Colony, Empire, Environment: A Comparative International History of Arctic Science

Collaborators:

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Professor **Suzanne Zeller**, Wilfrid Laurier University, Canada

Prof. **Robert Marc Friedman**, University of Oslo, Norway

Prof. **Michael Bravo**, University of Cambridge, England

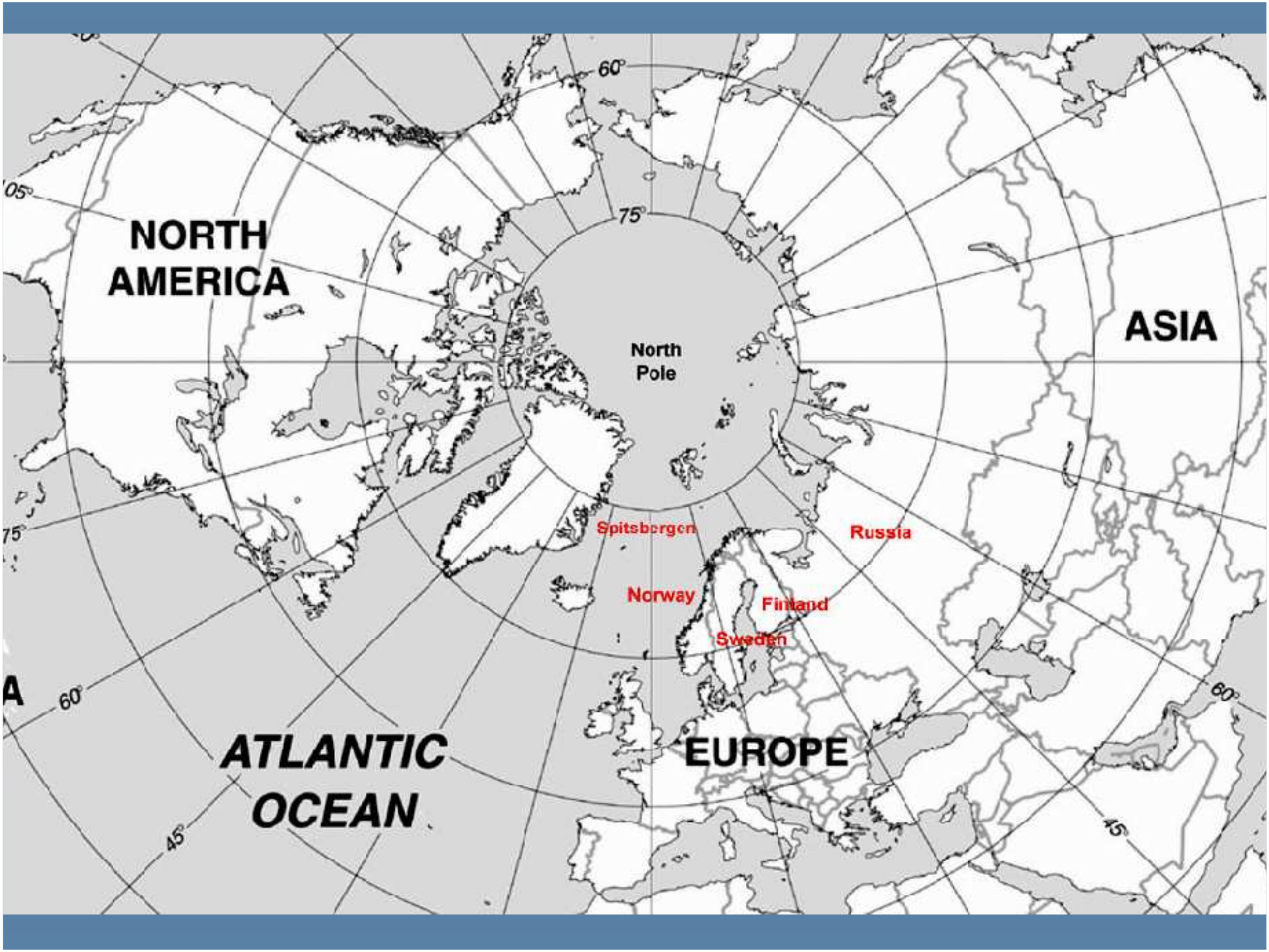
Dr. **Julia Lajus**, European University at St. Petersburg, Russia

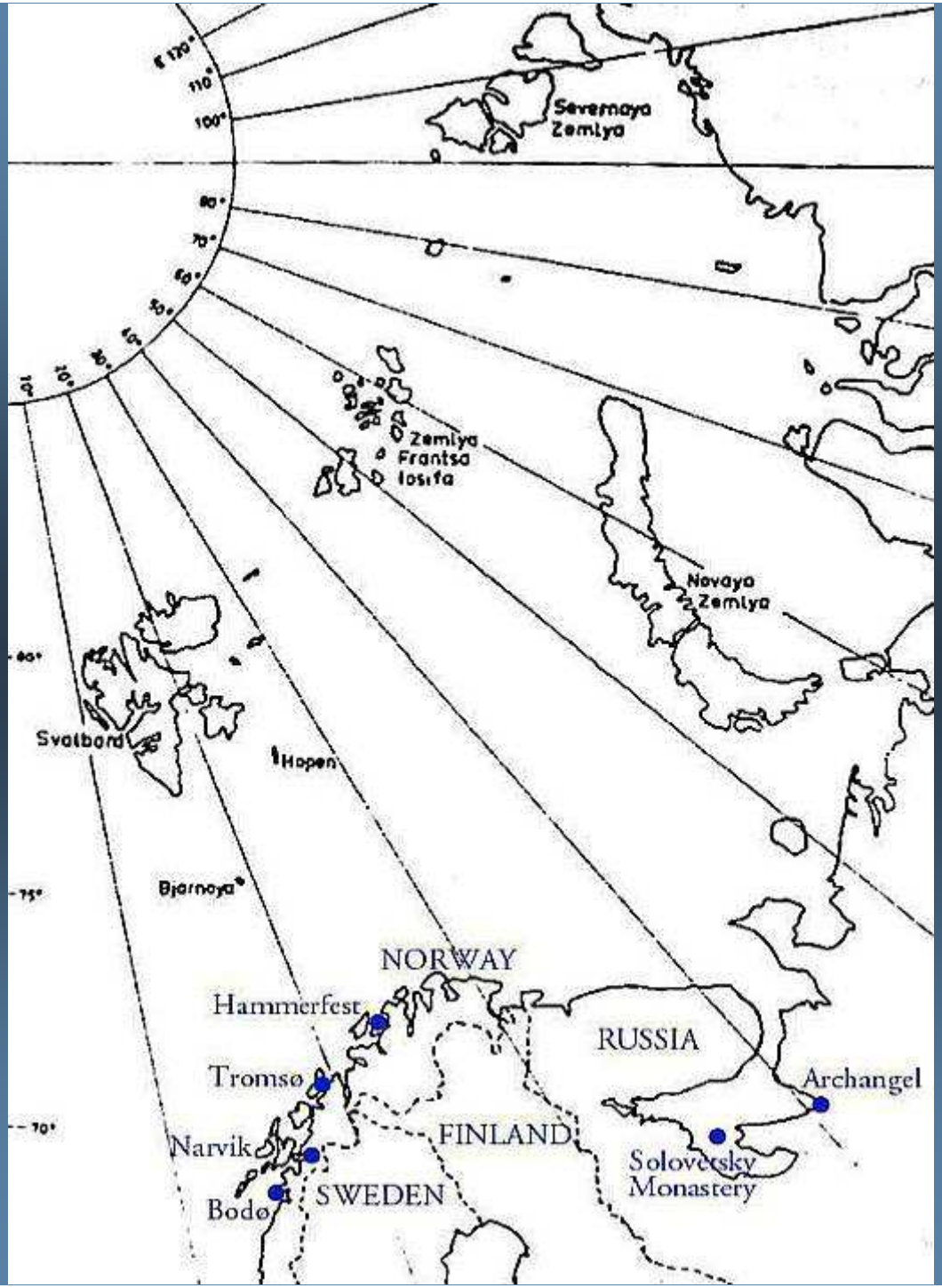
Dr. **Karin Granqvist**, University of Tromsø , Norway

