



IASC workshop on Arctic data rescue, citizen-science and collaborative research

Icelandic Meteorological Office, Reykjavík – 11 & 12 November 2013

Progress in Arctic science is hampered by sparse data or data that are inherently difficult to interpret. Often data are hard to find or access and human intervention is necessary at multiple points on the path to utility. In these cases machine-based data acquisition and/or analysis is impossible. In this workshop we explore a variety of Arctic data/information sources and discuss new pathways to effective utilization across disciplines.

Agenda highlights:

The story of the Arctic from limited records

This session was about the process of doing Arctic science with limited records: It's a critical and variable region, but historically very badly observed. What data have we got (or know of) and how can we use it?

What is intractable data, who's got it and how can we use it?

This session is about making apparently intractable data useful. Examples include hand-written manuscripts, instrument traces, photographs and video/audio recordings. Where is it and how can we utilize it?

Arctic research: challenges on land, sea and air

Workshop participants presented topics related to data recovery and use in their particular discipline – from atmosphere to anthropology.

Understanding long-term changes in Arctic sea ice

Focus session on the problems, progress and future opportunities in the area of sea ice and its historical variations in the Arctic.

What motivates the crowd: the game, a story, or compelling science?

What are the characteristics of successful citizen-science projects, in particular those factors most important for motivating broad participation from volunteers that is indispensable? Communication/outreach aspects as experienced by the scientists and designers of [Zooniverse](#) projects were also discussed.

Nuts & bolts (round table)

A 'how to' session on building citizen science research projects. Questions around information technology, staff time, funding requirements, and other practical matters were explored.

Synergistic objectives included: Increase in easily available relevant historical data for all Arctic scientists; the leaders of active projects (i.e. Old Weather – Arctic) can become familiar with research objectives in other Arctic disciplines fostered through data/information sharing or by contributing technical insight; and all will benefit from an exploration of end-to-end ideas for data sources, technical processing, and research applications.

Workshop Participants



Back Row (L-R): Philip Brohan, Guðrún Nína Petersen, Przemysław Wyszyński, Jelte Rozema, Astrid Ogilvie, Jean-Pierre Lanckman, Phil Jones, Halldór Jóhannsson, Takuro Aizawa, Aleksandra Pospieszyńska, Björn Erlingsson, Mark Mollan

