The Wegener Memorial Expedition to the Greenland Caledonides

Kurt Stüwe and Werner Piller University of Graz, Earth Science, Graz, Austria (kurt.stuewe@uni-graz.at) http://wegener.uni-graz.at



2012 marked the 100 anniversary of the publication of Alfred Wegeners book: 'Die Entstehung der Kontinente' - which is often hailed as the discovery of continental drift theory in the advent of plate tectonics. Wegener was later appointed as professor for geophysics at the University of Graz in Austria - in part for this discovery. He held this position until his death in Greenland in 1930.

of the least investigated corners of the Greenland Caledonides. The pictures show Ella O and a supercub en route

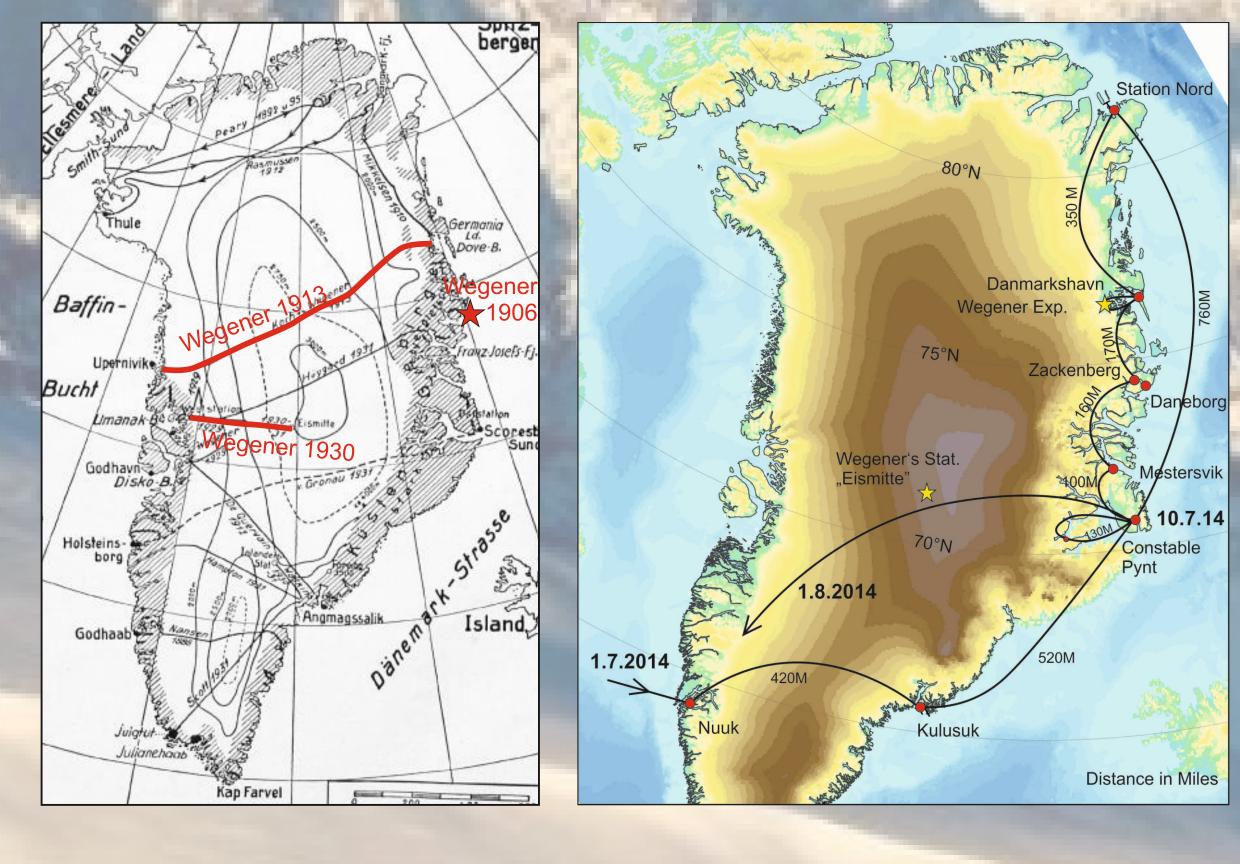
In honour of the hundredth anniversary of the 1912 milestone publication, the University of Graz in Austria stages an expedition to Greenland in the spirit of Alfred Wegener and supported by the Austrian Academy of Sciences. The expedition aims predominantly to unravel secrets of the Caledonides of Northeastern Greenland using an extensive sampling program to some of the least explored corners of the orogenic belt. Particular emphasis will be placed on the Hager Bjerg allochthon and its relationship to the hanging wall and footwall units. However, the expedition also aims at retracing Alfred Wegeners expedition. Moreover, the route of access for the expedition will involve several weeks of travel through Baffin and Ellesmere islands and it is planned to perform a series of scientific investigations en route.

