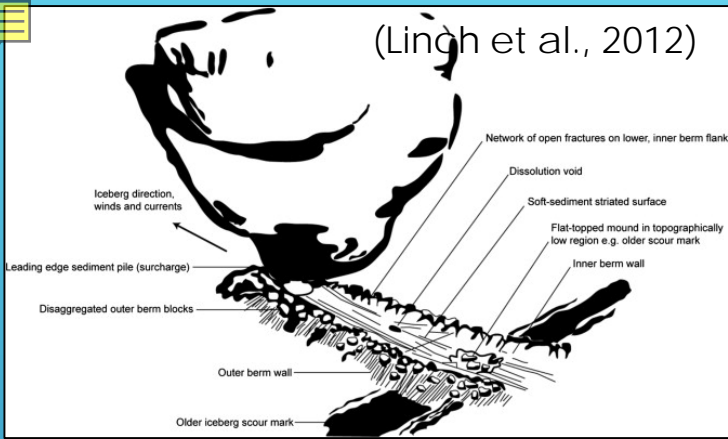


## Etchings of an iceberg by Vanessa Lucieer

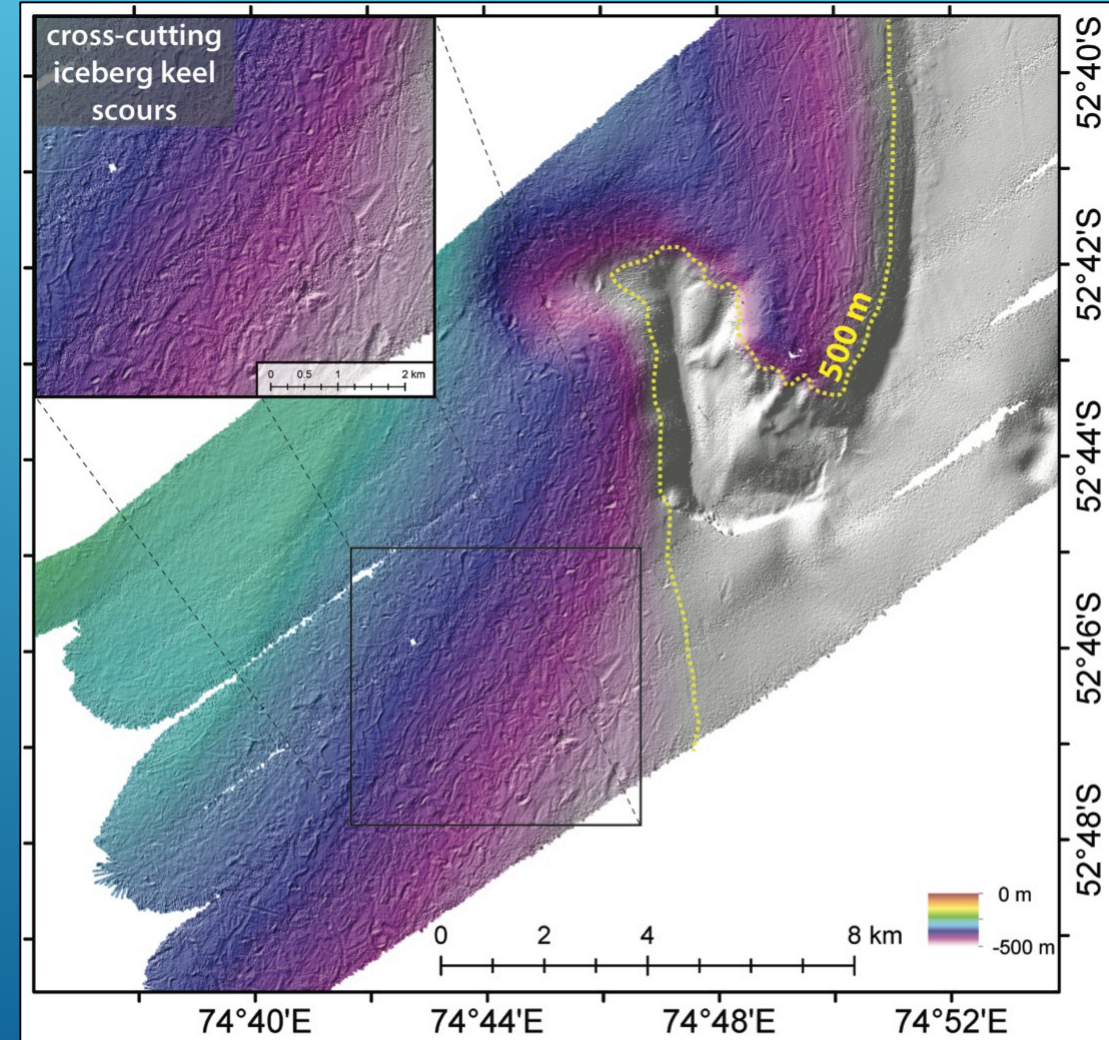
