

Gordon Pritchard died in Calgary, Alberta, after a long struggle with multiple myeloma, on 23 December 2012. He was 73 years old. Gordon was a premier Canadian entomologist and educator and an expert on many subjects from the biology of crane flies to evolutionary questions associated with the development of insects, especially aquatic ones. But his overwhelming entomological love was the study of the Odonata and he was a significant force in the international research organizations that focused on this insect order.

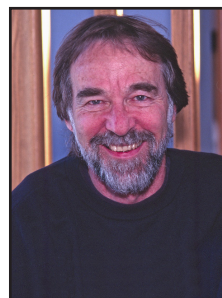
Gordon was born on 9 February 1939 in Burton-on-Trent, Staffordshire, a city of breweries in the English Midlands. His wartime childhood memories were of taking shelter under the family's grand piano during air-raids and seeing his father, a quartermaster sergeant with the RAF, off at the bus stop after his leaves at home.

Gordon was fascinated by the countryside around the village of Bretby, where he spent his early years. There, he played in the cowsheds and fields at the farm of a family friend, visited a bird-egg-collecting naturalist who lived down the lane, and made frequent trips by bus or foot to the Derbyshire Dales. When Gordon was 9 or 10, without a net, he captured his first dragonfly, a brown hawkler (*Aeshna grandis*) - the trick, he said, was to throw your jacket over whatever interested you. He played conkers under the chestnut trees and was awed by fields of English bluebells. Another life-long love, jazz, also evolved during those early years and Gordon began to play the drums. He made his first set from old banjo vellums and biscuit tins but, later, a thoughtful neighbour took pity on him and presented him with his first real drum set.

Gordon had been inspired by his biology teacher at grammar school and wanted to be a biology teacher himself. But, instead, in 1957 he enrolled in Imperial College, University of London, a place he later would consider the best entomology department in the world. However, all his classes couldn't have been that inspiring, because he spent much of his time immersed in jazz, rugby, drumming, and beer drinking. He received his BSc (Honours) in zoology in 1960 and, after winning a Commonwealth Scholarship that year, he came to the University of Alberta where jazz concerts, rugby, drumming and beer drinking again rounded out his academic life. In those days the Entomology Department was small, with three faculty – Brian Hocking (chairman), George Evans (ecologist and Gordon's supervisor) and George Ball (systematist) – and only eight graduate students. But the place hummed with excitement and new ideas. It was a wonderful life for a young graduate student (Acorn 2004). Gordon's doctoral research focused on the life of larval dragonflies in the boreal forests of Alberta, especially how they capture their prey with their extendible labium. His work extended into several areas: prey organisms, the functioning of the labium, and the morphology of the labium and compound eyes. Gordon finished the field work in only one season, a sign of his efficiency and concentration. He was awarded his PhD in entomology in 1963. On 2 February that year, Gordon married June Dalby in Edmonton.

After graduating, Gordon's first job was as a research scientist with CSIRO (Commonwealth Scientific and Industrial Research Organization) in Sydney, Australia, where he studied fruit flies. Gordon's and June's daughter, Tracy, was born there in 1964. Although Gordon loved Australia and was offered a permanent research position, after 3 years, the family decided to move back to Canada.

Back at the University of Alberta, in 1966, Gordon filled in for George Evans while George was on sabbatical, and the next year took up a 1-year teaching appointment in insect physiology at the Calgary campus of the University of Alberta. The job was offered to him by Jim Cragg,



J. Acorn

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Head of the Department of Biology, who had been Gordon's external examiner at Imperial College. In 1968 Gordon's son Darren was born, and a permanent position somewhere became a priority. Luckily, one appeared in Calgary and Gordon stayed put. His appointment was initially divided between the Calgary campus and the Kananaskis Field Station in the nearby Rocky Mountains; the latter spot offered much scope for field studies and Gordon began researching the population ecology and development of local crane flies (Tipulidae), which engrossed him for the next decade (Acorn 2004).

