OBITUARY - John Douglas Campbell, Geologist and Paleobotanist

By Bill and Daphne Lee

John Douglas (Doug) Campbell unexpectedly passed away on 29th July 2001, aged 74, at his holiday home in Warrington. Doug was a major influence and an important person in the lives of many people in Dunedin: as a teacher, field companion, fellow explorer, colleague, academic mentor, conservationist, and very good friend. Doug graduated in both geology and botany, and it is his knowledge, appreciation, and enjoyment of plants and the environment that will be remembered by many Botanical Society Members.

The outdoors featured largely in Doug's life, perhaps derived from his youth in the countryside near Wanganui. This, coupled with his deep interest in the origin and history of the NZ environment, attracted him to geology. However, as a geologist, paleontologist and stratigrapher, Doug had a long-standing deep interest in living and fossil plants from all parts of New Zealand. The progress that has been made in plant macrofossil research over the last few decades has been in large part due to Doug's efforts, particularly through his supervision and encouragement of post-graduate students.

Doug was an insightful and meticulous observer, who made detailed observations and drawings of the plant leaves, seeds and fruit he collected. As well as clear, detailed comments on rocks and fossils, his field notebooks recorded the time spent at each outcrop, and the people who accompanied him in the field. On a trip to the Hokonuis in Southland, a few days before his death, Doug produced his field book from his first visit to this locality in 1952.

In the often fragmentary plant remains in the rocks (usually bits of stem or leaves or rarely fruits) Doug saw things most trained botanists would have missed, and he was involved in accumulating for the Geology Department at the University of Otago an outstanding collection of plant macrofossils from all over New Zealand. Discussions with Doug about the plants of the past were always enlightening. He would comment on the warmth-loving plants that occupied Otago and Southland, emphasize the links between these plants and the flora of New Caledonia today, and highlight the amazing similarities between some living and fossil fragments he had discovered. For many of us these talks were very formative in shaping our interests and views of New Zealand's changing flora and vegetation during Cenozoic times.

Doug was careful about naming fossil plants after modern species, and we all delighted in debating the topic. Recently Doug sent away the final manuscript on plant fossils from Landslip Hill near Gore to the Journal of the Royal Society of NZ. This represents the culmination of more than 20 years of careful collecting and research.

Plants, especially the native flora, were a great source of interest and enjoyment for Doug. He derived deep satisfaction from examining plants, growing them, harvesting them and just working amongst them. He was a great gardener, especially at

Warrington, where he enjoyed the challenge, and occasional frustration, of growing plants in a coastal environment with the salt spray and wind.

Doug was less concerned about the appearance of his garden. His interest was in the plants themselves. Each one had a story, either related to where he had collected them on geology trips all over New Zealand, or to a research question he had about the variation in leaf shape or size. He had speargrass, native brooms, shrubby *Coprosmas*, little *Gunneras*, and the occasional special *Celmisia*. He wanted to bring tui and bellbird around the house and was always on the lookout for good nectar-producing species.

His knowledge of the plants in the native section and surrounds of the Dunedin Botanic Gardens was unsurpassed. Derived from observations during daily walks over many years from his home in Opoho to the Geology Department, Doug knew the seasonal and annual patterns of flowering and fruiting, he pondered the original *vs* the planted species in the gardens, he saw the aggressive and passive species, and had numerous stories about the impacts of different gardeners on the Botanic Gardens. He greatly valued the Gardens and used them in his research on the identification of fossil leaves and fruits.

Restoration ecology is becoming increasingly important in New Zealand as we seek to support native plants and animals in previously totally modified environments in and near our cities. Doug's pioneering efforts at building his own wetland in a paddock at Warrington gave him immense pleasure. Modifying the local water table, controlling the weeds, planting native sedges, shrubs, and trees, were all undertaken with considerable thought, hard work, and a certain degree of stubbornness that often characterised his projects. He delighted to discuss what was happening in the wetland, and to share ideas on the most suitable species to plant. This was perhaps more challenging than expected because Doug would only plant natives that were naturally growing in the catchment as viewed from the site!

