POLAR CAREERS

I am a **marine biologist**.

Hi, I'm Linda Armbrecht!

I am a **marine biologist**. I study **DNA** in the **seafloor**. This DNA comes from **organisms** that have lived in the ocean in the past.

The DNA tells me who has lived where and when in the ocean a very long time ago.

I am trying to piece together which organisms have lived under the **Ross Ice Shelf** over the last few million years.

Credit: Lee Stevens/IODP

Credit: Ana Tovey

When I Am in Antarctica...

I usually collect **samples**, and make sure that they are collected in a very clean way and frozen right away, so that I can take them to the lab for experiments.

The best thing about working in Antarctica is...

Antarctica is a stunning place, it's very difficult to put into words. I really enjoy the research there, as it holds so many discoveries.

Guess what?

I can tell who was living in the ocean 1 million years ago by studying less than a gram of seafloor mud!

I work in a lab where I am the biggest source of potential **contamination** when I am in there—so I wrap myself up in a white **hazmat suit**! I also put on goggles, a face mask, and gloves, so I'm almost unrecognisable when I am in there.

My workdays vary a lot. Often, I start the day by going to the lab with one of my students, and we work through an experiment together. Then later in the day I write about the experiment, or I write about what experiments I would like to do next.

When I was a kid...

I loved anything that had to do with horses! I started horse riding when I was 6.

Becoming a scientist...

I love animals, and I was always looking for a job where I can help making a better place for them. I feel like by studying their **environment** and finding out more about the world they (and we!) live in can help with that.

I have 2 horses: Ferro and Luna, who is very young, and I'm training her up myself. She is a quick learner, and it's a lot of fun!

The biggest challenge in working in Antarctica is...

is always leaving my home and driving down the driveway. Fieldwork often takes two months, and it is a long time to be away.

I love the adventure though!

Life on Ice

I was really worried about being cold when going on the SWAIS2C **fieldwork**. But it was so warm in my tent with the sun shining 24 hours a day that, at times, I had to sleep on top of my sleeping bag.

I love playing card games, so took a game called Phase 10, which was a lot of fun.

I have 2 cats: Django and Calypso. I also have 19 hens and 1 rooster, all of whom have names, but it's a long list....

Want to be a scientist?

Linda says:

Follow your instincts.
If you like something, you'll know!

If I weren't a scientist...

I'd work with horses. But I like both, so I'm splitting up my time as much as I can. :)

Find out more about Linda and her work here.
An article about Linda's SWAIS2C work is here.

Glossary

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

contamination – made dirty (or unsafe) by adding something harmful or unwanted to it—in this case, Linda's own DNA.

DNA – the genetic information found inside cells, like a set of instructions for how to make an organism (DNA stands for deoxyribonucleic aci)

fieldwork – scientific research, exploration, or observation conducted in "the field"—in this case, Antarctica!—rather than the laboratory or classroom

hazmat suit – a special suit for protecting its wearer from dangerous (hazardous = haz) material (mat); but in this case, the suit protects the DNA in the samples from contamination by Linda's own DNA!

marine biologist – a scientist who studies life in the sea

organisms – individual living things that are alive—including plants, animals, and bacteria and other tiny lifeforms (microorganisms)—which need things like air, water, and food to survive, and which can grow and reproduce.

Ross Ice Shelf – An ice shelf is a floating piece of land ice which is attached to the land. Land ice is formed by layers of compacted snow over hundreds and thousands of years. It flows down toward the sea in slow-moving rivers of ice called glaciers and ice streams. When it reaches the sea, it flows off the land and onto the water. Ice is less dense than water, so it floats, just like ice cubes in your drink. Eventually, ice at the edge calves (breaks off) and becomes icebergs. Ice shelves are very important because they act as a buttress (like a wall) and slow the flow of ice sheets.

samples – small amounts of seafloor mud

seafloor – the solid surface at the bottom of the ocean or sea

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SWAIS 2·C