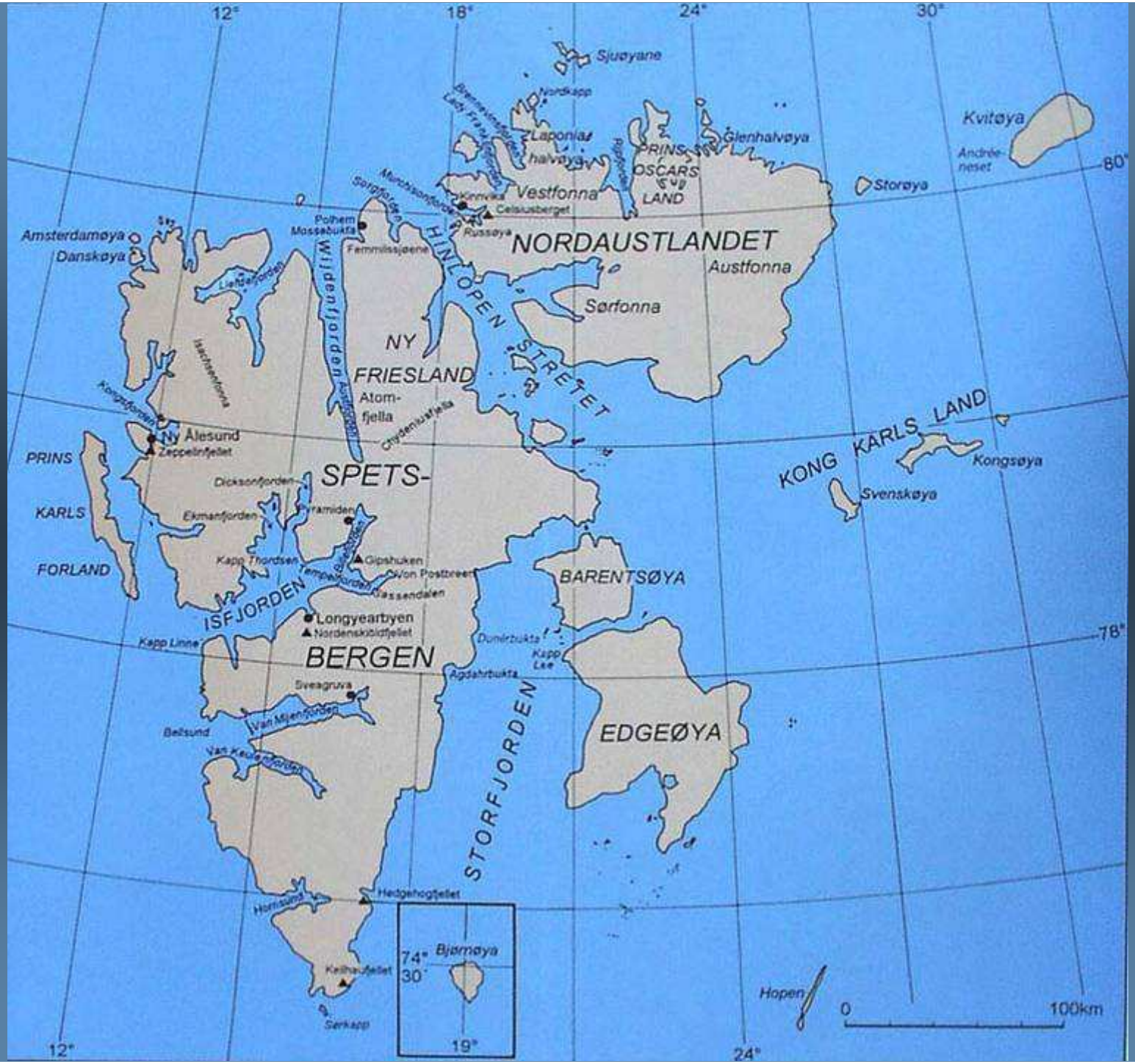
"Beyond the Frozen Borders: Nationalists and Conservationists in the Circumpolar North"

Spitsbergen and the European Conservation Movement

Dr. Urban Wråkberg
The Barents Institute, Kirkenes, Norway


NORTH AMERICA
ASIA
North Pole
Spitsbergen
Russia
Norway
Finland
Sweden
ATLANTIC OCEAN
EUROPE
60°
75°
45°


Severnaya Zemlya
Zemlya Frantsa Iosifa
Novaya Zemlya
Svalbard
Hopen
Bjarnoya
NORWAY
Hammerfest
Tromsø
Narvik
Bodø
SWEDEN
FINLAND
RUSSIA
Archangel
Soloveisky Monastery


12°
18°
24°
30°
80°
78°
Sjuøyane
Nordkapp
Laponiahalvøya
Glenhalvøya
PRINS OSCARS LAND
Kvitøya
Andrée-neset
Storøya
Vestfonna
Celsiusberget
Russøya
Polheim
Massebukta
Femmilssjøene
Sørfjorden
Mushamnfjorden
HINLOPEN STRETET
NORDAUSTLANDET
Austfonna
Sørfonna
Amsterdamøya
Danskøya
Liefdefjorden
Isachsenfonna
Kongsfjorden
Ny Ålesund
Zeppelinfjellet
Wijdenfjorden
NY FRIESLAND
Atom-fjella
Chydenius-fjella
PRINS KARLS FORLAND
SPETS-
Dicksonfjorden
Ekmanfjorden
Pyramiden
Kapp Thordsen
Gipshuken
Von Postbreen
Tempelfjorden
Tempelbreen
Nassendalen
ISFJORDEN
Longyearbyen
Nordenskiöldfjellet
BERGEN
Kapp Linné
Sveagruva
Van Mijenfjorden
Van Keulenfjorden
Bellsund
Hornsund
Hedgehogfjellet
Kelhaufjellet
Sørkapp
74°
30'
Bjørnøya
19°
BARENTSØYA
Dunérbukta
Kapp Lee
Agardhbukta
STORFJORDEN
EDGEØYA
KONG KARLS LAND
Kongsøya
Svenskøya
Hopen
0
100km

dic op Spitsbergen Overwintert zijn. 31

February. doot ghelenst; de Moer ons genoegh te doen gevende ist Jonge onthoiden / wy hadden somtijts ghewenst winter-weer; bemercten mede dat de Noordt-bahij by de Arssijpelle ende voorts t' Tee-

waerts overninge hadde / doch in den Ho- February.
rison sagen wy 't ijs blincken. 's Nachts
bequaem weder; in de Vonde-wacht
vernam de waechter een Beer / daer van
hem na is geschoten / maer niet geraeckt.

Den 8 dito / het Windeken uyt de Noordelijcker-handt met schoon licht weder: alsoock gingen 3 van ons Compagnons wel gemonteert na 't Noordt-mannen Eylandt / om te sien ofter yets tot verversinghe of profijt te bekomen was / als mede of men geen van de vorige geauetste beeren doot vinden soude / daer komende sagen veel beeren / gaende met troupen als 't Vee in Nederlandt / het Volck vernemende ginghen op hun

Beeren-jacht.

