

a great deal without some further explanation or, preferably, with an accompanying scientific name. Distribution is given using town names and geographical features, many of which, regrettably, do not feature on the location maps in the front and back end-papers.

The distribution maps, although much reduced in size from those in the first edition, are certainly large enough to clearly depict the currently known range of each species. Where the species also occurs in eastern states, this is sometimes stated in the text and sometimes it is not.

Probably the most controversial aspect of this publication is the creation of three new genera, *Praecoxanthus*, *Cyanicula* and *Drakonorchis*, to accommodate several species previously included in *Caladenia*. Also the placement of *Caladenia menziesii* into the monotypic genus *Leptoceras*, the inclusion of *Lyperanthus nigricans* and *L. forrestii* in *Burnettia* and the continued use of the generic name *Paracaleana* are noteworthy. How these proposed changes are to be regarded by the taxonomic community only time will tell.

The use of hybrid names, particularly in *Caladenia*, is at times confusing. For example, on page 43, *C. X ericksoniae* is said to be a natural hybrid between *C. polychroma* and *C. cairnsiana*. On pages 51 and 131, *C. X ericksoniae* is said to be a natural hybrid between *C. incensa* and *C. pachychila*. Such anomalies have arisen due to the splitting up of one or both parent species into several distinct species. Where this has occurred, surely a narrower view should be taken as to the true identity of the named hybrid.

The south-west corner of the Australian continent contains one of the world's most beautiful, fascinating and complex terrestrial orchid floras. This book is by far the most useful and comprehensive treatment of the orchids of that region yet to appear. I would strongly recommend it, not only to students of Western Australian orchids, but also to those with an interest in orchids in general.

Jeff Jeanes

MAPPING THE CONTEMPORARY DISTRIBUTION OF NEW ZEALAND'S ORCHIDS

Ian St George and Ben Stewart,
Wellington, N.Z.

INTRODUCTION

From its beginning in 1983 the New Zealand Native Orchid Group collected information on the whereabouts of wild orchid species. New Zealand is a long thin country and orchid enthusiasts were occasional to rare — we had little opportunity to meet and talk and we needed the Group's *Newsletter* as a forum. Early issues were rich in regional lists of species. At least to some extent at first the exercise was one of familiarisation — many of us were beginners and we wanted to know where to go and look for unfamiliar species. There was at the same time a perception that the destruction of habitat was accelerating and that the "official" ranges of many species were possibly inaccurate and certainly out of date. What we needed were modern reports of where the orchids were.

By 1987 the Group had about 150 members, mostly knowledgeable amateurs, but with a sprinkling of professional botanists too — and relations were convivial. Perhaps everybody recognised that expertise in this subject is as likely to result from self education by the enthusiast as from formal education in a tertiary institution: there was little of the unhealthy anxiety about amateurs evident elsewhere.

MAPS

A couple of years earlier the Department of Conservation had produced maps of New

Zealand's Ecological Districts and Regions. Though by 1973 there were already no less than 43 systems of subdividing New Zealand for administrative purposes, this was something new. In 1979 a workshop had recommended that a Biological Resources Centre be established, to "plan for and see developed a co-ordinated approach to taxonomic, distributional and ecological resource studies so that data are available in a useful form for management and research purposes". Our Reserves Act of 1977 was to be the spur, for one of its purposes was to ensure the "preservation of representative samples of all classes of natural ecosystems and landscapes which in the aggregate originally gave New Zealand its own recognisable character".

By 1982 over 260 Ecological Districts in 85 Ecological Regions had been suggested: Dr Brian Molloy, mentor of New Zealand orchidologists, was closely involved in the South Island mapping. First edition maps were widely distributed for advice and comment and second editions were developed by 1983.

An Ecological District was defined as "a local part of New Zealand where the topographical, geological, climatic, soil and biological features, including the broad cultural pattern, produce a characteristic landscape and range of biological communities". It is important to recognise that

