, and religious observances, among others. Antarctica is a unique social space in which to do anthropology. No anthropologists have done participant-observation like this during the summer season when the population and activities are at their height. Members of our research team took on work as cargo handlers, shuttle drivers, a general assistant, and a dining

room attendant. We also participated as much as we could in the social life of the community attending the Halloween party, using the library, playing soccer, DJ-ing at the radio station, and participating in the women's support group.

The goal of this presentation is to present the first rough cut of our data on daily life and gender dynamics among support workers, to see if the data makes sense to those of you who have long experience in Antarctica, and to get recommendations for on-going data collection at McMurdo with suggestions of alternative interpretations of the data that we have not yet considered.



The Sky's the Limit for Women in Polar Regions

Mary A. Crawford
Retired, U.S. Navy

A brief description will be presented of the context, including social, of incorporation of women in the Antarctic Development Squadron (VXE-6) as well as the United States Navy at large. A personal perspective will be included of the experience of the first women aviators assigned during Deep Freeze 81-82, with a comparison of the experience of these women and their male counterparts. Finally, a summary will explain what happened after the polar experience and what continuing participation military women still have in Polar exploration.



From Africa to Antarctica: Adventures in Living and Working in Remote Deserts

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The Antarctic continent, although largely covered with ice, hosts a number of volcanoes, some of which are currently active. The activity of these volcanoes, past and present, and the interaction between the volcanoes and the Antarctic ice sheets has been the focus of my research for the past 20 years.

My first trip to Antarctica was in 1983, when I worked as a field assistant on the active Mt. Erebus volcano, as well as on sampling some older volcanoes on or near Ross Island. Although I'd never really thought much about Antarctica prior to my first trip, I was enchanted with the place from my first views of the continent, and continued to like it more and more as my field work progressed. After my first season, I've been able to return to Antarctica for field work 16 more times, as field assistant, research associate or principal investigator. Those trips included

further work on Mt. Erebus, work on small volcanoes in the Dry Valleys, large volcanoes in West Antarctica, as well as volcanic-ash-bearing blue ice sites. From my first season on, I found that I was very comfortable with the Antarctic field life. There are a number of aspects of field life that I particularly enjoy. These include the challenge of complex trip planning; mobile tent-camping lifestyle; living and working for long periods with only 3-4 other people; communicating on the radio; spending long hours on the rim of an active volcano; moving around steep slopes in order to make observations and collect rock samples and working in the windy blue ice areas. Feeling comfortable and at ease with these sometimes difficult aspects of field work has allowed me to concentrate fully on the scientific research at hand, without being distracted by the physical aspects of the field work or living conditions.

Having observed many other people dealing with Antarctic field conditions through my years of field work, I think that the characteristic of being comfortable with field life is one of the traits that encourage people to continue pursuing field work, rather than focusing on other aspects of research. I'm sure that there are many different factors that affect this comfort level in different people, but for my own case, I would suggest that outdoor experiences gained during my upbringing and schooling may have had a significant effect. Experiences ranging from remote camping trips as a child in Afghanistan and Morocco, to geology field trips and outdoor education classes and experiences in high school and college, were all important for me. I would suggest that inclusion of this type of experience in girls' and women's upbringing and school curriculum may contribute to increasing women's roles in polar science.



The Future of Ice

Gretel Ehrlich

Wyoming

To get above treeline; to see nothing but horizons. This was my goal more than a decade ago when I first traveled to Greenland, and was the start of a journey that I am still on today. My presentation is about the Inuit people of Greenland that I have lived and traveled with throughout the seasons of light and dark. It is about the real heroes of the Arctic, the subsistence hunters, who continue to live much as they did long before their land was "discovered." Through a series of anecdotes and observations made while traveling on foot, by dog-sled and wintering in isolation, I compare my experiences with those of Knud Rasmussen, the Danish-Inuit explorer who established a trading base at Thule at the turn of the last century. Rasmussen launched seven Arctic expeditions recording the history and customs of the nomadic Eskimos and often served as my inspiration and "companion-in-spirit" as I traveled in his footsteps and those of the incredible men and women of the Greenlandic subsistence culture. In this way I will illustrate why these people, and in particular, the Inuit women, are deserving of the highest recognition for their fortitude and the pivotal role they play ensuring the survival of this important cultural heritage.



Graceful Observation: Women, Science and Community in Polar Regions

Wendy R. Eisner

Department of Geography and Center for Women's Studies
University of Cincinnati, Ohio

Drawing on my personal and professional experiences of 15 years of research in the Russian Far East, Greenland, and Arctic Alaska, I will discuss the challenges and rewards facing women in the Polar Regions. My own odyssey in the North has been a gradual recognition of my limitations as well as an appreciation of my abilities, and a respectful awareness that we cannot always control our situation in remote environments. With this understanding, I have developed a strong admiration for the people who live and work in the Arctic, especially for the indigenous Inuit women. With these remarkable women as a guide, I have identified the characteristics that are most valuable for a productive life in the Polar Regions: cooperation, humor, and an alert awareness of the environment.

With these comments as a starting point, some questions we might want to explore further are:

- How is environmental change affecting the people of the Arctic?
- What is the future of the communities of the Arctic?
- What opportunities are available to women scientists working in Polar Regions?
- What are the benefits for young scientists, women and men, to be mentored by women scientists?
- How will young women investigators successfully gain access to the Polar science community?
- In what direction is Polar research going, and how will women scientists be part of that trajectory?



