Locations of survey sites allocated to DSF e35. Grey shading indicates extant native vegetation cover within the study area.

WSF e37: Southeast Lowland Gully Shrub Forest

Plate e37. Southeast Lowland Gully Shrub Forest (Map Unit e37) dominated by *Angophora floribunda* with *Eucalyptus cypellocarpa, Acacia longifolia, A. mearnsii, Pteridium esculentum* and *Microlaena stipoides* at Saltwater Creek flat, Ben Boyd National Park.

Sample Sites: 20
Area Extant (ha): 13700
Estimated % remaining: >95%
Area in conservation reserves (ha): 4700
Estimated % of pre-clearing area in conservation reserves: 30-40%
No. Taxa (total / unique): 218 / 0
No. Taxa per Plot (±sd): 36.7 (9.5)
Class: South Coast Wet Sclerophyll Forests
Related TEC: n/a

Southeast Lowland Gully Shrub Forest is equivalent to Lowland Gully Shrub Forest (unit 37) described by Keith & Bedward (1999). The tree canopy typically rises to 25 m in height with one or two prominent tall shrub strata 5-8 m in height also present. The tall, semi-continuous groundcover is dominated by bracken fern *Pteridium esculentum,* grasses and graminoids with a variety of small shrubs and forbs scattered throughout. Southeast Lowland Gully Shrub Forest occurs on gully flats either on Tertiary alluvium, Holocene sands or on deep colluvial sandy soils washed down from adjacent sedimentary substrates upslope. It is most common in the Nadgee-Timbillica area below 100 m elevation and includes the well-known Monkey Gum flats in that area. These flats provide important resource-rich fauna habitat with dense groundcover in an area largely covered by open dry sclerophyllous forests. Southeast Lowland Gully Shrub Forest has affinities with a highly restricted assemblage in similar habitats in far East Gippsland (Ecological Vegetation Class 4, Woodgate *et al.* 1994), but this unit has *E. botryoides* as a co-dominant tree and a greater diversity of vines. Relatively little of this vegetation has been cleared. Although some stands on private land are potentially threatened by clearing, the principal threat is frequent disturbance regimes. In some unprotected sites with *E. cypellocarpa* the disturbance regime may include logging, although *A. floribunda* is not an economic wood species and some flats in production forest are protected by management prescriptions. Sedimentation may affect stands where logging occurs upslope. Where logging is carried out and followed by regeneration burns and thinning, this may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Frequent burning may reduce diversity by interrupting life-cycle processes of woody species and by competitive exclusion due to increased densities of *P. esculentum* and *I. cylindrica* (Keith 1996). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks, decline in densities of rhizomatous species and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Allocasuarina littoralis, Angophora floribunda* **Shrubs:** *Acacia longifolia, Exocarpos strictus, Hibbertia aspera* subsp. *aspera, Leucopogon lanceolatus* var. *lanceolatus, Persoonia linearis, Pultenaea daphnoides* **Climbers:** *Billardiera scandens, Eustrephus latifolius, Glycine clandestina, Hibbertia dentata, Kennedia rubicunda, Tylophora*

barbata **Groundcover:** *Dianella caerulea, Dichondra* spp., *Entolasia stricta, Gonocarpus teucrioides, Goodenia ovata, Imperata cylindrica* var. *major, Lomandra longifolia, Poa meionectes, Pteridium esculentum, Schelhammera undulata, Viola hederacea*

Vegetation structure:

Stratum	Frequency (n=18)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	22.1 (8.5)	39.1 (15.3)
Small tree	50	7.9 (2.4)	27 (20.9)
Shrub	94	3 (1.6)	36.9 (26.9)
Ground cover	100	1.1 (0.6)	63.1 (23.7)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 11 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 29 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 11 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	2(1-2)	60	1(1-2)	9
Acacia mearnsii	1(1-2)	30	1(1-2)	7
Allocasuarina littoralis	1(1-2)	60	1(1-2)	17
Angophora floribunda	2(1-3)	85	1(1-2)	9
Banksia integrifolia subsp. *integrifolia*	1(1-2)	25	1(1-2)	2
Cassytha pubescens	1(1-1)	30	1(1-1)	8
Dianella caerulea	1(1-1)	75	1(1-1)	28
Epacris impressa	1(1-1)	35	1(1-1)	4
Eucalyptus baxteri	2(1-3)	25	1(1-2)	<1
Eucalyptus cypellocarpa	1(1-1)	35	2(1-2)	10
Eucalyptus longifolia	2(1-2)	20	1(1-2)	2
Eustrephus latifolius	1(1-1)	60	1(1-1)	19
Exocarpos strictus	1(1-1)	45	1(1-1)	9
Gahnia radula	1(1-2)	35	1(1-2)	3
Glycine clandestina	1(1-1)	75	1(1-1)	26
Gonocarpus teucrioides	1(1-2)	65	1(1-1)	17
Goodenia ovata	2(1-3)	65	1(1-1)	7
Goodia lotifolia	1(1-1)	20	1(1-1)	2
Hibbertia aspera subsp. *aspera*	1(1-2)	50	1(1-1)	10
Hibbertia dentata	1(1-1)	40	1(1-1)	6
Hierochloe rariflora	2(1-3)	30	1(1-2)	4
Hydrocotyle peduncularis	1(1-1)	35	1(1-1)	9
Imperata cylindrica var. *major*	1(1-1)	40	1(1-2)	10
Kennedia rubicunda	1(1-1)	45	1(1-1)	6
Leptospermum continentale	1(1-2)	25	1(1-1)	3
Lomandra longifolia	1(1-3)	80	1(1-1)	44
Muellerina eucalyptoides	1(1-1)	20	1(1-1)	<1
Opercularia aspera	1(1-1)	30	1(1-1)	8
Ozothamnus cuneifolius	2(1-2)	30	1(1-1)	1
Poa meionectes	1(1-2)	80	1(1-2)	16

