

## OBITUARY

**Graham Rhys Young BSc (Syd.), DIC, MSc (Lond.), FRES, Cert. Hort.**

**2 April 1941S 18 February 2004†**

Graham was born in Sydney and spent part of his early life in the Blue Mountains where he developed a passionate interest in the natural world. After attending Hurlstone Agricultural High School, he proceeded to the University of Sydney. He enrolled in Agriculture but later changed to Science, completing his BSc in 1964 with majors in Zoology (Entomology strand) and Botany. Apart from laying the foundations for his integrated approach to practical problems, his university experience left him with lifelong friendships with his contemporaries from both faculties. I remember him from those days as a formidable intellect, convivial drinking partner and an excellent baseballer.

From March 1965, Graham spent several years teaching biology, chemistry and instrumentation at Sydney Technical College before going to the United Kingdom where he completed his Diploma of Imperial College and MSc in Tropical and Applied Entomology at Imperial College, Silwood Park (University of London). He also learned to cook, taught by French girls in his course who found the college food as unappetising as he did.

Then, after 18 months as a tutor in Biochemistry at the University of Sydney and a further two years teaching at Sydney Technical College, he started work in 1974 at the Department of Primary Industry, Papua New Guinea, based at Bubia Agricultural Research Station near Lae. This appointment was to set the pattern for his future career in tropical entomology. He took over the *Locusta migratoria* program following the departure of Graeme Baker (a science acquaintance from University days). Graham's control methods terminated the plague. He initially developed expertise in stalk borers and pests of legumes, but changing agricultural needs soon found Graham specialising in coffee and coconut problems, such as the association between crazy ant and coconut spathe moth. Tettigoniid leaf feeders were next on the list, especially *Sexava* and the elusive sexava parasitoid, *Stichotrema dallatorreanum* (Strepsiptera), whose generic name he took later for his email address. He set up a biological control program for control of sugar cane stem borer during 1981-82. During his time at Bubia he contributed greatly to the strengthening of the field crop research group, and trained many PNG staff in field and laboratory entomology.

For family reasons, Graham returned to Sydney in 1982 with no job to go to, and was briefly a Technical Manager at Rentokil (Australia) Pty Ltd. This position must have been uncongenial to someone with his commitment to integrated pest management. Graham then worked as a crop protection specialist consultant on projects in Palawan in the Philippines, initially participating in planning sessions as well as observing and reporting on pest and disease problems of coconuts, cocoa, coffee, corn, rice, mungbean and peanuts. Subsequently he was responsible for the design of long-term crop protection strategies, particularly for intensification programs. The main objective was integrated pest management of black bug on rice. Additionally he made recommendations on planning and implementing a plant quarantine policy for the island of Palawan. As part of the project he contributed to:

- (i) Establishing a gene pool of disease resistance for all the project crops
- (ii) Developing chemical, biological and cultural methods of pest and disease control
- (iii) Contributing to the further training of Philippines project staff in crop protection
- (iv) Strengthening the Provincial Agricultural Centre and the four Regional Agricultural Centres in identification, surveillance, record keeping and pest-disease control

1985 saw Graham in yet another locality, dealing with yet another crop and suite of protection problems. This time it was a ten weeks consultancy in China, at the Citrus Fruit Demonstration Farm, Lingling, Hunan Province. Here he assisted and advised Chinese researchers in a long-term study of the ecology and control of citrus red mite, citrus rust mite and chaff scale. He also provided advice on routine pest control measures for leaf-feeding insects, cerambycid borers and leafminers, and devised pest surveillance methods for newly established citrus orchards.

Graham returned to PNG in 1986 to fulfil a two-year contract with Ramu Sugar Ltd., Madang Province. At this stage Ramu was losing 90% of the crop to pests and diseases. Graham described this as an immensely frustrating but intellectually rewarding assignment. Graham worked on four stalk borer species, including *Sesamia grisescens*. His studies included population dynamics and pheromone production, and laid the groundwork for later IPM of the pest. He experimented with control of melolonthid pests attacking the roots of the cane and investigated the vector of a new viral disease, Ramu stunt disease. He also masterminded the 1988 *Locusta* control campaign in the Markham Valley, showing *Locusta* could be controlled without expensive aerial spraying. As always in PNG, an important part of his work was in the training of PNG staff, which he achieved both by working with them and writing manuals on practical aspects of pest control.

