

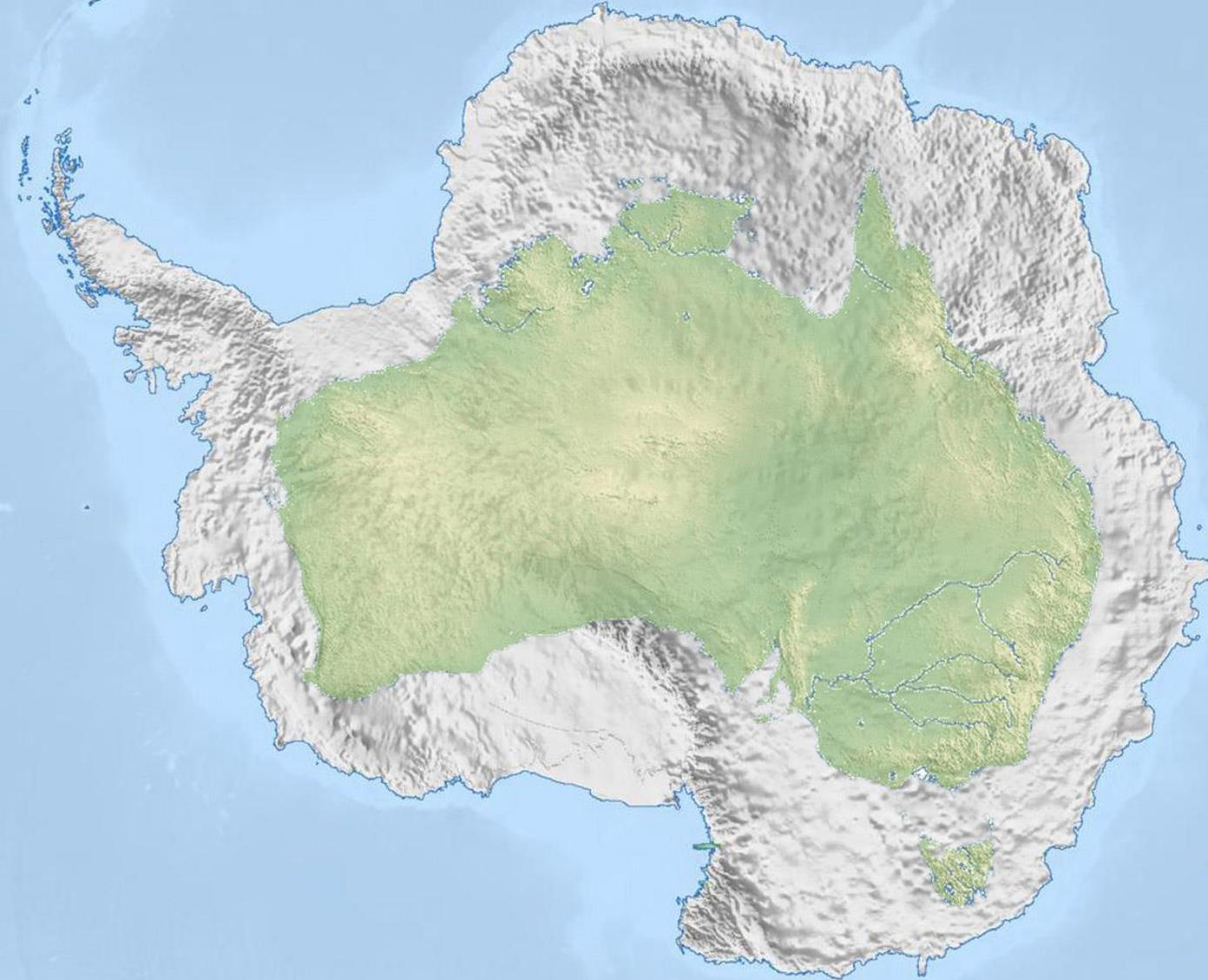
# Antarctic Travel

## Modern Practicalities

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A comparison of the size  
of Antarctica and Australia



- Antarctica is a continent, it is very roughly circular with a diameter of about 2,800 miles (4,500 km). There are no roads for conventional vehicles outside of short non-paved tracks around scientific stations, just a few "airports" that are rough landing strips usually on ice no commercial air or sea ports and no railways.
- There is no infrastructure where you can buy fuel, get repairs or overnight accommodation other than as part of a (very expensive and very rare) short term adventure tourist package.
- It's also very BIG!

