

SHORT COMMUNICATION

Range extensions and conservation status of 18 restricted plant species in north-eastern New South Wales

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Introduction

During recent surveys within north-eastern New South Wales new records of range extensions for some significant plant taxa were recorded. The implications for the conservation status of each taxon in terms of their ROTAP status (Briggs & Leigh 1996) are discussed. It is important that management decisions concerning rare taxa are made using the most up-to-date information possible, hence the need to report new distributions and suggest changes in conservation status. Vouchers of all taxa discussed have been lodged at the NCW Beadle Herbarium at the Division of Botany, University of New England and/or at the Herbarium of the North Coast Regional Botanic Garden, Coffs Harbour. In the following notes National Park is abbreviated to NP and Nature Reserve to NR.

1. *Acacia barringtonensis* Tindale (family Fabaceae)

Previously believed to be restricted to a few disjunct localities in the Barrington Tops, Backwater, Boonoo Boonoo and Gibraltar Range areas but recently discovered in the east of Oxley Wild Rivers NP and in Carrai NP (P. Richards pers. comm. 1997), and along the Racecourse Trail in Werrikimbe NP (Copeland 1999). The current ROTAP code, 3RCa (Briggs & Leigh 1996) is considered adequate.

2. *Acacia macnuttiana* Maiden & Blakely (family Fabaceae)

Previously recorded from Pindari Dam area near Ashford (North Western Slopes) to Boonoo Boonoo Falls (Northern Tablelands). Populations are known from Boonoo Boonoo NP and the Torrington State Recreation Area (Clarke et al. 1998) where at least 1000 individuals occur in several populations. An unreserved population was also found in the Eagle Creek area west of Tenterfield (Hunter & Clarke 1998) and a small population has been recently discovered in the Washpool NP western additions along Morven Creek (Hunter 1998). In all localities, this species is primarily restricted to riparian situations.

Although additional populations have been found, many individuals were destroyed by the enlargement of the Pindari Dam. This taxon should still be considered vulnerable as it is a relatively short-lived obligate seeder that requires a comparatively large meta-population size to maintain viability. Its range exceeds 100 km — therefore a more appropriate ROTAP code is 3VCa.

3. *Acacia orites* Pedley (family Fabaceae)

Rare species known from Springbrook in Queensland to Demon NR in NSW (Hunter et al. 1999). Populations reserved in Nightcap, Mount Warning and Border Ranges NPs, Demon and Numinbah NRs and Mount Nothofagus and Minyon Falls Flora Reserves.

Recently populations have been found within the Washpool NP western additions on the margins of closed forests (Hunter 1998). These populations, while not extensive, are not uncommon and have extended the known southern distribution. Populations are now known from over 100 km in distribution and numbers are well in excess of 1000 individuals in the current reserve network — a ROTAP code of 3RCa is considered appropriate.

4. *Acacia pubifolia* Pedley (family Fabaceae)

Vulnerable species restricted to a small population along the Gulf Road north of Emmaville and a larger, more widespread population in the Stanthorpe–Wallangarra area (including Girraween NP), Queensland. Listed as 2VC- (Briggs & Leigh 1996) and Endangered under Schedule 1 of the *NSW Threatened Species Conservation Act* 1995.

A recent discovery of a small population on private property 4 km east of Warrabah NP represents a southerly range extension of nearly 200 km. This population of 95 plants (P. Metcalfe pers. comm. 1999) occurs in partially cleared country. The population has now been fenced off under an agreement with the landholder. A ROTAP code of 3VC- is considered more appropriate.

5. *Acacia tessellata* Tindale & Kodela (family Fabaceae)

Occurs along the eastern escarpment of the northeast of NSW, reserved within New England, Werrikimbe and Willi Willi NPs.

Recently, populations within the Washpool NP western additions have been found (Hunter 1998), extending the current distribution range to nearly 200 km. Listed as 2RC- (Briggs & Leigh 1996), with the new northern extension of range a ROTAP code of 3RCa is considered more appropriate.

6. *Callistemon pungens* P.F. Lumley & R.D. Spencer (family Myrtaceae)

Known from a number of scattered localities on the Northern Tablelands and North-Western Slopes but not known in any reserved areas, coded 3R (Briggs & Leigh 1996). A number of significant populations have recently been found in granitic areas west of the Great Dividing Range in conservation reserves — Warrabah and Kings Plains NPs, Severn River and Ironbark NRs and Torrington State Recreation Area. Also known from Oxley Wild Rivers NP (Copeland 1997), Mann River NR (Sherringham & Westaway 1995) and Single NP. Habitats range from riparian areas dominated by *Casuarina cunninghamiana* subsp. *cunninghamiana* to woodland and rocky shrubland. In light of these recently discovered reserved populations a ROTAP coding of 3RCa is considered more appropriate.