These will mainly involve LIDAR measurements of selected key regions in the arctic for snow thickness and glacial retreat investigations (performed by expedition member Prof. Chris Larsen / Fairbanks University)

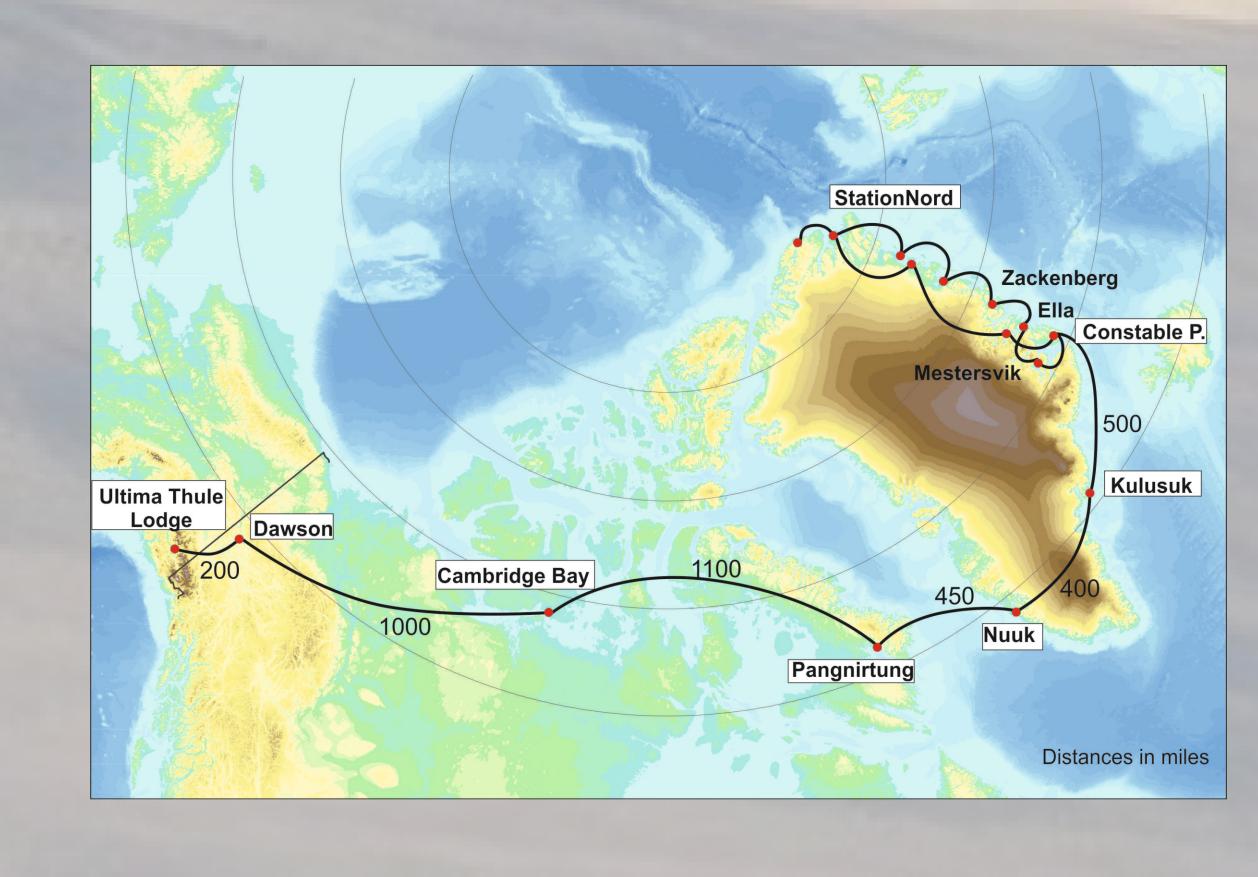
The expedition will use the unparalleled flexibility of small aircraft that will be piloted by experienced Alaskan bush pilots and brought to Greenland from Alaska for this purpose.