A comparison of the size of Antarctica and the USA



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A comparison of the size of Antarctica and Europe



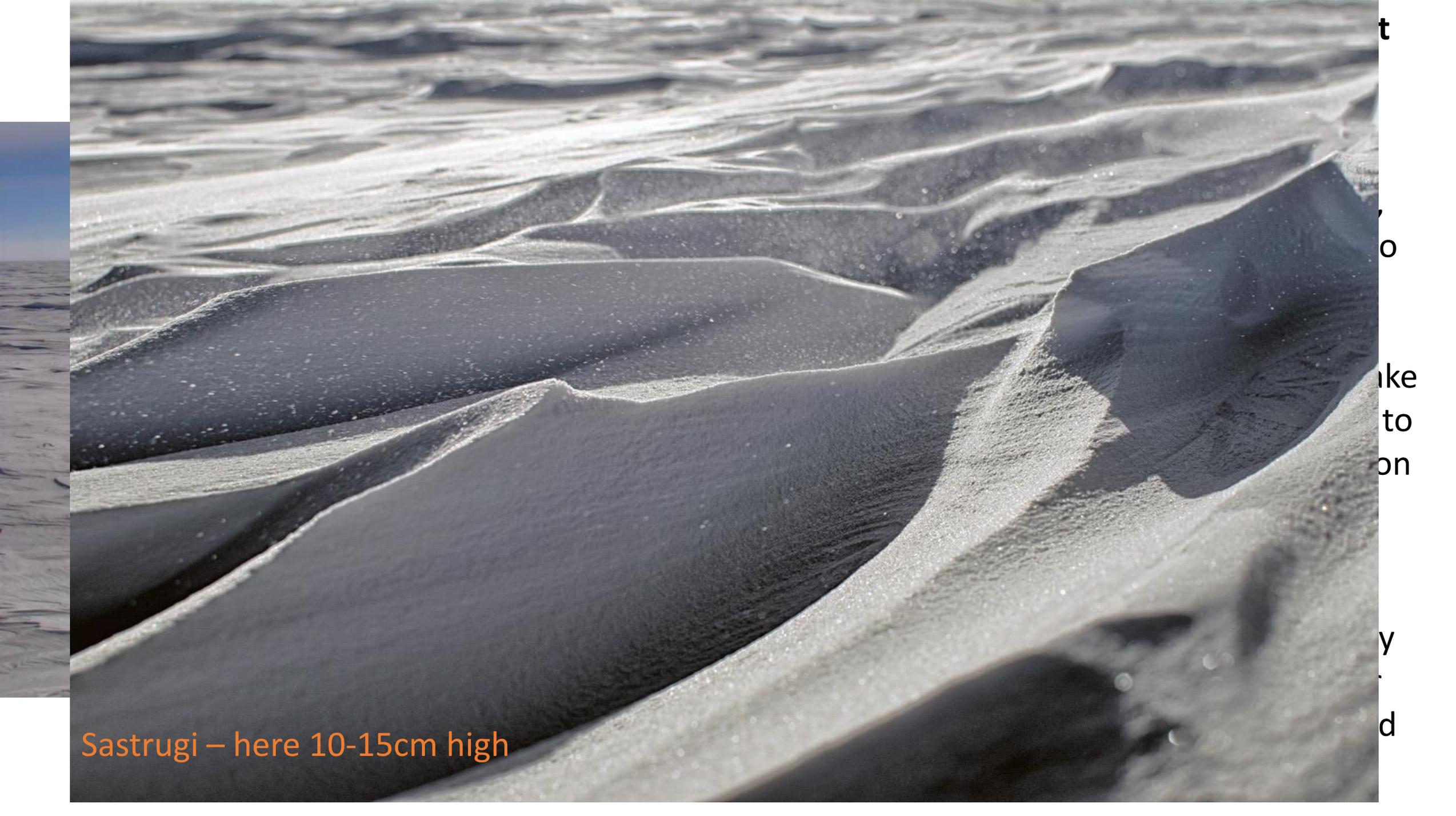
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- **Field parties may camp for up to 100 days in the Antarctic summer months with periodical resupply which is taking place here by air.**
- Food and fuel are dropped off many miles from the nearest base allowing remote and distant areas to be visited, the aircraft will also take out collected rock samples, this field party travel are using snow mobiles and sleds to carry their equipment.

