

## SHORT COMMUNICATION

### **New distributions of *Leptospermum namadgiensis* and *Olearia rhizomatica* on Yaouk Peak (Southern Tablelands, NSW).**

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### **Introduction**

Yaouk Peak (35°51'S 148°52'E) is c. 65 km SSW from Canberra and lies south of the A.C.T. border in N.S.W. The peak rises to 1725 m above sea level from a broad rocky ridge top. This ridge top is treeless and shrub dominated from about 1700 m up to the peak. The substrate is composed of porphyritic leucogranite, with muscovite leucogranite to the west of the peak (Snelling 1960). Humic skeletal soil occurs on the ridge top, but is often quite shallow. Deeper loams occur at the woodland margins.

A field trip to Yaouk Peak was undertaken by students participating in the Australian National Herbarium's (CANB) Botanical Internship Programme. The twenty interns assisted by Herbarium staff visited the Peak on the 9th January 1996 to make collections. The range of habitats on the treeless ridge-top was sampled haphazardly in order to find as much floristic diversity as possible. As such, the species list in Table 1 must be considered a preliminary one. Most of the collections were made on the treeless ridge-top above 1700 m, although some collections were from the lower, woodland margins.

Heath vegetation, predominantly *Leptospermum namadgiensis* Lyne, *L. micromyrtus* Miq. and *Kunzea muelleri* Benth. partially covers the ridge top area, between many exposed rocky surfaces. The surrounding woodland is dominated by *Eucalyptus pauciflora* Sieber ex Sprengel with *E. debeuzevillei* Maiden also present. *Eucalyptus pauciflora* and *Hakea lissosperma* R.Br. are occasionally emergent on the higher areas. The flora of this peak was previously poorly known, as only a few collections had been made there (Table 1).

*Leptospermum namadgiensis* and *Olearia rhizomatica* Lander ms were found on Yaouk Peak. These collections increase the known geographic ranges of both species (Fig. 1). As very few collections have been made of both of these species, the distributions may still be incomplete.

The collections made on the trip have been determined, databased and incorporated into the CANB collection. The flora known to date of Yaouk Peak is listed in Table 1, and predominantly reflects the flora of the treeless ridge top.

**Table 1: Species present on Yaouk Peak**

Known flora of Yaouk Peak. New records in bold type. Existing records from ANHSIR and IBIS.

F - frequent O - occasional U - uncommon R - rare

\*Observed but not collected

Species	Local Frequency	Species	Local Frequency
Cryptogams:		Myrtaceae	
<b>Cladonia sp</b>	O	<i>Eucalyptus debeuzevillei</i> Maiden*	U
Filicopsida:		<i>E. pauciflora</i> Sieber ex Spreng	F
Aspleniaceae		<i>Kunzea ericoides</i> (A. Rich.) J. Thompson	R
<b>Asplenium flabellifolium</b> Cav.	R	<i>K. muelleri</i> Benth.	F
Dryopteridaceae		<i>Leptospermum micromyrtus</i> Miq.	F
<b>Polystichum proliferum</b> (R. Br.) Presl	R	<b>L. namadgiensis</b> Lyne	F
Magnoliopsida-Magnoliideae:		Proteaceae	
Asteraceae		<i>Grevillea lanigera</i> Cunn. ex R. Br.	O
<b>Celmisia sp. nov. a</b>	O	<i>Hakea lissosperma</i> R. Br.	O
<b>C. sp. nov. b</b>	F	Rutaceae	
<b>Lagenifera stipitata subsp. stipitata</b> (Labill.) Druce	O	<i>Phebalium squamulosum</i> subsp. <i>ozothamnoides</i> (F. Muell.) Paul G. Wilson	R
<b>Olearia rhizomatica</b> Lander ms	O	Scrophulariaceae	
<b>Ozothamnus thyrsoides</b> DC.	R	<b>Derwentia perfoliata</b> (R. Br.) B. Briggs & Ehrend.	F
Campanulaceae		Thymeliaceae	
<b>Pratia puberula</b> Benth.	O	<b>Pimelea linifolia subsp. linifolia</b> Smith	O
Caryophyllaceae		Violaceae	
<b>Stellaria pungens</b> Brongn.	F	<b>Viola betonicifolia subsp. betonicifolia</b> Sm.	O
Clusiaceae		Magnoliopsida - Liliideae:	
<b>Hypericum japonicum</b> Thunb.	O	Anthericaceae	
Euphorbiaceae		<b>Arthropodium milleflorum</b> (DC.) J.F. Macbr.	O
<b>Poranthera microphylla</b> Brongn.	O	Juncaceae	
Geraniaceae		<b>Luzula flaccida</b> (Buchenau) Edgar	O
<b>Geranium antrorsum</b> Carolin	R	Orchidaceae	
Goodeniaceae		<b>Chiloglottis valida</b> D.L. Jones	U
<b>Goodenia hederaceae subsp. alpestris</b> (K. Krause) Carolin	F	Poaceae	
Fabaceae		<b>Poa labillardieri var. labillardieri</b> Steud.	F
<i>Acacia alpina</i> F. Muell.	F	<b>Deyeuxia monticola var. monticola</b> (Roem. & Shult.) Vickery	R
<i>Oxylobium alpestre</i> F. Muell.	F		
<i>Oxylobium ellipticum</i> (Labill.) R. Br.*	O		
Lamiaceae			
<i>Westringia lucida</i> B. Boivin	O		

## Discussion

Yaouk Peak vegetation can be described as a mixture of predominantly subalpine (*sensu* Thompson 1981) and rocky heath species (*sensu* Helman & Gilmour 1985).