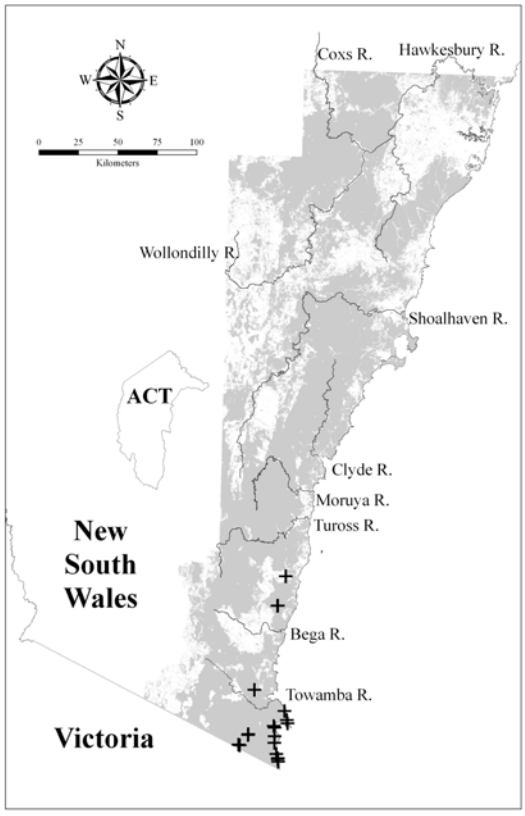
Pteridium esculentum	2(2-3)	90	1(1-2)	37
Pultenaea daphnoides	1(1-1)	40	1(1-1)	4
Schelhammera undulata	1(1-1)	50	1(1-1)	7
Viola hederacea	1(1-1)	75	1(1-1)	22

Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	55	1(1-1)	28
Calochlaena dubia	3(1-4)	30	1(1-3)	9
Coprosma quadrifida	1(1-2)	30	1(1-1)	10
Dichondra spp.	1(1-1)	45	1(1-2)	25
Elaeocarpus reticulatus	1(1-2)	35	1(1-1)	12
Entolasia marginata	1(1-2)	30	1(1-1)	11
Entolasia stricta	1(1-2)	55	1(1-2)	34
Lagenifera stipitata	1(1-1)	30	1(1-1)	14
Lepidosperma laterale	1(1-2)	30	1(1-1)	29
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	50	1(1-1)	24
Microlaena stipoides	2(1-2)	30	1(1-2)	36
Oplismenus imbecillis	1(1-2)	30	1(1-2)	14
Persoonia linearis	1(1-1)	50	1(1-1)	29
Tylophora barbata	1(1-1)	40	1(1-1)	17

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Corymbia gummifera	2(2-2)	5	2(1-2)	16
Eucalyptus angophoroides	3(3-3)	5	1(1-2)	1
Eucalyptus botryoides	3(3-3)	5	2(1-3)	3
Eucalyptus elata	1(1-1)	5	2(1-3)	5
Eucalyptus globoidea	2(1-3)	25	2(1-2)	12
Eucalyptus muelleriana	3(3-3)	5	2(1-2)	6
Eucalyptus obliqua	3(1-3)	10	2(1-3)	4
Eucalyptus ovata	2(2-2)	10	2(1-3)	1
Eucalyptus pseudoglobulus	2(2-2)	5	0(0-0)	0
Eucalyptus sieberi	1(1-3)	15	2(1-3)	16
Eucalyptus smithii	1(1-1)	5	1(1-2)	2



Locations of survey sites allocated to WSF e37. Grey shading indicates extant native vegetation cover within the study area.

FoW e38: Far Southeast Riparian Scrub

Plate e38. Far Southeast Riparian Scrub (Map Unit e38) with *Callistemon subulatus, Acacia floribunda, Calytrix tetragona* and *Lomandra longifolia* among granitoid outcrops in the bed of Imlay Creek near Imlay Road crossing, Wallagaraugh Flora Reserve.

Sample Sites: 5
Area Extant (ha): 420
Estimated % remaining: >90%
Area in conservation reserves (ha): 290
Estimated % of pre-clearing area in conservation reserves: 55-65%
No. Taxa (total / unique): 90 / 0
No. Taxa per Plot (±sd): 27.6 (19.2)
Class: Eastern Riverine Forests
Related TEC: n/a

Far Southeast Riparian Scrub is equivalent to Southern Riparian Scrub (unit 38) described by Keith & Bedward (1999). It features a patchy shrub stratum 2 m tall occasionally with emergent saplings of Eucalyptus elata around 8 m tall. The patchy groundcover is dominated by rushes and sedges with small ferns also present. Far Southeast Riparian Scrub is restricted to riverine alluvium derived from granitoid or sedimentary parent materials at elevations up to 400 m along major streams in the south, including the Genoa, Wallagaraugh and Merrica Rivers, and possibly parts of the Towamba River. Although not explicitly described, similar vegetation may occur in East Gippsland within the riparian scrub complex (Ecological Vegetation Class 17, Woodgate *et al.* 1994), which also includes assemblages related to Southeast Lowland Swamp (Map Unit FrW e57) and Southeast Flats Swamp Forest (Map Unit FoW e17). The principal threat to Far Southeast Riparian Scrub is from sedimentation and weed invasion associated with road and logging activities in stream catchments. Mitigation measures include stream buffer strips of varying width and erosion control during earthworks and logging. Frequent fire regimes may reduce diversity by interrupting life-cycle processes of woody species if streams are used repeatedly as ignition lines for hazard reduction.

Floristic Summary:
Trees: *Acacia mearnsii, Allocasuarina littoralis, Eucalyptus cypellocarpa, Eucalyptus elata* **Shrubs:** *Acacia floribunda, Acacia longifolia, Babingtonia pluriflora, Bursaria spinosa, Calytrix tetragona, Crowea exalata* subsp. *exalata, Kunzea ambigua, Kunzea ericoides, Leptospermum lanigerum, Leptospermum scoparium, Lomatia myricoides, Melaleuca squarrosa, Prostanthera lasianthos, Tristaniopsis laurina* **Climbers:** *Cassytha pubescens* **Groundcover:** *Adiantum aethiopicum, Drosera peltata, Entolasia stricta, Gahnia clarkei, Gahnia sieberiana, Goodenia ovata, Hierochloe rariflora, Lepidosperma laterale, Lepidosperma urophorum, Lomandra longifolia, Opercularia aspera, Pteridium esculentum*

Vegetation structure:

