

**Professor Emeritus Dr. Donald A. Chant
(1928-2007)
O.C., FRSC, FESC, LL.D., B.A., M.A., Ph.D.**



The entomological world lost an accomplished and enthusiastic champion in December 2007 with the sudden and unexpected – and untimely – death of Dr. Donald A. Chant. He was only 79 years of age.

Don Chant was many things to many people, so evident upon a review of his CV or the notices and announcements that appeared in the *Globe & Mail* (Jan 2, 2008; pg. S6), the *University of Toronto Bulletin* (Feb. 26, 2008, pg. 9), and the *International Journal of Acarology* (Sept 1, 2008), among others. His list of degrees, honours, awards, accomplishments, accolades, and published works alone are achievements in and of themselves.

Donald A. Chant, the person, was a husband, father, grandfather, uncle, brother, friend, colleague, and mentor to many, near and far. Dr. Donald A. Chant, the professional, was an enthusiastic, disciplined scientist with a penchant for acarology; a skilled and distinguished university professor and administrator, eminent researcher, and impassioned activist who led environmental stewardship charges in both the academic and non-government worlds. He loved his family ... far and wide. He loved nature ... big and small. The person and the professional blended in all Don did.

His life's work in acarology – Don was Canada's pre-eminent authority on the Phytoseiidae – helped resolve the synonymies of phytoseiid mites and described many new taxa. When he began his research in the 1950s, approximately 20 species of phytoseiids were known; over 2,000 species are known to science today. An expert in natural alternatives to pesticides, Don's work has been crucial to the use of mites in biological control.

Don always said it best, *“Fortunately for us, other kinds of mites are predators of the plant-feeding mites and in the right circumstances can effectively control them. These predators are called Phytoseiids, which literally translated means ‘God’s little creatures that live on plants’, so named by Antonio Berlese of Florence, an early Italian acarologist. These predacious mites have been the objects of my research for the last 30 years, and I think I can safely say that I know more about them than anyone else does.”* Don was addressing the Moss Scholarship Winners at an Alumni Awards Banquet held at the University of Toronto “way back” on April 9, 1980. Almost three decades later, what Don said then is still applicable today, written, and, no doubt, spoken in his lively, informative, and challenging way.

Don *“...love[d] to talk, in fact, about zoology the thing that kept me sane in ... years of administration, the thing that has given me joy and excitement and interest, and far more professional satisfaction than anything else that has claimed my attention. I still get the same kick, the same sense of accomplishment, at having a research paper published as I did when I first appeared in print almost 30 years ago. Basically, my research since I received my Baccalaureate in 1950 has been in Entomology ... But the real excitement, the real fun, is in studying living mites – in learning about their basic biological traits, their habits, and their behaviour. Nature truly is a wonder to behold.”* Again, what was spoken in 1980 still held true for him to the last.

In his later years, Don was also writing his “Memoirs”. With his usual balance of humility and pride, he explained why: “First, I assume that at least some of my progeny and grand-progeny will be interested in the history of their family and will want to know where they came from. Another reason, I suppose, was that I wanted to lay out before me my own life. When I'm finished (if I ever am) I can hold the Memoirs in my hand and say to myself, 'Well, that's what I've done and that's who I am, warts and all.' Not the least reason for undertaking these rather disjointed Memoirs was an urge for tidying up the room before the lights are turned out.”

Before “the lights [were] turned out”, here follows some of what Don’s Memoirs shared about things entomological:

“I discovered the science of entomology in my third year at UBC [1949] when I enrolled in the introductory course taught by Prof. G. J. Spencer, who made the greatest single impact on me during my years as a university student. As a youngster I had been interested in insects, of course, particularly when we summered in the Maritimes, collecting beetles, grass-hoppers and butterflies, killing them in a cyanide bottle, and pinning them in small museum boxes that my parents bought for me. But this was un-informed amateurism. It was not until Spencer came along that I succumbed to a full-bore, life-long fascination with insects. I came to understand how complex are their lives and how intricate their anatomy, fully rivalling our own. And the supply of them is endless – there are about one million known species of insects and it is estimated that this is but a small fraction of the actual number out there in nature. And their variety is limitless – they occupy every conceivable niche (save the marine environment) – from snow capped peaks to tropical swamps, all apparently happily going about their affairs, with nary a thought for us, the 'Rulers of the World'. Nonsense! Insects rule the world and always have since they evolved about 400 million years ago.”...