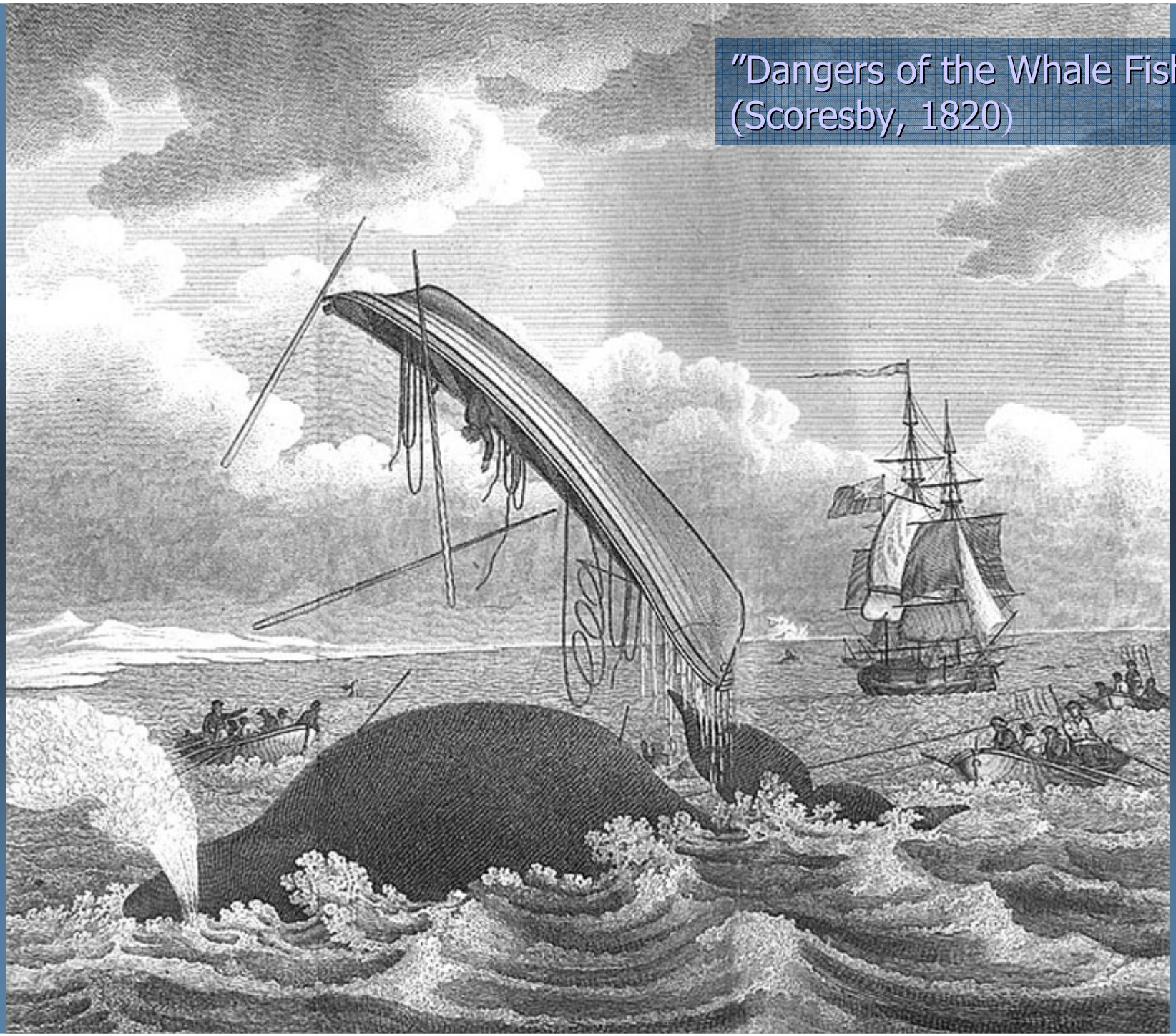
achterste pooten / van gelijcke de Jonge neffens haer staen / dat kluchtig om sien was / ons volck nader komende zijn gevlucht / de selvige hadden achter een geul vel hun leegher-plaets gehouden / en groote diepe putten in 't Ijs ofte sneeuw gemaeckt. Sy vonden aldaer een romp ofte tonghe van een Walvis / die sy een Mans lenghte uyt het Ijs hadde op gekrabt ende by na op gegeten. Ick met den Timmerman in de Tent gebleven zijnde.

From J. Segersz. van der Brugge's "Journael," 1635.

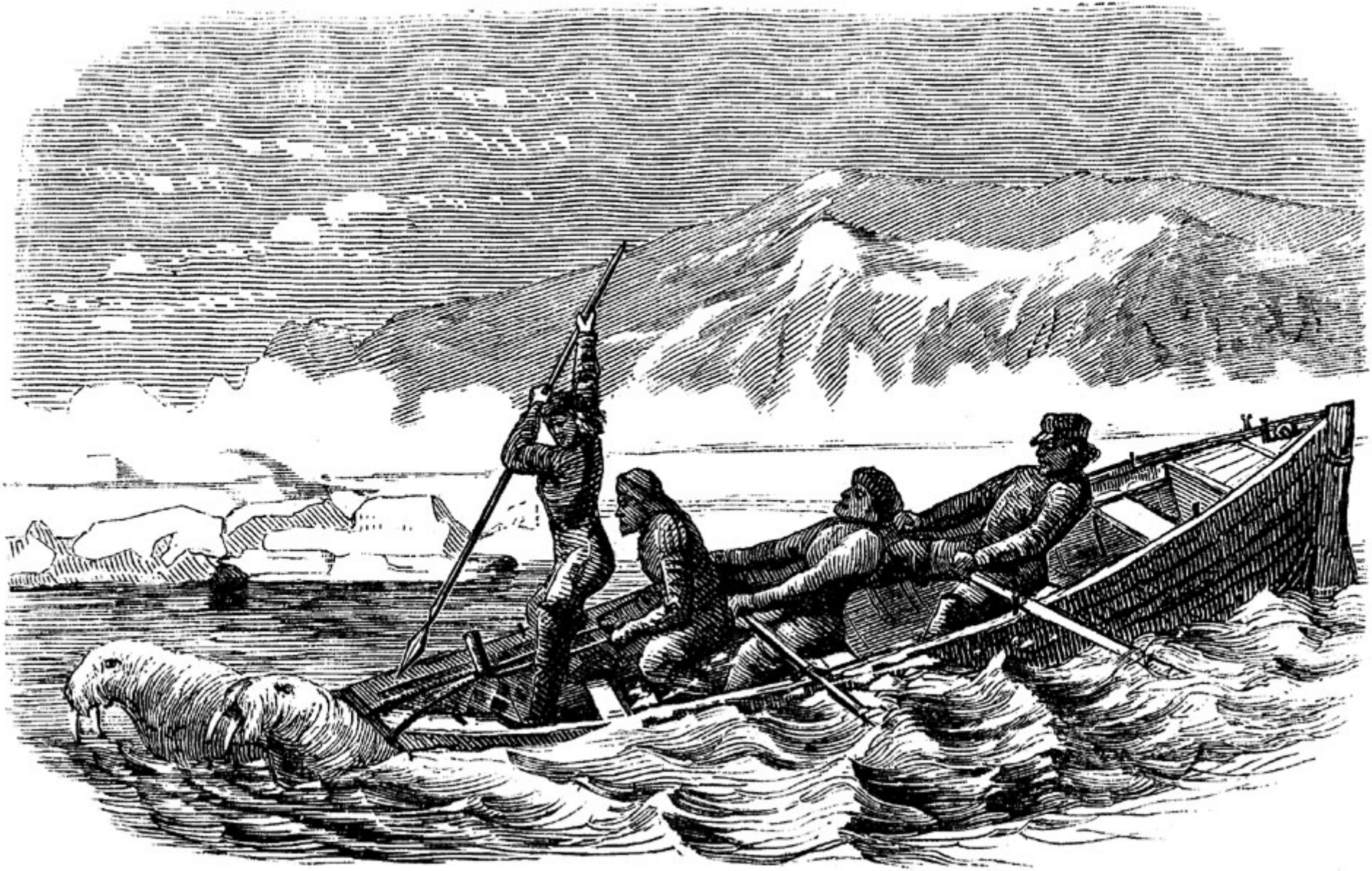
[British Museum copy, 1057. dd. 50. (13.)]

Reproduced for the Hakluyt Society by D. Macbeth.