Stratum	Frequency (n=5)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	80	11 (6.7)	23 (19.9)
Small tree	40	8 (5.7)	70 (14.1)
Shrub	60	2 (0.5)	36.7 (30.6)
Ground cover	100	0.9 (0.7)	20 (10.6)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 9 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 12 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 9 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia floribunda	2(1-2)	40	1(1-2)	3
Adiantum aethiopicum	1(1-1)	60	1(1-1)	9
Babingtonia pluriflora	2(1-4)	80	1(1-1)	1
Baloskion tetraphyllum	1(1-1)	20	1(1-2)	<1
Callistemon subulatus	1(1-1)	20	1(1-1)	<1
Callitris rhomboidea	1(1-1)	20	1(1-2)	<1
Calytrix tetragona	1(1-2)	60	1(1-2)	2
Carex gaudichaudiana	1(1-1)	20	1(1-2)	1
Centrolepis fascicularis	1(1-1)	20	1(1-1)	<1
Crowea exalata subsp. *exalata*	1(1-1)	40	1(1-2)	<1
Derwentia perfoliata	1(1-1)	20	1(1-1)	1
Drosera glanduligera	1(1-1)	20	1(1-1)	<1
Drosera peltata	1(1-1)	40	1(1-1)	2
Drosera pygmaea	1(1-1)	20	1(1-1)	<1
Eucalyptus elata	1(1-3)	60	2(1-3)	5
Gahnia clarkei	1(1-1)	40	1(1-2)	2
Gahnia sieberiana	1(1-1)	40	1(1-1)	5
Gleichenia microphylla	2(2-2)	20	1(1-2)	1
Grevillea parviflora subsp. *parviflora*	2(2-2)	20	1(1-1)	<1
Grevillea victoriae subsp. *nivalis*	1(1-1)	20	1(1-2)	<1
Hierochloe rariflora	1(1-1)	40	1(1-2)	4
Kunzea ambigua	1(1-3)	60	1(1-2)	4
Kunzea ericoides	1(1-1)	40	1(1-2)	2
Lepidosperma urophorum	1(1-1)	60	1(1-2)	7
Leptospermum brevipes	1(1-1)	20	1(1-2)	<1
Leptospermum lanigerum	2(2-2)	40	1(1-1)	1
Leptospermum scoparium	2(1-2)	40	1(1-2)	<1
Lomatia myricoides	1(1-1)	60	1(1-1)	4
Lythrum salicaria	1(1-1)	20	1(1-1)	<1
Melaleuca armillaris subsp. *armillaris*	1(1-1)	20	2(1-2)	1
Melaleuca squarrosa	1(1-1)	40	2(1-3)	1
Myriophyllum pedunculatum subsp. *pedunculatum*	1(1-1)	20	1(1-2)	<1
Pomaderris andromedifolia	1(1-1)	20	1(1-1)	<1

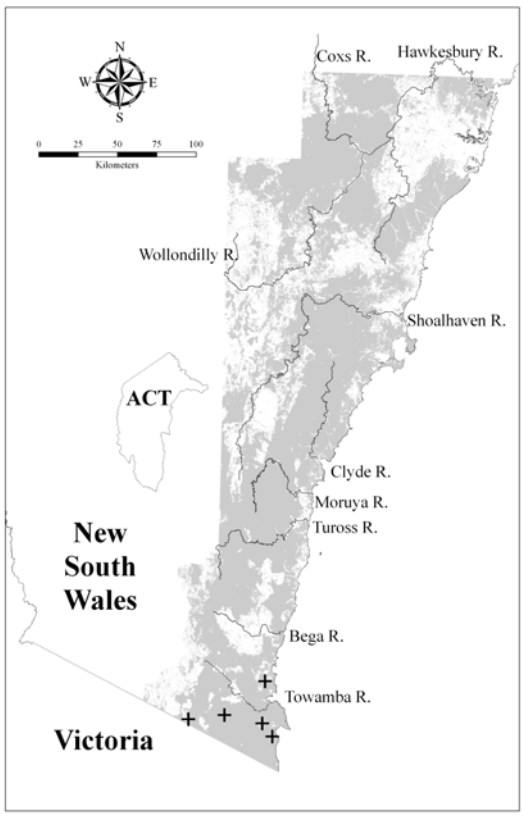
Prostanthera lasianthos	1(1-1)	60	1(1-1)	3
Prostanthera rotundifolia	1(1-1)	20	1(1-2)	<1
Sticherus lobatus	1(1-1)	20	1(1-3)	1
Tristaniopsis laurina	3(2-4)	100	1(1-2)	2
Utricularia lateriflora	1(1-1)	20	1(1-1)	<1
Vallisneria gigantea	1(1-1)	20	1(1-1)	<1
Westringia eremicola	1(1-1)	20	1(1-2)	<1

Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-1)	40	1(1-2)	10
Acacia mearnsii	2(1-2)	40	1(1-2)	7
Allocasuarina littoralis	1(1-1)	60	1(1-2)	17
Bursaria spinosa	1(1-1)	60	1(1-2)	14
Cassytha pubescens	1(1-1)	40	1(1-1)	8
Entolasia stricta	1(1-1)	40	1(1-2)	34
Eucalyptus cypellocarpa	1(1-1)	40	2(1-2)	10
Goodenia ovata	1(1-1)	40	1(1-1)	7
Lepidosperma laterale	1(1-1)	60	1(1-1)	29
Lomandra longifolia	2(1-3)	80	1(1-1)	44
Opercularia aspera	1(1-1)	40	1(1-1)	8
Pteridium esculentum	1(1-1)	40	1(1-2)	37

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	2(2-2)	20	1(1-2)	9
Eucalyptus obliqua	1(1-1)	20	2(1-3)	4



Locations of survey sites allocated to FoW e38. Grey shading indicates extant native vegetation cover within the study area.

FoW e39: Bega-Towamba Riparian Scrub

Plate e39. Bega-Towamba Riparian Scrub (Map Unit e39) with *Acacia floribunda* and *Leptospermum emarginatum* in the sandy bed of Myrtle Creek, Yowaka section of South East Forests National Park.

