

Douglas Gordon Embree was born in Wolfville, Nova Scotia, in April 1924. Doug's father, Gordon, was a pharmacist and his mother, Helen, gave music lessons in piano and voice. In 1927, the family moved to Truro. When Doug was only 8, his father passed away. In addition to giving music lessons, Doug's mother was organist and choir director at their church in Truro, where Doug sang in the choir. Doug graduated from high school in 1942, joined the Royal Canadian Air Force and was called to duty early in 1943. After initial training in Guelph and Kingston, Ontario, Doug was stationed in Nassau, Bahamas, with Coastal Command. One of the duties that he carried out there was guarding the periphery of the residence of the Duke and Duchess of Windsor. From Nassau, Doug was sent to Northern Ireland and then to Scotland, where he served with the Commonwealth Squadron as a wireless air gunner. Doug was a proud member of the Royal Canadian Legion, Branch #4.



Douglas Gordon Embree
(1924–2013)

After the war, Doug enrolled in the forestry program at the University of New Brunswick (UNB) in Fredericton. In order to take some additional courses, he attended Mount Allison University in 1947–1948, where he met and married Audrey Smith. Together, they returned to UNB, and Doug graduated with his BScF in 1950, followed by a MScF in 1951 from the New York College of Forestry at Syracuse, New York. In that same year, Doug joined the Canadian Forestry Service as a technical officer in Debert, Nova Scotia. By this time, an invasive pest from Europe, the winter moth (*Operophtera brumata*), had become a significant problem in fruit orchards and hardwood forests in Nova Scotia and Prince Edward Island. Building on long-term studies carried out in Whytham, United Kingdom, Doug researched biological agents for the control of this pest for his PhD studies with Dr Frank Morris. A number of parasites were considered, but the tachinid fly, *Cyzenis albicans*, and the ichneumonid, *Agrypon flaveolatum*, both collected in France and Germany, proved to be the most effective. A number of releases of parasites collected from Europe were made between 1954 and 1963. After 1963, parasites collected locally were used. Winter moth populations throughout Nova Scotia and Prince Edward Island collapsed within 5 years of the first detection of *C. albicans* in host populations, and by 1966, winter moth populations across the Maritimes had collapsed. While Doug's field work was carried out in the Maritimes, his academic studies were completed at Ohio State University (OSU) in Columbus, and this often meant long absences from Audrey and their daughter Joanne. OSU awarded Doug his PhD in 1961.

With the closure of the Debert lab in 1964, Doug reluctantly moved, with his young family, to the Maritime Forest Research Centre (MFRC) in Fredericton. At around this time, he began working with the Christmas tree industry in Nova Scotia and, in preparation, spent a sabbatical with Dr Max McCormat, a Christmas tree specialist at the University of Vermont. Doug worked on the control of pests of Christmas trees using chemicals and, more importantly, biological control agents, including the virus (OrleNPV) of the white-marked tussock moth (*Orgyia leucostigma*) and *Olesicampe benefactor*, an ichneumonid parasite of the larch sawfly (*Pristiphora erichsonii*).

Doug was an innovator. He tried using explosive canister “pop-ups” and radio-controlled aircraft to apply chemical pesticides over Christmas tree plantations (reminiscent of his years in the air force). He initiated the “Balsam Fir Christmas Tree Updates” at UNB, which were meetings of Christmas tree growers where leading experts were brought in to discuss the most recent advances.

In the late 1970s, Doug took on administrative duties as the Director for Technical Services

at MFRC. He would sometimes refer to management meetings as the “Gong Show”, but for those within his unit, he instituted meetings where he encouraged a free exchange of ideas and opinions. These were known as the “T.T.T.” meetings, “Tuesdays at Two at the Tavern”. Eventually, these caught the attention of someone in Ottawa who criticized Doug for not keeping adequate records of the minutes of these meetings.

During this time, Doug did not give up on research. In the early 1970s, the winter moth appeared in apple orchards and Garry oak stands in British Columbia. In 1979–1980, *C. albicans* and *A. flaveolatum* were released in British Columbia from parasitized larvae collected from an orchard at the Kentville Agricultural Station. To collect the parasitized larvae, Doug enlisted the help of staff from the station, Nova Scotia Lands and Forests, his and their families, and a Girl Guide troop from Falmouth. These releases had the desired effect in British Columbia and, in gratitude, Doug was given the keys and made an honorary citizen of the City of Victoria.

In 1987, excavations for the new Hugh John Flemming Forestry Complex, at the top of Regent Street in Fredericton, were begun. Doug was again reluctant to move to another location and he would tell people that, at night, he would fill in the holes the excavators had dug during the day. When the inevitability of the move became evident to Doug, he joined in and was instrumental in organizing the open house that would introduce the Fredericton community to the new home of the MFRC.

In 1989, Doug Embree and Doug Eidt officially retired but both returned to work one-third time. This opened up the two junior research scientist positions that Jon Sweeney and I filled that same year. Jon and I consider ourselves to be very fortunate to have benefitted from the experience and friendship of the “two Dougs” in the intervening years.

Doug Embree was an avid outdoorsman and athlete. He loved to ski and, when young, he sometimes barely made it off the ski trails in time to sing in his mother’s choir at church on Sundays. He was instrumental in setting up and cutting trails at the alpine ski hill at Wentworth, Nova Scotia, and trail 15 on that hill is named the “Embree Run” in recognition of his contribution. In Fredericton, Doug was a ski instructor and, while his daughter Joanne was on the downhill race team, he was involved with that activity at Crabbe Mountain ski hill in Lower Hainesville, New Brunswick. In 1994, Doug had the first of his three hip replacements and, as he was told by his physicians not to ski for the rest of that year, he snowshoed around Crabbe Mountain planning and later helping to clear cross-country ski trails.

Doug, his close friends Jan Bonga, Bud Irving, Murray Neilson and others made frequent trips to hike and cross-country ski in the Gaspé region of Quebec and on Mount Katahdin in Maine. On his 65th birthday, Doug and Brian Kilpatrick hiked to the top of Tuckerman Ravine, Mount Washington, Vermont, and skied down the steep headwall, something Doug had always wanted to do.

Shortly after retiring, in an effort to “lose a little weight”, Doug took up jogging. Not someone to do things in half measure, Doug ran in and completed the New York Marathon in 1992, 1993, and 1994. After completing his second marathon, he told a long-time friend of his achievement, to which his friend replied, “Well Doug, it is obvious that your legs have outlasted your brain!”

Doug had a great sense of humour and fun; he could take and dish out good-natured ribbing. He was a seemingly endless source of songs and stories. To a great many people, Doug was a good and loyal friend and he will be missed, especially by his wife Audrey and their daughter, Dr Joanne Embree.

Thank you to Audrey and Joanne Embree, Jan Bonga, Gerry Estabrooks, Ed Kettela, and Brian Kilpatrick for sharing their memories of Doug with me.

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