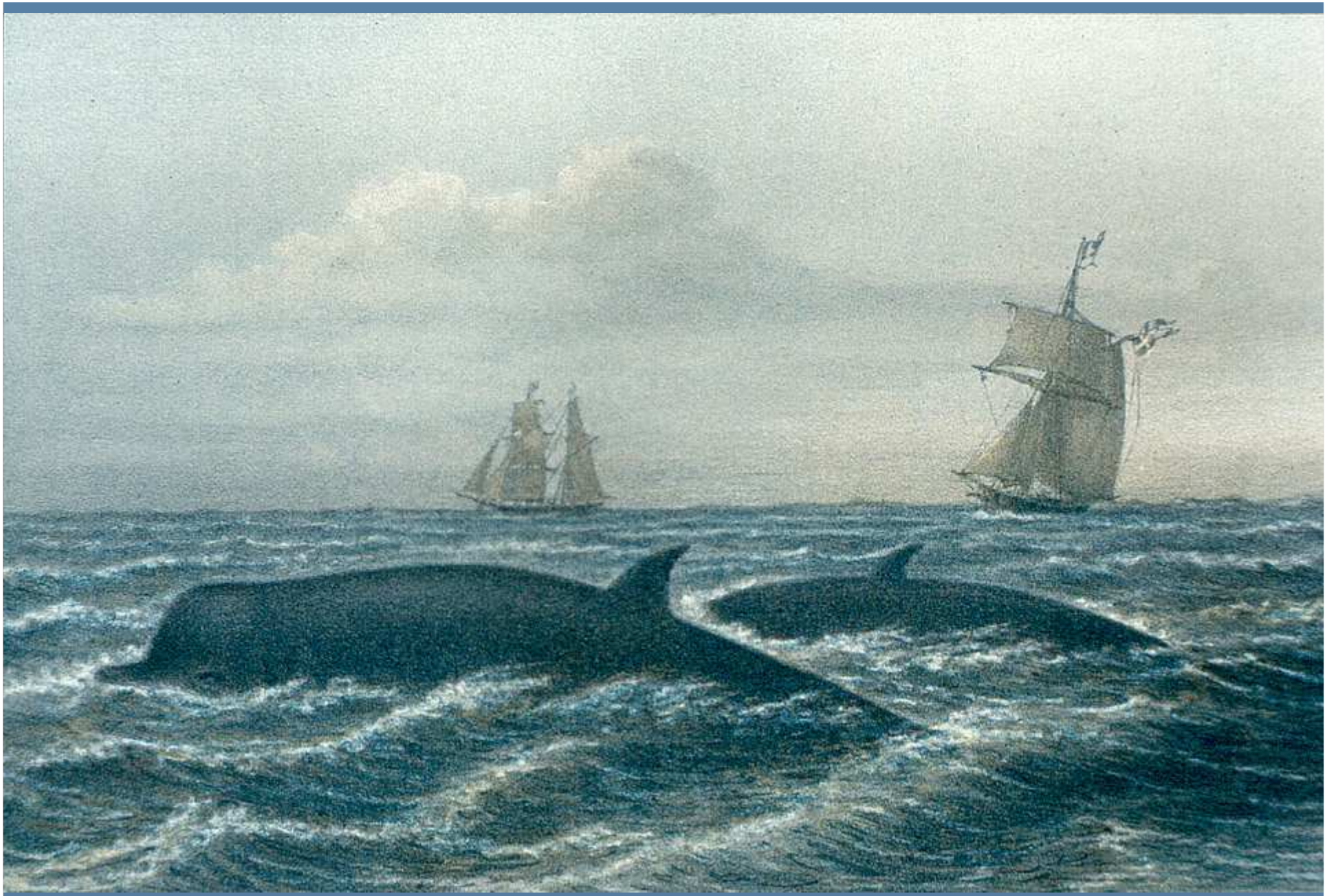
Whaling and Polar Bear hunting in Spitsbergen, AD 1635



"Dangers of the Whale Fishery"
(Scoresby, 1820)



Walrus hunting in Spitsbergen in 1861



First Swedish polar expedition to Spitsbergen in 1861

Remains of the mine of the Arctic Coal Company, Advent Valley, 1999


Swedish occupation
For mining-purposes, the peninsula between
Klaas Billen Bay, Sassen Bay and Temple Bay
Claimed July 1910
B. Högbom; O. Olofsson; G. Ohlsson