“...Under his tutelage I got the top mark in 4th year entomology, and won a book prize awarded by the Entomological Society of B.C. and presented at their annual meeting – my first scientific conference. I got two books on entomology, and have them yet.

When I was looking for a part-time job during the 1948-49 term, after I had decided that life as a halibut biologist was not for me, Prof. Spencer put me on to Jim McLeod, the Officer-in-Charge of the tiny CDA Entomology Laboratory located on the UBC campus. This began my professional career as an entomologist, and I've never looked back. “

A few years later, Don worked at the Entomology Research Institute, Canada Department of Agriculture in Bellville, Ontario, first as a Research Officer and then as Head of the General Entomology Section from 1956-60. It's ironic that, among Don's memoirs of this time, he doesn't describe in great detail his own jobs or tasks or accomplishments, but rather, mostly the “flavour” of the Institute at the time:

“... The Entomology Research Institute was known locally as the “Bughouse.” It was pretty modern by my standards (shaped by East Malling and Summerland), built around 1950, and located in Belleville because that was the hometown of one of the bigwigs in Ottawa. There were about 30 professional staff and about the same support staff. The Director was Bryan Beirne, an affable and highly competent Irishman who studied predacious bugs. His second in command was Jim McLeod, who had come to Belleville when the Vancouver laboratory was closed, and who had guided my career to that point. Both were a pleasure to work with and I enjoyed our association.

The professional staff were a mixture of older scientists (who sometimes resented we young Turks) and staff of my age who had also just returned from Ph.D. studies in the US, Europe or England. The areas of research ranged from insect nutrition (how to rear predators and parasites) and population studies to using insects for weed control. The lab was closed in the 1960s and the

professional staff almost en masse left the federal government and moved to Simon Fraser University in Burnaby, B.C., where they established an Institute of Pestology (of all things!), which still thrives today. Bryan, of course, was the director, but Jim stayed behind in Belleville, thinking he was too old to move and unfamiliar with university ways, where he became Secretary to the Moira River Conservation Authority (a dam along the Moira is named after him). The Bughouse stood empty for years, then housed the offices of some social services, and then finally was renovated and turned into an old folk's home.

Then, Don goes on to describe his experience in Vineland ... "In 1959 Bryan Beirne and Jim McLeod brought to my attention that the separate Plant Pathology Research Laboratory in St. Catharines [Ontario] and the Entomology Research Laboratory in Vineland in [Ontario's] Niagara Peninsula, hitherto separate entities, were going to be combined and the search was on for a Director of what would be called a Research Station. They urged me to apply, I did, and I was successful, at the age of 31. I think there were three factors underlying my success: favourable endorsements from Bryan and Jim, a respectable list of research publications, and the fact that I had some sort of financial experience by virtue of being President of our local Credit Union.

One of my missions on becoming Director of the new Research Station was to steer our research more towards the basic end of the spectrum so that we could better understand what was going on in the orchards and field crops and devise solutions to their pest problems that were more than hit-and-miss. After all, the provincial horticultural staff, which were located right next door in Vineland, were supposed to take care of applied aspects such as spray calendars and direct advice to growers.

I had always wanted to collect my kind of mites in the wilderness areas of Canada, both below and above the tree line. In 1963 I decided to start fulfilling this yen. I quickly decided that such expeditions would have to be by water since there are no roads in the places in which I was interested. I looked at maps of many parts of Canada and chose for the first such foray the Rupert River, rising in northern Quebec and emptying into James Bay about 150 miles away. I was not a skilled canoeist but from what I could discover it looked like the Rupert would be manageable. I signed up two colleagues from Ottawa, who also wanted to do some collecting, and one of my staff at St. C. My account of this adventure was published in 1964 in 'The Beaver', the Hudson Bay Company's magazine on northern activities.