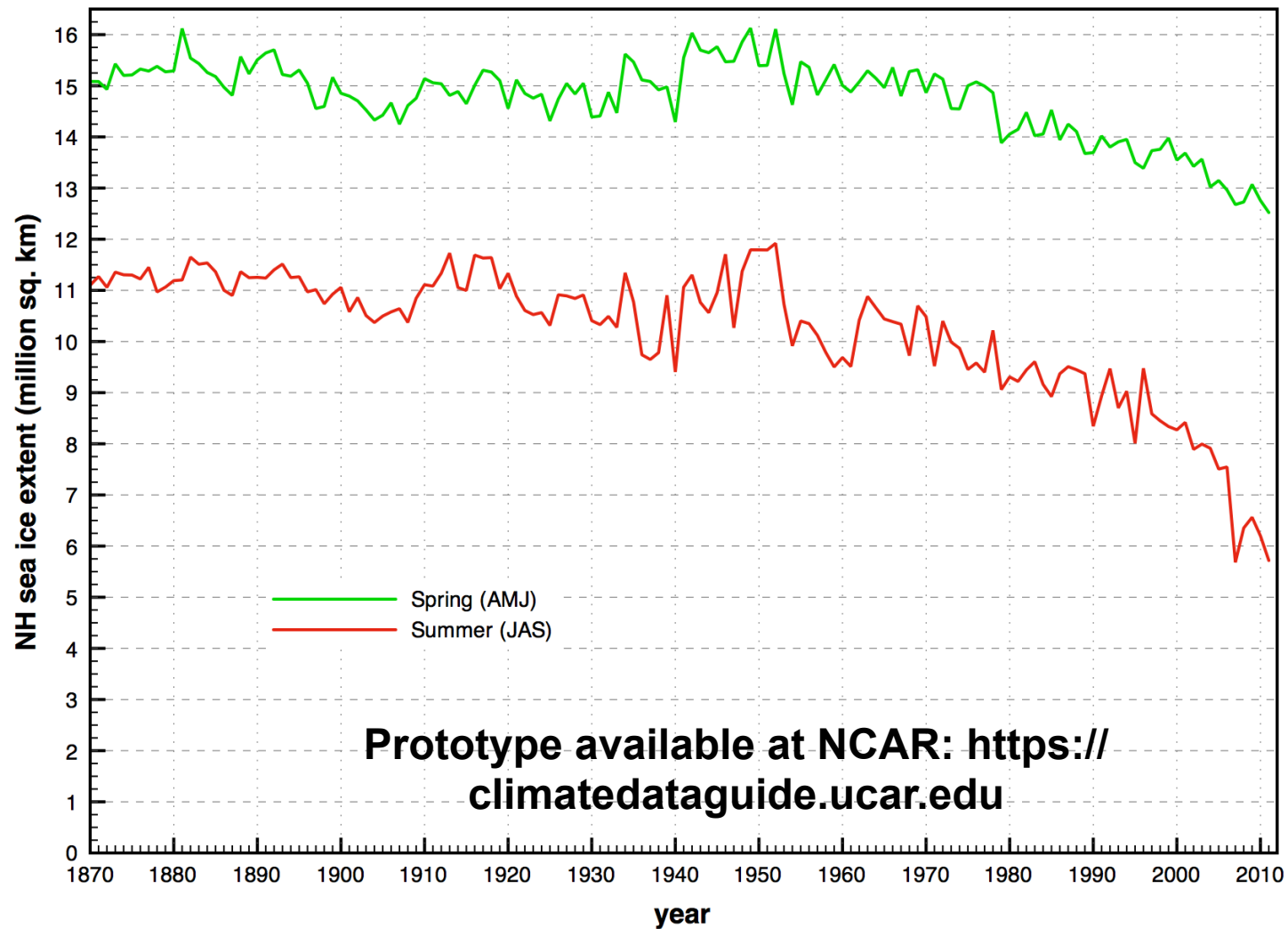
Front Row: Trausti Jónsson, Jim Overland, Eirik Førland, Jonny Day, Rajmund Przybylak, Halldór Björnsson, Chris Lintott, Mark Procknik, Dennis Wheeler, Stef Weijers

