



## Expedition Day 2 Questions and Answers

1) What is the difference between sea ice and pack ice?

Sea ice is a general term used for to describe any type of ice in the sea. The pack ice is a term referring to the found around the arctic polar region, that floats on top of the arctic ocean.

2) Does pack ice support marine life like sea ice does?

Yes they both support the plant life that is the bottom of the food.

3) What is the oldest ice sample you have found?

Glacier ice is thousands of years old, oldest pack ice in only 10 years old at most.

4) Where are you from? What is your educational background?

Hajo is from Germany and has a Phd in geophysics. Andy is from England and is currently working on his Phd.

5) Do you work alone or with a crew?

It is safest to work in groups of 2 or larger.

6) Who supports your research? (Government, school, individuals?)

We are funded mostly through grants provided by a federal agency called the National Science Foundation.

7) Why are there dark and light rings in the ice core samples?

The ice is formed at different temperatures and sometimes with different amounts of sediment or plant material in them.

8) How thick are the rings/layers in the ice, and what does that mean?

The thickness depends on the temperatures and conditions under which the ice grew.

9) How do you use chemistry in your work?

We use it to stain organisms or structures in the ice to make them more visible.

10) How did you get interested in ice core research? (covered in another answer)

11) What have you found in your research? (covered in another answer)

12) How much evidence of animal and plant life do you find in your research?

We find a lot of evidence at the bottom of the ice where the algae grows.

13) Does albedo on sea ice differ from the albedo of fresh water ice?

Yes, normally freshwater ice is darker and has a lower albedo while sea ice is usually lighter and has a higher albedo.

14) Is albedo studied on sand deserts?

Yes, there are scientist studying albedo in many places.

15) How long have you been doing research on the arctic coast near Barrow and what makes it a good area to do your research?

Hajo has been working here for four years and Andy has been working for 2 years.

16) What kind of results have you obtained from your work and have you observed any changes during that time?

We have seen some evidence of decreasing mass of the ice.

17)How did you become interested in ice research? (covered in another answer)

18) What type of education is needed to do the kind of work that you do? Where did you go to school?

A degree in physics, geology, atmospheric sciences or math.

19)Have you run into any polar bears while doing work there?

Andy has seen quite a few.

20) What is the hardest thing about doing work there and what is the easiest?

The cold temperatures are the hardest, while getting here is the easiest.

21) What is the thickest ice that you have cored?

About 3 meters.

22)What are you wearing---are you warm enough? (covered in another answer)

23) How do you set up an experiment to study ice and what kind of equipment do you use? (not answered)

24) What kinds of classes should I take in high school if I want to learn more understand more about ice research? (covered in another answer)

25) What majors in college would help me get a job in your field or a related field of work? (covered in another answer)

26) What is the most exciting thing that has ever happened to you while working up there?

How long will you continue your work there? (covered in another answer)

27) Do you do your research at the same time every year, if so why have you picked that time of year to do it? (covered in another answer)

28) Does it matter what time of the year you conduct your research? (covered in another answer)