

# Radar Secrets on Display

by Maridon Duncanson



Courtesy of the Secrets of Radar Museum

The Secrets of Radar Museum displays a number of photos depicting the men and women who operated radar equipment during WW II.

**W**orld War II introduced a British development that would change aviation warfare forever, detecting enemy planes and directing anti-aircraft fire with deadly precision. The invention was, of course, radar (radio detection and ranging) and its effects would be felt not only in war, but in many aspects of our everyday life. Today radar is used to obtain weather information, nab speeders, inventory forests and monitor bird migration.

During WW II, radar:

- Played a major role in winning the Battle of Britain and defeating the German air blitz of 1940 and 1941;
- Helped to locate and sink the German battleships *Bismarck* and *Scharnhorst*;

- Enabled German industrial cities to be pulverized by huge bomber forces, despite darkness and cloud;
- Silenced German coastal batteries in France before the D-Day landings in Normandy;
- Guided paratroops to their destinations;
- Helped to win the Battle of the Atlantic;
- Defeated Germany's V-1 flying bomb; (The *Toronto Globe and Mail*, Aug 15th 1945).

Ground and airborne radar was first proposed and demonstrated by Sir Robert Watson-Watt in 1935. It was developed in England as an effective military system, first at Orford Ness and later at Bawdsey

Research Station. This resulted in the design and installation of a chain of radar stations along the east and south coast of England in time for the outbreak of war in 1939. Known as Chain Home, the system provided the vital advance information that helped the Royal Air Force (RAF) to win the Battle of Britain.

Once the radar system was in place it required a great number of trained technicians to operate it. The *Globe and Mail* stated that, at the outbreak of the war with Germany, "The Air Ministry and the RCAF overseas disclosed that 5,000 Canadian radar mechanics and 750 RCAF radar officers replied to a manpower SOS from Britain to speed development of the weapon." Secrets of



*Fred Bates at RCAF Station No. 27 Marble Island, BC, with the 98 pound halibut he caught using a six inch spike hammered into the shape of a hook and some pieces of ham as bait.*

the radar development were also given to the United States in 1940 in order to utilize their resources.

Having exhausted Canada's supply of experienced radio men, the air force commissioned 13 Canadian universities to train new technicians to man the radar controls. In a radio broadcast on April 8th 1941, Air Minister C.G. "Chubby" Power announced that "We are looking for 2,500 Canadians of good common sense who are ready this minute to volunteer for overseas service in a new service, one that will develop and grow and one to which we are harnessing the initiative and zest of Canadian youth. Those who get into it on the ground floor will themselves be the ones to improve it, to invent by tinkering and experience a still great defence to that 'Fortress of the Seas' upon which our minds are now all so intently fixed."

The prospect obviously intrigued many. "Personnel were recruited from all over Canada; they came from every walk in life. There were teachers, clerks,

engineers, students and, of course, many radio amateurs or 'hams.' None of them received any special physical or survival training." (Wing Commander C.B. Limbrick, "Roundel," 1950)

One young man who answered the call was shopkeeper Fred Bates. First posted to the Guelph University in Feb 1942, Bates was posted to the No. 31 Radio School RAF Clinton (later No. 5 Radio School RCAF) in Vanastra, Ont in July 1942. This was a top secret radar training school, the first of its kind in North America. Because of fear in Britain that their radar training school in Yatesbury, England could become a target, the military sought another location where the threat of enemy attack did not exist. The Vanastra site was perfectly situated in an isolated area on the Lake Huron coastline.

After training at RCAF Stn Trenton, Ont, as an officer, Bates spent the next year-and-a-half at radar installations on the West Coast, particularly Vancouver Island and the Queen Charlottes. In May 1944 he was posted to England and transferred to work with the RAF on the Oboe blind bombing system. While in England, he met his wife, Janet, an RAF radar equipment operator.

After the war, Bates maintained his interest in electronics, working in the development and sales of various devices. Now, at 86, he has focused his skills and interest once again on radar, devoting his time and energy to the preservation of its history in the Secrets of Radar Museum in London, Ont.

Many of the materials for the museum came from the Air Force Radome Museum of Electronics, which was located at the site of the original training base in Clinton, Ont. After it closed, the materials were put in storage. Fearing that the artifacts, as well as their history, might be lost forever, the Bates set about to retrieve them and set up a permanent display. They gathered together a small group of like-minded individuals and, with a young man named Ryan Fraser as their president, embarked on

the slow and sometimes frustrating process of making their dream a reality.

An immediate necessity, besides funding, was to locate a facility to accommodate the materials. They found one, appropriately, in a cottage behind Parkwood Hospital in London that once housed ailing war veterans. With the moral support of several local historical and military organizations, the dedication of the board of directors, donations of both cash and materials from interested parties and the elbow grease of a number of volunteers, the Secrets of Radar Museum became a reality at the beginning of March 2003.

With its collection of photographs, maps and artifacts, the museum is "dedicated to preserving the experiences, stories, and histories of the men and women who helped build, develop, operate, maintain and defend Canadian RADAR, here in Canada, and abroad."