Thus began a long career of solid, meticulous research. Gordon's interests were primarily in the evolutionary ecology of insects, from the evolution of individual traits, through the evolution of life-history strategies, to the evolution of communities. He worked mainly on insects with aquatic larvae and was particularly interested in the proportional allocation of time to the aquatic and terrestrial habitats and the mechanisms that determine when the transition from one to the other is made. Much research focused on the effects of temperature on insect development. Specifically, he studied temperature adaptations in aquatic insects, insects in geothermal habitats, the colonization of temperate-zone latitudes by tropical taxa, and the relative allocation of time to different life-cycle stages. He was interested in predatory behaviour in arthropods; respiratory structures and mechanisms in aquatic insects; and the colonization of aquatic and terrestrial habitats, with particular reference to the evolution of aquatic life-styles and of flight in insects. Gordon delved into the evolutionary origin of insects and the phylogeny of arthropods, especially examining larval traits. Although he certainly did not consider himself a systematist, he did publish in this field. One his last graduate students, Jack Zloty, named a newly discovered mayfly, *Ameletus pritchardi*, after Gordon (Zloty 1996), a fitting tribute to a career of superb aquatic insect research.

By the late 1970s, Gordon returned to studying Odonata, being intrigued by the vivid dancers (*Argia vivida*), southern damselflies living in the warm pools at Banff. With various graduate students, he studied these damselflies all over western North America, concentrating on life history, reproductive behaviour, egg development, larval growth and the effects of temperature on physiological processes. In the late 1980s, as John Acorn (2004) described, "...when [Gordon's] work was taking him pretty far south, he realized it was time to go to the tropics, 'where dragonflies really come from'... One of Gordon's most frequently cited conclusions with respect to odonates is that they retain their tropical temperature responses and are thus 'prisoners of their tropical past'." In Costa Rica he studied damselflies in the genera *Cora* and *Hetaerina*. Some of his dragonfly work was broadly theoretical, such as his investigations into odonate mating systems and sexual selection.

But dragonflies were far from all that Gordon studied. He examined life histories and feeding in alderflies, morphology of stridulation in predaceous diving beetles, peritrophic matrices in ground beetles, and development and survival in mosquitoes. Stoneflies in Rocky Mountain streams were a favourite subject - sampling techniques, life histories, and growth and development. Caddisflies and mayflies did not escape his interest and neither did water mites. Having good-sized populations of the iconic Canadian insect, *Grylloblatta campodeiformis*, nearby in the Rockies made the study of this fascinating subterranean species relatively straightforward. Gordon probably showed dozens of entomologists their first specimens of the Order Grylloblattodea during his frequent forays into the Kananaskis Valley.

One of Gordon's last and most intriguing entomological adventures was the discovery of a new family of flies (Diptera), the Oreoleptidae. Strange larvae unassigned to any known family had been found several times in torrential streams in the western mountains. But it wasn't until Jack Zloty and Gordon collected and reared larvae and pupae to adults that it was confirmed to be a distinctive, undescribed species in a new genus and family. Brad Sinclair, an expert on the

phylogeny of flies, collaborated with them on the project and demonstrated that the fly had unique characteristics closely related to the Tabanidae (horse flies) and Athericidae (water snipe flies). How many entomologists these days are lucky enough to find and name a new family of insects?

By the early 1990s, Gordon's life was changing. He and June had divorced and he married Valerie Preuter (néé Jones) on 4 August 1991. They made a terrific and inseparable team – generous, happy, full of fun. They welcomed many visitors to their Calgary home and travelled to all corners of the world.

From 1967 to 1999 Gordon was an energetic and involved teacher, researcher and administrator at the University of Calgary. By 1976 he was made Full Professor and from 1976 to 1978 he served as an Assistant Dean of Science. In 1997 the University offered early retirement to their senior faculty – the deal was so good that many, including Gordon, couldn't refuse. The administration then discovered that there was no one to teach the senior courses, and so seasonal appointments were given to those interested. Gordon continued to teach during the next 2 years. In his retirement he was named Professor Emeritus.

Gordon's university teaching dealt primarily with evolution, ecology and entomology, and ranged from 400-student introductory classes to small graduate student tutorials. He taught in the lecture theatre, the laboratory and the field. For many years, Gordon led Educational Travel Study Programs on behalf of the University of Calgary's Faculty of Continuing Education to Costa Rica, the Galápagos Islands, and to East Africa.

Gordon supervised 19 MSc and PhD students, served on over 100 graduate student thesis committees, and published 84 peer-reviewed papers. He made his first trip to the Galápagos Islands in 1983; this led to what he called a "serious interest" in Charles Darwin. In 1986 Gordon established the Annual Darwin Lecture and Dinner, on a date in February close to Darwin's birthday. This was a social and intellectual gathering for the faculty and students of the Ecology Division and included the dreaded Darwin quiz. Gordon's Darwinian knowledge was staggering and he used it well – in his teaching, research and entertainment. The event continues still - a wonderful legacy of Gordon's passion for science.