Ecological Regions of New Zealand



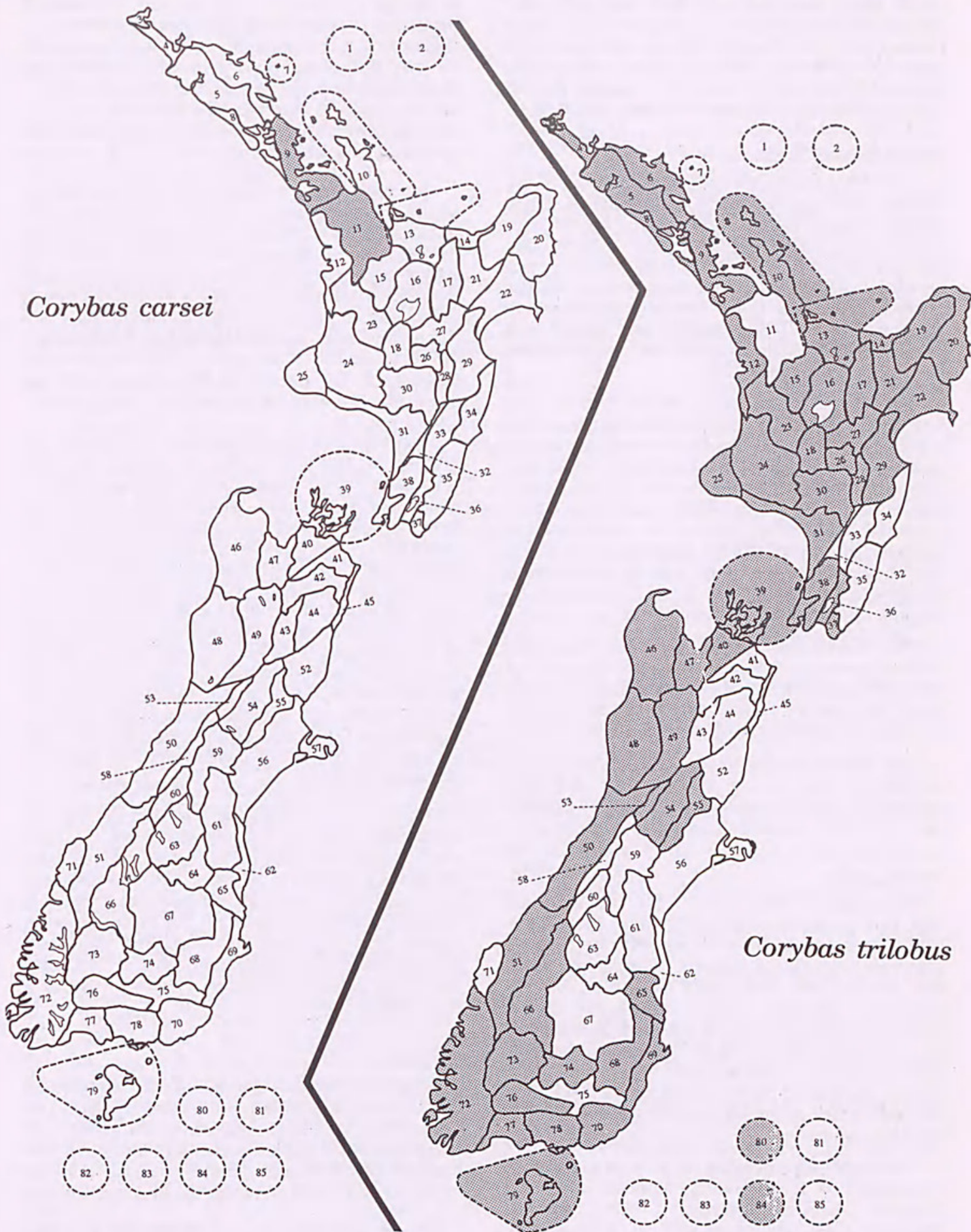


Figure 3

Distribution Maps

these were not faunistic, not botanical, not landscape, nor habitat: but areas of *ecological* homogeneity. A Region was an aggregation of adjacent Ecological Districts with very closely related characteristics (in some cases a Region was one Ecological District with unique features).

ORCHID MAPPING

In 1987 the distribution mapping effort of the Group was formalised into a national Mapping Scheme. Observations were accepted from a twenty year period (1972 to 1992) representing the current status of orchid distribution and people could report any contemporary or earlier observations from those two decades for five years ending in 1992. Funding was sought and granted from Lottery Science and annual grants have been made since 1987.

Reporting forms were devised and were included in *Newsletter* mailings several times. For a particular Region, reporters would list orchid species, giving additional information on habitat, flowering times, associations and abundance. It was soon realised that the request for these collateral data either made the reporting too complex to be sufficiently accurate, or actively discouraged reporting: in the end we settled for a simple format asking for a list of species by Region, with the date as the only extra.

