OBITUARY PROFESSOR WILLIAM DALZIEL JACKSON, 1921–2002

by James B. Reid

(with one plate)

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Emeritus Professor Bill Jackson

Emeritus Professor Bill Jackson is remembered as an academic, botanist, ecologist and geneticist. He was all of these things and much more. He was a truly inspirational teacher who made time available to students regardless of what else was on. An insightful researcher, he established the core principles of ecological theory that describe the processes shaping the Tasmanian vegetation. He was a leader and visionary who saw the way forward in botanical research and fostered its development over nearly 50 years. He was head of the Department of Botany at the University of Tasmania for over 20 years. Bill Jackson, or Prof as he was known by generations of students, led from the front and took the big decisions. The paperwork was left to others or the circular filing cabinet.

Prof was born in Hobart, Tasmania, in 1921. After completing an instrument-maker course at the Launceston Technical College, he served as an artificer with the AIF in the Pacific arena during WWII. He began his studies at the University of Tasmania in 1946 and graduated with a B.Sc. Honours degree in Botany in 1952. He joined the staff of the Botany Department as a Demonstrator in the same year. He completed his Ph.D. in 1960 under the supervision of Professor H. Newton Barber FRS. His thesis, as with all his research, included ground-breaking work on clinal variation in eucalypts and chromosomal damage from X-rays.

His work on eucalypts was ahead of his time (Jackson 1960) and, consequently, traditional taxonomists were reluctant to accept his view of the genetic continuum of clinal variation between species. We easily accept this concept today, but in the 1950s the concept of the immutability of species was still dogma, at least among many taxonomists who refereed his manuscripts. His work laid the foundations

for many student projects in the following four decades and led to international recognition for the University of Tasmania as a centre for the genetic studies of eucalypts. He received the David Syme Medal for this research in 1960, a medal awarded by the University of Melbourne for the most distinguished science during the previous two years. Former students have spread far and wide, all enthused by Prof's deep and abiding interest in why variation occurs within and between plant species.

His other great passion was the love of the Tasmanian bush and his knowledge of its plant communities. His work laid the foundations for our current understanding of plant ecology in Tasmania. His insights into the role of fire and humans on our environment were extraordinary. They covered communities from dry, coastal areas, through our wet sclerophyll and rainforest regions to the alpine habitat (e.g., Jackson 1968, 1999b,c,d). He managed to see systems as dynamic and interactive. He understood probabalistic events and hence how chance events could shape plant communities. This he used to explain how wet sclerophyll communities developed and changed over time and led him to be active in the public debate over forests and forestry well before it became politically popular.

His influence was best seen through his legendary style and approach to his favourite course, Field Botany, which he established in the early 1970s and continues today. Students 30 years his junior could not keep up with him. He would be calling out species names and descriptions with vigour and enthusiasm from morning until after dusk. He would become absorbed with the plants and he would not stop for lunch until after 3 pm. The students would be feeling the pinch but if Prof could do it, how could they wilt? Tea would be the same. Prof would keep going well past the normal cut-off time and then they would still have to walk back from the Tarn Shelf or K-Col or wherever they had ended up at the end of the day, getting back after dusk on numerous occasions. He was in his element telling stories around the camp-fire or in the hut at night, imparting knowledge and views about conservation and forestry to generations of students over a quiet drink.

Bill Jackson was appointed Professor of Botany and Head of Department in 1966 and he remained Head of Department until a year before his retirement in 1986. Over that period he built up the infrastructure of the Department in all the major areas for which the Department is recognised nationally today — eucalypt genetics, developmental genetics, ecology and algal studies. He would actively participate in the design and development of specialist facilities and we often joked that he was the highest paid technician in the University. One of the strangest examples was the cyclic salt collector, which was designed to test how much of the nutrient input to oligotrophic environments of west and southwest Tasmania came from rain and how much from the soil. You may have seen them around the state. Prof used his design expertise to help others examine problems.

This exemplified his leadership style. He identified potential in researchers and encouraged them and provided the resources necessary to make the research successful. His vision in this area is the main reason the Department of Botany was successful under his leadership and has continued to be successful years after his retirement. Many former students of the Department are indebted to his support and encouragement for their careers.

