

Fear of flying

...a birds-eye view

by John Bird

"Is your air sickness bag handy?" asked Captain Girard. After I assured him that it was, he banked the jet sharply. This was his opening manoeuvre in a demonstration of a "Tutor" aircraft used by the Canadian Forces Air Demonstration Team — "The Snowbirds". This flight was part of a recent visit I was privileged to have with the team at Canadian Forces Base Comox, on Vancouver Island.

Side-by-side seating and a clear plastic canopy allowed an excellent all-around view as the horizon rolled into a vertical line orientation. On the right was a

sunny sky, and on the left were mountains and the coastline. Although it seemed we should be falling out of our seats, the "g force" of the turn held us in securely. This was a typical turn; we pulled three or four "g's", which tripled the weight of everything in the aircraft, including our bodies. My oxygen mask and helmet became very heavy. I could feel the blood starting to flow down from my head. After a few more seconds I would have blacked out, but Capt. Girard leveled the plane. Accordingly, the duplicate control stick between my knees moved with his.

Most of the controls are duplicated on each side because

the Tutor is a training aircraft. So Capt. Girard offered to let me try my hand at flying. Gripping the control stick, I leaned it to the right, suddenly throwing us into a hard right turn.

"Keep it gentle," Capt. Girard warns me over the intercom. Slight forces to the left and right kept the aircraft straight, and back and forth kept it level. It was like super-sensitive power steering.

"Would you like to see a roll?" Capt. Girard asked.

"Sure," I replied, apprehensively.

"It's easy to do, just bring the nose up to 20 degrees," he explained, pointing out the 20 degree line of the climb indicator.

"Then ease off on the control stick, and give it full deflection." As he did this, the horizon rotated right around. I could feel the rotation, but I didn't budge from my ejection seat because of the multiple shoulder straps, seat belt, and parachute harness securely restraining me. This was even more fun than the exhibition! Coming out of the roll after about four seconds, we were flying straight and level.

"Now you can try it," Capt. Girard decided. It seemed easy enough for him, but he is an instructor pilot with 2000 hours of jet flying time. Anxiously, I pulled back slowly on the stick until the climb indicator hit the 20 degree line, and the horizon dropped out of view. Then, leaning the stick over slowly to the right, the horizon rolled around, and we ended up rolling a bit too far, and nose down.

"Bring it over faster and the nose won't drop as far," Capt. Girard explained, so I tried the roll again with a bit more success.

Over the shore, heading toward the mountains on the island, the ride became very bumpy, like a motorboat at high speeds on rough water.

"Let's get back out over the water," Capt. Girard advises. "This turbulence is due to the topography here, and the high winds." So we headed back out over the water.

"inverted flight": upside-down cake

"Now I'll show you a loop," Capt. Girard tells me. We climbed sharply and the next thing I saw was the ground above me. As we approached the top of the loop, the horizon was level but the ground was in the sky, and the sky was below us. We were not hanging in our harnesses. Rather, we were held in our seats by the "g" force of the loop, which made us feel as though we should be right side up. As the ground rolled back under us, Capt. Girard was ready for the next manoeuvre.

"Here is a slight variation." Up we went again. This time, at the top of the loop, when we were upside-down, he rolled the plane over, completing a half loop. Then rolling the plane half way, but flying level, he said, "This is

inverted flight," and we were hanging upside down in our seats.

Flying these manoeuvres made me realize that great skill required to perform them correctly. That's why the pilots selected for the Snowbirds are the best in the Canadian Forces. But even these men need a few months more training to learn to perform these manoeuvres in formation. They learn to fly using the adjacent plane as the on solo reference point. Concentrating primarily on maintaining a position just a few feet from the adjacent aircraft, the manoeuvres themselves must be instinctive. To complicate the situation, they must maintain precision while under high "g's" with the ground spinning around in every direction, which can be disorienting.

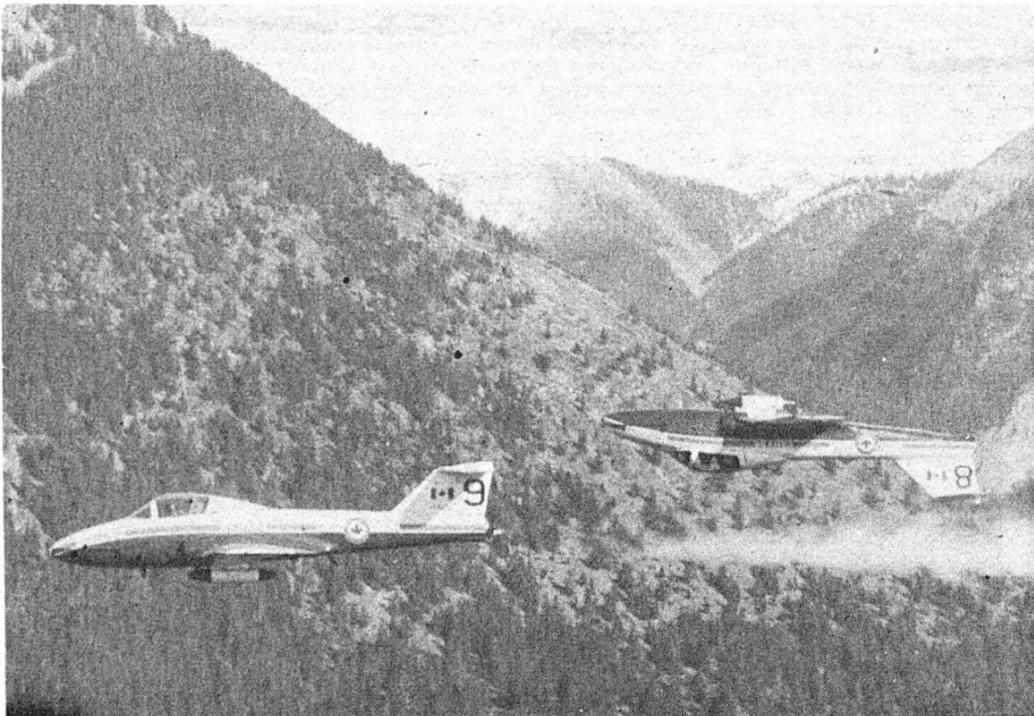
To demonstrate weightlessness, Capt. Girard pulled the plane up, then we went into a dive, following a giant arc. Over the top of it, my camera strapped around my neck, began to float in front of me. All loose straps and wires were suspended randomly. We were astronaut for a few seconds.

Meanwhile, on the ground the other nine Snowbirds were preparing to take off. We watched them as they headed down the runway in formation, with Major Denis Gauthier, the Team Leader, in front. Approaching the formation, I could see that there was slight relative motion among the planes as they jockeyed for their positions. This is only perceptible when flying close to the formation.

Capt. Girard flew around the team so I could take a few pictures. For an added visual effect, they turned on their white smoke.

By this time, our plane was running low on fuel, so we landed to watch the team practice the 28 minute show. Cpl. Ian Neilson, the Snowbirds safety system technician, helped me disconnect my oxygen, communications, and all the straps holding me into the ejection seat.

He pointed out the lights of the Snowbird aircraft as they came into view. When they reached their usual operational region 1500 feet away, at the minimum safe height of 300 feet, the formation itself performed a manoeuvre while trailing the smoke. Two "solo" aircraft then separated and headed away in opposite directions. Returning, they seemed to be on a collision course. Of course they missed. Still, it was sensational. As they vanished the other group came into view



Simultaneous photos from different angles