Sample Sites: 14
Area Extant (ha): 350
Estimated % remaining: <30%
Area in conservation reserves (ha): 40
Estimated % of pre-clearing area in conservation reserves: <10%
No. Taxa (total / unique): 174 / 0
No. Taxa per Plot (±sd): 32.2 (12.5)
Class: Eastern Riverine Forests

Related TEC: n/a

Bega-Towamba Riparian Scrub is equivalent to Northern Riparian Scrub (unit 39) described by Keith & Bedward (1999). It is characterised by a patchy shrub stratum up to 4 m tall with scattered emergent eucalypts up to 15 m tall dispersed in from adjacent forest vegetation. The patchy groundcover is dominated by grasses and graminoids with small scattered herbs also present. Bega –Towamba Riparian Scrub is restricted to riverine alluvium derived from granitoid substrates at elevations up to 250 m along major streams of the southeast including the lower Bemboka River and lower reaches of Tantawangalo, Stockyard and Myanba Creeks. It occurs in lower rainfall districts (<850 mm annual precipitation) than Far Southeast Riparian Scrub (Map Unit FoW e38) and has a different shrub composition. No similar assemblages have been described in adjacent regions (Austin 1978, Woodgate *et al.* 1994)). Over one-third of Bega –Towamba Riparian Scrub has been cleared in agricultural districts and almost all of the remainder is threatened by further clearing and degradation on private land. The principal threats associated with agricultural land uses include sedimentation, nutrification, weed invasion and physical damage by stock. Some sedimentation may originate from roadworks and logging in steeper, higher rainfall areas in the upper catchments. Frequent burning of adjacent vegetation may also threaten shrub diversity at some sites.

Floristic Summary:
Trees: *Acacia mearnsii* **Shrubs:** *Acacia floribunda, Bursaria spinosa, Callistemon subulatus, Hakea microcarpa, Kunzea ericoides, Leptospermum emarginatum, Lomatia myricoides* **Groundcover:** *Carex gaudichaudiana, Cyperus lucidus, Epilobium billardierianum, Isolepis inundata, Lomandra longifolia, Microlaena stipoides, Persicaria decipiens, Themeda australis*

Vegetation structure:

Stratum	Frequency (n=13)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	38	12.8 (6.5)	10 (14)
Small tree	23	4.7 (1.2)	30 (10)
Shrub	100	2.8 (1.2)	33.9 (24.1)
Ground cover	92	0.9 (0.7)	21.4 (15.3)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 10 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 22 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 10 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia elongata	2(1-2)	29	1(1-1)	1
Acacia floribunda	2(2-3)	93	1(1-1)	2
Acacia mearnsii	1(1-1)	71	1(1-2)	7
Babingtonia pluriflora	1(1-2)	21	1(1-1)	1
Beyeria lasiocarpa	1(1-3)	29	1(1-2)	2
Blechnum minus	1(1-1)	29	1(1-1)	<1
Bursaria spinosa	1(1-1)	50	1(1-2)	14
Callistemon subulatus	1(1-1)	57	1(1-1)	<1
Calytrix tetragona	1(1-2)	36	1(1-2)	2
Carex gaudichaudiana	1(1-1)	43	1(1-2)	1
Crassula helmsii	1(1-1)	21	1(1-2)	<1
Cyperus lucidus	1(1-1)	50	1(1-1)	1
Epilobium billardierianum	1(1-1)	43	1(1-1)	2
Eucalyptus elata	1(1-1)	29	2(1-3)	5
Eucalyptus maidenii	1(1-3)	21	2(1-2)	2
Euchiton gymnocephalus	1(1-1)	36	1(1-1)	7
Exocarpos cupressiformis	1(1-1)	29	1(1-1)	5
Gratiola peruviana	1(1-1)	36	1(1-1)	1

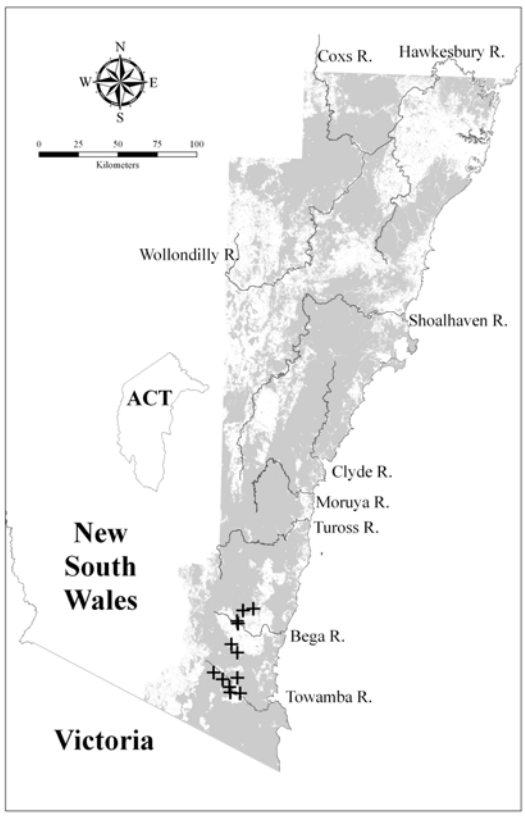
Hakea microcarpa	1(1-1)	43	1(1-1)	<1
Isachne globosa	1(1-2)	36	1(1-3)	<1
Isolepis inundata	1(1-1)	50	1(1-1)	1
Juncus usitatus	1(1-1)	21	1(1-1)	2
Kunzea ericoides	1(1-1)	50	1(1-2)	2
Leptospermum emarginatum	1(1-2)	100	1(1-2)	<1
Leptospermum lanigerum	1(1-1)	29	1(1-2)	1
Leptospermum obovatum	1(1-1)	29	2(1-3)	<1
Leucopogon juniperinus	1(1-1)	29	1(1-1)	6
Lobelia anceps	1(1-1)	36	1(1-1)	1
Lomandra longifolia	2(1-2)	93	1(1-1)	44
Lomatia myricoides	1(1-1)	79	1(1-1)	4
Melaleuca armillaris subsp. *armillaris*	2(2-3)	21	1(1-2)	1
Melaleuca parvistaminea	1(1-2)	21	1(1-1)	<1
Persicaria decipiens	1(1-1)	64	1(1-1)	1
Pimelea axiflora	1(1-1)	21	1(1-1)	3
Plectranthus graveolens	1(1-1)	21	1(1-1)	1
Senecio quadridentatus	1(1-1)	21	1(1-1)	1
Themeda australis	1(1-1)	50	1(1-3)	17

