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The current status of biogeography in New Zealand

Michael Heads

A recent biogeography symposium held in Lincoln, New Zealand brought together a wide range of authors to discuss aspects of Southern Hemisphere biogeography. Although the full papers have not been published together, the abstracts were collated (Stewart 2000) and these allow a summary analysis of the authors' views. Many of the abstracts supported either a recent center of origin/long distance dispersal (l.d.d.) paradigm or ancient vicariance for the origin of

the various groups studied. (Vicariance is a term and concept introduced by Leon Croizat 1958, 1964, and subsequently developed by several Ph.D. students in New Zealand through the 1970s and 80s, cf. Matthews 1990, Craw *et al.* 1999). Not all the symposium papers could be allocated to one or other model, but the 20 that could revealed an interesting pattern, as the following table shows.

Author	Taxon studied	Author's country	Model	Notes
Bickel	Diptera	Australia	vicariance	
Burckhardt	Hemiptera	Switzerland	vicariance	
Cameron	orchids	U.S.A.	vicariance	
Hansen & Richardson	Parastacidae	Australia	vicariance	
Harvey	Arachnida	Australia	vicariance	
Swenson <i>et al.</i>	<i>Nothofagus</i>	Sweden/Australia	vicariance	(basally in the subgenera)
Henderson & Gullan	Hemiptera	NZ/Australia	vicariance	
Smith <i>et al.</i>	molluscs	Australia	vicariance	
Smith & Villouta	benthic taxa	Chile/NZ	?vicariance	('Gondwanic links')
Johns	Orthoptera	NZ	?vicariance	('late in the Cretaceous')
Sponer <i>et al.</i>	echinoderms	NZ	?vicariance	(l.d.d. at 100 Ma)
Hoare	Lepidoptera	NZ	l.d.d.	
Jordan	angiosperms	Tasmania	l.d.d.	
Simon <i>et al.</i>	cicadas	NZ/USA	l.d.d.	
Wagstaff <i>et al.</i>	plants	NZ/Chile	l.d.d.	
Waters & Wallace	galaxiid fishes	NZ	l.d.d.	
Winkworth & Lockhart	angiosperms	NZ	l.d.d.	
Winkworth <i>et al.</i>	<i>Myosotis</i>	NZ	l.d.d.	
Stöckler	<i>Nothofagus</i>	NZ		(Pleistocene glaciation)
Wagstaff & Dawson	<i>Corynocarpus</i>	NZ	l.d.d.	('Centre of origin')
Wagstaff & Swenson	<i>Tetrachondra</i>	NZ/Sweden	l.d.d.	

There is a clear pattern, with authors from New Zealand supporting center-of-origin/long-distance dispersal models, and authors from other countries favouring vicariance. This reflects current funding practices in New Zealand science. For example, all four proposals to FRST for funding of panbiogeographic (vicariance) research have been rejected, with the Foundation relying each time on reviewer input from opponents of panbiogeography. It is hardly accidental that of the original New Zealand panbiogeographers, two (Craw and Climo) lost their jobs, four (Grehan, Heads, Page and Tangney) found employment overseas, while two (Gray and Henderson) found work in New Zealand but have never again publicly supported panbiogeography.

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Ironically, in his influential account of contemporary systematics Hull (1988) proposed the term 'New Zealand school' of biogeography for the New Zealand panbiogeographers. The critical importance of the New Zealand school in the development of biogeography is now widely acknowledged by a growing group of panbiogeographers in countries such as Argentina, Mexico, Venezuela, Brazil, Colombia, Spain and Italy (e.g. Llorente Bousquets and Morrone, 2001, Luna-Vega *et al.* 2001). This is probably the first time that a group of New Zealand biologists has had such a direct influence on the science in South America and Europe.

Katie Reynolds

Graeme Platt

"The most humble weed is no less interesting than a mighty forest giant and deserves equal consideration".

I vividly remember the events surrounding my first ever encounter with the late Katie Reynolds. One of the workers at the Nursery came running to say that there was a grumpy old lady in the retail area wanting to speak to me. When I entered the shade house Katie asked in her imperious manner "Where did I get hold of that?" as she prodded a small specimen of a rare native fern *Davallia tasmanii* endemic to the Three Kings Islands with her walking stick. I replied that Ross Michie had given me a piece out of his garden at Kaitaia. "You know Ross then, it's the only place you could have obtained it", was her rejoinder.

Katie was a remarkable plantswoman: she not only knew her plants, in this case my plants, she also instinctively knew where I got them from. Like many great people, her at times brusque exterior totally belied her true inner warmth and the generous heart of a truly wonderful lady. So began a friendship that lasted up until the time of her death, each time I passed through Whangarei, calling in to see Katie became an obligatory event. Time to have a chat –

that at times lasted all day -and to collect seeds and cuttings from her garden.

It has taken the rest of the country over sixty years to catch up to Katie. It was in her garden that I first encountered many rare native trees and plants. She had a collection obtained from Northland and the northern offshore islands during her boating days. Among her treasures were *Pittosporum fairchildii*, *Tecomanthe speciosa*, *Pseudopanax ferox*, *Pseudopanax gilliesii*, *Nestegis apetala*, *Cordyline kasper*, *Xeronema callistemon*, *Coprosma macrocarpa*, *Pomaderris rugosa*, the Poor Knights Island forms of *Hoheria populnea* and *Hedycarya arborea*, and the three rare northern hebes, *Hebe speciosa*, *H. bollonsii* and *H. brevifolia*, amongst others. I first encountered the deep violet-flowered *H. macrocarpa* var. *latisejala* in her Anzac Rd garden. *Pittosporum dallii*, from the bleak and at times frigid Cobb Ridge in the mountains of North West Nelson was thriving on a poor clay bank alongside a large grove of bananas in her subtropical garden.

Katie was a friend and colleague of the two great Lucy's of New Zealand botany, Lucy Cranwell, and Lucy Moore. It was via Katie that I often felt as if I