David Larson, a water beetle expert and an early doctoral student of Gordon's, credits Gordon's clarity and patience in his successful teaching of difficult ideas and methodologies. He remembers Gordon as "reflective and philosophical, exhorting students to understand the basics... a counselor, a person I could bring ideas to and have them seriously considered, debated and evaluated."

Larson also recalls that "Gordon could be highly focused and immersed in his studies. A feature of American universities is for faculty to keep their office door open and appear inviting. Gordon didn't - his door was shut and knocks went unanswered unless they were very persistent - then you would hear a muffled 'There is nobody here' and, if you didn't believe that and still knocked, there would be an eventual 'Go away!' He had time and patience for meetings but they had to be scheduled and done right." This concentration, Larson notes, can be seen in Gordon's research: "Both his morphological and experimental work is meticulous... His ecological studies are exemplary for their clear focus. He had the background of a naturalist and could see what was real and important in nature, and had the skill and care to design his studies to get to the point."

Retirement allowed Gordon to indulge his love of music. Although he had played the drums since he was a boy, he had no formal training. He loved to jam with a small group, where reading music was not required, and several nights a week were devoted to this. But when the opportunity to play with a Big Band surfaced, Gordon knew that he would have to learn to read scores - and so began the drum lessons that lasted the rest of his life. Saturday mornings were devoted to band practice and gigs took the band from seniors homes to golf and country clubs. Gordon had an encyclopedic knowledge of the jazz artists of the past and present. Hearing a piece of music, he could tell you who was playing what instrument and, most times, when and

where the recording had been made.

Gordon began a lot of new things late in his life. He learned to downhill ski for his 50th birthday; he took scuba diving lessons in 1997 so he could join his children underwater on the Great Barrier Reef. In 2001 he started snowshoeing to prepare for a trek to Everest Base Camp.

Travel was integral to Gordon's being. He and Valerie travelled to all the continents - trains in Russia, Mongolia, China and Australia; ships of various shapes and sizes to the Caribbean, the Mediterranean, and Antarctica; tour buses and 4x4s in Africa; and walking in England to the places Gordon remembered as a child.

Dragonflies took Gordon to many wonderful places, from the hot springs of Canada and the USA, to tropical streams in Costa Rica and Colombian Amazonia; from conferences above the Arctic Circle in Sweden to the deserts of Namibia. For most of his career, Gordon worked tirelessly in the societies that promoted and coordinated international dragonfly research and published odonatological journals. Among much other work he organized the Seventh International Symposium of Odonatology in Calgary in 1983 (Societas Internationalis Odonatologica) and, in the Worldwide Dragonfly Association, served as a Trustee, a Coordinator of International Symposia of Odonatology, and as President from 2007 to 2009.

Gordon's cancer surfaced in 2003 with a diagnosis of multiple myeloma, treatable but not curable. In February, 2012, he wrote: "The cancer diagnosis really changed my outlook. No longer did I dwell on the past, nor did I think too much about the future. I felt really good every morning when I got up and took every day as it came, filling the day with things I wanted to do. If I didn't get everything done that I thought I might, there was always tomorrow, which would also be a great day."

Gordon was a dear friend. Although I didn't see him often, he was always there, an inspiration in the background. When I did see him, there was always something to learn. I met Gordon through our shared love of dragonflies in the late 1970s. We worked together on the organization of the 1983 International Odonatological Symposium and sat through many odonatological society meetings, some of which were surprisingly testy and turbulent (I was always impressed by Gordon's calm wisdom and negotiating skills). We collected grylloblattids in the Kanana-skis Valley and watched damselflies and dragonflies along the shores of dozens of streams and ponds. We reveled in smoky Parisian nightclubs and talked into the night around campfires in the Namibian wilderness. We drank scotch and listened to jazz in the basement of his Calgary home. He was a wonderful man.

References

- Acorn, J. 2004. Damselflies of Alberta: Flying Neon Toothpicks in the Grass. University of Alberta Press, Edmonton.
- Zloty, J. 1996. A revision of the Nearctic *Ameletus* mayflies based on adult males, with descriptions of seven new species (Ephemeroptera: Ameletidae). *The Canadian Entomologist* **128**: 293-346.

Rob Cannings, Royal BC Museum, Victoria. With help from John Acorn, David Larson, Rob Longair, Jack Zloty and, especially, Valerie Pritchard. John Acorn's (2004) book, cited above, contains an excellent summary of Gordon's career and influence.