Getting around can be hard - 2





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Sheltering from the wind and hoping it won't last for long

**Weather.** Temperatures can fall or rise, there is a big difference between -10C, -20C and -30C and what you can comfortably and safely do at each temperature.

Blizzards are ever present possibilities and result in having to stop and wait until they pass, this might take a day or two, or a week, or two.

Even on calm and not especially cold days, low cloud can result in **white-out** conditions where it is like being inside a ping-pong ball making dangers such as crevasses much harder to see and slowing progress significantly.



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## Hazards- Breakdowns

Vehicles used in Antarctica tend not to be the most up to date, using yesterdays engineering. This means they are proven in use and are easier to fix when they break. If your vehicle breaks down deep in the field, it may be days until someone can fly out with a mechanic or spare parts to fix the problem.

Easier to fix vehicles make more sense and simpler technology is less affected by the harshness of Antarctic conditions. This means that very expensive to deploy deep field units can work more effective days.

Repairing a sled in the deep field, a small pit has been dug to get to the right level



**A tractor unit pulls sleds with fuel, equipment, and living accommodation as part of a multi-week, deep field expedition to measure weather conditions and deploy remote sensing apparatus.**



**Accommodation units on skis** form part of a train of tractor pulled sleds.

This allows the group to spend long periods in the field being able to work and rest without taking too long setting up and taking down camp each day.



**Snow mobiles**, here at the South Pole Station with a rugged plastic cargo sled in the foreground and with a passenger sled in the background.

Snow mobiles may be used as runabouts in and around scientific stations or may be used to take small teams for longer trips or be involved in moving scientific instruments.

Photo: Lora Koenig & NSF



**A heavy tractor unit.**

These are modified agricultural or construction vehicles adapted for extreme cold conditions and to move over snow and ice.

This will be used to pull a chain of sleds on multi-week trips away from base.



## **A Delta.**

Used as a bus to ferry people and their belongings across the sea ice and onto the land at McMurdo station between the base and the airstrip.



**An LC-130A, a ski equipped Hercules.**

These have been used for flights from New Zealand to Antarctica, and as far as the South Pole for over 50 years.

They are used to transport people or as heavy cargo carriers.

The South Pole Station was flown in entirely on these aircraft.

**A de Havilland Twin Otter**, another aircraft workhorse, used in Antarctica for over 40 years.

They are mainly used for short and medium length trips, especially as here, to meet with parties deep in the field when they resupply them with food and fuel and remove and specimens collected, allowing them to function far from the base station for months at a time.



## A Boeing 757.

In recent years, more conventional passenger jets have been used to reach Antarctica, these require better prepared ice runways with more frequent attention to enable them to land safely with wheels.





**Helicopters are useful for shorter trips over difficult terrain.**

They are also used extensively by ships. The two in this picture were both subsequently written off by making separate hard landings in white-out conditions, highlighting the limitations on helicopter use.