Bohdan Cwilong 1908-1958

Unluckiest UBC Physics Professor, Non-discoverer of the triple-point of helium

Bohdan Cwilong (approximate pronunciation “Bogdan Tsveelong”) founded the Low Temperature Group in the Physics Department at UBC. He was recruited by Department Head Gordon Shrum and later fired after an unfortunate event that caused Shrum professional embarrassment. This incident, however, set Cwilong off on a scientific adventure that defies belief.

Much of the material in this poster comes from recollections of the late Johnny Lees, the departmental glass blower and friend of Cwilong’s, related to and fact-checked (as far as is possible) by Emeritus Professor Peter Matthews.

Early Life in Poland

Cwilong was born in Irkutsk, Siberia, but was raised in Piotrkow, then part of Imperial Russia, later in Poland. After graduation from the University of Warsaw, he worked at the Polish National Institute of Meteorology and the Centre for Aviation.

In 1928 Cwilong showed an aptitude for unusual aquatic adventure by sailing a converted bathtub 600 km down the River Vistula.

At the opening of WWII he was an officer in the Polish Army. After Poland was overrun by the Wehrmacht, he escaped first to France with the Free Polish Army, and then to England.

Oxford

Because of Cwilong’s background in academic meteorology, he joined the Clarendon Laboratory of the University of Oxford. He worked under the supervision of Professor G.M.B. Dobson (he of the Dobson units for atmospheric ozone) to establish the conditions needed to cause water vapour to condense into ice crystals in the atmosphere. Condensation trails were a problem for high-flying warplanes as they rendered the aircraft easily visible from the ground.

UBC

After WWII, Cwilong spent a couple of years in New Zealand, and was then recruited by Gordon Shrum to come to Vancouver and head up a new Low Temperature Group. Cwilong was a odd choice as he had no relevant experience. Professor Simon at Oxford (himself a noted Low Temperature Physicist) wrote Cwilong a glowing reference, under the mistaken assumption that the UBC job was for a meteorologist. Luckily Cwilong was a quick learner, but his lack of a background in the field was to catch up with him later.

Shrum once noticed that Cwilong was not wearing a tie while lecturing. He sent a terse note defining clearly the dress code then expected of lecturers. Outraged, Cwilong went home and made a large gauzy tie with spare curtain material, which he then wore regularly for his lectures. Johnny Lees remarked that this was the only time he could recall of someone having the nerve to defy Shrum.

The Triple-Point Affair

In 1952 Cwilong thought he had found evidence for the hitherto unknown triple-point (solid/liquid/gas) of helium. He wrote a note for Physical Review and planned to make a grand announcement at the Royal Society of Canada meeting in Ottawa in 1952, but Shrum went instead. At the talk, NRC physicists pointed out that helium has no triple-point: simple thermodynamics forbids it. In fact, Cwilong had already figured this out, but his telegram to Shrum did not arrive in time. Shrum, publicly embarrassed, fired him.

Free to Sail the World

Relieved of responsibility to UBC, Cwilong apparently obtained some money from the UK Met Office for a multi-year round-the-world “cruise” to make meteorological and magnetic measurements. His vessel, the “Non-Magnetic III”, built entirely of wood in his back yard, was deployed from the schooner “Princess Waimai”, which had a crew of six seamen-scientists, plus Cwilong and his wife.

On his second time around the world, the Princess Waimai got stuck when Cwilong could not pay the dues for the Panama Canal. The authorities impounded his battery. He tried to escape without it, taking his wife but leaving the crew stranded. He ran into a hurricane and the ship was dismanted. He was towed ignominiously back to Panama by a passing freighter, to face legal action not only from the Canal Authority but also from his crew, whom he had left stranded penniless with only the clothes on their backs.

Here the story takes an interesting turn: in order to avoid the penalties he made a deal with the Panamanian Government, and became the founder of the meteorological program at the University of Panama.

Unfortunately Bohdan Cwilong did not live to enjoy the tropics for long; he died three years later.

References:

Poster prepared by Theresa Liao and Chris Waltham
UBC Physics & Astronomy Outreach Program

100 Years of Physics at UBC
http://phas.ubc.ca