7. *Chiloglottis platyptera* D.L. Jones (family Orchidaceae)

Poorly known, scattered north from the Barrington Tops, reserved in Barrington Tops NP. A population of at least 50 plants has recently been recorded growing on

metasediment near Steepdrop Falls in Oxley Wild Rivers NP. A similar sized population has also been discovered in Butterleaf State Forest. Assigned a code of 2KC- (Briggs & Leigh 1996), in light of these northerly range extensions a code of 3KC- is more appropriate.

8. *Chiloglottis sphyrnoides* D.L. Jones (family Orchidaceae)

The exact distribution of this rare species is uncertain, as it has been previously confused with a closely related, unnamed species (Bishop 1996). Recent surveys by the NSW National Parks and Wildlife Service have found significant populations in Chaelundi, Guy Fawkes River and Barool NPs and Glen Nevis, Mt Mitchell and Forestland State Forests (P. Richards pers. comm. 1998). A large population of several hundred plants was also found widely spread throughout tall open forest on metasediment in Werrikimbe NP (Copeland 1999). Assigned a code of 3KC- (Briggs & Leigh 1996), these recent findings suggest a code of 3RCa would be more appropriate.

9. *Cynanchum elegans* (Benth.) Domin (family Asclepiadaceae)

This rainforest climber appears to consist of small isolated populations, often with less than 30 plants. The ROTAP status of 3ECi (Briggs & Leigh 1996) was mainly based on a limited number of sites in Woko NP and Camels Hump NR.

Populations have since been recorded in Wollemi NP, New England NP, Coorumbene Wildlife Refuge, Booti Booti State Recreation Area, Sea Acres NR and Hallidays Point Rainforest Reserve. Two additional populations have also been discovered growing on the margins of closed-forest patches in Oxley Wild Rivers NP. Few plants were observed but it is likely that a more thorough search of the area (including other closed-forest patches) may reveal more individuals. Other unreserved populations are known to occur as far south as Wollongong and north to south-eastern Queensland (A. Bofeldt pers. comm. 1998). On the basis of the large number of newly recorded populations a ROTAP code of 3VCi is considered more appropriate. This species is still considered vulnerable due to the small size of its very scattered populations.

10. *Derwentia arenaria* (Benth.) B.G. Briggs & Ehrend. (family Scrophulariaceae)

Rare species coded 3RC- (Briggs & Leigh 1996) with a widespread but disjunct distribution in northern NSW and southern Queensland. It is an annual and this may account for the paucity of records. Reserved in Warrumbungle and Warrabah NPs and the Torrington State Recreation Area (Clarke et al. 1998).

Extensive populations have recently been found in Ironbark NR and the neighbouring property 'Bornhardtia'. Population numbers within the reserves described above are thought to exceed 1000 individuals and therefore a code of 3RCa is considered appropriate.

11. *Dodonaea rhombifolia* Wakef. (family Sapindaceae)

Widely dispersed from East Gippsland in Victoria to south-eastern NSW with disjunct occurrences in northern New South Wales. The species is reserved in at least 12 Conservation Reserves. Recently collections were made within Washpool NP western additions on the face of a metasediment rock outcrop and representing a northern extension of range. The current 3RCa coding is considered appropriate.

12. *Euphrasia ciliolata* W.R. Barker (family Scrophulariaceae)

Poorly known species with a scattered distribution from Barrington Tops to Backwater on the Northern Tablelands. Two populations of at least 100 plants each have been observed on the margins of swamps in Werrikimbe NP, one near the Hastings River, growing on granitic soils and one near Racecourse Swamp, restricted to a metasediment substrate. These populations are intermediate in distribution between the populations in the Barrington Tops area and the recently recorded population in Cathedral Rock NP (S. Horton pers. comm. 1998). In light of these northerly populations the ROTAP code of 2KC- (Briggs & Leigh 1996) would be more appropriate as 3KC-.