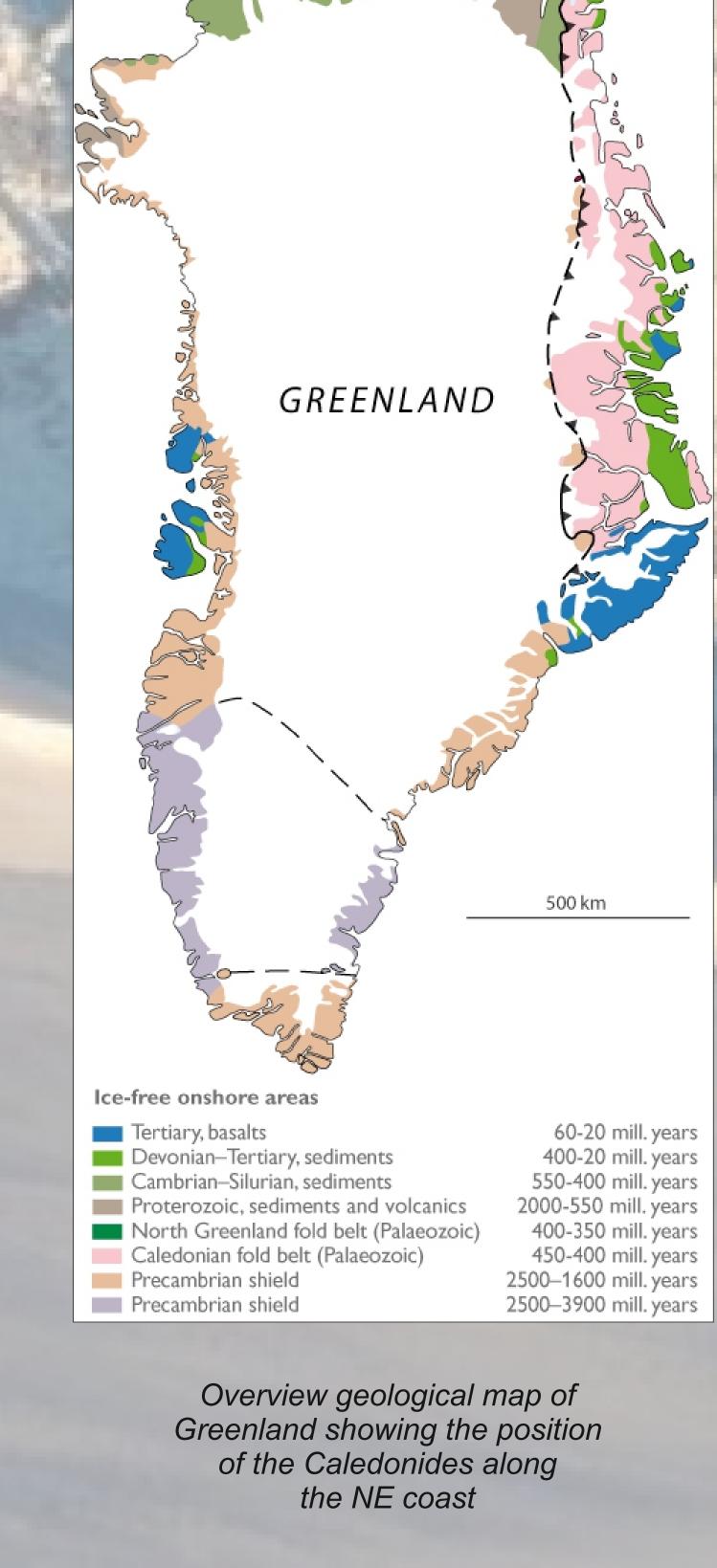


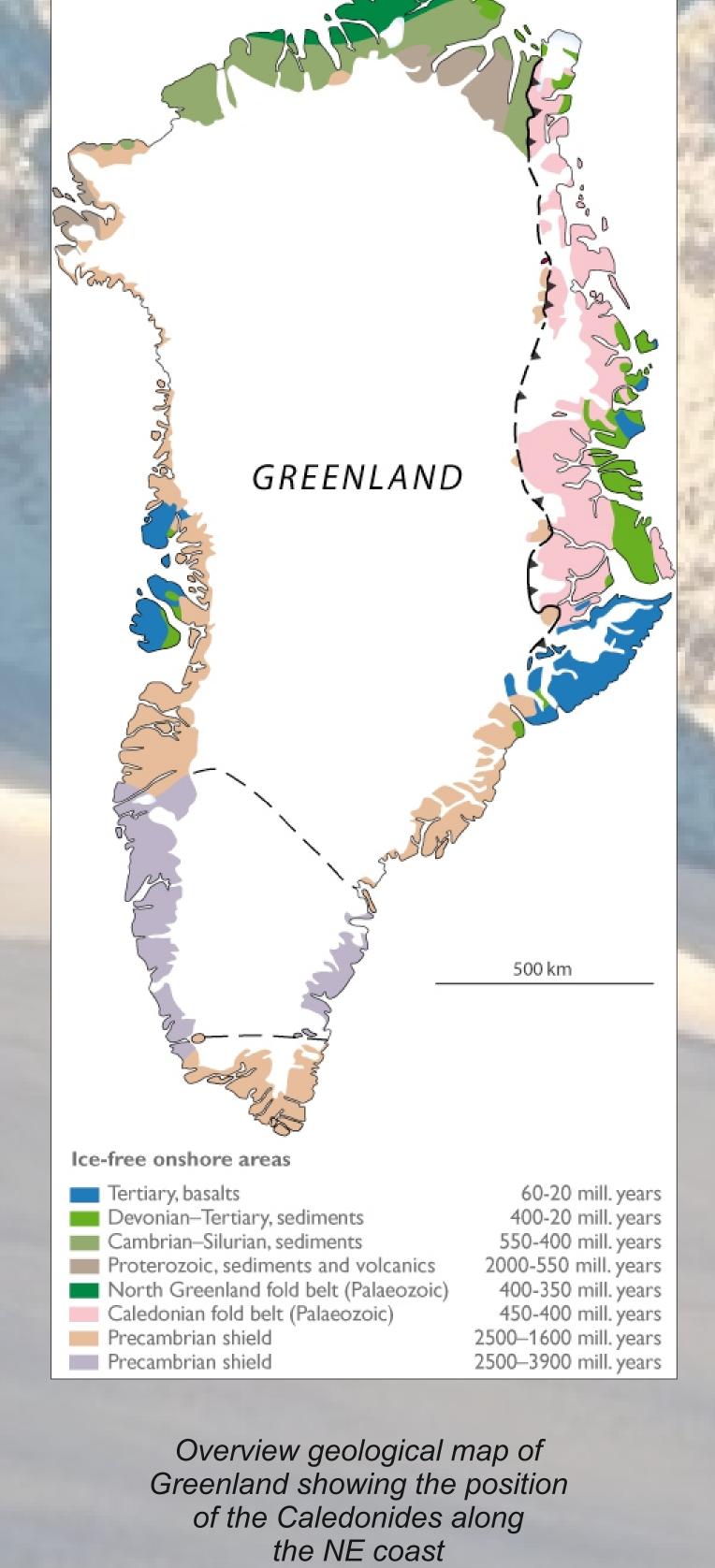


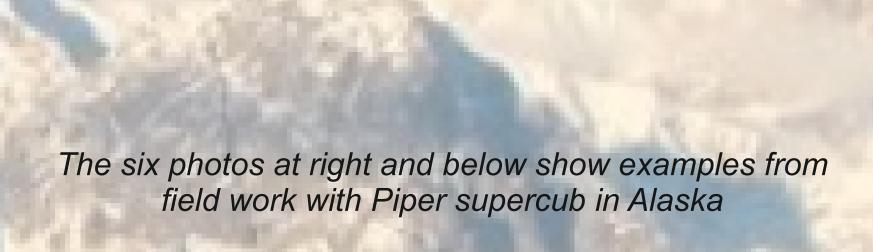


The early explorers routes in Greenland with Alfred Wegeners expeditions marked in red and the route planned for the Wegener Memorial Expedition in summer 2014 (Greenland above, access below)