Back once again in Sydney in 1988, Graham worked as a Technical Officer with the NSW TAFE (Ryde School of Horticulture) for five years, a job that scarcely utilised his talents. During this time he carried out two research projects. The first was control of scarab grubs in nursery stock using Suscon Green, a product consisting of thermoplastic granules impregnated with chlorpyrifos. The second concerned the biology, ecology and host plants of the lilly pilly psyllid, *Trioza eugeniae*, a pest attacking the leaves of a range of *Syzygium* and *Waterhousea* species. Graham examined the effect of varying rates of nitrogen and sulphur on the survival rates of *T. eugeniae* populations, from egg to adult.

He then took up a position in Darwin to work with the Northern Territory Department of Primary Industry & Fisheries as Acting Principal Entomologist, a position involving various high-level administrative duties including assessment of applications to import living organisms. At the end of the 'acting' period he continued as Senior Entomologist until he retired in April 2001. His work in Darwin, following the pattern of his whole career, was directed towards innovative methods of control minimising the use of toxic agricultural chemicals. Again a new suite of pests came under his eye: two-spotted mite, melon and red-banded thrips, bean fly, and silver leaf whitefly. He conducted trials with new chemical compounds against melon and red banded thrips and developed the use of potassium soap against melon thrips. He also revived interest in the biology of the giant termite, *Mastotermes darwiniensis*, and continued work on developing baits for termite control. For this project, he and his colleagues won the Chief Executive Officer's Employee Award in 2003 for their outstanding contribution to the Department and industry. During his time in Darwin he was diagnosed with prostate cancer, in a form that proved intractable to all treatments.

In 1997 he undertook a one-month assignment to the China-Hebei Watershed Management and Livestock Project as an IPM specialist. Here he developed an overview of crop pest problems and management practices in the project area, with particular attention to horticultural crops, corn and cabbages. He also developed and implemented a short IPM training course for relevant project staff and recommended future project-related IPM activities for training and implementation.

Graham always saw the big picture and had an unusual ability to analyse the key features of any problem, leading to rapid practical solutions. He was equally at home working with people from all cultural backgrounds and educational levels. His PNG colleagues had a high regard for him, as he did for them. At one stage he idly inquired what pay-back a group of them would seek if he was killed during fieldwork. They had no doubt that they would be able to get recompense to the extent of \$12000 or a second-hand Land Cruiser.

Always a keen gardener, and expert on the growing of native orchids, Graham added a Certificate in Horticulture to his formal qualifications in 1991. His participation in sport continued through most of his life. Graham travelled widely for both work and leisure interests. He could speak with knowledge and insight on a great range of subjects. He had an eclectic and practical interest in languages. His work in PNG had made him fluent in Neo-Melanesian. When I visited him in hospital he was studying Spanish, and bemoaned the fact that there was no-one in the ward he could speak Greek to - yet another accomplishment.

Graham was a Fellow of the Royal Entomological Society and a member of the Australian Entomological Society, the Entomological Society of NSW and the Australian Institute of Biology. His interest in entomology was unquenchable and the week before he died he was discussing how he could extend his work on tree psyllid nutrition, even though spinal tumours had seemingly relegated him to a wheelchair. It was typical of his courage and optimism that he never complained but looked forward to making the most of the future. A few days later, that future was suddenly cut short by pneumonia.

Despite Graham's achievements, his work was not known or appreciated at its full value by the Australian entomological community. Perhaps this was because much of his career was spent out of Australia, and his publications were commonly in local or industry journals and bulletins. Or perhaps his individual approach was, more often than not, ahead of its time. His fellow members and his family have lost a fine entomologist and good friend. We will long miss his knowledge, insight, wisdom, humour and companionship.

Dinah Hales

#### **Acknowledgments**

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