Whalers in Safe Haven, Spitsbergen, 1908

Carcasses of White Whales in Van Keulen fjord, 1898

Glacier front in St. John’s fjord, western Spitsbergen

Field camp of Swedish polar scientists in Green Harbour, Spitsbergen1861

Tourist steamers in Advent Bay, 1898

The tourist hotel in Advent Bay in 1898

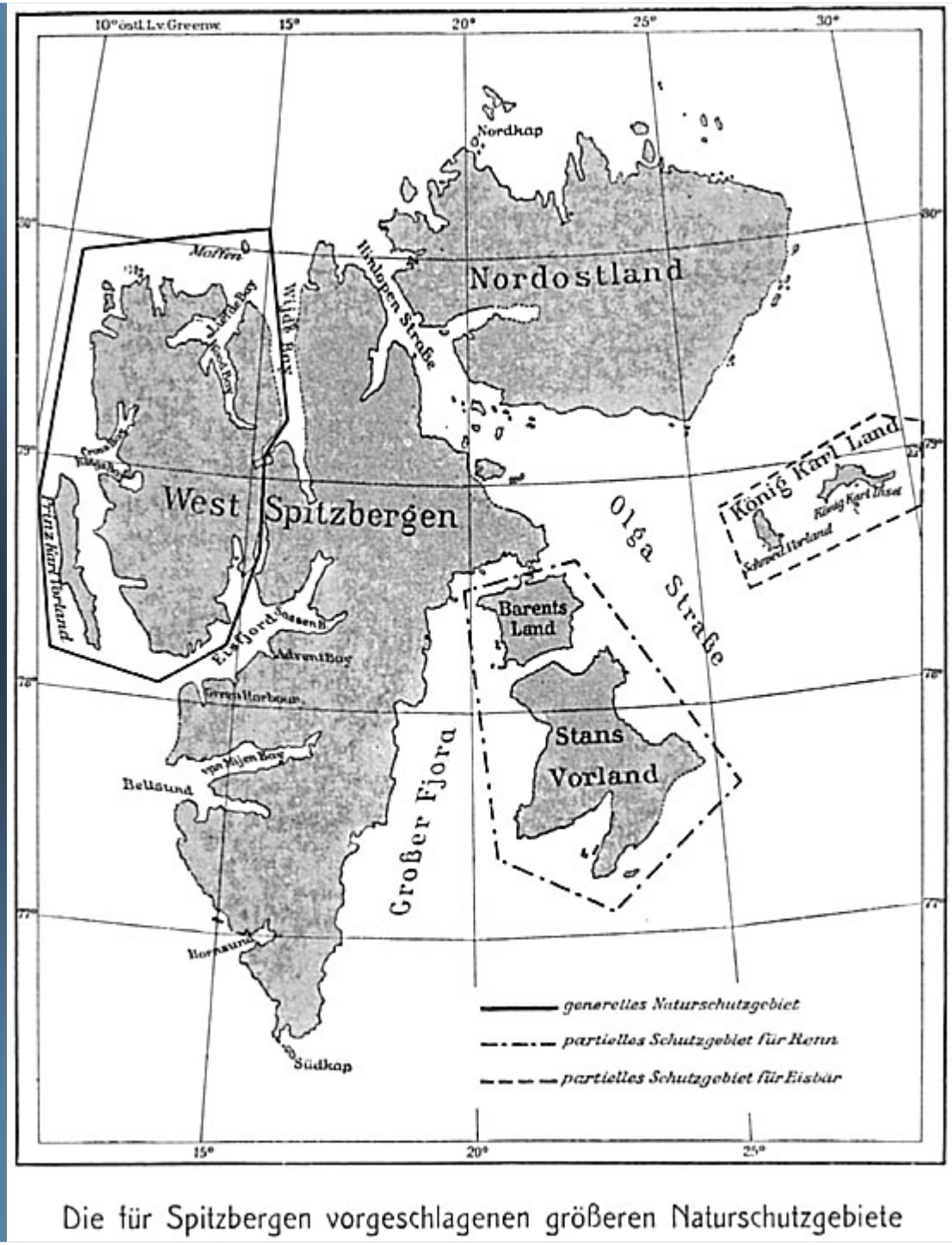
Hugo Conwentz
in 1894

Die für Spitzbergen vorgeschlagenen größeren Naturschutzgebiete

Nature reserves of Spitsbergen according to Conwentz' proposal of 1914

Negri Point, Edge Land= ”Stans Vorland”, 1998

Ekroll Harbour, Edge Land, 1998

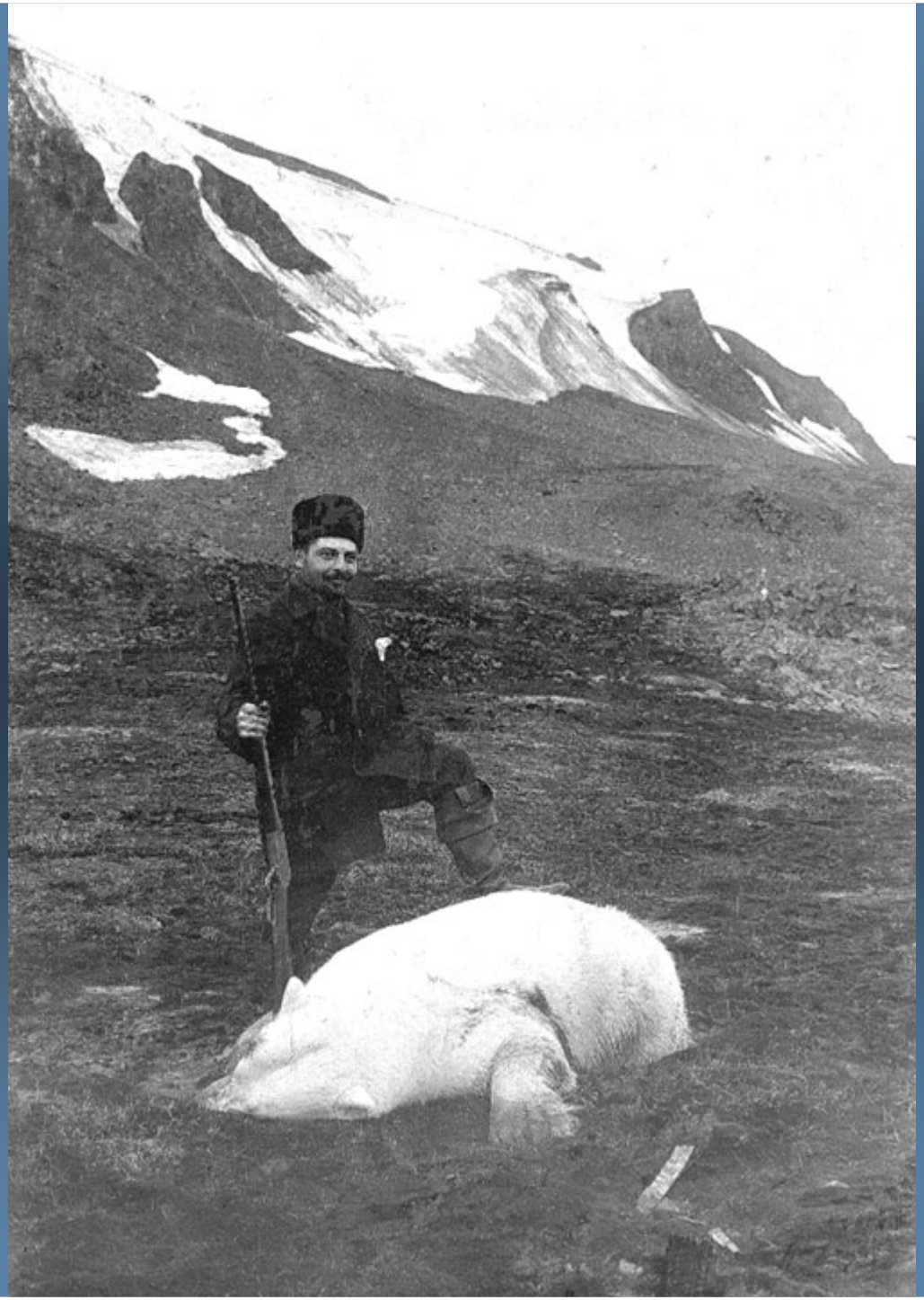


Die für Spitzbergen vorgeschlagenen größeren Naturschutzgebiete

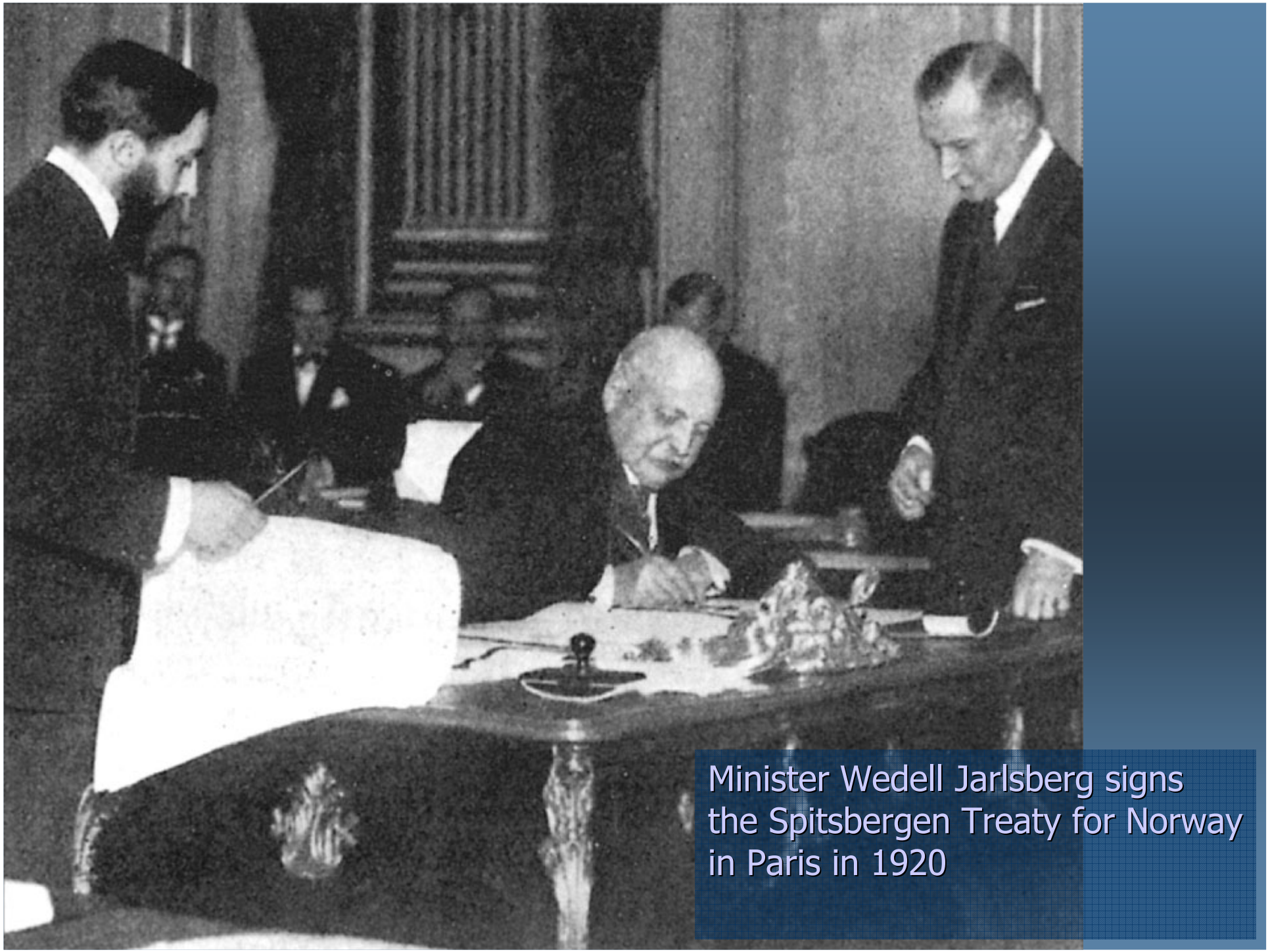
Nature reserves of Spitsbergen according to Conwentz' suggestion of 1914