Women in Polar Regions: Some Experiences from the Past

Rita A. Horner

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This talk will be a series of anecdotes relating to my experiences in Arctic Alaska starting as a graduate student in 1965 and extending into the 1980s as a university professor and independent researcher. As with many women not only working in Polar Regions, but in science in general, I had a series of very supportive male mentors. Fortunately, they believed that women did belong in science and could work successfully in Polar Regions. I was also at a university where women had gone to sea on university research vessels at least since the mid-1950s. Thus, it came as quite a shock to learn that it would not be possible for me to work at the old Arctic Research Laboratory (later the Naval Arctic Research Laboratory) at Point Barrow. Among the

reasons given was that I was a woman and single. Wives of male researchers and laboratory staff were allowed, however, so the usual excuse of “no facilities” did not work. Here is where two of my mentors stepped in and I think bullied the Navy and laboratory Director into allowing me to work at Barrow in the summer. I was also lucky to have obtained Navy funding through the Arctic Institute of North America. Thus started a career that spanned nearly 20 years.

Much of my research involved fieldwork that first included the use of small boats and the lab’s larger boats (Natchik and Ivik) to collect water samples. Then, with other investigators, we started a program to determine productivity in Arctic coastal waters that included sampling not only the water column, but also the sea ice and benthos and that meant having a team of SCUBA divers and a heated building on the ice. Eventually the work expanded to include Prudhoe Bay and other locations along the Alaska coast and involved the use of small planes on skis and/or helicopters to land on the ice. Finally after seven years of requests, I was allowed to work on the drifting ice station T-3. Then came U.S. Coast Guard icebreakers and cruises in the Bering, Chukchi, and Beaufort seas.

I am no longer involved with Arctic research, but now I see female graduate students who think nothing of heading off to the Arctic to do their research, no one questions their abilities or even suggests that they might not be able to cope with conditions there. Times have changed!



A Minister and Two Presidents

Edna MacLean
President
Ilisagvik College
Barrow, Alaska

Life of women in Arctic communities is full. A myriad of responsibilities to the extended family, to the whaling and hunting community, and to the various educational, religious, cultural, and political institutions forms the lifestyle of the three Inupiaq women presented in this paper. One is the minister of the local Presbyterian Church, one the president of the North Slope Borough Assembly, and the third is the president of the Ilisagvik College. I will briefly chronicle the life history of each and in this manner identify what experiences and influences at home, in the community, and in schools helped to shape the life choices the three women made which led to the responsibilities that each now has. I will present one perspective of a social and cultural context which helped to foster the characteristics of the three women in their roles as leaders in an Arctic community.



Two Decades of Glaciology on the Polar Sheets

Ellen Mosley-Thompson

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Over the last two decades the climate for female participation in polar research and its associated support activities has improved significantly. When I began working in the Antarctic, most aspects of daily life ranging from scientific inquiry to station support were male dominated. However, I am fortunate to have been among the new wave of polar scientists, both male and female, dedicated to elevating the role of science and promoting an environment of inclusiveness within the polar research community. Today women regularly lead field teams to remote locations and serve as chief scientists on ocean drilling cruises. Within the science support system women are now employed as ice core drillers, carpenters and plumbers as well as cooks.

My slide presentation highlights this transition starting with my first field season at South Pole Station in 1982, and concluding with my most recent field season (1999) in Greenland where we established three different remote field camps to drill a sequence of ice cores as part of the NSF-NASA PARCA (Program for Arctic Regional Climate Assessment) project. The evolution of ice core drilling systems will be highlighted, along with developments in camp facilities that range from South Pole Station to the now closed Siple Station in Antarctica and Dye 3 Station in Greenland. The continuing trend toward lighter and more transportable ice core drilling systems is a direct outgrowth from the need to recover cores from ice caps in the high mountains of Peru and China and on the Antarctic Peninsula ice plateau that is outside the range of U.S. LC-130 operations. These lighter drilling systems have resulted in smaller field teams and hence, lighter and more efficient camp facilities. Thus today, ice cores can be recovered from virtually any remote ice field site if the scientists are willing to invest the time and effort. I will share anecdotes highlighting the challenges and the excitement of polar field work and demonstrating that even small changes may enhance the experience for all participants.



The Story of Tookoolito of Baffin Island

Sheila Nickerson

Bellingham, Washington

Tookoolito of Baffin Island (1838-1876) served as interpreter to explorer Charles Francis Hall for eleven years. She and her husband, Ebierbing, were Hall's constant companions and mentors during his expeditions of 1860-62 and 1864-69 in search of Sir John Franklin. They then sailed with Hall on the Polaris for the North Pole in 1871. Disaster struck quickly with the mysterious death of Hall. Tookoolito and Ebierbing were left in a vulnerable position, locked in the ice and

leaderless among warring strangers. Their situation became far more perilous a year later when an October gale nipped the Polaris and tore away half the party on an ice floe. Tookoolito, Ebierbing, and their adopted daughter Punny were among nineteen crew members who were to ride the ice for six and one-half months down the length of Baffin Bay to the Atlantic Ocean. In spite of incredible dangers and deprivation, all nineteen survived, in no small measure because of the steadfastness, ingenuity, determination, and faithfulness of Tookoolito and Ebierbing. After the U.S. Navy inquiry put to rest the embarrassing affair of the Polaris, the Inuit couple settled in Groton, Connecticut, where Hall had previously arranged a home for them. Without Hall, however, they lacked support and protection; and, in spite of the fame they had shared with the explorer during his lifetime, they were soon forgotten. Though Ebierbing returned to a successful life of guiding in the Arctic, Tookoolito remained in Groton with Punny for the short duration of their lives. A cluster of Inuit graves in Groton's Starr Burying Ground provides sad evidence of how their remarkable stories – and even their names – were almost lost in the country they had so bravely served.



