

# POLAR CAREERS

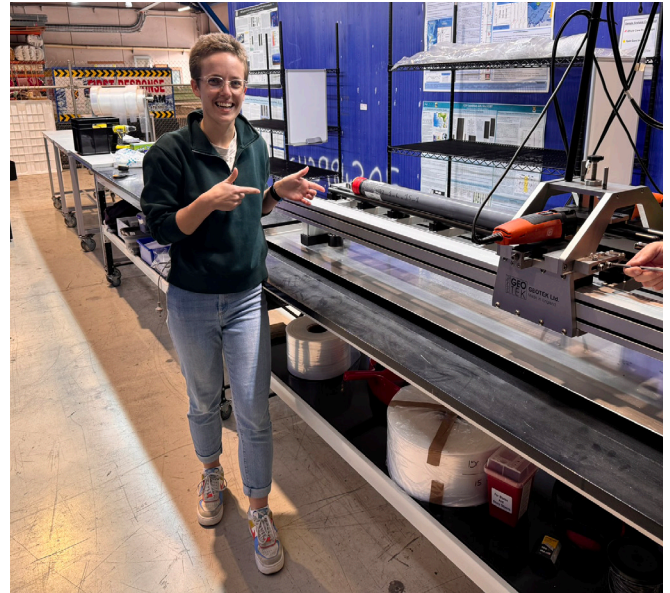
I am a **sedimentologist**.

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2°C

## Hi, I'm Linda Balfourt!

I am an Antarctic **sedimentologist**, which means I look at sand and mud deposited underneath modern-day **ice sheets** to better understand **sediments** deposited underneath ancient ice sheets. This will eventually help us to better understand how the ice has behaved in the past, which will inform how it might behave in the future.

I am a **PhD student**, and I work in an office at Victoria University in Wellington, New Zealand. If I have new samples, I will work in a lab to get all my **data** and then analyse that data on my laptop behind my desk. To get new samples, we have to go to Antarctica!



## In Antarctica...

my day normally started with coffee and breakfast, then a quick meeting with the science team about our responsibilities for the day. I'd then walk over to the **drill tent**, check in with the **engineers** about progress, and then operate the large **winch** that allows us to lower our equipment down the **borehole**. If we were successful and collected **sediments**, my job was to **characterise** them, **image** them, and bag them up correctly.

## The coolest thing about working in Antarctica is...

that you meet many different people from different walks of life. It's a place where there's a range of different people that all have one thing in common: they understand Antarctica is important, and they want to protect it by learning more about it.

The best thing about Antarctic **fieldwork** was waking up on the **Ross Ice Shelf** on a clear day!

## Did you know that...

we know more about the rocks on the moon than we know about the rocks underneath the **Antarctic Ice Sheet**?!





### When I was a kid...

I loved collecting rocks! I collected so many different **minerals** and rocks from all over Europe, and now I collect sediments and rocks from Antarctica!

### Becoming a scientist...

I am Dutch, and my childhood home was located almost 4 meters beneath **sea level**. That has kickstarted my passion for **sea-level rise**. Combining this with my love for rocks, minerals, and crystals, and understanding that the Antarctic Ice Sheet is really important for future sea level rise, means I am combining all my passions for my research!

### If I weren't a scientist...

I'd be a gardener or a social worker!



### The biggest challenge in working in Antarctica is...

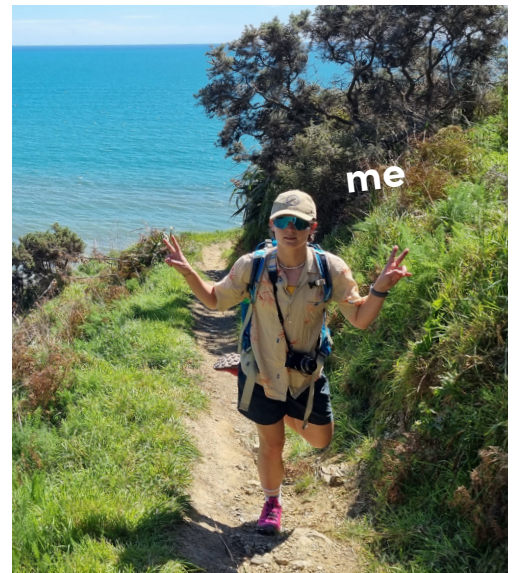
the isolation and the distance from friends and family, as well as the unfamiliar environment. Nothing is quite like Antarctica.



My comfort item was my partner's little hedgehog stuffed animal. Kept me company at all times. :)

### What I do for fun...

I read books, surf, run, play football, cook, and hang out with my cats, Rosie and Charlie.





## Want to be a scientist?

### Linda says:

Antarctica is for everyone. You don't have to be a specific type of person to thrive in these environments. Ask questions, be curious, and most importantly: do not hide! We all deserve to take up space, while learning the ropes of a new job.



Find out more about Linda and her work [here](#).

## Glossary

**Antarctic Ice Sheet** – the thick sheet of ice that covers the continent of Antarctica

**borehole** – a deep hole; in this case, drilled through the ice shelf using a hot water drill that melts the ice

**characterise** – to describe various aspects of something; in this case, to describe the grain size, colour, and microfossil content

**data** – information such as facts, numbers, observations, or anything that provides clues about something

**drill tent** – the large tent that houses the drilling machinery and other equipment

**engineers** – designers, builders, or supervisors of engines and technical machinery

**ice sheets** – massive blankets of ice over a large area of land. They form over thousands to millions of years as snow falls, compacts, and hardens into ice, and they gradually flow down toward the sea.

**image** – (verb) to take pictures; in this case, X-raying the **cores** (cylinders of sediment) to picture what is inside them before they are cut open

**minerals** – solid chemical elements or compounds that occur naturally in the form of crystals

**PhD student** – a student studying to obtain a doctorate/ Doctor of Philosophy degree, the highest degree awarded by a graduate school or other educational organization

**Ross Ice Shelf** – the world's largest ice shelf; an ice shelf is a floating piece of ice, attached to the land and formed on land by layers of compacted snow over hundreds and thousands of years that have flowed onto the sea. Ice shelves are very important because they act like a dam and slow the flow of ice sheets into the ocean.

**sedimentologist** – a scientist who studies sediments and sedimentary rocks (rocks formed from sediments)

**sea level** – the level of the ocean. Since the sea rises and falls with the tides, sea level is taken as the average between mean (average) high and mean low water.

**sea-level rise** – an increase in the level of the world's oceans due to the effects of climate change, including thermal expansion of the ocean and melting of ice sheets and mountain glaciers

**sediments** – material such as rocks, minerals, and the remains of organisms deposited by water, wind, and glaciers

**winch** – a machine for hauling or pulling