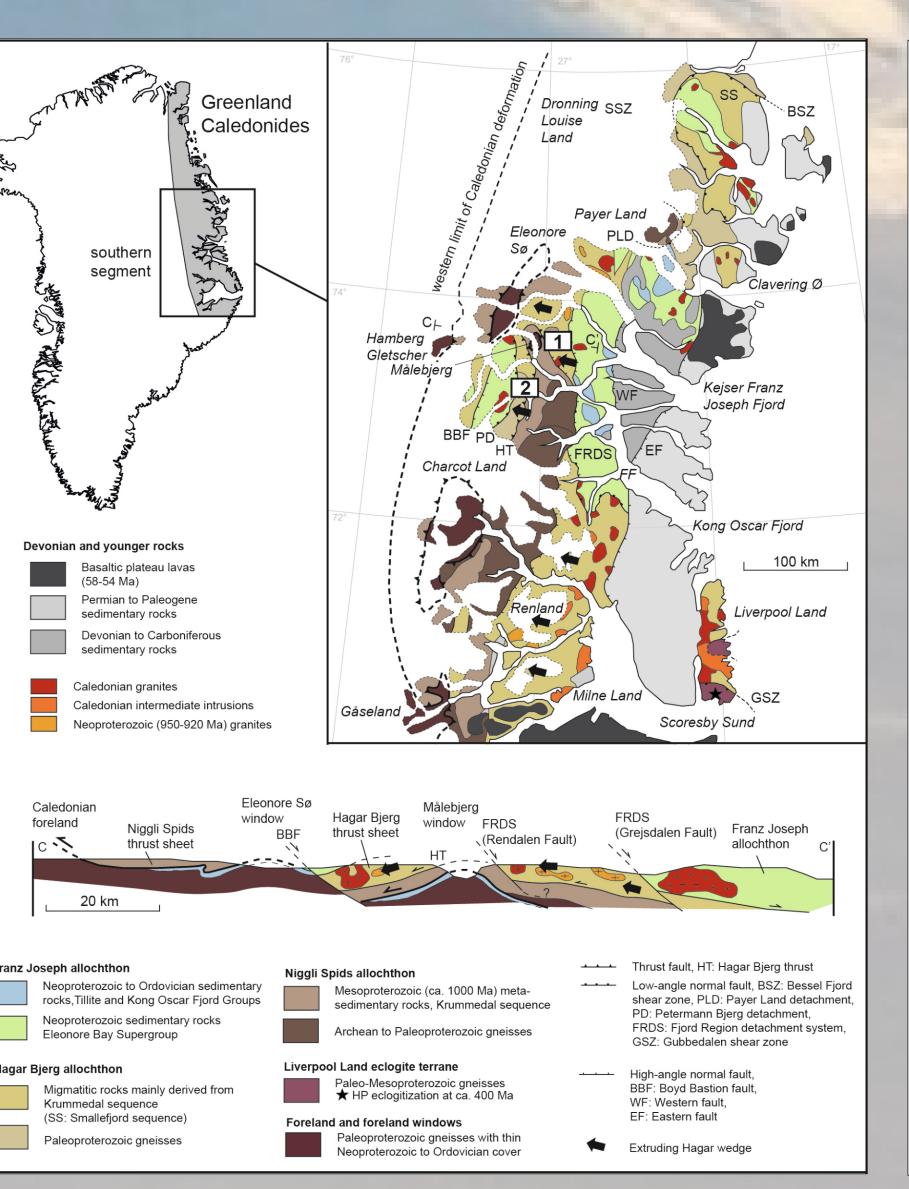


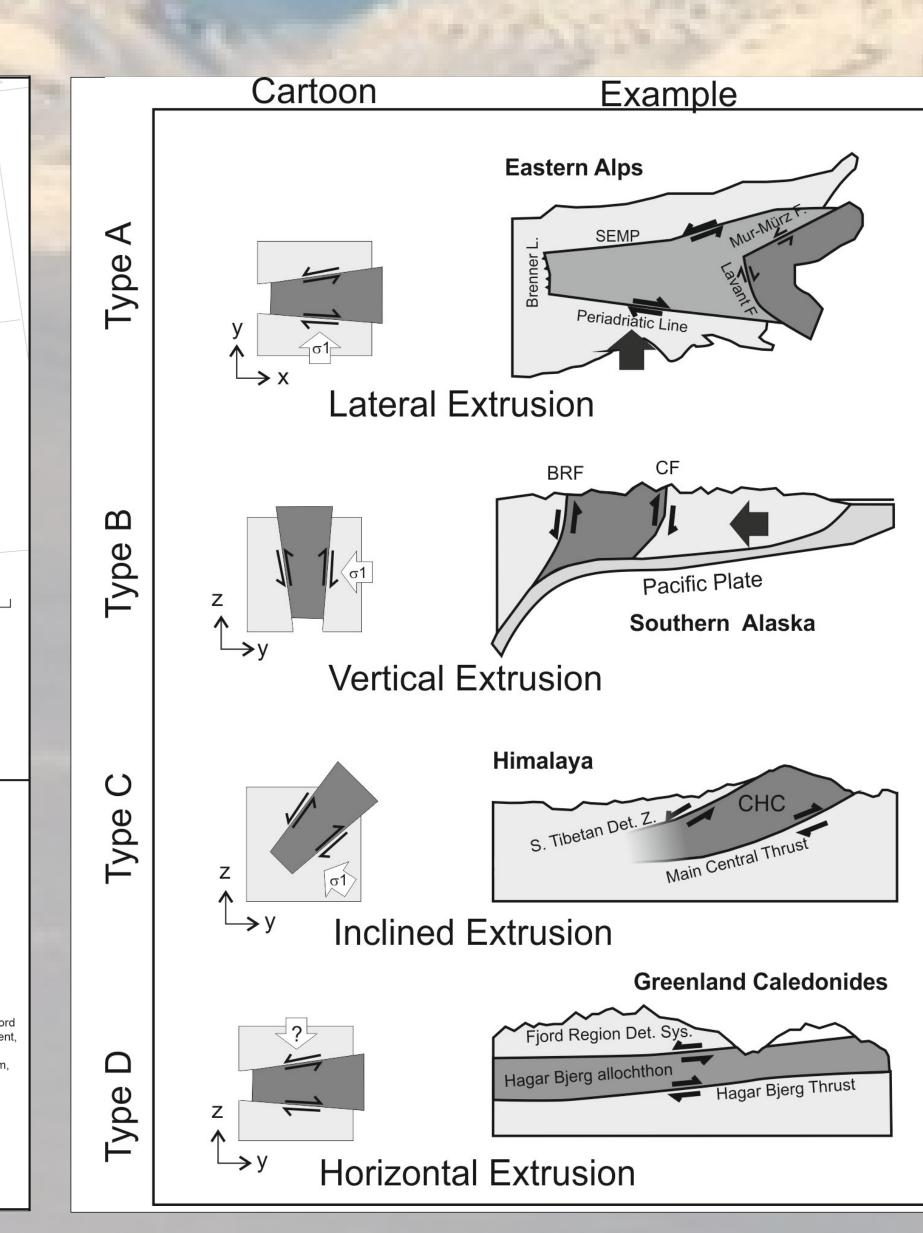






The scientific motivation for the project lies in investigating the Hagar Bjerg allochthon of the Greenland Caledonides as an example for a horizontally extruded metamorphic wedge. is idea are explained in an project application to the Austrian Science Fund that was rejected in late 2013. Some of the critical diagrams of this are shown below.







100 YEARS OF CONTINENTAL DRIFT THEORY