The First

Edith “Jackie” Ronne
Washington, DC

In this presentation, I will provide a series of crisp memories and reminiscences from more than six decades of involvement in the Antarctic. Beginning with my experiences as the first American woman to visit and spend the winter in Antarctica and ranging to recent lecture stints aboard cruise ships. The lecture will examine how things have changed during the important period in Antarctic development since the first American woman’s foot was set on “the ice.” The expedition discussed here represents one of the last ‘private’ expeditions for science and exploration in Antarctica, the Ronne Antarctic Research Expedition (1946-48), for which I served as Historian and Correspondent, and was established on Stonington Island, at the edge of the Antarctic Peninsula. My involvement with this expedition began when Finn Ronne was planning his trip, and as a newlywed, I assisted with the tedious planning that such an undertaking required. The original plan was for me to handle expedition affairs in the U.S., but a last-minute decision involved joining the expedition, thus initiating a lifelong passion for the Antarctic and all that it represents.



Women in Polar Regions: Always Here, But Sometimes Overlooked

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It is apparent from the breadth of topics presented at the October 2003 Symposium of the American Polar Society that the role of Women in Polar Regions is not only significant, but has been so for many decades. It took a Symposium on this subject to reveal the nature of this importance. Examples from remote regions exemplified the role of adventure and service in the role of women living and working in local cultures of the North, and being the 'first' of their gender to illustrate that a 'man's world' is a thing of the past. To be one of the first women to winter in Antarctica was indeed an achievement in its day of male heroics; to overcome existing bans against women in Antarctica is a major landmark in the history of scientific research there; and an involvement in the science and technology of ice-core drilling for evidence of past climates is a highlight of male-female interaction in one of the foremost targets of scientific research in glaciology today. Research by a female scientist on ozone depletion in Antarctica resulted in an award of the Presidential Medal of Science. A female flight officer would have been unheard of when the first LC-130 appeared in 1960 in the support capacity of the U.S. Antarctic Research Program. Female leadership in polar tourism is a relatively new phenomenon in the conduct of travel in areas where it was a man's world for many years. All of the above are only a few of the examples of recognition of women in polar regions, and a few slides will illustrate some of them, as well as a short list of their accomplishments and an accompanying bibliography of 'must-read' books.

[The assistance of R.K. Headland, Archivist, Scott Polar Research Institute, is gratefully acknowledged in providing details for some of the following.]

Appendix 1. Women's Roles in Polar Regions – Abridged List

1921 – Navarana Freuchen (wife of Peter Freuchen); died on the Fifth Thule Expedition, led by Knud Rasmussen – buried in Upernavik, Greenland.

[There are numerous additional examples of Eskimo women on Arctic expeditions.]

1929 – Frederica de Laguna – anthropology projects in Greenland.

1933-41 – Louise Arner Boyd, American Arctic explorer; led a series of scientific explorations on east coast of Greenland. In 1955, she became the first woman to fly over the North Pole.

1935 – Caroline Mikkelsen – wife of whaling captain in Antarctica. First female to step ashore in Antarctica, near the present Davis Station (Australia) (68°05'S, 78°05'E).

1938-41 – Tahoe Talbot Washburn – explored parts of Northwest Passage of Canada, from King William Island to Beaufort Sea, with husband Link Washburn, who was doing field work toward a Ph.D. degree in geology.

1947 – Jackie Ronne and Jennie Darlington arrived at Stonington Island, Antarctica, on Ronne Antarctic Research Expedition. First wintering over for women.

1957 – Pan American Airways Stratocruiser from Christchurch, landed at McMurdo, on 15 October.

1962 – Mary Alice McWhinnie and Phyllis Marcurial sailed on cruise #6 on *Eltanin*. First women U.S. scientists in Antarctica. (McWhinnie also on *Eltanin* in 1965, 1967, 1969, 1970; Chief Scientist in 1972).

1969-70 – First females in Antarctica in U.S. and N.Z. Antarctic Research Programs.

1. Lois Jones (leader), Kay Lindsay, Eileen McSaveney, Terry Tickhill.
2. Pam Young (NZARP).
3. Christine Muller-Schwarze (together with husband, Dietland, first husband-wife scientific team in Antarctica).
4. Jean Pearson – Detroit Free Press reporter.

12 November 1969 – all but Muller-Schwarze were first females at South Pole.

1974 – Mary Alice McWhinnie and Mary Odile Cahoon – first USARP women to winter-over in Antarctica (McMurdo).

1978 – Emilio Marcos Palma's mother, 7 months pregnant, was flown to Esperanza Station (Argentina) for his birth, 7 January.

1979 – Michele Raney, M.D. – first female to winter-over at South Pole.

1983 – Female AB (Able-bodied 'seaman') employed on tourist vessel *Lindblad Explorer* on Antarctic cruises.

1986 – Ann Bancroft, only female on Steger/Schurke dog-sledging expedition to North Pole.

1988-89 – Shirley Metz and Victoria Murden, only females in ski party to South Pole.

1989 – Alison Clifton (Macquarie Island) and Diana Patterson (Mawson) were first Australian female Base Leaders.

1990 – Monika Puskeppeleit – leader of an all-female wintering party of 8 at 'Georg von Neumayer' station, Antarctica.

1990 – Louise Crossley – Base Leader at Mawson (Australia).

1992 – Helen Thayer, solo female (aged 50), and her dog, Charlie, to the North Magnetic Pole.

1997 – McVities Penguin Polar Relay, first all-female expedition to reach North Pole; without dogs or machines, but air-supported.

1998 – Vicky Auld – first female Base Commander at Halley Station (U.K./BAS).

2000-01 – Ann Bancroft and Liv Arnesen – skiing expedition across Antarctica; 97 days, 1,800 miles.

2002-03 – International Trans Antarctic Scientific Expedition (ITASE), tractor traverse from Byrd Station to the South Pole. The three women on the traverse were probably the first scientists to arrive there overland.

2005 – Ann Bancroft and Liv Arnesen are planning a 100-day trans-Arctic Ocean expedition.

