The scientific exploration of Svalbard and the development of modern Arctic research
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Content of today’s lecture

1st half: • The origins of Arctic research
  – The concepts of polar research and Arctic science
  – Development of modern polar research
  – Periodization: phases in the science history of Svalbard

2nd half: • Research on Svalbard
  – Milestones and examples
  – Characteristics of Svalbard science
  – The historical significance of science

Problem: • Driving forces behind and historical effects of science on Svalbard?

Today’s Cultural Heritage Quiz
What is this?
What is polar research?

- Exploration and research – contradiction in terms?
- A geographical, not a disciplinary definition
- Polar research was/is motivated by more than "pure" desire of true knowledge
  - Economic interests
  - Political and strategic interests
  - Individual fame and national prestige
- Polar research was/is typically field based, multidisciplinary, international – and very expensive

When did polar research become "scientific"?

- Karl Weyprecht’s polar program
  - K. Weyprecht – Arctic hero and more
  - Polar research must concentrate on solving nature’s riddles instead of competing for international “honour”
  - Pure geographical exploration must step back in favour of “scientific objectives”
  - Single scientific studies must be replaced by parallel observations through a whole year. Requires international cooperation

Result: The International Polar Year 1882–83

Phases in Svalbard research

- Barentsz’ discovery
- Mapping by whalers
- Accumulation of geographical knowledge
- Age of reason and natural science
- The race for the North Pole
- Svalbard as field of research
- "The golden age"
Phases in Svalbard research

- Norway joins in
- Science and land claim
- Crisis and war

- "Big science" on Svalbard
- The environmental challenge
- An international research platform

15 minutes break

Some milestones of science history

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<th>1700</th>
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<th>1900</th>
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<td>Martens 1671</td>
<td>Chichagov 1764-66</td>
<td>Phipps 1773</td>
<td>Koehn 1866</td>
<td>Nordenskiöld 1864, 68, 72-73</td>
<td>NSU 1928</td>
<td>ESKO 1967-74</td>
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<td>Arc of Meridian 1898-1902</td>
<td>EISCAT 1996</td>
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A changing scientific profile

• 18th and 19th century “natural history”
• Geography – a key science
• What decided the research profile?
• Resource orientation: geology, oceanography and marine research
• Politicised research?
• Environmental research and “big science”
• Climate change

Summing up: Historical significance

• Increased knowledge about Svalbard – also for the general public
• Basic scientific value, f. ex. understanding of glaciations, aurora, climate, adaptation
• Scientific activity stimulated the development of tourism – and vice versa
• Geological research was a precondition for and a direct cause to industrialization
• Research and education has become important factors in Svalbard’s economy
• Science has played a political rôle – and still does

Next time on HOS...

To the North Pole... seriously?
End of 5th lecture
(Don’t forget the exercise…)

SH-201 The History of Svalbard