Constant:

Species	C/A	Freq	C/A O	Freq O
Echinopogon ovatus	1(1-1)	36	1(1-1)	14
Entolasia stricta	1(1-1)	36	1(1-2)	34
Microlaena stipoides	1(1-1)	50	1(1-2)	36

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	7	1(1-2)	9
Eucalyptus agglomerata	1(1-1)	7	2(1-3)	7
Eucalyptus cypellocarpa	1(1-1)	7	2(1-2)	10
Eucalyptus muelleriana	1(1-1)	14	2(1-2)	6
Eucalyptus polyanthemos subsp. *tarda*	1(1-1)	7	1(1-2)	<1
Eucalyptus tereticornis	2(1-2)	14	2(1-3)	7
Eucalyptus viminalis	1(1-1)	14	2(1-3)	4



Locations of survey sites allocated to FoW e39. Grey shading indicates extant native vegetation cover within the study area.

WSF e42: Southeast Inland Intermediate Shrub Forest

Plate e42. Southeast Inland Intermediate Shrub Forest (Map Unit e42) dominated by *Eucalyptus obliqua* and *E. sieberi* with *Acacia terminalis, A. longifolia, Pultenaea daphnoides* and *Pteridium esculentum* on Poole Fire Trail near Mt Poole Flora Reserve in Yambulla State Forest.

Sample Sites: 67
Area Extant (ha): 21400
Estimated % remaining: >95%
Area in conservation reserves (ha): 5700
Estimated % of pre-clearing area in conservation reserves: 20-30%
No. Taxa (total / unique): 230 / 0

No. Taxa per Plot (±sd): 29.3 (8.5)
Class: South Coast Wet Sclerophyll Forests
Related TEC: n/a

Southeast Inland Intermediate Shrub Forest is equivalent to Inland Intermediate Shrub Forest (unit 42) described by Keith & Bedward (1999). It is characterised by a tall *Eucalyptus* canopy frequently exceeding 28 m in height and a relatively dense shrub stratum including both smaller species and tall shrubs eventually forming a small tree stratum around 10 m in height. The tall semi-continuous groundcover is dominated by grasses, graminoids and herbs with a variable layer of bracken fern *Pteridium esculentum* usually present. Southeast Inland Intermediate Shrub Forest occurs on sheltered slopes either on metasediments or granitoid substrates at 150 - 650 m elevation in the coastal ranges and hinterland south from Merimbula. The most similar assemblage described in East Gippsland (Community 16.5, Forbes *et al.* 1982) shares few of the major understorey species and has relatively higher and lower frequencies of *E. globoidea* and *E. cypellocarpa*, respectively. Relatively little Inland Intermediate Shrub Forest has been cleared, most occurring on public land within production forest, while about one-quarter is reserved. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus cypellocarpa, Eucalyptus obliqua, Eucalyptus sieberi* **Shrubs:** *Acacia obtusifolia, Epacris impressa, Leucopogon lanceolatus* var. *lanceolatus, Lomatia ilicifolia, Persoonia linearis, Platysace lanceolata, Pultenaea daphnoides* **Climbers:** *Billardiera scandens* **Groundcover:** *Dianella caerulea, Entolasia stricta, Gonocarpus teucrioides, Hierochloe rariflora, Lepidosperma laterale, Lomandra longifolia, Poa meionectes, Pteridium esculentum, Stylidium graminifolium, Tetrarrhena juncea, Viola hederacea*

Vegetation structure:

Stratum	Frequency (n=19)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	27.7 (6.7)	34.7 (9.6)
Small tree	21	8.8 (4.5)	34.3 (21.9)
Shrub	95	3 (1.8)	36.7 (18.1)
Ground cover	100	0.9 (0.4)	53.2 (26.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 14 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 23 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 14 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	2(1-2)	33	1(1-2)	9
Acacia myrtifolia	1(1-1)	16	1(1-1)	4
Acacia obtusifolia	2(2-2)	58	1(1-2)	9
Acacia terminalis	2(1-2)	39	1(1-1)	11
Amperea xiphoclada	1(1-1)	30	1(1-1)	7
Billardiera scandens	1(1-1)	81	1(1-1)	27
Blechnum cartilagineum	1(1-2)	30	1(1-2)	11
Calochlaena dubia	1(1-2)	28	1(1-3)	9
Cassinia longifolia	1(1-1)	16	1(1-2)	6
Comesperma ericinum	1(1-1)	13	1(1-1)	1
Comesperma volubile	1(1-1)	10	1(1-1)	2
Correa reflexa	1(1-1)	18	1(1-1)	5
Daviesia ulicifolia	1(1-1)	18	1(1-1)	6
Dianella caerulea	1(1-1)	66	1(1-1)	28
Dianella tasmanica	1(1-1)	21	1(1-1)	7