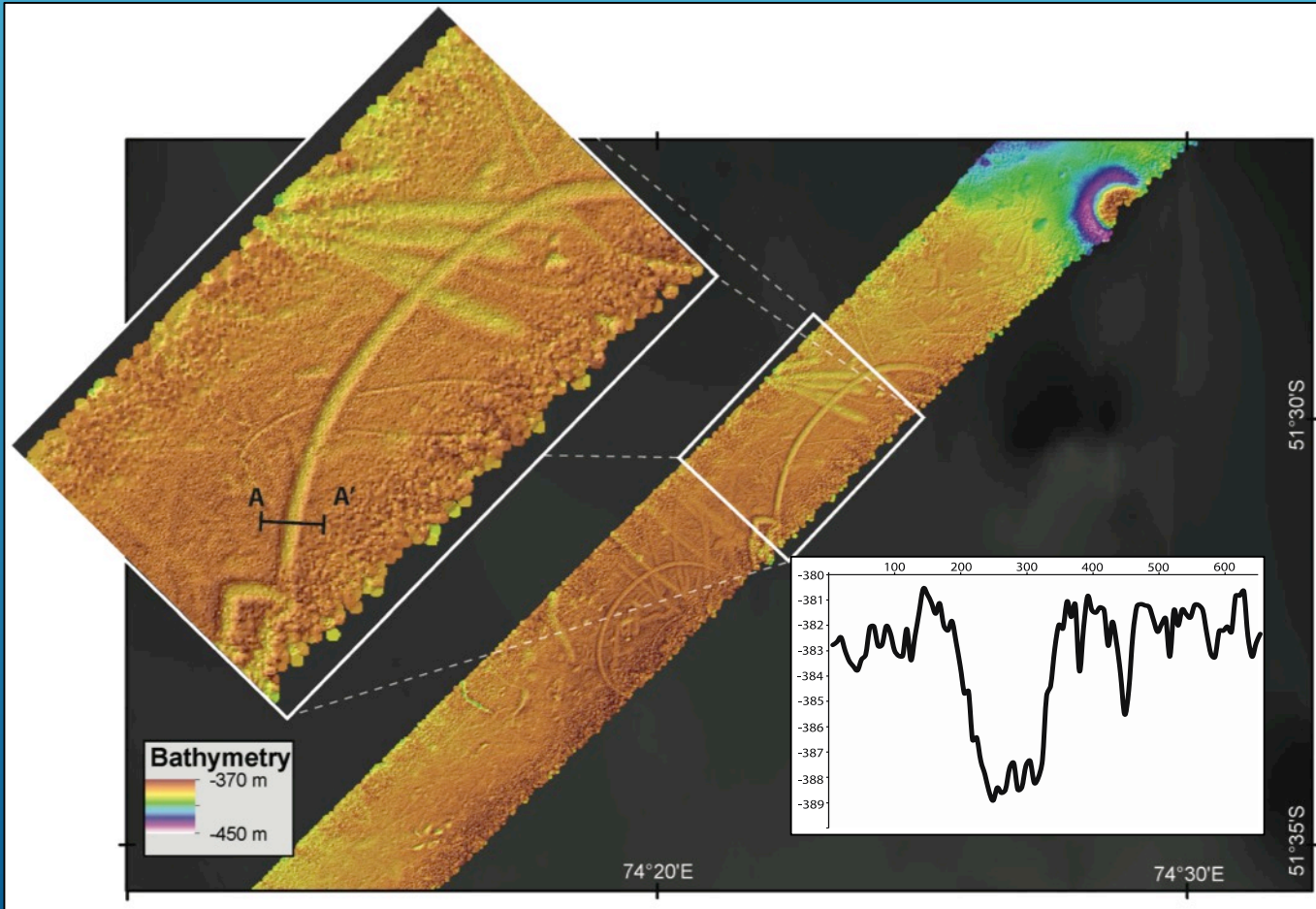
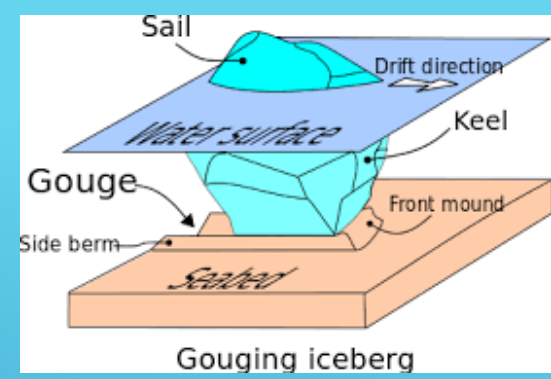