Not Pictured: Kevin Wood, Igor Krupnik, Ingibjörg Jónsdóttir

Data rescue and evaluation

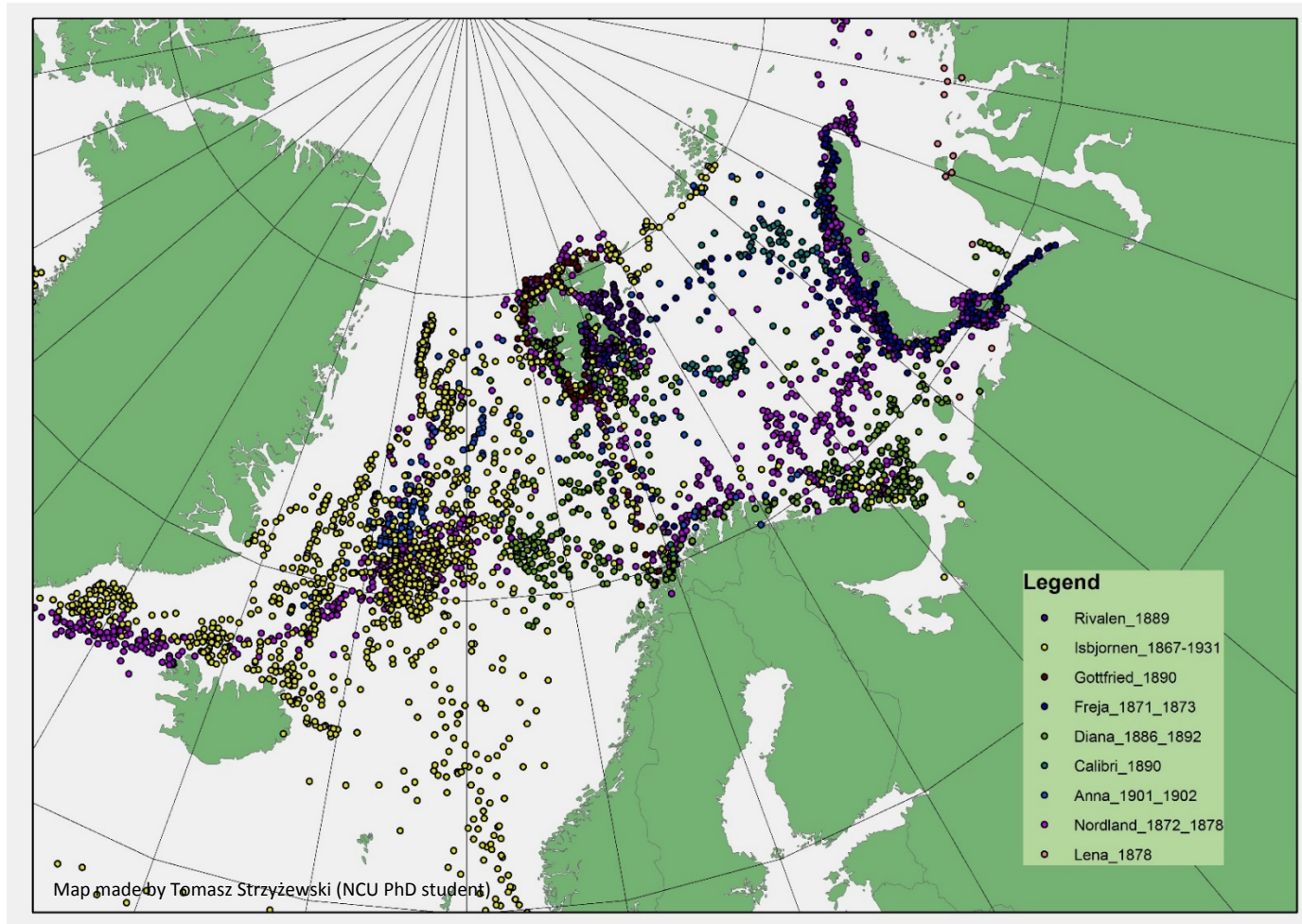


Focus: past state of the Arctic sea ice



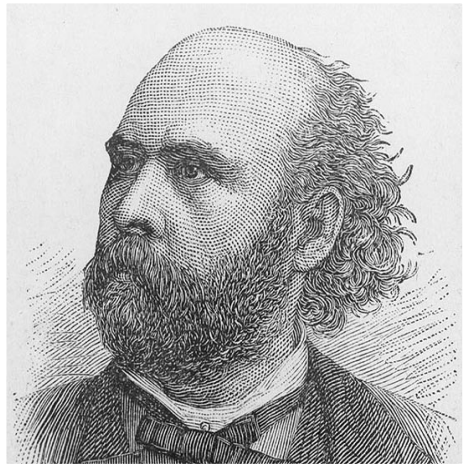
Walsh, Chapman & Fetterer: extended time series of Arctic ice extent, 1870-2011
[incorporating ACSYS, AARI sea ice data]

The AWAKE-2 Project



AWAKE-2 project – so far digitized: 9 yachts, 31 cruises, 4876 points (20.0% of collected material)

(129 years later)



George W. Melville
(1841-1912)

The scientific value of the work accomplished by these men, living and dead, can only be estimated after their observations have been compiled and computed, compared and applied - all of which will involve years of patient toil.