

The Mesoscaphe Submarine and Radar through Ice Title 104

The first tourist submarine was built for the Swiss National Exhibition in Lausanne in July 1964. The designer and constructor was Jacques Piccard, the son of the world-famous Swiss Physicist Auguste Piccard who had reached the stratosphere in a giant balloon and then later descended to the ocean floor in a similar vehicle, but with his 'balloon' filled with petrol. He called it a 'Bathyscaphe'. Being on a private visit to Geneva, a few kilometers from Lausanne, I drove over to try and obtain a story for my newspaper from a ride in the Mesoscaphe, named *Auguste Piccard*.

I did make notes, as my press pass got me a free ride. It was quite dramatic but the story was never printed. It had 40 seats, 3 pilots and a hostess, and above each seat was a television screen, but no heating or air-conditioning for the short dives—mine lasted from 12.50 to 13.26, 36 minutes. Next to my seat was a small porthole, just large enough to have a good view of the water outside. One of the pilots gave a running commentary, mostly about water temperature, depth, and velocity through the water, which electrically driven, reached a maximum of 11 knots.

I kept careful records minute by minute, but the view was completely 'nothing'. One heard a slight humming of electric motors and after 5 minutes the TV screen went blank and drops of water, condensation, began to fall from the steel ceiling. The colour of the water changed from green to grey, and 3 minutes later, we reached a depth of 20 meters. After 11 minutes diving, we touched the bottom of the Lac de Genève at 62 meters, water temperature being there 5 °C. We had seen nothing except air bubbles, no sign of life. Then after 18 minutes one small fish, about 5 cm long appeared, and that was all. It was the 18th cruise dive of the Mesoscaphe and I never heard of it again, nor whether if it was ever used elsewhere for sight-seeing or tourism [but see Title 185].

One of the last reports of 1964 was an invention of Stanley Evans of the Scott Polar Research Institute in Cambridge. I went to see him in December, and he explained to me that radar signals sent vertically down through ice would be reflected back twice, once from the bottom below, and secondly from the surface of the ice. The difference between these two times, the two reflections, would give an exact thickness of the ice. It had a successful test during the summer on the ice cover of Greenland, 1.5 km deep. Slightly larger than a car radio and battery operated, its total research and development cost was only £ 6000. Its great advance, over the previously employed seismic sounding, is the continuous record of depth as the radar was driven across the ice in a tracked vehicle, and it was hoped one day to fly it over the Antarctic. Five years later I took part in these first tests [Title 201].