A number of items housed in the museum were originally on display at the first Radar Reunion in Coventry, England in 1991. It was in that year that the British government first excused the radar workers from their oath of secrecy, allowing them to disclose their experiences for the first time. A Canadian, Bob McNary, had the exhibits shipped home and put on display at the 1996 Calgary conference and later in Ottawa.

There are no actual radar devices at the Secrets of Radar Museum, as the government ordered them destroyed at the end of the war. However, there are a number of pieces of communications and electronic equipment. Many of the items were "found objects" from basements and attics. As Fraser says, "Stuff is coming out of the woodwork. People kept a lot of items, waiting for the secrecy act to be lifted." The panels from the Coventry reunion detail the history, development and uses of radar, using maps, photos, newspaper articles and personal anecdotes. The uniform and medals belonging to the Clinton school's second commanding officer, W/C K.R. Patrick, are on display, as are a wide

variety of notes and textbooks used by the radar students.

Aside from the technical significance of the objects in the museum, it is a fascinating repository of stories. Many of these are contained in newspaper clippings and books. However, the greatest source of information is Fred Bates, himself. Having kept quiet about it for almost 50 years, Bates is now more than ready to share his stories with visitors.

Some of his fondest memories involve setting up a radar station on Marble Island, 150 miles west of Prince Rupert, BC. Limbrick, in his 1950 article, described it as "a small knob of land which the Pacific Ocean was perpetually trying to swallow, 'affectionately' known to its RCAF inhabitants as 'Alcatraz.'" Here, Bates arrived by barge, complete with 28 tons of equipment that had to be hauled over the rocks and up the 85 foot cliffs. Being in such a remote location, supplies were often scarce. When the cook complained that he did not have enough to feed 65 people, Bates took control of the situation. Using the last of the ham as bait, he and the assistant cook headed out to sea where they were able to snag a 98 pound halibut; more than enough for a sumptuous dinner. A photo of Bates and the fish is now proudly displayed in the museum, together with the hook used to catch it – a six inch spike hammered into the appropriate shape.

Another significant event occurred during Bate's first Oboe mission. In 1944, two Gestapo agents disguised in Canadian uniforms were able to penetrate the Dutch resistance, which had been retrieving downed allied airmen from across Europe. As a result, 158 Dutch resistance members were imprisoned in a large stone jail just north of Paris. Coincidentally, the jail had been designed by the same architect who planned the Barton Street Jail in Hamilton, Ontario. Oboe staff were therefore able to plan a rescue effort based on the Barton Street blueprints. Using five Mosquito aircraft, the entire raid required five 500-pound bombs and lasted less than 10 minutes. Precision was imperative in order to destroy the non-supporting walls at the back of the prison. The mission was successful and 156 of the prisoners managed to escape out the back of the cells into the arms of the waiting French resistance.

As Fraser notes, it is the stories that form the real heart of the museum. "The important thing is the experiences of the people involved – more important than the technology," he says. "It's the human story draws me to the museum."

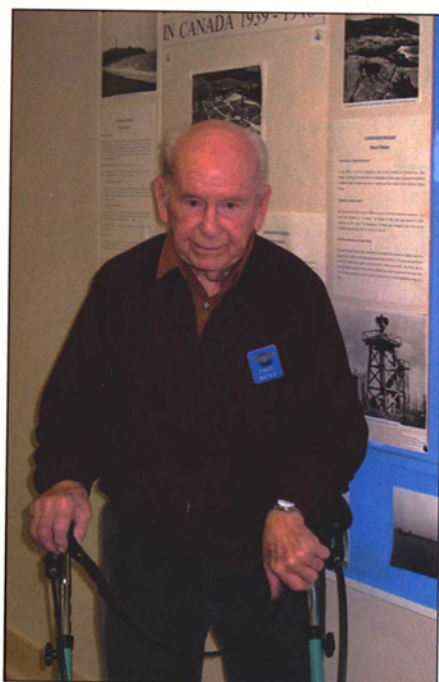


Photo by Maridon Duncanson

Fred Bates in the Secrets of Radar Museum, London, Ont.

While they intend to expand its focus in the future, the museum is currently concentrating on the importance of radar during WW II. Those involved have only been able to share their stories since 1991 and some have, sadly, been lost forever. Both Fraser and the Bates are passionately resolute in their desire to educate others, especially the youth, about this aspect of our history. Fraser says it is imperative that the public learns about the incredibly significant things these young men and women were doing. "It is an important part of history that no one knows about. If we don't do something, no one will know about it." ☺

*(Ed note: Maridon Duncanson is a London, Ont, based freelance writer.*

*The Secrets of Radar Museum is located in the Huron Pavilion just outside the Parkwood Hospital in London. As well as much needed funds and volunteers, the museum is seeking photos, artifacts and stories from the men and women who worked on radar equipment during WW II. If you have something to share, please contact Ryan Fraser at (519) 439-2953 or e-mail: [president@secretsofradar.com](mailto:president@secretsofradar.com) . You can also visit their website at: [www.secretsofradar.com](http://www.secretsofradar.com) .)*