

## Antarctica Total Solar Eclipse Trip Report: [By Ellen Drake](#)

Ellen with Geoff Carr.

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ANTARCTIC ECLIPSE TRAIPISE: Nov. 23, 2003

We - approximately 80 people, about half from Japan, the rest from USA, UK, India, Norway, Sweden, France - and Botswana - boarded a Russian-made Ilyushin 76 TD around 10:45 a.m. local time (08:45 GMT) on Nov. 23, 2003, and flew the 4,200 km from Cape Town to the camp of the Antarctic Logistics near Novolazarevskaya, Dronning Maud Land, Antarctica. The flight took about six hours. We crossed the Antarctic circle around 13:35 GMT; champagne was served and we proposed a toast & clapped our hands. We had reason to celebrate; we had been told the day before that we might not be able to fly to Antarctica at all. A storm had hit the camp that had been prepared for us, high winds and snow had made it impossible for planes to land. The four tents that had been put up to house us had blown away. But there was a "window" of good weather; and our tour guides told us to be ready to leave at an hour's notice, any time after 4 a.m. (local time) on Nov. 23, the day of the solar eclipse we had paid so much to see.

So at 09:00 (local time) we got the call: Pack your bags and be down in the lobby of our hotel (the Cullinan, Cape Town) by 10:00 a.m. We were loaded into the plane - a cargo plane with NO frills - just bare wires where in a passenger plane you would see baggage compartments, curtains, smooth plastic surfaces hiding the rather scary innards of the plane. There were only two portholes, so our only view of the land and water below was a video projection onto a screen at the front of the plane.

Our destination was on the part of Antarctica called East Antarctica. The Lonely Planet's "travel survival kit" book on the continent says this part is considered to be the "far side," where you "get away" from the "crowded" Antarctic peninsula. Don't ever say I haven't been off the beaten track.

Antarctica's large areas of ice and snow contain about 85% of all the fresh water in the world (Lonely Planet, *ibid.*, p. 175). The ice is more than four km

thick in some places. That, if anything, should have told us that the place is cold. But one of the many messages I got prior to the trip said that "it will not be as cold as you expect," and that an ordinary winter coat, such as is used in winter in Europe & North America, would keep us warm.

But if it's foolish to try to predict the weather in Kansas (or Botswana), what more in Antarctica. The storm that had hit our viewing site on Nov. 22 was still tailing off. The temperature (according to the tour guide's web site) was -24 degrees Celsius (about -11 Fahrenheit? - Someone please correct me if I'm wrong).

By the time we landed (around 15:15 GMT), the sun was out and although the blizzard had stopped, the wind was so cold that it seared the skin... Hard to explain, but it felt as intensely cold as a blow-torch is hot... you instinctively withdraw from it. We shrank into our warm clothing like snails withdrawing from salt...

A shimmering, gossamer layer of wind-blown snow particles swept along about six inches above the surface of the plain. In some places, clear blue ice showed through the crust of snow. In other places, the snow had been sculptured into streamlined lozenges of ice particles that crunched and squeaked as we walked on them. (I need an Inuit dictionary to describe the snow! The nearest approximation I can find is "neve" - granular snow that hasn't yet turned to ice.)

We were herded into the mess tent, which was heated inside, and where we were protected from the wind. We were given a meal and told what the latest plan was for our activities. A pair of biplanes (Russian Antonov 2s, with about 15 passenger seats each) was waiting to take those who wanted to go to the Barrier Mountains. I went, because Rob (tour leader) said the mountains were "must-see" features,

that I would regret it if I didn't go, and that we might not be able to go the next day because the other storm was moving in and we would have to leave before it hit.

Rob was selling the tickets - they weren't included in the already astronomical tour price - so I was skeptical of his motives. But I succumbed, paid up and went on the flight. I'm glad I did. The mountains (nunataks?) were not very high above the surface of the icy plain, but if the ice is over 4,000 m thick they would be very imposing if seen from the base rock. As it was, they were extraordinary. Images of teeth come to mind: Some of the peaks were shaped like sharks' teeth, and I saw a pair of almost vertical points of rock that reminded me of the roots of a gigantic upturned molar. The mountains were mostly free from snow and were a burnt-ochre shade of brown (like teeth SERIOUSLY tobacco-stained, or perhaps having been exposed to too much fluorine). There was a band of pale yellowish rock that looked like an intrusion, but I'd like a geologist's assessment before I comment further. We were given a chance to get out of the planes near the mountain range, and someone took my picture (which is on <ellennewsletter> under the heading "photograph", from "riverwalker"). But it was too cold to linger long there, and anyway we had to go to the eclipse-viewing site.

We no sooner got back to camp from the mountain flight than we were packed again into the biplanes and flown to the place where we were to watch the eclipse. Jen Winter, the over-all organiser of the tour, was worried about my "boots" - the footwear that I had pieced together, using an old pair of rubber sandals, plus some fake leather that had once been a cushion cover, held together with lots of glue and silicone seal. I told her that I would take my sleeping bag with me, would sit in my chair & wrap up in the bag and that if anything bad happened to me I would take full responsibility. So she let me go (she had enough other worries as it was) and, after the event was all over she said I had probably done better than some others had.

By the time we made it to the viewing site, the sun was so low that it had nearly set. And after we had positioned ourselves, the sun did indeed disappear, briefly, behind a small hillock. But it soon reappeared, on the other side of the little rise, and when I looked through my sun-proof "glasses" I saw that the moon was already about a quarter of the way across the sun's disk. I struggled with: Wind; mittens (they weren't warm enough & wearing them prevented me from pulling my hands inside the sleeves of my jacket); cold - I mean, COLD!; glasses that frosted over from the moisture that rose from my cheeks; the sun-proof spectacles that bent away from my face with the wind, that I

couldn't hold because my fingers would have frozen; the sleeping bag that blew in front of my face & blocked my view, but blew open in other places and exposed my body to the icy wind; and fingers that really did turn blue at the tips when I tried to hold onto the spectacles or pull the sleeping bag into position.