Although Doug had been formally retired from the University for more than a decade, he continued in active and productive research. As students and colleagues, many of us appreciated Doug's thoughtful advice as a mentor, his sharing of experience and geological insights, his and Ann's generous hospitality, and his enthusiasm for understanding the geological history of our land. We remember him with great affection and gratitude.

A few of Doug's paleobotanical contributions are listed below. A planned memorial volume of the Journal of the Royal Society of New Zealand will include several of Doug's manuscripts, and contributions from other colleagues on brachiopods, Triassic/Jurassic stratigraphy, and fossil plants.

Campbell, J. D. 1985. Casuarinaceae, Fagaceae, and other plant megafossils from Kaikorai Leaf Beds (Miocene), Kaikorai Valley, New Zealand. New Zealand Journal of Botany 23: 311-320.

Campbell, J.D. in press: Angiosperm fruit and leaf fossils from Miocene silcrete, Landslip Hill, Southland, New Zealand. Journal of the Royal Society of New Zealand

Campbell, J. D., Fordyce, R. E., Grebneff, A., and Maxwell, P. A. 1991. Coconuts, coconuts, coconuts. Geological Society of New Zealand newsletter 92: 437-438.

Campbell, J. D., Fordyce, R. E., Grebneff, A., and Maxwell, P. A. 2000. Fossil coconuts from mid-Cenozoic shallow marine sediments in southern New Zealand. Geological Society of New Zealand Annual Conference 2000, programme and abstracts. Geological Society of New Zealand miscellaneous publication 108A: 21.

Campbell, J. D. and Holden, A. M. 1984. Miocene Casuarinacean fossils from Southland and Central Otago, New Zealand. New Zealand Journal of Botany (22): 159-167.

Campbell, J. D., Lee, D. E., and Lee, W. G. 2000. A woody shrub from the Miocene Nevis Oil Shale, oOtago, New Zealand - a possible fossil divaricate? Journal of the Royal Society of New Zealand 30 (2): 147-153.

Kovar, J. B., Campbell, J. D., and Hill, R. S. 1987. *Nothofagus ninnisiana* (Unger) Oliver from Waikato Coal measures (Eocene-Oligocene) at Drury, Auckland, New Zealand. New Zealand Journal of Botany 25: 79-85.

Pole, M. S., Campbell, J. D., and Holden, A. M. 1989. Fossil legumes from the Manuherikia Group (Miocene), Central Otago, New Zealand. Journal of the Royal Society of New Zealand 19 (3): 225-228.

BOTANICAL DIARY.

Australasian Bryological Workshop, 20 –26 Sept, 2001. **Blue Mountain, NSW**. The sixth of a series of informal workshops, with the aim of providing a forum for bryologists to get together for an interchange of ideas, to compare and contrast the bryoflora of different areas of Australia and to develop skills in recognising taxa in the field. Elizabeth Brown, email: **rbgsyd.nsw.gov.au**

NZ Moss Foray, 22 – 27 Nov, 2001. The 17th John Child Bryophyte Workshop will be held at the **Tauherenikau** Race Track, near Featherston, an hour north of Wellington. More details on Botany Dept noticeboard or contact Barbara Polly, email: barbarap@tepapa.govt.nz, Post: Te Papa, PO Box 467, WELLINGTON

Seed Symposium, 29 Nov, 2001: **New Zealand Seeds – their morphology, ecology and use as indicators**. This symposium, organised by Landcare Research and the New Zealand Botanical Society, will be held at **Lincoln University** on Thurs 29th Nov. It will mark the launch of **"Seeds of New Zealand – Gymnosperms and Dicotyledons"** by Colin Webb and Margaret Simpson. There will be other associated events around the day. **Contact**: A McGlinchy, Landcare Research, Box 69, Lincoln.
Email: *mcglinchy@landcare.cri.nz*

Botanical Society Summer Field Trip, 27 Dec – 5 Jan, **Twizel** area. Keep these dates free. Otago members are welcome to join the Wellington Botanical Society on their summer field trip. Based at Twizel and L Ohau, which should provide good access to alpine plants at surrounding skifields and alpine areas, with some interesting valleys to explore at the heads of the lake. Registration forms from Julia White, Wellington Botanical Society, Box 10-412, Wellington, email: alanwhite@the.net.nz