BIOCLIM generates climate estimates based on meteorological data and topographical information (Busby 1991). User input of the distribution of taxa is used to create climatic profiles, which can subsequently allow predictions of further distributions of these taxa (Busby 1991). BIOCLIM requires precipitation and temperature information, but does not take substrate into account. *Leptospermum namadgiensis* has only been found on a limited number of substrates, namely porphyritic and muscovitic leucogranite (Yaouk Peak), undifferentiated leucogranite (Scabby Range) and granodiorite (The Sentry Box and Mt Namadgi). As *L. namadgiensis* has not been found on nearby peaks of similar climate and altitude (Mt Morgan—as predicted by

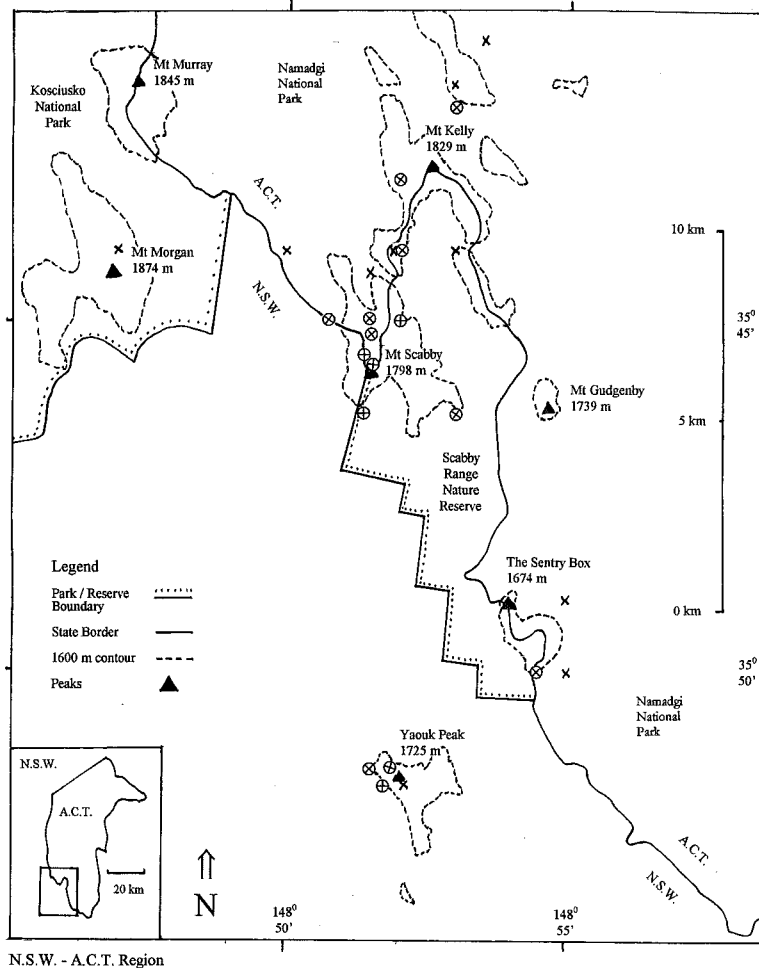


Fig. 1. Distribution of *Leptospermum namadgiensis* Lyne ⊗ and *Olearia rhizomatica* Lander ms ×

BIOCLIM), it appears that *L. namadgiensis* may be restricted to certain substrates. Further experimentation would be needed to properly test this hypothesis.

*Olearia rhizomatica* is found on the same substrates as *Leptospermum namadgiensis* but in addition it is found on Mt Morgan (adamellite and granodiorite). *Olearia rhizomatica* appears not to be as restricted by substrate as *L. namadgiensis*.

### Conservation implications

*Leptospermum namadgiensis* is known from populations within Namadgi National Park and Scabby Range Nature Reserve. Lyne (1993) considered that a conservation code of 2RCat was appropriate for this taxon according to the criteria outlined by Briggs & Leigh (1996). As Yaouk Peak does not lie within a conservation reserve, this code should be amended to 2RCa.

*Olearia rhizomatica* has been recorded from Namadgi and Kosciusko National Parks, and Scabby Range Nature Reserve. *Olearia rhizomatica* is listed by Briggs & Leigh (1996) and has been given a conservation code of 2RCit. Again, this should be amended to 2RCi. The citation of *O. rhizomatica* in the Tinderry Nature Reserve (Briggs & Leigh 1996) is incorrect, as the specimen from there is not conspecific (I.R. Telford pers. comm.)

The populations of *Leptospermum namadgiensis* and *Olearia rhizomatica* on Yaouk Peak do not appear to be threatened, as the area is unsuitable for agricultural purposes.

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