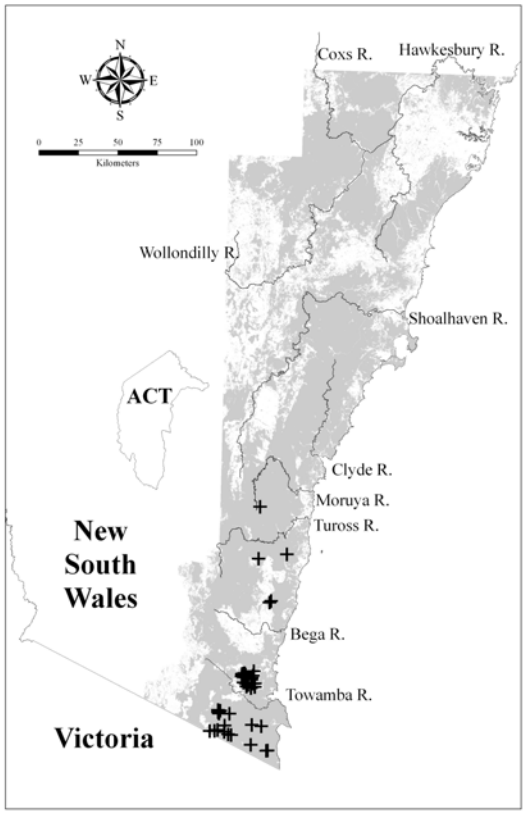
Epacris impressa	1(1-1)	61	1(1-1)	4
Eucalyptus agglomerata	2(1-2)	21	2(1-3)	7
Eucalyptus cypellocarpa	2(1-2)	43	2(1-2)	10
Eucalyptus muelleriana	2(2-2)	22	2(1-2)	6
Eucalyptus obliqua	2(1-2)	66	2(1-3)	4
Eucalyptus sieberi	2(2-3)	82	2(1-3)	15
Gahnia radula	1(1-2)	13	1(1-2)	3
Gahnia sieberiana	1(1-2)	13	1(1-1)	5
Gonocarpus teucrioides	2(1-2)	87	1(1-1)	17
Goodenia ovata	1(1-1)	21	1(1-1)	7
Hibbertia empetrifolia subsp. *empetrifolia*	1(1-1)	36	1(1-1)	6
Hierochloe rariflora	1(1-2)	42	1(1-2)	4
Hydrocotyle peduncularis	1(1-1)	22	1(1-1)	9
Lepidosperma laterale	1(1-1)	51	1(1-1)	28
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	90	1(1-1)	23
Lindsaea microphylla	1(1-1)	15	1(1-1)	5
Lomandra confertifolia subsp. *leptostachya*	1(1-2)	12	1(1-1)	<1
Lomandra longifolia	1(1-1)	63	1(1-1)	44
Lomatia ilicifolia	1(1-1)	55	1(1-1)	6
Olearia erubescens	1(1-1)	19	1(1-1)	2
Ozothamnus cuneifolius	1(1-2)	16	1(1-1)	1
Persoonia linearis	1(1-1)	81	1(1-1)	28
Platylobium formosum	1(1-1)	22	1(1-1)	3
Platysace lanceolata	1(1-1)	40	1(1-1)	13
Poa affinis	1(1-2)	10	1(1-2)	2
Poa meionectes	1(1-1)	64	1(1-2)	16
Polyscias sambucifolia	1(1-1)	18	1(1-1)	6
Pteridium esculentum	2(1-2)	94	1(1-2)	37
Pultenaea benthamii	2(1-2)	12	1(1-1)	<1
Pultenaea daphnoides	1(1-2)	75	1(1-1)	4
Schelhammera undulata	1(1-1)	22	1(1-1)	7
Senecio velleioides	1(1-1)	10	1(1-1)	1
Sticherus lobatus	3(2-3)	9	1(1-2)	1
Stylidium graminifolium	1(1-1)	51	1(1-1)	9
Tetrarrhena juncea	2(1-2)	70	1(1-2)	4
Tetratheca thymifolia	1(1-1)	18	1(1-1)	6
Viola hederacea	1(1-1)	49	1(1-1)	22
Xanthorrhoea australis	1(1-3)	13	1(1-2)	1

Constant:

Species	C/A	Freq	C/A O	Freq O
Clematis aristata	1(1-1)	33	1(1-1)	20
Entolasia stricta	1(1-1)	46	1(1-2)	34

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	2(1-2)	3	1(1-2)	9
Eucalyptus croajingolensis	1(1-1)	1	2(1-3)	<1
Eucalyptus elata	1(1-2)	4	2(1-3)	5
Eucalyptus fastigata	3(1-3)	3	2(1-3)	6
Eucalyptus globoidea	1(1-1)	24	2(1-2)	12
Eucalyptus longifolia	2(2-2)	1	1(1-2)	2
Eucalyptus radiata subsp. *radiata*	1(1-1)	10	2(1-3)	6
Eucalyptus smithii	1(1-3)	4	1(1-2)	2



Locations of survey sites allocated to WSF e42. Grey shading indicates extant native vegetation cover within the study area.

DSF e43: Southeast Mountain Sandstone Shrub Forest

Plate e43. Southeast Mountain Sandstone Shrub Forest (Map Unit e43) dominated by *Eucalyptus sieberi* and *E. cypellocarpa* with *Persoonia linearis, Podolobium ilicifolium, Epacris impressa* and *Acacia falciformis* on the western rim of Nungatta Plateau, Genoa section of South East Forests National Park.

Sample Sites: 15
Area Extant (ha): 2500
Estimated % remaining: >95%
Area in conservation reserves (ha): 2300
Estimated % of pre-clearing area in conservation reserves: >90%
No. Taxa (total / unique): 147 / 1
No. Taxa per Plot (±sd): 33.8 (6.7)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Southeast Mountain Sandstone Shrub Forest is equivalent to Mountain Sandstone Shrub Forest (unit 43) described by Keith & Bedward (1999). It is characterised by a tall *Eucalyptus* canopy which sometimes exceeds 31 m in height. Two prominent sclerophyllous shrub strata may be present ranging from 1 - 5 m tall. The open groundcover comprises grasses and graminoids with a variety of scattered herb species also present. Bracken fern *Pteridium esculentum* is also usually present with variable cover. Southeast Mountain Sandstone Shrub Forest occurs on ridges and upper slopes associated with Nungatta Mountain at 400 - 900 m elevation. Here, the substrate is Genoa Sandstone and underlying mudstones, although outlying stands occur on granitoid ridges on the escarpment range (Nalbaugh Plateau and Big Jack Mountain). This assemblage differs from Southeast Sandstone Dry Shrub Forest (Map Unit DSF e25) in its lack of *E. obliqua* and *E.* sp. aff. *radiata* which are substituted by other tree species, its different shrub composition and its shorter and more open groundcover. Although Southeast Mountain Sandstone Shrub Forest does not readily match any assemblages described in East Gippsland (Forbes *et al.* 1982), similar assemblages might occur within the dry sclerophyll forest complex (Woodgate *et al.* 1994) on Genoa sandstones across the border in the Coopracambra area. A negligible proportion of this assemblage has been cleared and almost all is represented within national parks. The principal threat is frequent fire regimes that may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Acacia falciformis, Eucalyptus cypellocarpa, Eucalyptus globoidea, Eucalyptus sieberi* **Shrubs:** *Cassinia longifolia, Daviesia ulicifolia, Epacris impressa, Exocarpos strictus, Leucopogon lanceolatus* var. *lanceolatus, Olearia erubescens, Ozothamnus cuneifolius, Persoonia linearis, Platysace lanceolata* **Climbers:** *Billardiera scandens, Hardenbergia violacea* **Groundcover:** *Dianella caerulea, Dianella tasmanica, Dichelachne rara, Gonocarpus teucrioides, Hierochloe rariflora, Lepidosperma laterale, Lomandra longifolia, Lomandra multiflora* subsp. *multiflora, Poa meionectes, Poranthera microphylla, Pteridium esculentum, Senecio prenanthoides, Viola hederacea*