Magdalene Bay, Northwestern Spitsbergen

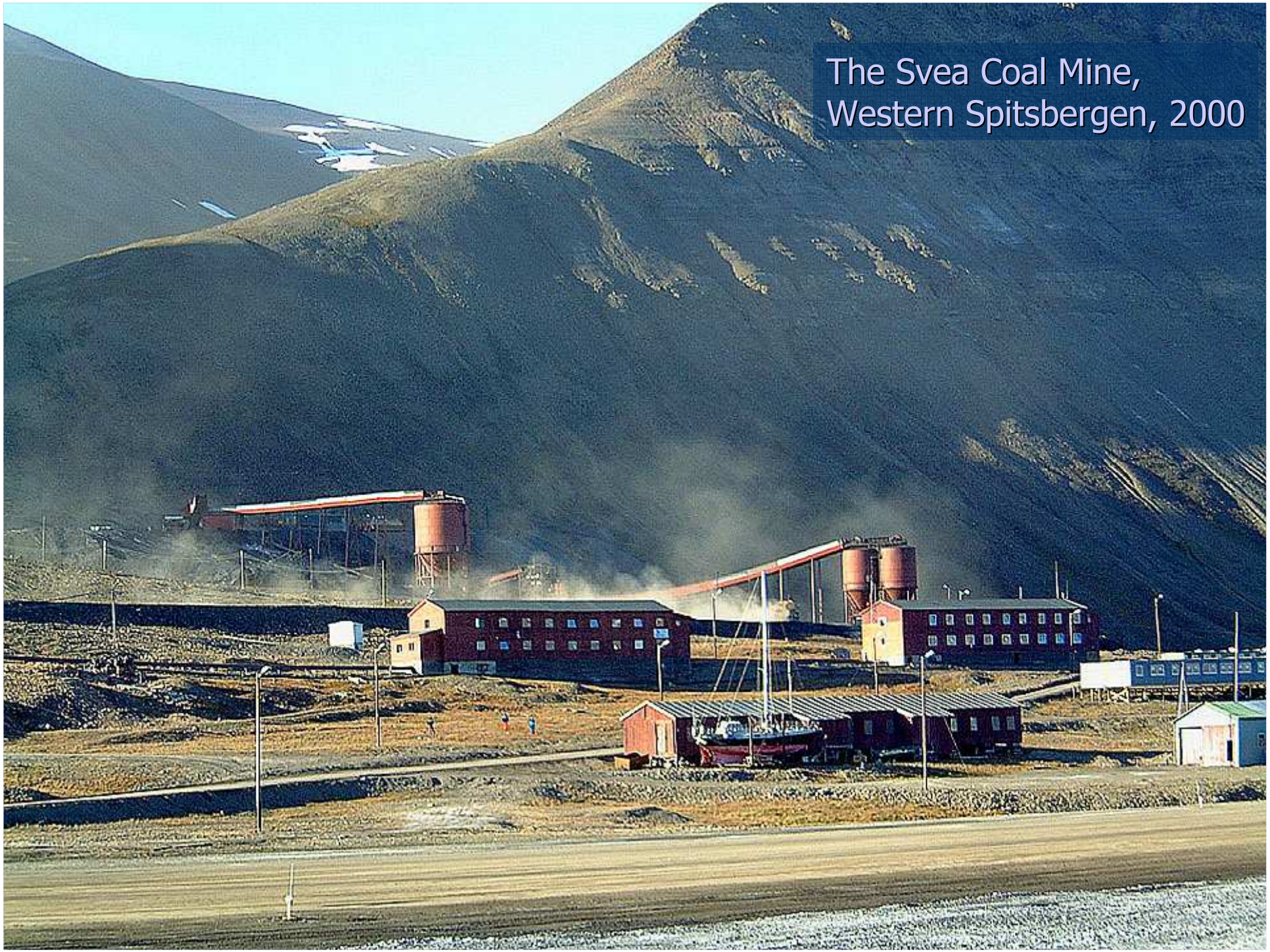
Tourists in Magdalene Bay, Northwestern Spitsbergen, 2002



Polar Bear hunting during the Swedish Arctic expedition of 1898



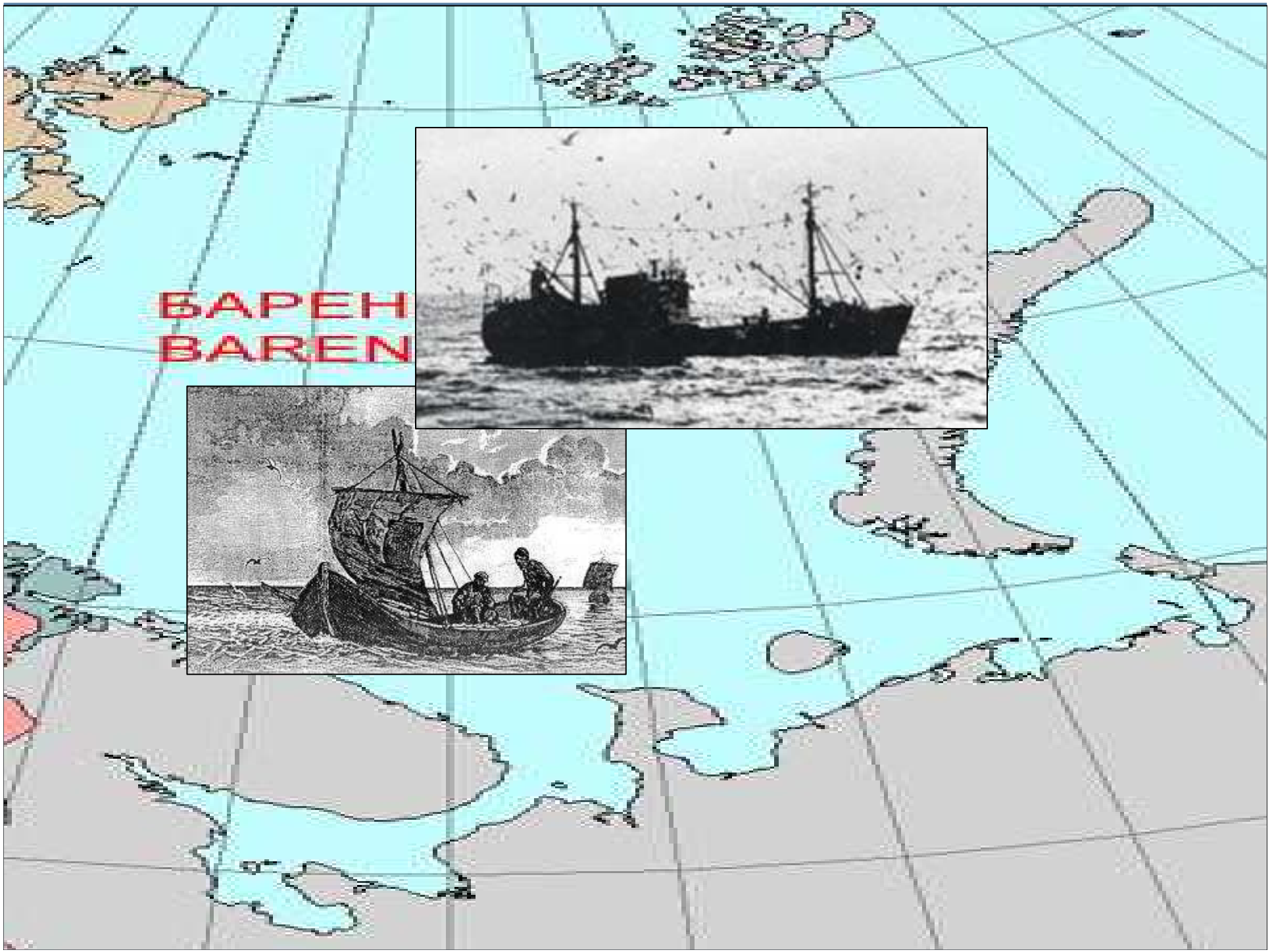
Minister Wedell Jarlsberg signs the Spitsbergen Treaty for Norway in Paris in 1920


The Svea Coal Mine,
Western Spitsbergen, 2000

Field sciences in the Russian North: modernization of use of natural resources and environmental changes in the 20th c.

Julia Lajus

Center for Environmental and Technological History, European University at St. Petersburg, Russia

