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The Printery, Massey University http://printonline.massey.ac.nz
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ISSN 1173-7425

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Front Cover

Mountain neinei (*Dracophyllum traversii*), a distinctive dragon-leaf tree of New Zealand. Image: ©Paul Ashford (www.NZplantpics.com).

From the Editors

To gardeners and horticulturists it may seem annoying to learn that botanists have yet again changed the names of their beloved plants. However, these new names are intended to more accurately reflect relationships of that plant with its relatives. Considerable progress has been made by botanists using traditional taxonomic methods as well as the latest DNA techniques and this issue presents a special feature on their research into the New Zealand native flora. Although this is a rather technical and complex field we hope these articles help to demystify and explain this research.

Dr Peter Heenan of the Allan Herbarium, Landcare Research, delivered the 2007 Banks Memorial Lecture in Christchurch, in association with the NZ Gardens Trust 'Southern Splendour' conference, held 4–6 May 2007. Peter's lecture is published here and provides some examples of recent research.

We follow this with related articles from Peter Heenan's colleagues. Four of these are based on contributions to the magazine *NZ Science Teacher*, issue 116, 2007. The other article summarises the mounting DNA evidence that much of the New Zealand flora is more recently derived than has generally been accepted.

Congratulations to the 2008 RNZIH award recipients – Helen Leach for her Award in Garden History and our new Associates of Honour, Peter Arthur and Peter Sergel. We will publish their citations, as well as several obituaries in the next issue of this journal (Vol. 11, No. 2, Dec. 2008).

We conclude with some botanical book reviews. Andrew Maloy presents an original review on a guide to plant names, and three reviews are reproduced courtesy of the *NZ Journal of Botany*.

Murray Dawson and Andrew Maloy

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Feature on plant taxonomy and DNA

The 2007 Banks Memorial Lecture:
'Discovery and description' of the New Zealand flora:
a contemporary perspective

Botanist Peter Heenan provides some examples of recent taxonomic research, including aspects of conservation, biogeography, and the role of DNA data.

DNA sequencing and analysis: How it's done

David Glenny, Steve Wagstaff, and Murray Dawson explain how DNA sequencing works.

The second Linnaean revolution:

DNA sequencing and its impact on traditional taxonomy
David Glenny and Murray Dawson reveal the impact that DNA
research is making on plant names and traditional taxonomic
classifications

Dragons in the mist

David Glenny interviews Steve Wagstaff on his *Dracophyllum* research.

The New Zealand flora:

'Moa's Ark' or 'Fly-paper of the Pacific'?

Murray Dawson and Richard Winkworth review recent DNA evidence that shows the New Zealand flora to be much more recent that previously thought.

Unravelling the fibres of harakeke evolution

Rob Smissen and Peter Heenan use DNA fingerprinting techniques to unravel the relationships within harakeke (New Zealand flax or *Phormium*).

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Plant Names: A guide to botanical nomenclature

By Roger Spencer, Rob Cross, and Peter Lumley, reviewed by Andrew Maloy.

Flowering Plant Families of the World

By V.H. Heywood, R.K. Brummitt, A. Culham, and O. Seberg, reviewed by Peter Heenan.

Natural History of Rangitoto Island

By the Auckland Botanical Society (edited by Mike Wilcox), reviewed by Bruce Clarkson.

Wild Orchids of the Lower North Island: Field guide 2007 By Peter de Lange, Jeremy Rolfe, Ian St George, and John Sawyer, reviewed by Murray Dawson.