Vegetation structure:

Stratum	Frequency (n=14)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	24.3 (6.8)	37.5 (10)
Small tree	43	5.8 (3)	37.5 (6.1)
Shrub	93	1.4 (0.7)	37.7 (17.9)
Ground cover	100	0.6 (0.3)	33.9 (18.7)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 13 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 29 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 13 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	2(1-3)	87	1(1-2)	10
Acacia mucronata subsp. *longifolia*	1(1-2)	33	1(1-2)	1
Cassinia longifolia	1(1-2)	40	1(1-2)	6
Comesperma volubile	1(1-1)	20	1(1-1)	2
Correa reflexa	1(1-3)	27	1(1-1)	5
Daviesia ulicifolia	1(1-1)	53	1(1-1)	7
Dianella tasmanica	1(1-1)	40	1(1-1)	7
Dichelachne rara	1(1-2)	40	1(1-1)	4
Epacris impressa	1(1-1)	80	1(1-1)	4
Eucalyptus agglomerata	2(2-3)	33	2(1-3)	7
Eucalyptus cypellocarpa	2(1-2)	93	2(1-2)	10
Eucalyptus globoidea	2(1-2)	67	2(1-2)	12
Eucalyptus mckintii	2(2-2)	20	3(2-3)	<1
Eucalyptus sieberi	2(2-3)	60	2(1-3)	16
Euchiton gymnocephalus	1(1-1)	33	1(1-1)	7
Exocarpos strictus	1(1-2)	73	1(1-1)	9
Gonocarpus teucrioides	1(1-1)	80	1(1-1)	17
Hierochloe rariflora	3(2-3)	40	1(1-2)	4
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	93	1(1-1)	23
Leucopogon microphyllus	1(1-1)	20	1(1-1)	3
Lomandra longifolia	1(1-1)	80	1(1-1)	44
Olearia erubescens	1(1-1)	53	1(1-1)	2
Olearia stellulata	1(1-1)	20	1(1-1)	1
Opercularia aspera	1(1-1)	33	1(1-1)	8
Oxylobium arborescens	1(1-2)	20	1(1-2)	<1
Ozothamnus cuneifolius	2(1-3)	40	1(1-1)	1
Persoonia linearis	1(1-1)	87	1(1-1)	29
Persoonia silvatica	1(1-1)	20	1(1-1)	2
Platysace lanceolata	2(1-3)	93	1(1-1)	13
Poa meionectes	2(1-2)	73	1(1-2)	16
Pteridium esculentum	1(1-2)	73	1(1-2)	37
Senecio prenanthoides	1(1-1)	60	1(1-1)	8
Senecio velleioides	1(1-1)	27	1(1-1)	1

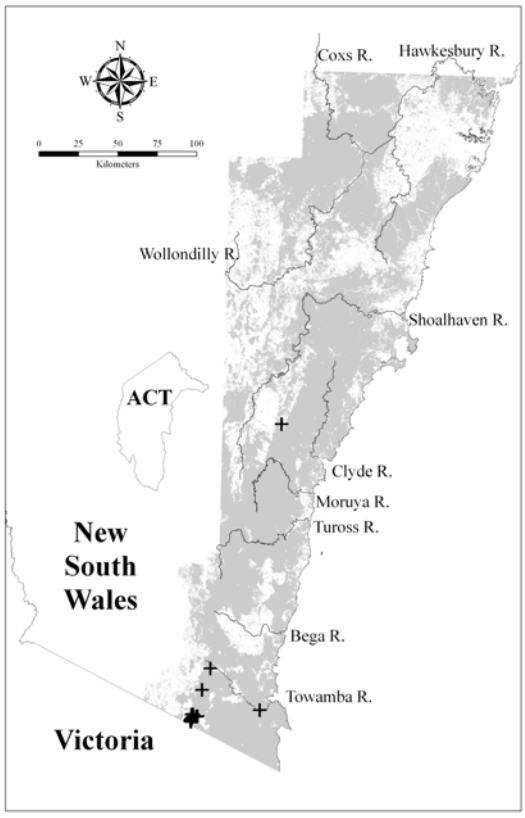
Veronica calycina	1(1-1)	33	1(1-1)	6
Viola hederacea	1(1-1)	73	1(1-1)	22

Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	40	1(1-1)	28
Dianella caerulea	1(1-1)	53	1(1-1)	28
Dianella revoluta var. *revoluta*	1(1-1)	33	1(1-1)	15
Hardenbergia violacea	1(1-1)	47	1(1-1)	17
Hibbertia obtusifolia	1(1-1)	33	1(1-1)	11
Hypericum gramineum	1(1-1)	33	1(1-1)	16
Lagenifera stipitata	1(1-1)	33	1(1-1)	14
Lepidosperma laterale	1(1-1)	53	1(1-1)	29
Lomandra multiflora subsp. *multiflora*	1(1-1)	40	1(1-1)	25
Oxalis perennans	1(1-1)	33	1(1-1)	13
Poranthera microphylla	1(1-1)	40	1(1-1)	15

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus angophoroides	3(1-3)	13	1(1-2)	1
Eucalyptus elata	2(1-2)	13	2(1-3)	5
Eucalyptus muelleriana	3(1-3)	20	2(1-2)	6
Eucalyptus obliqua	3(2-3)	13	2(1-3)	4
Eucalyptus radiata subsp. *radiata*	1(1-1)	7	2(1-3)	6



Locations of survey sites allocated to DSF e43. Grey shading indicates extant native vegetation cover within the study area.

DSF e44: Southeast Foothills Dry Shrub Forest

Plate e44. Southeast Foothills Dry Shrub Forest (Map Unit e44) dominated by *Eucalyptus sieberi* with occasional *E. cypellocarpa* and *Acacia falciformis, Leucopogon lanceolatus* and *Poa meionectes* near Mt Calabash, Coolangubra State Forest.