His dedication to the Department, University and its students did not end on retirement. Prof continued with his research right up until a few weeks before his death. Indeed he published a paper on nutrient ecology in 2000 (Jackson 2000) and one paper on a topic he began investigating over 40 years ago, the genetic variation in trigger plants, was published in 2001 (Jackson & Wiltshire 2001). In his retirement, he made substantial donations to the University to establish scholarships to allow future generations of students to undertake studies in botany and genetics. His generosity of time over his 56 years on campus also inspired many students to continue their studies.

He was active in departmental life right to the end. He would come to morning and afternoon tea for his game of crib and offer advice to staff and students. Prof will be remembered by generations of students as a great teacher, someone who always questioned why things were the way they were, someone who cared deeply for them and who always had the time available to discuss an issue or stay beyond the end of a practical class if others were interested. He was an inspirational Tasmanian who has made crucial and lasting discoveries on the nature of the Tasmanian vegetation and the factors that control its communities and their distribution. He always could see the broad overview — he was an integrator and ideas person.

In honour of Prof's contribution to botanical research in Tasmania, a public symposium was held in October 2002, under the auspices of the School of Plant Science, the Royal Society of Tasmania and the Ecological Society of Australia. Some of the proceedings of that symposium are presented in the following articles, prepared by his former students to commemorate his memory and to give a glimpse into two of the areas of botany that fascinated him. They cover the development of research on *Eucalyptus* and his role in it, and an overview of the cytological variation in the Tasmanian flora.

BIBLIOGRAPHY

- BARBER, H.N. & JACKSON, W.D., 1957: Natural selection in action in *Eucalyptus. Nature* 179: 1267–1269.
- BARBER, H.N., JACKSON, W.D. & MURFET, I.C., 1958: Gibberellic Acid and the physiological genetics of flowering in peas. *Nature* 182: 1321–1322.
- BOWMAN, D.M.J.S. & JACKSON, W.D., 1981: Vegetation succession in southwest Tasmania. *Search* 12: 358–362.
- DUFF, G.A., REID, J.B. & JACKSON, W.D., 1983: The occurrence of mixed stands of the *Eucalyptus* genera *Monocalyptus* and *Symphomyrtus* in south-eastern Tasmania. *Australian Journal of Ecology* 8: 405–414.
- HARWOOD, C.E. & JACKSON, W.D., 1975: Atmospheric losses of four plant nutrients during a forest fire. *Australian Journal* of Forestry 38: 92–99.
- JACKSON, W.D., 1958: Natural hybrids in eucalypts, Part I. E. x taeniola (E. salicifolia x E. sieberiana). Papers and Proceedings of the Royal Society of Tasmania 92: 141–146.
- JACKSON, W.D., 1958: Chromosome numbers in Tasmanian Goodeniaceae and Brunoniaceae. Papers and Proceedings of the Royal Society of Tasmania 92: 161–163.
- JACKSON, W.D., 1959: The three-dimensional or solid-image microscope. *Nature* 183: 1048–1049.
- JACKSON, W.D., 1959: The life-span of mutagens produced in cells by irradiation. *Radiation Biology*: 190-208.
- JACKSON, W.D., 1960: Clinal variation in *Eucalyptus vernicosa*. Part 1. Taxonomic treatment. Unpublished Ph.D. thesis, University of Tasmania.
- JACKSON, W.D., 1965: Vegetation. In Davies, J.L. (Ed.): Atlas of Tasmania. Lands and Surveys Department, Hobart: 30–35.
- JACKSON, W.D., 1968: Fire, air, water and earth, an elemental ecology of Tasmania. *Proceedings of the Ecological Society* of Australia 3: 9–16.
- JACKSON, W.D., 1968: Fire and the Tasmanian flora. *Tasmanian* Year Book 11: 50–55.
- JACKSON, W.D., 1973: Vegetation of the central plateau. In Banks, M.R. (Ed.): The lake country. Royal Society of Tasmania, Hobart: 61–86.
- JACKSON, W.D., 1974: Conservation in Tasmania. In Specht, R.L., Roe, E.M. & Broughton, V.H. (Eds): Conservation of major plant communities in Australia and Papua New Guinea. CSIRO, East Melbourne: 319–448.
- JACKSON, W.D., 1977: Nutrient cycling in Tasmanian oligorrophic environments. *In* Proceedings of a Symposium on Nutrient cycling and indigenous forest ecosystems, CSIRO, Perth: 122–123.
- JACKSON, W.D., 1978: Ecological drift: an argument against the continued practice of hazard reduction burning. *In* Gee, H. & Fenton, J. (Eds): *The South West Book*. Australian Conservation Foundation, Melbourne: 98–102.
- JACKSON, W.D. (Ed.), 1981a: Vegetation of Tasmania. University of Tasmania, Hobart.
- JACKSON, W.D., 1981b: The Tasmanian environment: climate. In Jackson, W.D. (Ed.): Vegetation of Tasmania. University of Tasmania, Hobart:1–4.
- JACKSON, W.D., 1981c: Vegetation. In Jackson, W.D. (Ed.): Vegetation of Tasmania. University of Tasmania, Hobart: 11–16
- JACKSON, W.D., 1981d: Fire-patterned vegetation. In Jackson, W.D. (Ed.): Vegetation of Tasmania. University of Tasmania, Hobart: 17–35.
- JACKSON, W.D., 1981e: Wet sclerophyll. In Jackson, W.D. (Ed.): Vegetation of Tasmania. University of Tasmania, Hobart: 68–72.

