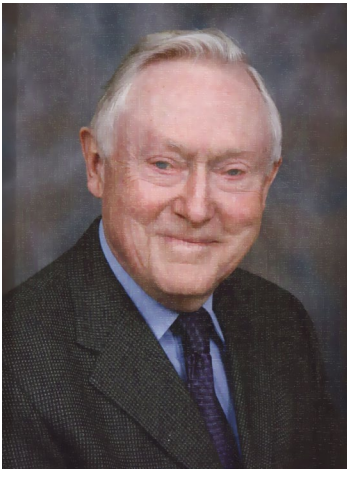
H Glenn Wylie was born on 15 October 1927 in Wingham, Ontario, and died on 1 December 2015 in Winnipeg, Manitoba. Glenn had a long and productive career specializing in parasitoid biology and the biological control of insect pests. His interest in biology began on the family farm in southwestern Ontario, and in insects as a student assistant at the Canada Department of Agriculture laboratory at Belleville, Ontario, in the summer of 1948. He graduated from the University of Toronto, Honours Zoology, in 1949, and was immediately hired by the Canada Department of Agriculture as a Technical Officer in the Entomology Laboratory at Belleville. From April 1950 Glenn was seconded to the Commonwealth Institute of Biological Control, Feldmeilen, Switzerland, to collaborate in efforts to find biological control agents against the balsam woolly aphid in the Atlantic Provinces. In addition to 6 months at Feldmeilen, Glenn was stationed in the Vosges Mountains of France for the summers of 1950 and 1951. The result of these efforts was "…a list of European predators and detailed information on the biology and life history of each species" (Bulletin of the Entomological Society of Canada **19** [1988]: 91–92). Six aphid predators that he identified were imported to eastern Canada, four of which established successfully.



H. Glenn Wylie
(1927 – 2015)

Instead of the expected return to Canada in fall 1951, Glenn was encouraged to enrol in graduate studies at the University of Oxford. His doctoral thesis, under the guidance of Professor George Varley, described host-finding by the house fly parasitoid, *Nasonia vitripennis* (Walker). Professor Niko Tinbergen had recently arrived at Oxford, and stimulated Glenn's interest in animal behaviour. A condition of Glenn's Department of Agriculture support during his doctoral studies was that he be involved in Varley's research on the winter moth, *Operophtera brumata* (L.). This insect had become a major pest of broad-leafed trees in Nova Scotia, and Glenn was required to spend about 6 weeks each summer in 1952 and 1953 on studies that might lead to its biological control. Because of the workload, Glenn was initially reluctant to take on both thesis research and the winter moth project. Nevertheless, he successfully juggled these two responsibilities and additionally found time to court Jean Mary Hodges. Jean typed Glenn's DPhil thesis, which was submitted in May 1953, and in September 1953 they were married and moved to Belleville. So, from 1950–1953, by his 26th birthday, Glenn completed a major study of the biological control of balsam woolly aphid, completed a DPhil on the behaviour of a housefly parasitoid in 22 months, met and married Jean Hodges, and laid the ground work for biological control of winter moth.

Biological control of the winter moth was Glenn's full-time project from 1954–57. Between 1952 and 1956 over 182,000 winter moth were shipped to Belleville for parasitoid rearing and other studies. Although Glenn made some of the first collections, most were done by European collaborators with visiting entomologists from Belleville to coordinate: Harold Welch in 1954,

