

New Research Sheds Light On Antarctic Ice Melting

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Correction - During this interview, it was stated that in the last 20 years, at least 20,000 square kilometers of ice have been lost, an area, it was stated, somewhere between the size of Texas and Alaska. That is incorrect. 20,000 square kilometers is roughly the size of New Jersey. The United States Geological Survey says that it is the Antarctic Peninsula, the source of the ice loss, that is larger than the state of Texas but smaller than Alaska.

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There may be no polar bears at the South Pole, but there sure is a lot of ice. In fact, more than 90 percent of the Earth's glacial ice is in Antarctica. Now, new research shows the continent's ice is melting in more places than previously known. Host Guy Raz speaks to scientist Jane Ferrigno of the U.S. Geological Survey about the Antarctic Peninsula's ice retreat.

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GUY RAZ, host:

In Antarctica, you'll find 90 percent of the world's glacial ice, but new research from the U.S. Geological Survey shows that every ice front in the southern part of the Antarctic Peninsula is retreating.

Jane Ferrigno is the lead author of that new report. She says scientists have known for a while that some of the peninsula's ice shelves are breaking up.

Ms. JANE FERRIGNO (Geologist, U.S. Geological Survey): That started at least a decade ago in the northern part of the peninsula, but we looked at all the ice fronts on the peninsula from north to south.

In the southern area, we're finding that all the ice fronts are retreating. In the northern part of the peninsula, the majority of ice fronts are retreating, and that's something we neither expected but we're highly interested in finding that out.

RAZ: At a peninsula, the area where this research was focused on, is sort of like a canary in the coal mine, right? I mean, what does it tell us about larger trends?

Ms. FERRIGNO: The fact that the ice shelves are changing on the peninsula is a significant signal that global change, climate warming, is affecting the ice cover of Antarctica. It's affecting first the area that's towards the north, that's slightly warmer, but the effect of the warming has traveled from the northern part of the peninsula to the southern part of the peninsula, where it's colder.

Our next concern is to see exactly what's happening in the continent itself. We've seen some changes there, but we need to look closely and see what else might be happening.

RAZ: Give us a sense of how much ice has been lost over the past, say, 10 years.

Ms. FERRIGNO: I think I'll go back 20 years, and in the last 20 years, I would say at least 20,000 square kilometers of ice has been lost, and that's comparable to an area somewhere between the state of Texas and the state of Alaska.

RAZ: So about the size of the state of Texas in terms of ice has been lost in the past 20 years.

Ms. FERRIGNO: Yeah, that's true.

RAZ: Can we measure the consequences, you know, here in North America? I mean, have we been able to see ocean levels rise as a result?

Ms. FERRIGNO: Well, this is a fairly small amount of ice when you consider the whole Antarctic continent consists of about 13 million square kilometers of ice.

RAZ: I mean, it sounds so dramatic, the size of Texas, right?

(Soundbite of laughter)

Ms. FERRIGNO: It is. It is very dramatic, and it is larger than the size of Texas, but when you consider the entire Antarctic ice sheet, it's still a fairly minimal amount. But the thing that we're really interested in seeing is that this is a sort of a red flag because if the warming continues, if the retreat continues, if the amount of ice on the continent starts to flow into the water, then there will be substantial impact to the sea level.

RAZ: That's Jane Ferrigno. She is a scientist with the U.S. Geological Survey.

Jane Ferrigno, thanks for coming in.

Ms. FERRIGNO: Thank you.

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