We recognised that the 260 plus Ecological Districts were the fundamental units, but we had only 150 members and pragmatism demanded the art of the possible — we settled for recording by the 85 Ecological Regions.

As reports came in they were coded by Ecological Region and entered on an IBM compatible wordprocessing program by species and by Region, for later transfer to maps.

PROBLEMS

The official maps were too big and too expensive to reproduce for everyone, though the boundaries among different Regions were clear; when the maps were redrawn to a smaller scale the boundaries were hard to interpret. A Matamata resident wrote: "I drove fifteen kilometres from Te Poi up into the Kaimais on the Tauranga Road and I walked about a kilometre north. I am not sure whether or not I crossed the border between Regions 11 and 13?" We could refer to the large scale maps and make the determination.

The Ecological Regions maps were eventually reproduced on a MacIntosh computer using the program Adobe Illustrator. This program produced high quality images in a Postscript format, which allowed the production of different sizes of images or line weights without loss of

resolution. Ecological Regions can be shaded, patterned or colourised for printing. Sadly, the program is not compatible with the data sorted on an IBM compatible personal computer, so they have had to be re-entered. Every researcher knows that the more often data have to be entered manually, the greater the fallout and the greater the eventual error.

We are largely a Group of amateurs, but we are the best we have. A scheme such as this could not work if it relied on reports from the professionals interested in orchids: there are simply not enough of them. But amateurs make mistakes in classification. We provided the names of several experts who might identify a plant when the finder was uncertain as to its species, but were unable to recognise, let alone intervene when the finder was certain but wrong. That kind of error is the bane of any multicentric research.

We live (meekly protesting) in the day of the taxonomic splitter, trying to keep up with increasing numbers and new names. Where a recognised species has been divided into several new ones, the amateur is late to realise what has happened. What does the distribution mapper do when a report of *Caladenia carnea* comes in? Is it the new and restricted version of *C. carnea*, or does the reporter mean one of the several now separate species once included in *C. carnea* such as *C. iridescens*, *C. alata*, *C. catenata*, *C. minor*, *C. "green column"* and so on? Where the professional in doubt would make no report or would check the current status, the amateur might report any one of the possibilities. And, worse, what can we do when botanical etiquette demands silence?

Even with reporting restricted to 85 Ecological Regions, 150 members of a Group such as ours may not have visited and recorded the species present in all. New Zealand has some inaccessible Regions — offshore and outlying islands are the obvious ones, but there are other remote and mountainous areas that few visit. And there were populous and often-visited areas that, for quite unfathomable reasons, nobody bothered to report.

PLANS

What we plan is to publish in the best form we can, what is available now. There are gaps (we wish there weren't, but only the naive or dishonest would claim immaculate data) and that must be accepted. The publication may even act as a spur to further reporting to fill the gaps.

In the end, though, we believe these orchid distribution maps do represent the best information available.

FIGURE 2

Shows the Ecological Regions of New Zealand.

FIGURE 3

The Distribution maps for *Corybas carsei* (left) and *Corybas trilobus* (right). (*C. trilobus* is probably universal in New Zealand and its reported distribution is probably a fair indication of the incompleteness of reporting).

ACKNOWLEDGEMENTS

Contributors to the Mapping Scheme have included no less than a third of our members (and a few others) and it is a pleasure to acknowledge them: Nancy Adye, Mrs C. L. Aston, Karlie

Birchall, Ross Bishop, Delphine Cox, Sarah Beadel, Ella Campbell, D. Catchpole, L. P. Chrystall, Noeleen Clements, Ida Collett, Peter de Lange, Pat Enright, Max Gibbs, Bob and Beryl Goodger, Dan Hatch, Margaret Hopkins, Bruce Irwin, Jean Jenks, Sandra Jones, Brian Killen, W. F. Liddy, Doug McCrae, Barbara McGann, David McNaughton, Pauline Mayhill, Mark Moorhouse, Manfred Peterek, Kevin Ross, Stella and John Rowe, Betty Seddon, Philip Simpson, Mary Skinner, Val Smith, T. A. Smith, Gordon Sylvester, I. J. Tweedy, Gordon Watson, Morley West, A. E. Wright, Wilbur Wright, Lyn Young.