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Harold and Glenn in 1955, and James McLeod in 1956. Glenn's thorough knowledge of the European literature, and the work at Belleville, resulted in a catalogue of 63 parasitoids of the moth in its native range, and improved understanding of geographic variation in the moth's phenology and population ecology. As early as 1953, Glenn concluded that the tachinid *Cyzenis albicans* (Fallen) and the ichneumonid *Agrypon flaveolatum* (Gravenhorst) were promising candidate biological control agents, and Glenn and Jean, along with Glenn's assistant Leon Chivers, made the first releases of *C. albicans* in Nova Scotia in 1954. Glenn was always quick to acknowledge the assistance of colleagues in Europe and North America, but without Glenn's efforts, the declines in the population of winter moth would not have happened. The two parasitoids recommended by Glenn established quickly and went on to control the damage of winter moth in Nova Scotia and Prince Edward Island. Douglas Embree later documented that the total cost of the research leading to this result was $160,000 and saved, in Nova Scotia alone, a forest resource valued at $12,000,000 (current value $75,000,000). When winter moth was introduced to Victoria, British Columbia, Embree repeated the process, collecting parasites in Nova Scotia, and sending them to Victoria with similar rapid success (Bulletin of the Entomological Society of Canada **45** [2013]: 175–176).

After completion of the winter moth project, Glenn returned to the study of pteromalid parasitoids of muscid flies. First, he published his thesis research on *N. vitripennis*, and followed this with studies of the effect of host age, size and density on this parasitoid. He also investigated the effects of intraspecific and interspecific interactions of pteromalid parasitoids within the same host. An early benefit of this research was its utilization "…by the USDA in developing mass rearing procedures for parasites released in inundative control programmes against house fly and other pest fly species" (Bulletin of the Entomological Society of Canada **19** [1988]: 91). From 1958 to 1979, Glenn published 21 papers reporting on his studies of pteromalid parasitoids and these have been cited more than 700 times. They continue to be important in the field of host-parasitoid interactions, with more than 50 citations since 2009, some 30–60 years after their publication dates.

In 1972, Agriculture Canada transferred Glenn and many of his colleagues at the Belleville laboratory to the Integrated Pest Management Section of the Winnipeg Research Station. In Winnipeg, Glenn quickly developed a research program on the parasites of key pests of oilseed rape or canola, then a rapidly expanding crop in Western Canada with many little known insect pests. With Gordon Bucher, Glenn used field surveys to assess the role of pathogens and parasitoids in the population dynamics of bertha armyworm, *Mamestra configurata* Walker. Glenn went on to document the prevalence and biology of armyworm parasitoids in a series of six papers produced from 1977 to 1979. By 1979 he had begun work on the life history of flea beetles in canola, in preparation for investigating opportunities for their biological control. He initially focussed on the biology of an already active parasitoid *Microctonus vittatae* Muesbeck, and later studied other euphorine braconids including the European *Microctonus bicolor* Wesmael. This work resulted in a series of 10 papers from 1980 to 1985. From 1978 to 1983, the European parasitoid, *Townselitus bicolor* Wesmael was released for biological control of flea beetles, but this species apparently did not establish. By 1985, Glenn was working with his technician and graduate student, Frank Matheson, on the parasitoids of aphids that infest alfalfa and field peas. As part of this program, over 100,000 *Aphidius smithi* Sharma et Subba Rao were released against pea aphid, *Acyrthosiphon pisum* (Harris), between 1983 and 1987; assessments in 2001 indicated that this parasitoid had become established.

Besides his many contributions to biological control of insect pests, Glenn contributed in other ways to entomology. He was a quiet man, not given to self-promotion, but was a valued and willing reviewer and source of expertise and advice for his colleagues. He was Secretary of the Entomological Society of Canada (1982–1984), and chaired the ESC's By-Laws Committee.

For the Entomological Society of Manitoba, Glenn chaired the Annual Meeting Committee and Publicity Committee at various times, and was President of the Society in 1976–1977. Glenn was an Adjunct Professor in the Department of Entomology, University of Manitoba from 1982 to 1988. Reflecting the respect he was given by the entomological community in Canada, he was named an Honorary Member of the Entomological Societies of Canada (1988) and Manitoba (1987).

Glenn retired in January 1987 after 37 years working at Agriculture and Agri-Food Canada. He was an active retiree. He volunteered his time at the Fort Whyte Alive Environmental Education Centre, and was a member of the Friends of the Delta Marsh Research Station. He continued to take an interest in entomologists and entomology and, until shortly before his death, encounters with Glenn and his dog were welcome punctuations for some of his former colleagues on their walk home.

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