13. *Eucalyptus dorrigoensis* (Blakely) L.A.S. Johnson & K.D. Hill (family Myrtaceae)

Occurs from north-east of Tenterfield along the escarpment to the Macleay River, reserved within Boonoo Boonoo, Dorrigo and Guy Fawkes River NPs, Dorrigo White Gum Flora Reserve and Demon NR.

Extensive populations were found in most areas in Washpool NP western additions (Hunter 1998) and, along with recent surveys carried out by NSW State Forests, support a ROTAP code of 3RCa.

14. *Eucalyptus subcaerulea* K.D. Hill (family Myrtaceae)

This recently described species was thought to be restricted to a few small stands within Gibraltar Range State Forest and around Cooraldooral Trig. Although these localities were not within the reserve network Hill (1997) assigned a ROTAP code of 2RC. Following recent changes to the reserve system these areas are now included in Barool NP.

A large and extensive population of this species has been found recently in the Washpool NP western additions and represents a northern extension of range and the largest extant population of this taxon. Although geographically restricted this is a resilient species that occurs in areas not subject to threatening processes. A code of 2RCat is considered appropriate.

15. *Leionema ambiens* (F. Muell.) Paul G. Wilson (family Rutaceae)

Locally abundant in some granite outcrop communities (Hunter & Clarke 1998) but restricted to north-eastern New South Wales and south-eastern Queensland. NSW populations are known from Bald Rock, Warra and Boonoo Boonoo NPs and Torrington State Recreation Area. Three plants have recently been found along Dandahra Creek in Gibraltar Range NP.

In recent times the large population in Warra NP has been heavily grazed by feral goats, resulting in the death of many plants (P. Richards pers. comm. 1998). The species is susceptible to soil compaction by goats in what is a very specialised habitat and also appears to be killed by fire. On the basis of these threats it is recommended that the ROTAP code be upgraded from 3RC- to 3VC- reflecting the taxon's vulnerability to current threatening processes.

16. *Leucopogon cicatricatus* J. Powell (family Epacridaceae)

This species has been recorded from a number of widely disjunct populations in north-eastern NSW and south-eastern Queensland. Reserved populations are currently known from Girraween and Mount Barney NPs in Queensland and Butterleaf, New England, Cathedral Rock, Tapin Tops and Werrikimbe NPs in NSW. Richards and Hunter (1997) have suggested a ROTAP code of 3RCa (previously 3RC-; Briggs & Leigh 1996).

A population of four plants was recently found at Sundew Lookout, south-east of Glen Innes. Plants were growing in crevices of a granite outcrop largely covered by heath dominated by *Kunzea bracteolata*. Searches of similar outcrops in the adjacent Guy Fawkes River NP may reveal further individuals in what seems to be a very small, disjunct population.

17. *Ozothamnus adnatus* DC. (family Asteraceae)

A widespread species known from a number of populations from the Guyra district to Victoria where it is reserved in Snowy River NP. In north-eastern NSW it is known from Oxley Wild Rivers, Guy Fawkes River and Cathedral Rock NPs.

Two new populations have been discovered on the Northern Tablelands. Eight plants were observed growing in dry sclerophyll forest dominated by *Eucalyptus melliodora*, *E. blakelyi* and *E. viminalis* in Imbota NR, eight kilometres south-east of Armidale. A search of the wider area did not locate any additional plants, suggesting that this very small population may be in danger of extinction. A larger population was recently recorded growing on metasediment around the rim of Rowleys Creek Gorge in Oxley Wild Rivers NP (Copeland 1997). At least 20 mature plants and a number of seedlings were seen over a distance of approximately 500 m of gorge rim.

Briggs and Leigh (1996) assigned the ROTAP code of 3KC-, however in light of the populations known from these four northern reserves and other unreserved populations (J. Williams, pers. comm. 1998) a code of 3RC- is more appropriate.

18. *Thelionema grande* (C. White) R. Henderson (family Phormiaceae)

Recorded sporadically from north of Howell to south-eastern Queensland. Coded 3RC- (Briggs & Leigh 1996) and known from Girraween, Warra, Mount Barney, Boonoo Boonoo and Gibraltar Range NPs and Torrington State Recreation Area (Clarke et al. 1998).

Populations have recently been discovered in Ironbark NR and the adjoining 'Bornhardtia' private property and it is believed that infertile material found in Werrikimbe NP also belongs to this species. These records represent a southern extension of range. All populations found in these areas were restricted to isolated granitic outcrops near watercourses. Due to the size of populations within known reserves a code of 3RCa is considered more appropriate.

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