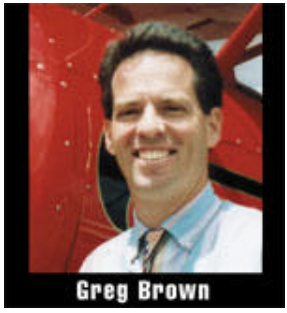
March 2002

Commentary

Flying Carpet

Eclipse



It was gray November in Indiana when I opened the battered campus mail envelope. Inside I anticipated a meeting announcement or other bureaucratic blather. Instead there was a note from Art Winfree, biology professor and fellow member of the Purdue Staff Aero Club.

"What are you doing in February?" he asked. "There's a solar eclipse in Winnipeg, and I'd dearly love to enlist an instrument pilot for the trip."

Frankly, I wasn't very interested when I first read the note. I'd seen eclipses before, and pursuing one to Canada in dead of winter hardly seemed worthwhile. But Art's a neat guy, so I suspected that there must be good reasons behind his enthusiasm.

"I'm skeptical," I wrote back, "but tell me more." This would be a rare total solar eclipse, I soon learned from articles that he sent, unlike the partial eclipses I'd seen in the past. With the sun entirely blocked by the moon, no special filters or glasses would be required to view it. Although the eclipse would be partial over most of the continent, totality would occur over a narrow 195-mile-wide band arcing through the Northwest and Canada. Winnipeg would be the closest place to observe it.

Before long Art had convinced me to reserve the club's Cessna 210 for the trip, "in case we decide to go." The clincher came when an astronomy professor volunteered to join us. "You're hesitating?" she asked. "There won't be another total eclipse nearby for decades!" Then she tantalized us with talk of "Baily's beads," the "diamond ring effect," and other mysterious phenomena. Soon I found myself touting the expedition to others, and before long we had filled the airplane.

We planned to depart the day before the eclipse, but threatening weather urged us to leave early. Following a night in Minneapolis we sailed frigid blue skies northwestward. Treeless farmland below was frosted by snow into stark geometric relief, with no signs of vehicles or plowing. I wondered where the residents might be, imagining them gone for winter or provisioned for long stays at home before a cozy fire. Upon reaching Grand Forks, North Dakota, we followed the Red River north into Manitoba.

Winnipeg was crowded with eclipse-watchers, but to our surprise almost every store and restaurant was closed. Apparently once-in-a-lifetime February tourists didn't justify opening on a Sunday. I was also intrigued to see electrical outlets at every parking space - given the severe winters, plug-in engine heaters are mandatory for restarting cars. After wandering, freezing, through town we finally found shelter at the planetarium's eclipse show. Our excitement was tempered, however, by the weather forecast; clouds might obscure tomorrow's celestial event.

Next morning Winnipeg was indeed overcast; panic set in as we contemplated coming all this way for nothing. Meteorologists recommended points west and north for a possible better view, encouraging auto travelers westward on the Trans-Canada highway to Brandon. To avoid the crowd we decided instead to fly north to Gimli, on the shores of Lake Winnipeg. There wasn't much time, however - the 147-minute eclipse was to begin at 8:36 a.m., with totality occurring midmorning. If all else failed we hoped to watch from the air above the overcast.

By the time we preheated the engine and topped the clouds, the show had already begun. We scraped frost from our windows using credit cards, and, guided by our onboard astronomer, punched pinholes in index cards to project the still-partial eclipse on scraps of paper.

Gimli was clear when we landed and peppered with observers armed with tripod-mounted telescopes and cameras. Quickly we set up our own equipment, and then watched on our pinhole projectors as the moon's silhouette overtook the sun's orb.

Only in the final seconds did we truly feel the unnatural dimming of daylight. Then, in an instant, this bright sunny morning turned black. Stars suddenly appeared, birds stopped singing, and temperatures plunged 20 degrees. The crowd gasped in a single note - then was silent. It was as if our chests had been crushed, as near to the end of the world as I ever hope to experience. The blackness was tinged only by unearthly purplish light ringing the distant horizon.

Overhead in place of the sun, licks of flame ringed a dark circle like snakes on the head of Medusa. With the moon covering the sun's disk, we were observing solar flares normally invisible in daytime brightness. Millions of miles long, they revealed themselves as streamers of orange fire in a pale white halo.

Totality lasted only 2.2 minutes. We didn't see much of Baily's beads - glimpses of sun peeking between mountains of the moon. But as the glow of the horizon advanced rapidly from behind us, light burst from one edge of the orb - the diamond ring effect.

Then, as suddenly as it had left us, the sun returned. Birds sang, and the sky turned blue. Only then did I realize how cold I'd been during the event. Temperatures that morning hovered around 10 degrees; during the eclipse they'd dipped below zero. The thought prodded me to hurry and start the engine, as no preheat was available.

Quickly we gathered our gear and navigated through the still-stunned crowd. Our engine sputtered to life, and while we waited shivering for the airplane to warm up, I turned to Art and shook his hand. Eleven hours in the air had proven a small investment for two minutes I'll remember for a lifetime. We set course southbound toward full-strength sunlight and home.

Greg Brown was the 2000 National Flight Instructor of the Year. His books include The Savvy Flight Instructor, The Turbine Pilot's Flight Manual, *and* Job Hunting for Pilots. *Visit his Web site (* *www.gregbrownflyingcarpet.com* *).*

By Greg Brown