In addition: Several sealing and whaling masters were accompanied by wives. Births have taken place on Iles Kerguelen (1852 and 1859); wives and families of modern whalers were at South Georgia from 1904 and Deception Island from 1906-07; Admiral Peary's wife accompanied him in Greenland; Edgar Aubert de la Rue (geologist), was accompanied by his wife on Iles Kerguelen (1928-31);

women were among the crew of Soviet whaling fleets – a waitress, Aleksandra Leonova, gave birth to a boy, A.Ye. Keshelava aboard *Slava*, south of South Georgia, 6 January 1948.

Appendix 2. Women’s Role in Polar Regions. Abridged Bibliography

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Ladies in Red and Other Colors

Peter E. Wilkniss

Polar Kybernetes International, LLC
Anchorage, Alaska

Historic Perspective: The Eighteenth Century

In the 18th century, Catherine the Great, Empress of Russia, issued orders for the scientific exploration of the North Pacific “to bring knowledge to perfection.” Her expeditions made contact with the peoples of the North, where women were integral and exceedingly important members of the prevailing subsistence cultures. There is no doubt that cultures of northern peoples thrived for ten thousand years or more because of the superb roles played throughout by women.

The Twentieth Century

The paper continues to trace the roles of women in the 20 century, including in the 1930s with the founding of the American Polar Society, and looks at the role of women with respect to the U.S. Navy and National Science Foundation from the 1970s to the 1990s, in the U.S. Government, in NSF's polar programs, and in the field programs in the Antarctic, including the Naval Support Force Antarctica, and the support contractor, ASA. In the Arctic, women are depicted in Alaska, Greenland, Spitzbergen and the Soviet Union, and special reference is made to the U.S. Navy's SCICEX program.

The Twenty-first Century

The paper goes on to present an assessment of the present status of women, and offers some thoughts on their potential role in the polar regions in the 21st century, including:

- Women in the polar regions on solid ice, in the mainstream
- Women have an opportunity to exert a unifying influence, IPY-4, IGY
- Attracting more young women to Polar Regions efforts.



International Polar Year 2007-2008: Looking to the Future

Terry J. Wilson

Alternate U.S. Delegate to SCAR and Representative for the
U.S. National Committee to the International Polar Year
Byrd Polar Research Center
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The year 2007-2008 will mark the 50th anniversary of the International Geophysical Year (IGY) (1957-1958). Several talks during this symposium have mentioned the IGY and the important initiatives that were begun in the polar regions at that time. Planning is now under way to hold the 4th International Polar Year (IPY) in 2007-2008 which is envisioned as a program of internationally coordinated polar science, exploration, and analysis, with strong educational and outreach components. One of the outcomes of such an effort will hopefully be to spark the interest of the next generation of scientists (including numerous young women and those from other under-represented groups) and to illustrate to the public the importance of polar science. To be successful, IPY should be visionary (not simply a continuation of current activities), address both Arctic and Antarctic topics, and look for linkages between the disciplines and the geographic regions under study. The IPY activity should be multidisciplinary (including study of human dimensions), international and ideally provide specific short-term outcomes which will lay the foundation for longer-term research programs. Under the auspices of the National Academy of Sciences, the Polar Research Board is helping to organize the U.S. effort for IPY and has formed the U.S. National Committee to the International Polar Year 2007-2008. This talk will summarize the current planning activities in the U.S. for IPY and will engage and encourage everyone to share their ideas with those involved in planning. In fact one of the

hallmarks of this IPY will be to involve the public and hopefully interest young scientists in becoming the next generation of polar researchers. For more information about the upcoming IPY please see: www.nationalacademies.org/prb/ipy .



Biographies of APS Speakers



Elaine Abraham

Elaine Abraham was born and raised in Yakutat, Alaska, where she now resides. Her father was a traditional Tlingit chief and Elaine was raised in the traditional Tlingit manner. After earning a nursing degree and working for several years in Arizona, she returned to Alaska as the first Tlingit registered nurse. She served at hospitals in Juneau, Mt. Edgecumbe and in Bethel during a diphtheria epidemic. She assisted in the opening of the Alaska Native Health Service Hospital in Anchorage in 1954. Ms. Abraham moved to Sitka where she worked as a nurse; served as school board president during the desegregation of the village school; organized the Southeast Health Aide Program with Dr. Justice from Mt. Edgecumbe, which became the model for the statewide Alaska Native Health Aide Program; and organized the Southeast Native Board of Health. At Sitka's Sheldon Jackson College she served as Associate Dean of Students, Director of Social Services and Vice President for Institutional Development. She developed the Tlingit and Haida Language Teachers Training program and helped in the creation of the Alaska Native Language Center, University of Alaska. In 1976, Ms. Abraham began her service at the University of Alaska, serving as Vice President for Rural Education Affairs, Coordinator of Native Student Services and Associate Professor at the Anchorage campus.

Her educational credentials include a Master's of Arts in Teaching, Alaska Pacific University; a Bachelor's degree in Human Resources Development, APU; a Certificate in Native Linguistics, University of Albuquerque, New Mexico; Associate of Arts in Anthropology, Sheldon Jackson College; and she received the highest recorded score for the Psychiatric Nurse Evaluation in Arizona. Ms. Abraham is a revered Tlingit elder and serves as Secretary of the Board of Commissioner's of the Alaska Native Science Commission.

Susan Adie

Susan Adie grew up in upstate New York, and graduated from Cornell University with a BS in Environmental Education. She began her career developing curricula and training teachers and students in environmental education for the 4-H Division of Cooperative Extension of Cornell University. For the New York State Department of Parks and Recreation, she organized and presented outdoor education experiences for summer camps. As an Assistant Outdoor Recreation Planner for the US Fish and Wildlife Service, she worked with community groups and the media to use the resources of Montezuma National Wildlife Refuge. She created a not-for-profit company that provides environmental education experiences for school groups which include personal visits from Susan as well as E-visits for students to remote areas of the world. Throughout these experiences Susan worked with television and film companies to produce educational programs. Thirteen years ago her love of the sea led her to expedition ships where she became an expedition leader and lecturer on marine biology topics. She has led more than

100 trips to remote areas of Alaska, the Russian and Canadian Arctic, the South Pacific islands including French Polynesia, the Amazon, Svalbard, Greenland, South Georgia and the Peninsula and Ross Sea regions of Antarctica.