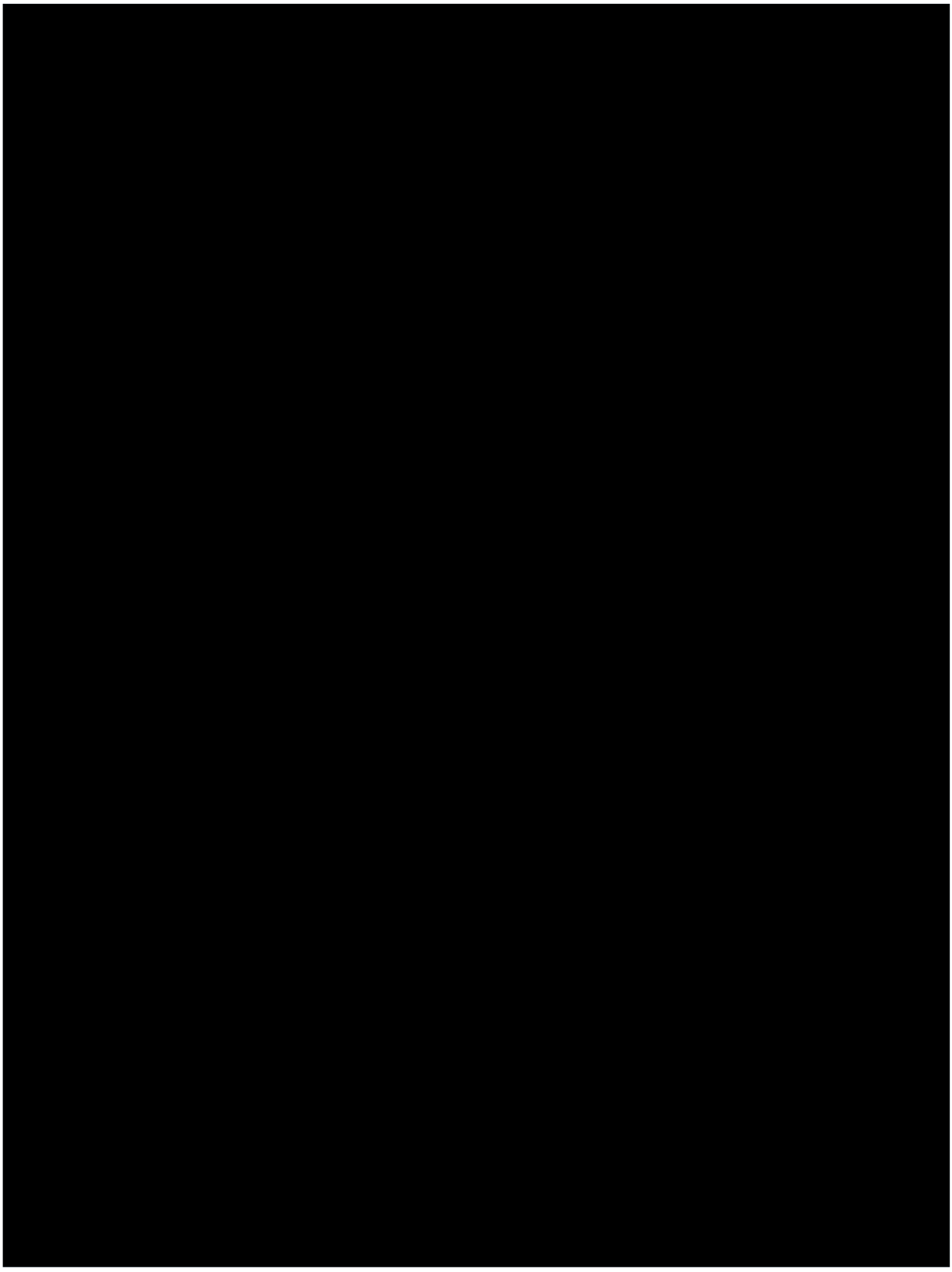

БАРЕН
BAREN

Periodization

- - WWI period – growing interest to the natural resources in general, and to the North in particular;
- - 1920s – idea of bringing new technologies to the wilderness: “Canadization of the Russian North”;
- - 1930s – forced industrialization, change of attitude towards resources and resource users, beginning of militarization of the North;
- - Cold War period;

Major questions

- - patterns of resource use;
- - influence of science and technology;
- - international vs. national strategies in science

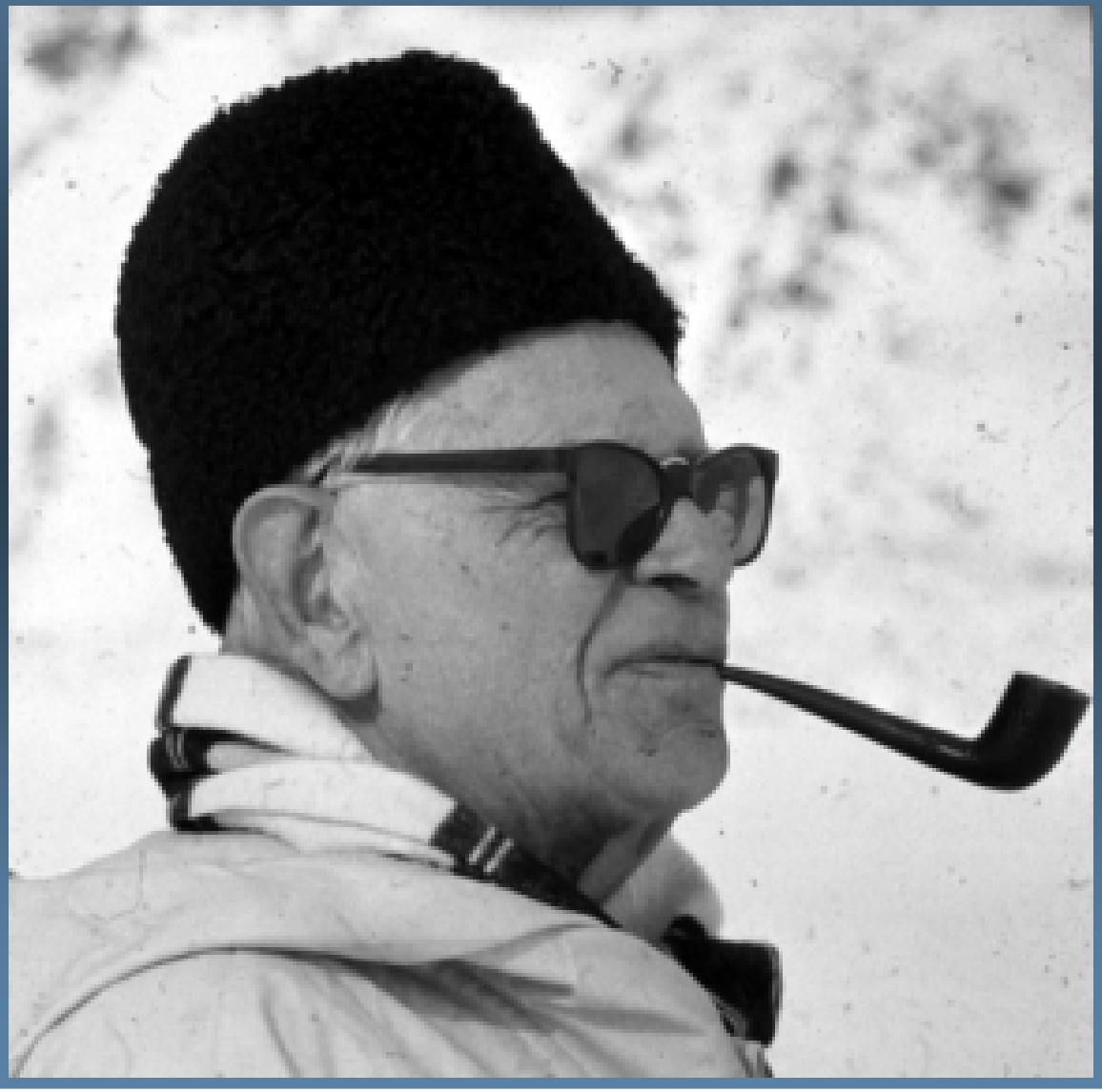


BOREAS Project
Colony, Empire, Environment: A Comparative International History of Twentieth Century Arctic Science

Constituting the Arctic Environment: How U.S. Military Patronage after World War II influenced the Environmental Sciences in the Far North

Prof. Ronald E. Doel
University of Utah / Oregon State University

Hans W:son Ahlmann



Warming Arctic Climate Melting Glaciers Faster, Raising Ocean Level, Scientist Says

5/30/47
P23 · col 3

By GLADWIN HILL
Special to THE NEW YORK TIMES.

LOS ANGELES, May 29—A mysterious warming of the climate slowly manifesting itself in the Arctic, engendering a "serious international problem," Dr. Hans Ahlmann, noted Swedish geophysicist, said today.

Dr. Ahlmann, Professor of Geography at the University of Stockholm and director of the Swedish Geographical Institute, discussed the phenomenon, on the basis of personal research over two decades, at a seminar of the Geophysical Institute at the University of California here.

Since 1900, Dr. Ahlmann said, Arctic air temperatures have increased 10 degrees fahrenheit, an "enormous" rise from a scientific standpoint.

In the same period, ocean waters in the militarily strategic Spitsbergen area have risen 3 to 5 degrees in temperature, and, apparently because of the accelerated melting of glaciers, one to one and one-half millimeters yearly in level, he said.

"We do not even know the reason behind this climatic change in recent years," Dr. Ahlmann added.

