

Graham Francis Harris

29 November 1950 – 16 December 2006



International ethnobotanist remembered

The Open Polytechnic of New Zealand mourned the passing of Associate Professor Graham Harris, a leading international ethnobotany researcher, at the end of 2006.

With a career at the Polytechnic spanning 30 years, Graham was a programme leader for environmental studies at the distance education provider, specialising in the field of horticulture.

Holding a Masters of Philosophy, Graham established his research reputation in the mid 1990s and subsequently published a succession of academic papers, monographs, and book chapters which investigated the traditional food crops of Māori.

He developed an international reputation for his extensive research on nga riwai – the Māori potato, tracing Māori cultivation of the staple food crop back to its first introduction by Europeans in the late 18th Century.

His research documented how Māori used their agricultural knowledge of growing the kūmara they had brought with them from Polynesia, and applying this wisdom to successfully adapt and grow many different varieties of the potato. The various cultivars were

given Māori names, with it being likely that Māori developed some of their own varieties by growing plants from true seed contained within the potato berries, and making selections from the seedlings of those that had desirable qualities.

One particular potato, the 'Urenika', was grown widely around New Zealand and while it has links to the English variety known as 'Congo', it was also similar to a variety grown in the Andes in Peru – with some historians arguing that Māori grew potatoes such as this variety prior to the arrival of European explorers.

At one stage during his research Graham was growing up to 16 different varieties of the cultivars at home, including 'Murihiku', 'Whataroa', 'Uwhi', 'Rangatira' and 'Rongo'. "Some potato varieties have been passed down through families for generations," said Graham at the time. "Māori growers say they taste much better than modern types and there's some evidence they are more resistant to disease."

As his work became more widely known, Graham was regularly sent samples of Māori potatoes from throughout New Zealand, helping to expand his collection of the cultivars. Working tirelessly to classify the many different varieties of the tubers, he was also eager to share his knowledge, publishing many articles in local newspapers and gardening journals, always including his phone number so that keen gardeners could provide further clues for his study.

Graham's research attracted both national and international acclaim and recognition, including a PremioSlowFood Award for Conservation of Biological Diversity presented to him at Bologna University, Italy, in 2000. He also received an appointment as a Fellow of the Linnean Society of London in 2004, as well as being named an Honorary Research Associate at Lincoln University in 2005, and receiving an inaugural

Open Polytechnic Research Excellence Award that same year.

By 2003 Graham had turned his attention to pre-European Māori cultivation of the kūmara. Receiving a \$NZ250,000 grant from the prestigious National Centre for Advanced Bio-Protection Technologies, based at Lincoln University, he took on a five year project to research the cultivation and storage techniques Māori developed after they brought the kūmara to New Zealand from Polynesia around 1000 years ago.

Joined by fellow Open Polytechnic Senior Natural Resources lecturer Mike Burtenshaw, and honorary research fellows Dr Foss Leach and Dr Janet Davidson, the research team built traditional kūmara storage pits in the Seventeen Valley near Blenheim in Marlborough. Located near archaeological remains of several pre-historic kūmara pits, the site was gifted by the Grove Mill vineyard to local iwi and deemed a perfect site for the team to carry out the research.

Their research demonstrated how early Māori adapted the production cycle of the tropical plant to suit New Zealand's temperate climate, and also showed how they developed effective storage methods to protect their kūmara stocks from rot over winter.

Graham said that the research provided "answers to quite a few questions, helping to allay some misconceptions about the efficiency of pre-historic kūmara production by early Māori."

For example, it was previously believed that yields of 'traditional' kūmara varieties were low, and that Māori moved their gardens frequently because of soil nutrient depletion. The research team's findings are now casting doubts on these long-held beliefs.

Most recently Graham had again turned his attention to traditional Māori's relationship with the potato. His final Open Polytechnic

Working Paper published just months before he passed away looked at a little known potato blight epidemic. Entitled "*Te Paraiti: The 1905–1906 potato blight epidemic in New Zealand and its effects on Māori communities*", the research discusses how the potato blight that affected Ireland in the 1840s played itself out sixty years later in New Zealand.

The research highlights how Māori had become innovative horticulturists by the 1840s, successfully adopting commercial production of European crops including the potato, as well as their successful adaptation of the tropical kūmara, with their produce playing a significant part in feeding not only the local European population, but also being exported overseas.

But during the 1860s a combination of the land wars and a restriction on Māori finding new land to cultivate their crops saw a decline in their agricultural activities.

This – combined with low-grade seeds producing lower yields, Europeans increasing their own agricultural production, crop failures as Māori abandoned their old practice of planting by the stars resulting in crops being planted at the wrong time, and having to work for wages and give up growing crops due to land losses – spelled the end of Māori agricultural prosperity.

"By the late nineteenth century Māori had become dependant on the potato as their main staple crop," said Graham. "When the potato blight epidemic hit New Zealand between 1905 and 1906 it had a devastating effect on some Māori communities. The potato blight was a significant event in New Zealand's history, but today, 100 years later, little is known of it."

"The effects of the destruction of potato crops by blight were further compounded in 1906 by summer frosts that destroyed maize and kūmara crops, and damaged those potato crops that had survived the blight."

By mid-1906 the then Native Department, assisted by government departments such as Justice, Health, and the New Zealand Police, had swung into action to ensure that vegetable seeds and blight resistant seed potatoes were dispatched to Māori communities to prevent starvation.

Graham's research found that aside from the availability of blight fungicides by the early 1900s, there were two important contrasts between the potato blight epidemics in Ireland and New Zealand. Firstly, although Māori were reliant on the potato as a primary food source, they were not usually totally dependant on it as the Irish were. Secondly, the New Zealand

government provided considerable assistance to Māori, whereas in Ireland, the British government of the day did little to alleviate the situation.

Further career highlights for Graham included co-writing New Zealand's first degree course on ethnobotany in 2002, and working with colleagues in supporting Ngati Hinewaka in the Wairarapa in an ongoing project for the re-vegetation of ancestral tribal lands, as well as assisting in researching and locating plant materials that were used in the reconstruction of the Makotukutuku wharepuni (sleeping house) now displayed at Te Papa.

Graham Francis Harris, ethnobotanist, born Taranaki 29 November 1950, died Wellington 16 December 2006, age 56.

Obituary compiled by Leanne Rate; Leanne.Rate@openpolytechnic.ac.nz

A similar version of this obituary was published in *Grower* (March 2007, Vol. 62, No. 2, pp. 37–39; see http://www.thegrower.co.nz/article_view.php?aid=265).

Graham Harris contributed two excellent articles to previous issues of the *New Zealand Garden Journal* (The significance of rengarenga *Arthropodium cirratum* to Māori, June 1996, Vol. 1, No. 2, pp. 19–21; Huperei — the Black Orchid, Sept 1997, Vol. 2, No. 3, pp. 7–9).