As an expedition leader, she has earned high marks from the groups she has led, such as the National Geographic Society (USA), Smithsonian Institution, American Museum of Natural History, the Explorers Club and the National Audubon Society.

John Behrendt

Dr. John C. Behrendt made his first trip to Antarctica in 1956 as a graduate student, where he wintered over at Ellsworth Station on the Filchner Ice Shelf. John continued his polar research over the course of 12 additional trips to Antarctica, his most recent trip being in 2003. John is one of few whose research in Antarctica has spanned more than half a decade and possibly the only person to have worked as a member of the U.S. Program in Antarctica for six successive decades. Dr. Behrendt participated in the Filchner Ice Shelf Traverse in 1957-58 and in 1961-62 he led the Antarctic Peninsula Traverse. For these and other contributions, the Behrendt Mountains in Ellsworth Land were named in his honor. He has also participated in six research cruises in the Weddell and Ross seas. John's recent book, *Innocents on The Ice; A Memoir of Antarctic Exploration, 1957*, won the Colorado Book Award for non-fiction in 1999. His second book, *The Ninth Circle; A Memoir of Life and Death in Antarctica, 1960- 62* is in revision for publication. Behrendt was awarded the first Felice Ippolito Gold Medal for his Antarctic research by the Italian Antarctic Research Program and the Academia Nazionale dei Lincea in 1999. In 2003 he was elected a Fellow of the American Association for the Advancement of Science for distinguished contributions to the understanding of crustal controls on the Antarctic Ice Sheet and for efforts to protect and manage Antarctica for the scientific benefit of all nations. Behrendt is a Fellow at the Institute of Arctic and Alpine Research at the University of Colorado-Boulder where he is working on geophysical evidence for subglacial and submarine late Cenozoic volcanism. He is also a scientist emeritus at the U.S. Geological Survey where he worked for 31 years. In addition to Antarctica, Behrendt carried out geophysical investigations in West Africa, the Atlantic continental margin of the U.S. and the Rocky Mountains.

Julie Brigham-Grette

Julie Brigham-Grette is a Professor in the Department of Geosciences at the University of Massachusetts, Amherst. She received her Ph.D. in Geology at the University of Colorado-Boulder and held post-doctoral fellowships at the University of Bergen, Norway (seabed history of the North Sea-1984) and with the Canadian Geological Survey based at the University of Alberta (seafloor geochronology and geology of the Canadian Beaufort Sea-1985-86). She joined the UMass-Amherst Geosciences department in 1987. Her research interests are focused on the stratigraphy and age dating of geologic systems (lakes, rivers, oceans) that record information about past climate change. In particular she has been interested in the climate history of the Arctic, especially the western Arctic across Alaska, NE Russia and adjacent oceans. Since 1991, Julie has organized and participated in nine field expeditions to remote NE

Russia including El'gygytgyn Crater Lake, and in the summer of 2002 was co-chief scientist for six weeks on the new US Coast Guard icebreaker *Healy* taking sediment cores from the Bering and Chukchi Seas. Professor Brigham-Grette teaches upper level undergraduate and graduate courses in her specialty of glacial geology, but she also regularly teaches introductory oceanography. Brigham-Grette has been Associate Department Head since 1998. Currently, she is President Elect of the American Quaternary Association and soon will be the Chair of the International Science Steering Committee of the IGBP Past Global Change Program based in Switzerland. In spring 2002, she was elected a Fellow of the Geological Society of America.

Colin Bull

Colin Bull's first polar expedition was to Spitsbergen in 1951 and he subsequently joined the British North Greenland Expedition (1952-54). As a follow-on to these experiences, Colin then moved to New Zealand as a senior lecturer in physics and organized the first ever university expedition to the Antarctic continent, the Victoria University of Wellington Antarctic Expedition (VUWAE, 1957-58). Colin Bull remained in New Zealand until 1961 when he accepted a 15 month visiting appointment at the Ohio State University to help establish the Institute of Polar Studies. He remained at Ohio State for 25 years, during which time he was successively the Director of the Institute, the Chairman of the Geology Department and eventually the Dean of the College of Mathematical and Physical Sciences. He took early retirement in 1986 in order to pursue other activities, including travel to Antarctica with his wife, writing books and running a polar book business. Bull Pass, a low pass through the Olympus Range in the McMurdo Dry Valleys of Antarctica is named for Colin Bull.

Nancy Chin

Nancy Chin received her Ph.D. in anthropology and a Masters in Public Health both from the University of Rochester. Her research has focused on maternal and child health in a variety of settings including Himalayan Buddhist villages, Bolivia, and Rochester, NY. She is co-Principal Investigator along with Dr. Tim Dye on a National Science Foundation grant to study cultural emergence and health in Antarctica. Chin and Dye use traditional anthropological methods of participant-observation and in-depth interviewing to gain a holistic understanding of life at McMurdo Station, the largest US research station in Antarctica. As part of her research in Antarctica, Dr. Chin worked as a dining room assistant in the galley during the 2002-03 summer season, as well as shadowed janitors, heavy equipment operators, science support staff, and science teams. Dye and Chin will return to Antarctica in the 2003-04 summer season.