During my years at St. C/Vineland, a group of young entomologists decided that we would resurrect the Entomological Society of Ontario, which had died of neglect a decade or so before. We were successful and the society still thrives today. The interesting thing about this is that several of those who were involved were at the University of Toronto and eventually ended up on my staff when I became Chair of Zoology there in 1967 – Bill Friend, for one. I attended several annual meetings of the Entomological Society of America during these years."

Between his "years at St. C/Vineland" and the University of Toronto, Don was Chairman of the Department of Biological Control at the University of California, Riverside (1964-67) where, among other things, he met one Vikram Prasad, now an enthusiastic and tireless acarologist in his own right, and the Founding Editor and Manager of The International Journal of Acarology. Through the IJA/Indira Publishing House, Don co-authored with his partner, Dr. James McMurtry, almost a dozen scientific papers on the Phytoseiidae, culminating in his life's work, a book entitled Illustrated Keys and Diagnoses for the Genera and Subgenera of the Phytoseiidae of the World. At the time of his death, Don was collaborating with Dr. Prasad to produce a series of books under the heading, An Atlas of the Phytoseiidae of the World. Whether the Atlas will see the light of day is yet to be determined. Even so, Don's productive and generous contribution to entomology has had a global reach, and will continue to span the bridges of time.

Don had much left to say about mites. Yes, even more than is written in his over 140 refereed research papers, 11 books, and innumerable reports and briefs. He was a wealth of interesting and historical anecdotes, and philosophies about life and work. He is sorely missed by those who knew him personally, and those with whom he worked, many of whom stayed life-long friends. But he is sorely missed for what he still wanted to contribute toward the future scientific clarity and understanding of his “beloved mites”. In his 1980 speech, he said, *“Where do we go from here in our research? ... First, to extend our knowledge of the family of Phytoseiidae itself – how many major groupings are there in the family, what is their natural geographical distribution, what assumptions about their habits and behaviour can we make on the basis of their physical characteristics? Are there other species waiting to be discovered ...?”*

So much of his life’s work answered those very questions. But, also in that speech, he gave the challenge: *“...much more research [is needed] on the biological characteristics of many more species. One could spend a lifetime and never know everything about even one species of these little animals, and so considerable effort must continue to be given to identifying the key characteristics.”*

The last words are Don's: *“Let me now end with stating another [reason], a very personal benefit of research in this area – the sheer joy, excitement, and intellectual stimulation of learning new facts about these fascinating creatures. Phytoseiid mites are like tigers in their miniature world, stalking their prey blindly, like mindless robots, through the jungle of hairs on an apple or bean leaf. If they were the size of a real tiger, they would have eliminated us eons ago. We would simply have been a footnote in the evolutionary history of the world. Their study has led to a very privileged life for me thus far – that of an academic with vast worlds of information to learn about in a field where almost every collection and every experiment leads to new understanding. Who could ask for more?”*

A memorial reception celebrating Dr. Chant's life was held on May 20, 2008, at the University of Toronto's Massy College. There, his family provided everyone with a beautifully-produced full colour coil-bound booklet chock-full of Don's professional and personal accomplishments, accolades, vignettes, and pictures galore.

At the memorial event, it was announced that a graduate fellowship in Conservation, Ecology & Evolution is being established in Professor Chant's memory. Donations from family, friends, and colleagues will be matched under the GSEF program – a partnership between the University of Toronto and the Province of Ontario to encourage and support graduate students.

Memorial donations may be made in Don's name to the World Wildlife Fund Canada, 245 Eglinton Avenue East, Suite 410, Toronto, Ontario, M4P 3J1 (www.wwf.ca) and/or the Donald A. Chant Fellowship in Conservation, Ecology & Evolution at the University of Toronto c/o Christie Darville, Faculty of Arts & Science, 100 St. George Street, Suite 2032, Toronto, ON, M5S 3G3. (416) 946-5192 / ([email](#)).

Condolences may be sent to Mrs. Merle Chant, R.R. #2, Madoc, Ontario, KOK 2K0.

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Questions, comments – contact:

Sherry L. Pettigrew
SECOND WIND SERVICES
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