- JACKSON, W.D., 1983: Tasmanian Rainforest Ecology. *In* Blakers, R. & Robertson, P. (Eds): *Tasmania's Rainforests: What Future*? Australian Conservation Foundation, Hobart: 9–39
- JACKSON, W.D., 1999a: The Tasmanian legacy of man and fire. Papers and Proceedings of the Royal Society of Tasmania 133: 1-14.
- JACKSON, W.D., 1999b: Vegetation types. In Reid, J.B., Hill, R.S., Brown, M.J. & Hovenden, M.J. (Eds): Vegetation of Tasmania. Australian Biological Resources Study, Melbourne: 1–10.
- JACKSON, W.D., 1999c: The Tasmanian environment. In Reid, J.B., Hill, R.S., Brown, M.J. & Hovenden, M.J. (Eds): Vegetation of Tasmania. Australian Biological Resource Study, Melbourne: 11–38.
- JACKSON, W.D., 1999d: Palaeohistory of vegetation change: the last two million years. *In* J.B. Reid, R.S. Hill, M.J. Brown & M.J. Hovenden (Eds): *Vegetation of Tasmania*. Australian Biological Resources Study, Melbourne: 64–88.
- JACKSON, W.D., 2000: Nutrient stocks in Tasmanian vegetation and approximate losses due to fire. *Papers and Proceedings* of the Royal Society of Tasmania 134: 1–18.
- JACKSON, W.D. & BARBER, H.N., 1958: Patterns of chromosome breakage after irradiation and ageing. *Heredity* 12: 1–25.
- JACKSON, W.D. & BOWMAN, D.M.J.S., 1982a: Slash burning in Tasmanian dry eucalypt forests: Comment. Australian Forestry 45: 63–67.

- JACKSON, W.D. & BOWMAN, D.M.J.S., 1982b: Reply: Ecological drift or fire cycles in south west Tasmania. Search 13: 175–176.
- JACKSON, W.D. & BROWN, M.J., 1999: Pattern and process in vegetation. In Reid, J.B., Hill, R.S., Brown, M.J. & Hovenden, M.J. (Eds): Vegetation of Tasmania. Australian Biological Resources Study, Melbourne: 357–380.
- JACKSON, W.D. & WILTSHIRE, R.J.E., 2001: Historical taxonomy and a resolution of the *Stylidium graminifolium* complex (Stylidiaceae) in Tasmania. *Australian Systematic Botany* 14: 937–969.
- MACPHAIL, M.K. & JACKSON, W.D., 1978: The Late Pleistocene and Holocene history of the Midlands of Tasmania, Australia: Pollen evidence from Lake Tiberias. *Proceedings of the Royal Society of Victoria* 90: 287–300.
- MACPHAIL, M.K., SHEPHERD, R.R., BROWN, M.J. & JACKSON, W.D., 1975: Norfolk Range Area Environment Statement. Tasventure Environment Centre, Devonport.
- POTTS, B. M. & JACKSON, W. D., 1986: Evolutionary processes in the Tasmanian high altitude eucalypts. *In* Barlow, B.A. (Ed.): *Flora and Fauna of Alpine Australasia. Ages and Origins.* CSIRO, Melbourne: 511–527.

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