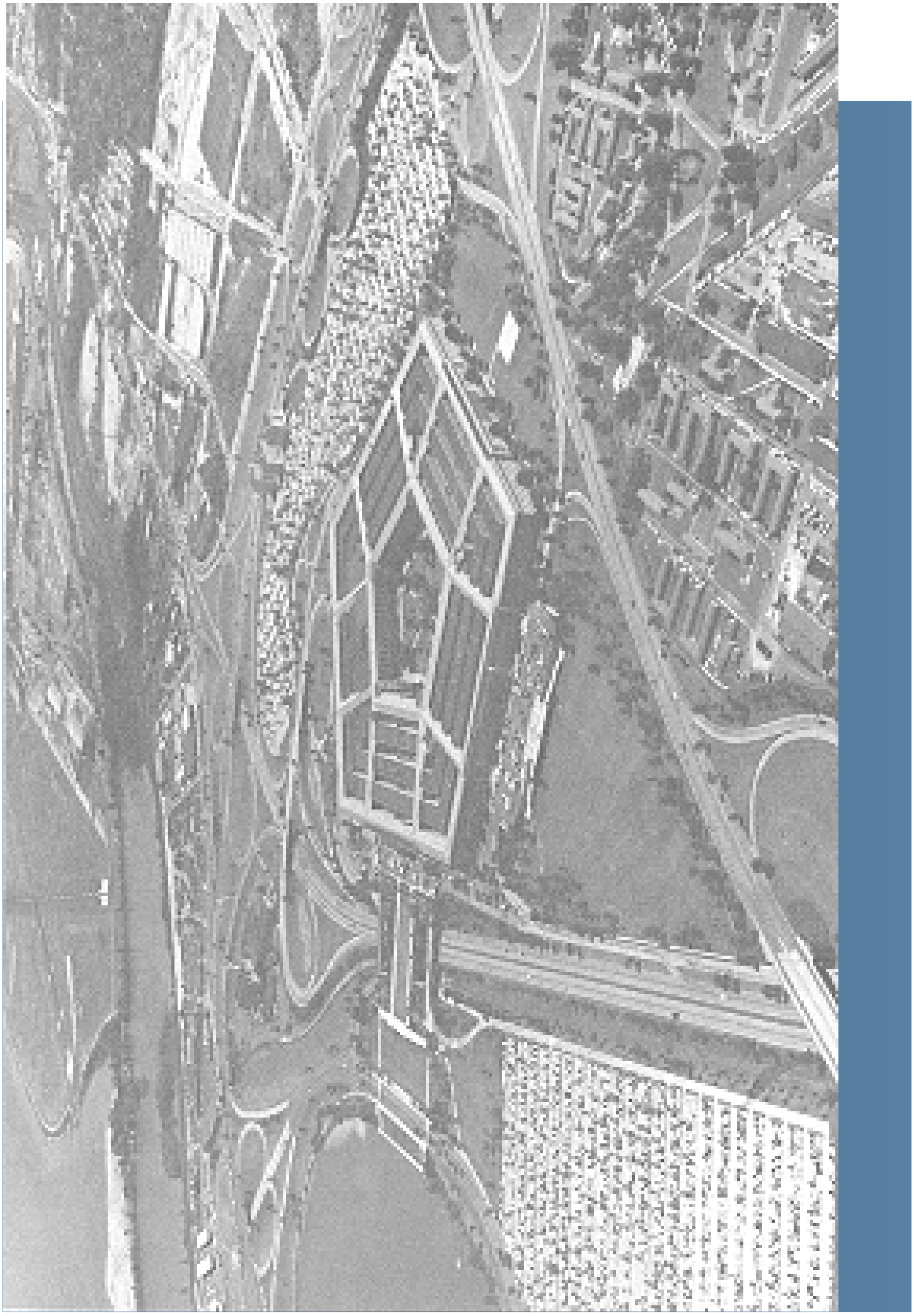
If, however, the cause were of global nature, and "if the Antarctic ice regions and the major Greenland ice cap should be reduced at the same rate as the present melting, oceanic surfaces would rise to catastrophic proportions," he said. "Peoples living in lowlands along the shores would be inundated."

The climatic change was not implausible, Dr. Ahlmann suggested, in view of the fact that "we know that the tropics have felt a marked climatic change in the last fifteen or twenty years, especially in the vicinity of West Africa. Many smaller lakes have actually disappeared and larger ones are drying up. Even huge Lake Victoria has dropped seven inches in the past decade."

The Arctic change, the scientist asserted, "is so serious that I hope an international agency can be formed to study conditions on a global basis. That is most urgent."

One effect of the change, he said, has been to improve navigation conditions along the northern rim of Europe, a development of chief interest to Russia.

"In 1910 the navigable season along western Spitsbergen lasted only three months," he said. "Now it lasts eight months. This is of world strategic importance."



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COMMITTEE ON GEOGRAPHICAL EXPLORATION

PANEL ON EXPEDITIONS

ANNEX "A"

to Minutes of Third Meeting

REMARKS MADE BY PROFESSOR AHLMAN
OF THE UNIVERSITY OF STOCKHOLM,
SWEDEN

"I have been occupied for many years with studies of the Arctic, especially around Sweden, Northeast Iceland and Northeast Greenland. There has been definite climatic improvement, especially in the last two decades. In Spitzbergen the improvement has been very rapid. The shipping season on the west coast of Spitzbergen was three months at the beginning of the century and is now eight months. Information from the Arctic Institute in Leningrad is corroborative. This climatic variation in the Arctic constitutes a natural revolution. In East Africa the level of Lake Victoria has gone down seven feet in the last ten years, and small lakes have disappeared. It looks as if this climatic change is a global phenomena but we cannot be sure before we have detailed facts from the Antarctic. We may need to search outside the earth for the explanation.

"It was proposed in London and Oslo that a Norwegian, English and Swedish expedition go to the Antarctic to the same district which was surveyed by the Germans in 1938-1939. The Norwegian Government has made representations to its Parliament for three million Norwegian Crowns to start this expedition in September of next year. It will be a Norwegian expedition with Sweden and England cooperating. There probably will be ten members; four Norwegians, three Swedes and three English, including meteorologists and glaciologists. I am responsible for the scientific program. We hope to get an idea of atmospheric circulation.

"I hope there will be an ice cap station in Greenland. The Danish Government has promised such a station and I hope it will be realized in 1948, but Denmark has much to do. In my mind there must be one or two ice-cap stations in Greenland in intimate cooperation with radio-sonde stations in the Northern Hemisphere, in northernmost America, Canada and perhaps also in the United States. If my general plan is realized there will be a systematic investigation of the atmospheric circulation over Greenland and Iceland and from pole to pole. The Antarctic expedition will be realized. As for the polo-to-polo radio-sonde stations, it is necessary to seek American cooperation.

June 16, 1947, Research and Development Board meeting, Washington, D.C.

(R) 5. The field of the geophysical sciences is broad and the military applications of these sciences are numerous. The unsolved problems in such general areas as oceanography, meteorology, geology are of a fundamental nature. The panels of the Committee have formulated the boundaries of the unknown in their respective fields and have rated the importance of the solution of unsolved problems from a scientific and military viewpoint. This was done in order to help in the formulation of a master plan of research and development in the geophysical sciences. This task, for a fundamental field of science, is complicated by the multitudinous military applications. The following table shows a few significant examples of the general relations of scientific fields to military objectives.

a.	Carrography & Geodesy - - -	Missile ranging and guidance problems; military mapping; terrain models.
b.	Geology - - - - - - - - - -	Strategic minerals; terrain intelligence.
c.	Hydrology - - - - - - - - -	Water supplies; floods; military construction on ice and permafrost.
d.	Meteorology - - - - - - - -	Weather forecasting for air operations; weather control in land and air operations.
e.	Upper Atmosphere- - - - - -	Guided missile design; long range communications.
f.	Atmospheric Electricity - -	Protection of aircraft radio communications.
g.	Oceanography - - - - - - -	Undersea warfare.
h.	Seismology - - - - - - - -	Shock protection of surface and subsurface installations; hurricane detection.
i.	Soil Mechanics - - - - - -	Vehicle trafficability.
j.	Terrestrial Magnetism and Electricity - - - - -	Mine and submarine detection; guidance system for missiles; degaussing