Mary Crawford

Mary Crawford grew up in Southern California, attended college and joined the Navy in 1974. After completing training in antisubmarine warfare, Mary was assigned to serve in Bermuda and Brawdy, Wales, UK. In 1977, she was selected for a Navy college education program and attended the University of Washington, Seattle. She completed a B.S. in Mathematics in 1980,

was commissioned as a Naval Officer, and attended aviation training. In 1981, Mary was designated a Naval Flight Officer, the first woman to earn this title in the Navy. Her first aviation assignment was to the Antarctic Development Squadron Six (VXE-6), the first female aviator assigned to the squadron. She deployed to Antarctica for Deep Freeze summer support 1981-2, 1982-83, 1983-84 and qualified as a Polar Transport Air Navigator and Instructor. She also served as the Assistant Officer-In-Charge of the VXE-6 Pararescue Team. Following her Antarctic assignment, she attended Naval Postgraduate School, Monterey, CA where she completed a M.S. in Operations Analysis (statistical analysis). Mary served as an Instructor Naval Flight Officer in Antisubmarine Warfare Squadron Thirty (VP-30) in P-3C aircraft, again a first for the Navy. She then was assigned to the training aircraft carrier, USS Lexington (AVT-16) in the Air Department and became the first female Aircraft Handling Officer, responsible for the movement of all the aircraft on the flight and hangar decks of the ship. Mary had numerous other assignments while still in the Navy and completed 28 years of active duty, retiring in July 2002.

Nelia Dunbar

Nelia Dunbar is a geochemist at the New Mexico Institute of Mining and Technology. She earned her undergraduate degree from Mount Holyoke College in 1983 where she did a senior research project on the mineralogy and chemistry of volcanic ash from Mount St. Helens. She completed her Ph.D. at New Mexico Institute of Mining and Technology in 1988, working on the pre-eruptive volatile contents and eruptions dynamics of the Taupo Volcanic Center, in the central North Island of New Zealand. In 1983, while working on her Ph.D. research, she was hired to be a field assistant on the active Antarctic volcano, Mt. Erebus. Since then, she has spent 16 field seasons in Antarctica, focusing on research projects involving volcanoes, volcano-ice interaction, and englacial tephrochronology. Her field projects have involved working on Mt. Erebus, on volcanoes in West Antarctica, at englacial tephra sites in both the East and West Antarctic ice sheets, as well as on volcanic rocks on Ross Island, in the Dry Valleys and Royal Society Range. In 1999 Dunbar Head, a projecting rock headland at the South end of Scott Coast, 11 mi SE of the summit of Mount Morning, was named in honor Nelia.

Gretel Ehrlich

Gretel Ehrlich was born on a horse ranch near Santa Barbara, California and was educated at Bennington College and at the UCLA film school. She worked in film for ten years, and began writing fulltime in 1978. Her first book, *The Solace Of Open Spaces*, published in 1984 became an instant classic and earned Gretel the Harold D. Vurcell Award for Distinguished Prose from the American Academy of Arts and Letters. Working on ranches by day, Ehrlich continued writing at night and in the slow seasons, Gretel published her second book in 1987, a novel entitled *Heart Mountain*, which is set in Wyoming during World War II. It is a portrait of a ranching community suddenly invaded by an internment camp for Japanese Americans. In 1991, Gretel was hit by lightning while taking a walk on her ranch and was severely debilitated for several years. She writes of the experience in her nationally bestselling memoir, *A Match To The Heart*, published in 1994.

Having recovered from her lightning injuries, Ehrlich began traveling in Greenland. "I wanted to get above treeline, to see nothing but horizons." Once there, she developed a deep relationship with the Inuit people, traveling with subsistence hunters by dogsled for months at a time out on the sea ice. Eight years later, in 2002, her book, *This Cold Heaven: Seven Seasons In Greenland*, was published. "Combining timidity, foolhardiness, tenacity, erudition, and poetry, Ehrlich's is a superb voice for the miracle of Greenland..." Tom Mc Guane.

Gretel's work has been published in Harper's, the Atlantic, The New York Times Magazine, The New York Times op-ed page, The Washington Post, Time Magazine, Life, National Geographic Adventure, National Geographic Traveler, Outside, Audubon, Anteaus, Architectural Digest, and the Shambala Sun, among many others. Her books have been translated into French, Italian, German, Japanese, Danish, and Swedish. Her awards include: National Endowment for the Arts Creative Writing Fellowship, National Endowment for the Humanities grant, a Whiting Foundation Award, A Guggenheim Fellowship, and the Harold B Vurcell Award at the American Academy of Arts and Letters. She and the theatre director, Martha Clarke were awarded a Bellagio Fellowship. In 1991 she collaborated with British choreographer, Siobhan Davies on a ballet that opened in London's South Bank Theatre.

Other books by Gretel include: *A Blizzard Year*, 1999; John Muir, *Nature's Visionary*, National Geographic Books, 2000, *Yellowstone, Land Of Fire And Ice*, 1995, *Arctic Heart*, 1991 (poems), *Drinking Dry Clouds*, 1985 (short stories), *To Touch The Body*, 1981 (poems), and *Geode/Rock Body*, 1970 (poems).

Wendy Eisner

Dr. Eisner is a physical geographer and archaeologist, trained in America and Europe. She currently holds a joint position as assistant professor in Department of Geography and the Center for Women's Studies at the University of Cincinnati. She has a B.A. in anthropology from Barnard College, an M.A. in social anthropology from the University of Leiden, the Netherlands, a Ph.D. in archaeology from the University of Amsterdam, the Netherlands, and a Doctor of Science in physical geography from the University of Utrecht, the Netherlands. She has been active in Arctic Science for 15 years, doing research in Northeastern Siberia, Greenland, and Northern Alaska. As an NSF Visiting Professorship for Women awardee, she studied Holocene landscape dynamics in Beringia at the University of Alaska Anchorage. A highlight of her career was when she received a U.S. Academy of Sciences Interacademy Exchange award for a three-month research visit at the Northeast Geographical Institute, Magadan, Russia. She spent this period working with Russian and American colleagues in remote regions of the Russian Far East.