Image credit\_ Margaret Dolan Geological Survey of Norway

(Lynch et al., 2012)



# Iceberg keel scour morphology



>660 individual iceberg keel scours (we mapped 1.3% of the Kerguelen Plateau)

Average length 711 m around the islands and 1,132 m on the plateau

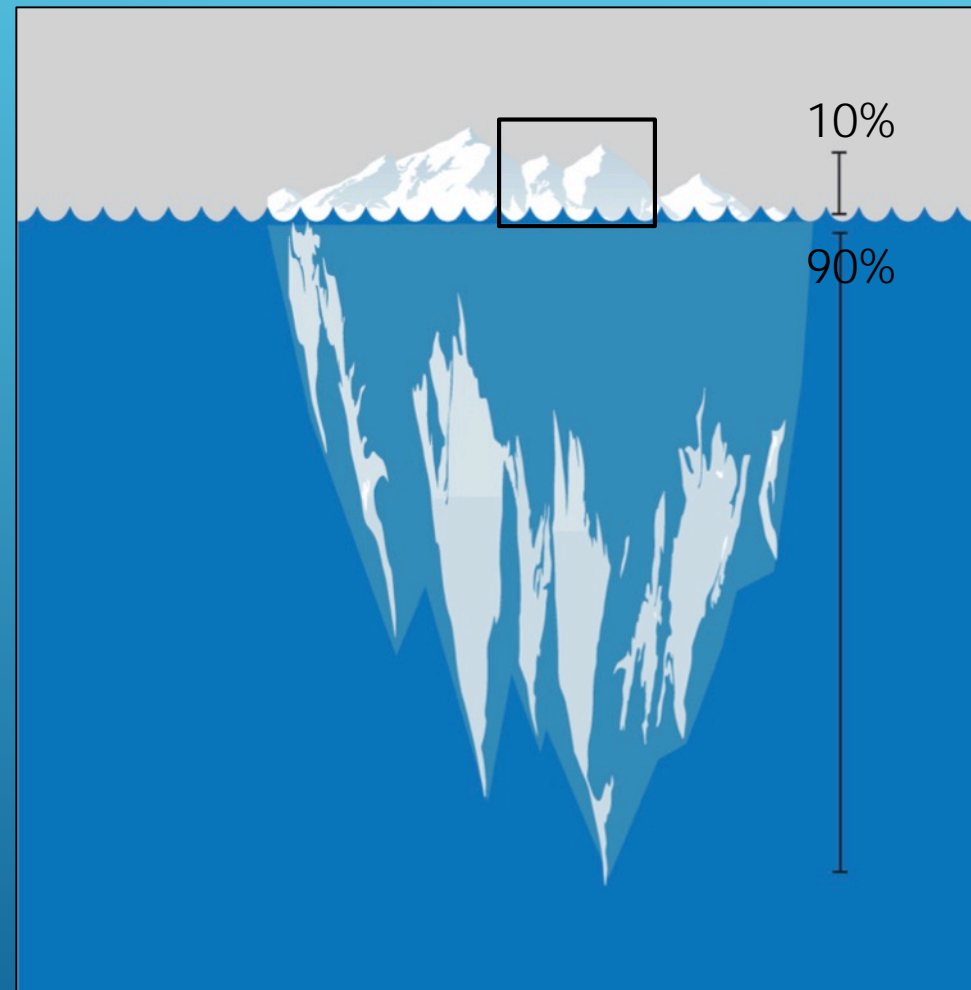
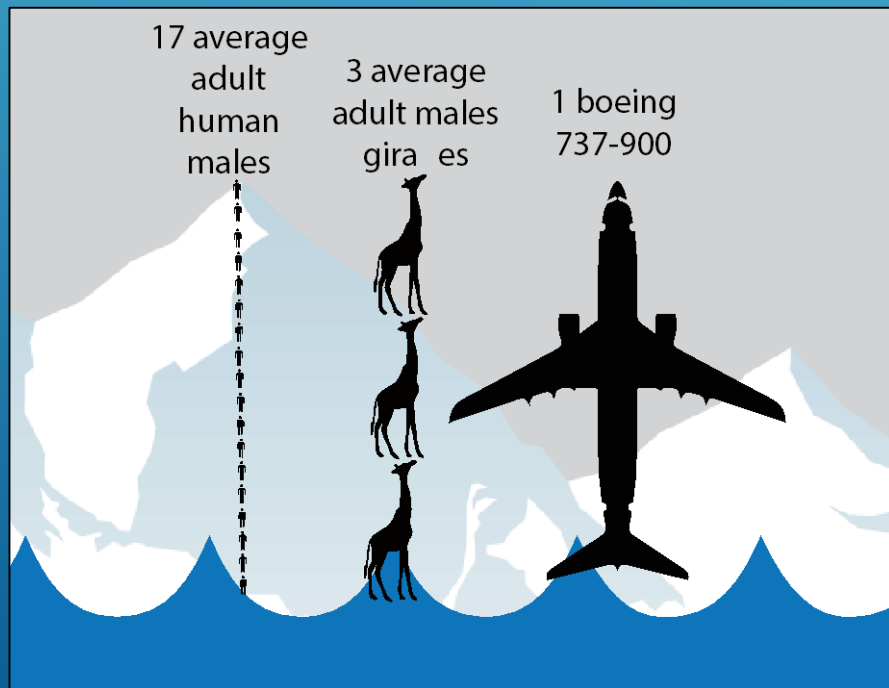
Average 150 m water depth around the islands