While I was still struggling, I suddenly realised that the sky was darkening rapidly. I managed to look through the special spectacles and saw that all that was visible of the sun was just the slenderest of crescents - a powerful pre-vision of the sliver of moon we saw in Cape Town, Nov. 25th evening, that marked the end of Ramadan. Suddenly, the sky turned deep royal blue. I removed the sun-protecting spectacles and saw a big black ball, like a colossal bowling ball resting on the horizon, with the silvery corona shimmering around it. A flat black mat - a mirage? - lay directly under the black ball.

The white plain was ALMOST as flat as western Kansas, and (need I say it?) as devoid of trees. The only signs of human presence were our biplanes, a big truck of some sort (brought there by our tour guides), and of course little clusters of eclipse-watchers scattered here and there. When the sun's face was hidden, the stars (& planets) came out; I could identify Venus, and I think the star near it was Aldebaran (?) (see [AstronomicalTours.net](http://AstronomicalTours.net) website). All around, just above the horizon, was a pink glow - like the last glimmer of a sunset, but not restricted to the western sky. Immediately behind me - i.e. in the direction opposite that of the sun - was a huge V-shaped shadow, its point on the ice surface, its open arms spreading upwards. This was the moon's shadow in our atmosphere.

We were told that we might see the southern aurora - especially since there were a lot of sunspots at that time. We didn't see any; but hey - I'm certainly not complaining! I heard that the shadow bands were very clearly visible, but I missed them - perhaps because I didn't know what to look for; or perhaps because I was so busy struggling with my sleeping bag flapping in front

of my face. I had placed my chair near the truck and the biplanes.

Two Japanese photographers, professionals working for NHK (Nippon Hoso Kiyokai) had also set themselves up there. They didn't know me and I didn't know how much English they could understand, so I didn't even try to explain why I started to cry. The eclipse was so

beautiful, so powerful, so long-awaited, so awesome..... Words can't describe it. Photographs

can't capture the effect. It's like trying to portray the power of the wind, the brilliance of lightning, or the shattering force of an earthquake....

We were on the continent of Antarctica only about 24 hours. After the eclipse we were shuttled straight back to the camp. The sun, having completed its show around 'midnight', seemed to just bounce off the horizon and head back up. (One minute, 20 seconds of darkness was all we had of 'night'.) After we got back to the camp, I had a meal and went to sleep, and when I awoke I found the sun was high in the sky again, and everyone around me in our warehouse-cum-bedroom was packing. The next storm is coming, they told me, and we've got to leave as soon as possible.

We barely had time for a group photo, and for a few post-clipsian sillybrations such as violinist Carole Howat playing her violin for a young couple who waltzed to ... I think it was "The Blue Danube". And then two other members of our group had a brief fencing match - I didn't get to see that, though, because I had run out of film and had gone into the mess tent to put a new roll into my camera. By the time I came out, they had finished the match the sharp wind had foiled their swords.

We - both tourists and handlers - believe that no more than 300 people have ever seen a total solar eclipse on Antarctica, so there are plans to form an association, with a secret handshake, a logo, perhaps some rings or badges. (At time of writing: The association's name is "Secret Society of Antarctic Total Eclipse Chasers". Rather late in my life to become a member of an exclusive group, but surprises keep coming....)

Meanwhile here are some more quotations from the LONELY PLANET guide, and I'll probably add some more

details later. But the sum is: It was the most expensive trip I've ever taken; the first (& probably

last) I'll arrange over internet; it was ridiculous to go all that way for only a little over minute's viewing of an eclipse and 24 hours of having my arse

frozen. But I'M VERY GLAD I DID IT. It was worth the expense; and I feel so lucky that things went well for a change - the weather held, we saw the eclipse, WE MADE IT!

Facts about Antarctica (reference LONELY PLANET):

It is the fifth largest continent - bigger than Europe or Australia.

It is the most arid. The interior of Antarctica is the world's driest desert, because the cold freezes the water vapor out of the air.

It is the highest continent - average elevation is 2250 meters. The highest point is the Vinson massif, 4897 meters above sea level.

It is 99.6% covered with ice. 90% of the world's ice is in Antarctica - 30 million cubic km, and it contains nearly 70% of the earth's fresh water.

Ice is up to 4775 m thick, and in some places its weight depresses the landmass by nearly 1600 m.

Lowest temperature ever recorded on the earth's surface is -86.6 degrees C, at Russia's Vostok

It experiences the strongest winds on the planet - katabatic winds can achieve velocities up to 320 km/hr. (Presumably this refers to "straight" wind - I'm sure a Kansas twister has faster & stronger winds inside the funnel.) [Katabatic wind: "gravity-driven wind caused by colder, heavier air rushing down from the polar plateau".

N.B. the next total solar eclipse on Antarctica will be in 2021, so you have plenty of time to prepare for it.

PS

From The LONELY PLANET Antarctica guide;

maybe we'll try it in 2021? :-)

CAMP MICHIGAN ANTARCTIC OLD FASHION

- One Fifth of Old Methusala (100 proof US Navy 'bourbon')
- Two red Life Savers
- melted snow
- Antarctic ice

Pour the Old Methusala into another container and fill the empty bottle half full with freshly melted snow. Force the Life Savers into the bottle and shake until dissolved. Pour over Antarctic glacier ice.

(Apparently this makes you feel warm when you go to bed, and gives you the courage to get up in the morning. The LP book didn't mention anything about hangovers.)

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