Wendy's current research is based in Barrow and Atkasuk, Alaska. As an NSF-funded Principal Investigator, she leads teams of scientists and students to the Arctic Coastal Plain for both winter and summer field work. The purpose of this research is to provide reliable records of vegetation change in the Arctic in order to understand long-term spatial and temporal patterns of vegetation succession and climate. Her research is strongly integrated with scientists studying modern Arctic vegetation, soil, and geomorphology.

Wendy is very interested in the impact of global climate change in the Arctic and the interactions of the indigenous people and scientists in the Arctic, and also studies gender roles in prehistoric contexts and women in science. She is developing a project with Alaskan Native elders to incorporate their perceptions and understanding of their environment in order to improve our scientific knowledge of the Arctic region. Some recent publications include: *The Paleoenvironmental Record from a Palsa-Scale Frost Mound, Arctic Coastal Plain, Alaska*, (2002), *Climate Change and Spatial Diversity of Vegetation during the Late Quaternary of Beringia*, (1999), *High-resolution pollen analysis of tundra polygons from the North Slope of Alaska* (1998), and *The Consequences of Gender Bias in Mortuary Analysis: A Case Study* (1991).

Rita Horner

Rita Horner received her B.S. from the University of Wisconsin, M.S. from the University of Minnesota, both in Botany, and her Ph.D. from the University of Washington in Marine Botany. She has been a university professor, independent researcher, and, since 1990, a principal oceanographer at the University of Washington. In 1963 she was honored with a Fulbright Fellowship and spent a year at the University of Oslo, Norway. In 1979, she became a Fellow of The Arctic Institute of North America and in 1997 she received the Chairman's Award at the Gordon Conference on Polar Marine Science. She is a member of The Arctic Institute of North America, the American Phycological Society and a number of other professional organizations. Dr. Horner's research interests include taxonomy and ecology of marine phytoplankton, dynamics of harmful algal blooms, ecology of sea ice organisms, and sampling methods. Much of her Arctic research was done from the former Naval Arctic Research Laboratory at Point Barrow, AK, and includes work at Barrow, at Prudhoe Bay, on the drifting ice island T-3, and cruises on U.S. Coast Guard icebreakers in the Bering, Chukchi, and Beaufort seas. She edited the book *Sea Ice Biota* in 1985 and published the book *A Taxonomic Guide to Some Common Marine Phytoplankton* in 2002. She has been an editor of the journals *Arctic* and *Polar Biology*.

Edna A. MacLean

Edna Ahgeak MacLean became President of Ilisagvik College located in Barrow, Alaska in July 1995. Dr. MacLean received her Ph.D. in Education from Stanford University; obtained her M.A. in Education (Bilingual Education) from the University of Washington; and her undergraduate degree from Colorado Women's College. Dr. MacLean also did graduate study in Greenlandic Eskimo at Aarhus University and she received her teaching credentials at the University of California, Berkeley. While at the University of Alaska, Fairbanks, Dr. MacLean was awarded tenure and promoted to Associate Professor of Inupiaq Eskimo. She was, for several years, the Special Assistant for Rural and Alaska Native Education to the State of Alaska Commissioner of Education. A Native speaker of Inupiat, Edna MacLean has developed many documents used extensively as references and guides to the Inupiat language and is well-known for her numerous presentations and workshops at conferences and seminars. She received the Alaska Federation of Natives Higher Education Awards for 1987 and 1995. Most recently in 1999, she received the Alaska Native Education Council Educator of the Year Award. Edna is a

Fellow of the Arctic Institute of North America, and been recognized by the Barrow City Council and the Ukpeagvik Inupiat Corporation for her contributions in education.

Ellen Mosley-Thompson

Ellen is a Professor in the Department of Geography and a Senior Research Scientist at the Byrd Polar Research Center at The Ohio State University (OSU). Ellen made her first trip to Antarctica in 1982 and since then she has conducted eight ice drilling programs in Antarctica and Greenland. For nearly three decades, she and her colleagues in the Ice Core Paleoclimate Group at OSU have reconstructed paleo-environmental conditions from the chemical and physical properties preserved in ice cores collected from Antarctica, Greenland, China, Peru, Bolivia and Africa. In 1985 Ellen led a six-person field team who recovered 15 ice cores totaling over 600-meters of ice at Siple Station, and in 1986 she led another six-person team who spent 21-days in a remote field camp near the "Pole of Relative Inaccessability" where they drilled 2 cores, each 200-meters long. This was not only one of the first 'remote camp' (no station support) ice core drilling projects on the East Antarctic Plateau, but it was the first to be led by a woman. Ellen has since conducted similar remote camp drilling projects on the Greenland Ice Sheet as part of NASA's Program for Arctic Regional Climate Assessment (PARCA). After working at South Pole Station numerous times, she realized that no systematic measurements of the annual snow accumulation were being taken except near the Station dome where wind-shadow effects contaminated the observations. With NSF funding, in 1992 she lead a team of three people using GPS surveying techniques to establish the first extensive accumulation network consisting of 240 poles along 6 lines that each extend 20 kilometers from the station. This accumulation network is still in operation and is measured once a year. It provides the only routine observation of the spatial distribution of accumulation on the Antarctic polar plateau. In 1994 the Mosley-Thompson-Cirques, in Northern Victoria Land, were named in recognition of Ellen's work in Antarctica.