A.N.O.S. AWARDS

Darryl Smedley

1. *Pterostylis pulchella* 'Unknown' — Award of Cultural Commendation. Bernie Fletcher, A.N.O.S. Sydney Group Winter Show, 12th April, 1987.
2. *Sarcophilus hartmannii* 'Red Snow' — Highly Commended Certificate. Ken Russell, A.N.O.S. Sydney Group Sarcophilinae Show, 22nd October, 1989.
3. *Sarcophilus hartmannii* 'Noelene' — Highly Commended Certificate. Ken Russell, A.N.O.S. Sydney Group Sarcophilinae Show, 22nd October, 1989.
4. *Dendrobium* David Baver 'Monroe' — Highly Commended Certificate. Laurie Jarvis, 2nd A.N.O.S. Autumn Show, Kincumber, 29th April, 1990.
5. *Caladenia patersonii* 'Conference' — Highly Commended Certificate. Les and Kay Nesbitt, 1st A.N.O.S. Conference and Show, Wollongong, 27th September, 1990.
6. *Sarcophilus* Jewel 'Dungog' — Highly Commended Certificate. (See Plate 24). Sid Batchelor, A.N.O.S. Sydney Group Sarcophilinae Show, 21st October, 1990.
7. *Sarcophilus* Jewel 'Dungog' — Award of Distinction. Sid Batchelor, A.N.O.S. Sydney Group Sarcophilinae Show, 21st October, 1990.
8. *Phalaenopsis amabilis* 'Moonshine' — Award of Merit. Mike Harrison, Special Judging, Baulkham Hills, 18th November, 1990.
9. *Dendrobium kingianum* 'Speckles' — Highly Commended Certificate. Neil and Meg Finch, A.N.O.S. Sydney Group Spring Show, 20th September, 1991.
10. *Dendrobium kingianum* 'Speckles' — Award of Distinction. Neil and Meg Finch, A.N.O.S. Sydney Group Spring Show, 20th September, 1991.
11. *Dendrobium schneiderae* var. *major* 'The Major' — Highly Commended Certificate. (See Plate 23). Gerry Walsh, 4th A.N.O.S. Autumn Show, Roseville, 5th April, 1992.
12. *Dendrobium cuthbertsonii* 'Orange Glow' — Award of Cultural Commendation. Phil and Yvonne Spence, 4th A.N.O.S. Autumn Show, Roseville, 5th April, 1992.
13. *Dendrobium schneiderae* var. *major* 'The Major' — Award of Cultural Commendation. Gerry Walsh, Judges Panel Meeting, 6th April, 1992.
14. *Dendrobium striolatum* 'Ruffles' — Highly Commended Certificate 75.93 points. Neil and Meg Finch, A.N.O.S. Sydney Group Spring Show, 18th September, 1992.
15. *Dendrobium kingianum* 'Steve' — Award of Distinction 5 for 2 against. Sid Batchelor, A.N.O.S. Sydney Group Spring Show, 18th September, 1992.
16. *Dendrobium* Brinawa Charm 'Lucky's Toy' — Award of Merit 82.08 points. (See Plate 25). Neil and Meg Finch, A.N.O.S. Newcastle Sarcophilinae Show, 15th October, 1992.
17. *Sarcophilus falcatus* 'Cheryl' — Award of Cultural Commendation 82.3 points. John Andrews, A.N.O.S. Sydney Group Sarcophilinae Show, 25th October, 1992.
18. *Cymbidium canaliculatum* 'Melba' — Highly Commended Certificate 79.8 points. (See Plate 27). Eric Webeck, A.N.O.S. Sydney Group Meeting, 20th November, 1992.
19. *Cymbidium canaliculatum* 'Melba' — Award of Cultural Commendation 83.8 points. Eric Webeck, A.N.O.S. Sydney Group Meeting, 20th November, 1992.

Summary of Awards to date

AM	—	2	Species	—	12	Terrestrials	—	2
HCC	—	9	Hybrids	—	3	Epiphytes	—	13
AD	—	3						
ACC	—	5						



St George, Ian and Stewart, Ben. 1993. "Mapping the contemporary distribution of New Zealand's orchids." *The Orchadian* 10(11), 411–415.

View This Item Online: <https://www.biodiversitylibrary.org/item/294975>

Permalink: <https://www.biodiversitylibrary.org/partpdf/362392>

Holding Institution

Royal Botanic Gardens Victoria

Sponsored by

Atlas of Living Australia

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Australasian Native Orchid Society

License: <http://creativecommons.org/licenses/by-nc-sa/4.0/>

Rights: <http://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.