Average 402 m water depth across the plateau

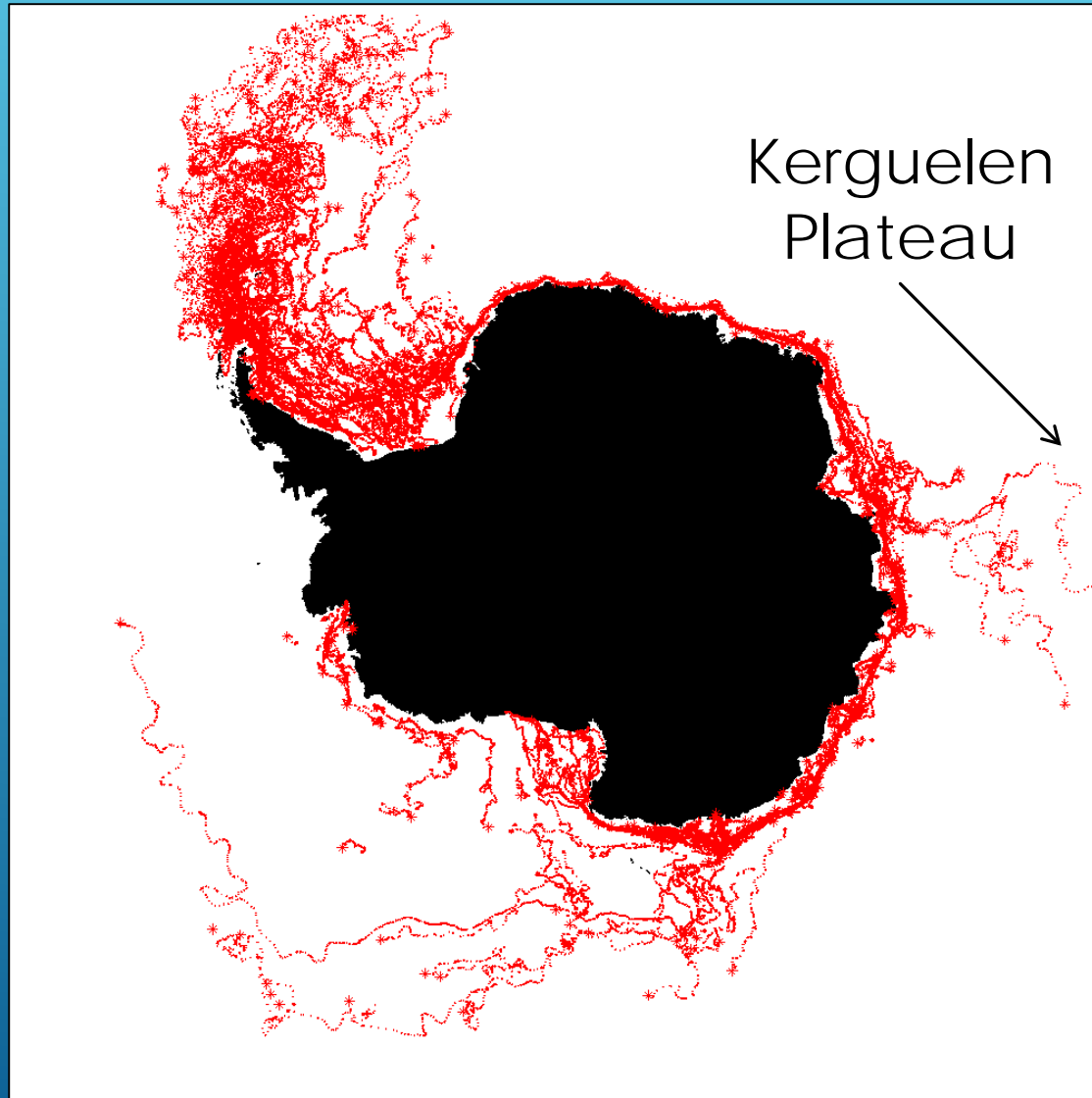
If ~402 m water depth today... that is ~282 m at LGM.

If 90% is underwater...the iceberg was ~313 m tall (total).

So, the iceberg would have risen ~31 m above the sea surface... or



# Icebergs from Antarctica scouring on the Kerguelen Plateau?



- Only very large icebergs make it to low latitudes
- Icebergs north of 63° S is low
- We wouldn't expect such high densities of scouring if they were all modern scours from Antarctica
- Tournadre et al (2008; 2012) analysed iceberg distribution using remote sensing datasets who show that there is a relatively low probability of icebergs moving from the Antarctic Continent to the Central Kerguelen Plateau in the current interglacial regime.