Shelia Nickerson

Sheila Nickerson developed an interest in the history of Arctic exploration while living in Juneau, Alaska. Born and educated in New York, she is a graduate of Bryn Mawr College and received a Ph.D. in Creative Writing from The Union Institute and University, Cincinnati. During her 27 years in Juneau, she served as Alaska Poet Laureate and Writer-in-Residence to the Alaska State Library, taught for the University of Alaska, and edited Alaska's Wildlife, the state's conservation magazine, for the Alaska Department of Fish and Game. Her poetry, which has received two Pushcart Prizes, includes ten books and numerous anthologized works. Research for her nonfiction book, Disappearance: A Map, a Meditation on Death & Loss in the High Latitudes (1996), ignited a continuing curiosity regarding women in Arctic history whose stories are little known. Among these is Tookoolito of Baffin Island, who served as interpreter to Charles Francis Hall for eleven years, and who was a member of the Polaris ice drift party. Nickerson tells Tookoolito's story in Midnight to the North (2002).

Judy Ramos

Judy Ramos is currently an anthropologist, having received her B.A. in that field from the University of Alaska in 1981, followed by a Master's degree from Alaska Pacific University in Adult and Community Education in 1985. Judy arrived at her profession not only by way of education but because she is a member of the Yakutat Tlingit Tribe in Alaska, a federally recognized tribe that is a vanguard among those that preserve and maintain traditional cultural habits and mores. Her most recent research interests have focused on her people's traditional ecological knowledge, including traditional salmon fishery management and traditional methods of household subsistence. She has presented the results of her work at several anthropology conferences and to Alaska's Southeast Regional Subsistence Advisory Council. Judy has been a traditional Tlingit dancer since her youth, and in 1978 she claimed the title Miss 1978 World Eskimo Indian Olympics, in part through her dance performance. Judy was also named an Outstanding Woman of America in 1982. Her interest in native heritage and community is enhanced by unique perspectives gained from cross-cultural studies of natives in Norway, New Zealand, and Tonga. Judy has served as an Associate professor at the University of Alaska, Anchorage, teaching courses in the Tlingit language and on the cultural knowledge of Alaska native elders. Judy is currently a co-owner of Yakutat Cross Cultural Consultants and has worked as a cultural interpreter aboard cruise ships visiting Hubbard Glacier. Her lifelong passion to preserve her Tlingit culture lives on.

Edith "Jackie" Ronne

Edith "Jackie" Ronne is a true Antarctic pioneer. The Ronne Ice Shelf, in fact, was named in her honor. Her Antarctic adventures began when her husband, Norwegian-American explorer Finn Ronne, persuaded her (by clever degrees) to accompany his expedition. She thus became the first American woman to set foot on the Antarctic continent and wintered-over there as a member of the Ronne Antarctic Research Expedition at East Base on Stonington Island from 1946-48. She served as historian and correspondent for the expedition, and helped collect important seismological and tidal data. Since that first historic visit, Jackie has enjoyed a career as a writer and lecturer. She is a member of the Society of Women Geographers and was its president from 1978-1981. She is also a member of the Explorers Club. Jackie and her late husband Finn went back to "the ice" in 1971 as guests of the National Science Foundation to celebrate the 60th anniversary of Amundsen's achievement of being the first person to set foot at the South Pole. Finn's father Martin Ronne had accompanied Roald Amundsen on the expedition to the South Pole in 1911. More recently, she and her daughter Karen went back to Stonington Island in 1995 to revisit the place where her lifelong passion for the Antarctic and all it represents began some six decades ago.

John Splettstoesser

John is a geologist who was born and grew up in the Minneapolis area of Minnesota. He earned a Bachelors degree in Geological Engineering at the University of Minnesota, with graduate work in Industrial Engineering. He was on the faculty of Ohio State University, University of

Nebraska, and the University of Minnesota for some 22 years, and ended his academic career as Visiting Faculty at College of the Atlantic, Bar Harbor, Maine, where he taught geology and courses on Antarctica. Most of his geologic field work has been in Antarctica (8 summer field seasons, from 1960-61 to 1985-86), as well as in remote parts of the world where his research has been on wind erosion and geomorphology. He has traveled and done geologic field work on each of the continents. He has been a part-time lecturer/naturalist on about 90 cruises to Antarctica and most of the sub-Antarctic islands, as well as 35 to the Arctic and sub-Arctic, beginning in 1983. His work has taken him to all three of the South and North Poles: Geographic, Geomagnetic, and Magnetic. Since the formation of the International Association of Antarctica Tour Operators (IAATO), John has represented the group at six consultative Meetings of the Antarctic Treaty nations, and also testified on Antarctic and tourism legislation in the U.S. House and Senate in Washington, D.C. John has authored about 175 publications in his field, including 5 books (edited), and received two polar medals (U.S. and U.S.S.R.) for his work in Antarctica, where he has a glacier and a mountain named for him.

Peter Wilkniss

Peter E. Wilkniss, Ph.D., roamed the global environment from the Arctic to the Antarctic in the 1960s and '70s as a civilian scientist with the Naval Research Lab after earning his PhD in radio and nuclear chemistry in Germany. He earned an international reputation as a leader in global science issues. At the National Science Foundation in Washington, D.C., Peter was in charge of the National Center for Atmospheric Research and the five-nation Deep Sea Drilling Project. During the 1980s and 1990s, he directed all U.S. research programs in the Antarctic and NSF's in the Arctic, where he forged strong relationships within the international research community. Peter served as a liaison member of the National Research Council's Marine Board and Polar Research Board; the Committee on Atmospheric Chemistry and Radioactivity of the American Meteorological Society; the Interagency Committee on Atmospheric Sciences; and the Space Station Advisory Committee of NASA. Peter has received many awards, including the American Institute of Architects Presidential Citation in 1993 for his work on the U.S. stations in Antarctica, the Meritorious Public Service Award of the National Science Foundation, for leadership and dedication to the polar programs; 1993: and the President of the United States Distinguished Executive Rank Award, 1987. He was recognized for his outstanding leadership with the designation of the Wilkniss Mountains in Antarctica.

Peter now lives in Anchorage, Alaska, where he directs a polar science and policy company, Polar Kybernetes International, LLC, and a nonprofit institute, the Transnational Arctic and Antarctic Institute.