Sample Sites: 42
Area Extant (ha):3100
Estimated % remaining: >90%
Area in conservation reserves (ha): 2300
Estimated % of pre-clearing area in conservation reserves: 65-75%
No. Taxa (total / unique): 218 / 0
No. Taxa per Plot (±sd): 30.5 (9.7)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Southeast Foothills Dry Shrub Forest is equivalent to Foothills Dry Shrub Forest (unit 44) described by Keith & Bedward (1999). It is characterised by a *Eucalyptus* canopy typically around 25 m tall, but sometimes exceeding 30 m. It has an open sclerophyllous shrub stratum and a groundcover of scattered grasses, graminoids and herbs with a variable cover of bracken fern *Pteridium esculentum.* Southeast Foothills Dry Shrub Forest occurs on exposed ridges and slopes usually at 500 - 900 m elevation on granitoid substrates or more rarely on metasediments. Occurrences are scattered widely on the coastal and escarpment ranges. Similar assemblages occur to the south within the shrubby dry forest complex (Ecological Vegetation Class 21, Woodgate *et al.* 1994). Relatively little Southeast Foothills Dry Shrub Forest has been cleared, most being reserved while about one-quarter occurs within production forest. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Acacia falciformis, Eucalyptus globoidea, Eucalyptus sieberi* **Shrubs:** *Leucopogon lanceolatus* var. *lanceolatus, Persoonia linearis, Platysace lanceolata* **Climbers:** *Billardiera scandens, Clematis aristata* **Groundcover:** *Dianella caerulea, Gonocarpus teucrioides, Hierochloe rariflora, Lagenifera stipitata, Lepidosperma laterale, Lomandra longifolia, Lomandra multiflora* subsp. *multiflora, Poa meionectes, Poranthera microphylla, Pteridium esculentum, Tetrarrhena juncea, Viola hederacea*

Vegetation structure:

Stratum	Frequency (n=26)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	24.3 (4.8)	43.8 (11.4)
Small tree	15	10 (-)	26.3 (30.7)
Shrub	96	2.6 (1.1)	23.9 (16.6)
Ground cover	100	0.7 (0.3)	31.3 (23.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 12 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 23 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 12 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia dealbata	1(1-1)	26	1(1-2)	5
Acacia falciformis	1(1-2)	69	1(1-2)	10
Acacia longifolia	1(1-1)	29	1(1-2)	9
Billardiera scandens	1(1-1)	50	1(1-1)	27
Cassinia longifolia	2(1-2)	29	1(1-2)	6
Clematis aristata	1(1-1)	40	1(1-1)	20
Comesperma volubile	1(1-1)	21	1(1-1)	2
Correa reflexa	1(1-1)	26	1(1-1)	5
Daviesia ulicifolia	1(1-1)	26	1(1-1)	6
Dianella caerulea	1(1-1)	57	1(1-1)	28
Dianella tasmanica	1(1-1)	38	1(1-1)	7
Epacris impressa	1(1-1)	21	1(1-1)	4
Eucalyptus cypellocarpa	1(1-2)	36	2(1-2)	10
Eucalyptus globoidea	1(1-2)	50	2(1-2)	12
Eucalyptus obliqua	2(1-3)	31	2(1-3)	4
Eucalyptus sieberi	3(2-3)	98	2(1-3)	16
Gonocarpus teucrioides	1(1-1)	50	1(1-1)	17
Hakea eriantha	1(1-1)	19	1(1-1)	2
Helichrysum scorpioides	1(1-1)	33	1(1-1)	7
Hierochloe rariflora	1(1-2)	62	1(1-2)	4
Lagenifera stipitata	1(1-1)	45	1(1-1)	14
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	83	1(1-1)	23
Lomandra longifolia	1(1-1)	93	1(1-1)	44
Lomandra multiflora subsp. *multiflora*	1(1-1)	57	1(1-1)	25
Lomatia ilicifolia	1(1-1)	33	1(1-1)	6
Opercularia aspera	1(1-1)	29	1(1-1)	8
Persoonia linearis	1(1-1)	74	1(1-1)	28
Platysace lanceolata	1(1-1)	62	1(1-1)	13
Poa meionectes	1(1-2)	74	1(1-2)	16
Podolobium ilicifolium	1(1-2)	31	1(1-1)	9
Poranthera microphylla	1(1-1)	71	1(1-1)	15
Pteridium esculentum	2(1-3)	100	1(1-2)	37
Senecio prenanthoides	1(1-1)	33	1(1-1)	8

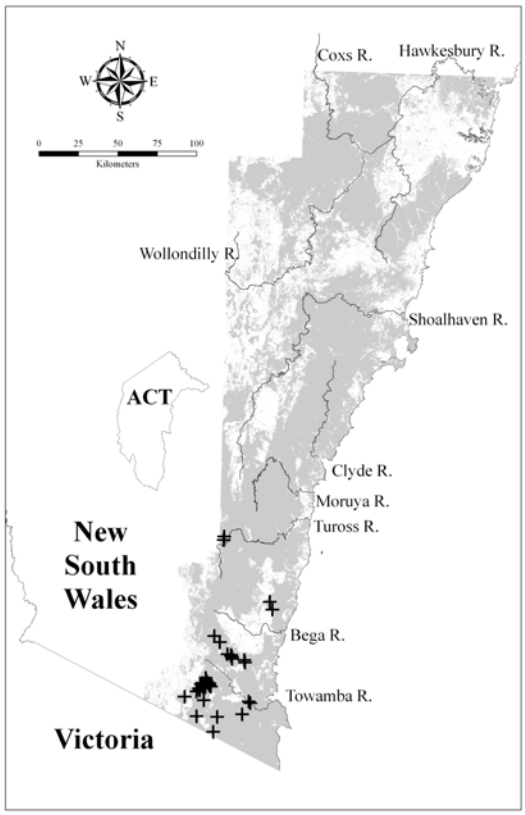
Stylidium graminifolium	1(1-1)	29	1(1-1)	9
Tetrarrhena juncea	1(1-1)	40	1(1-2)	5
Tylophora barbata	1(1-1)	38	1(1-1)	17
Viola hederacea	1(1-1)	64	1(1-1)	22
Xerochrysum bracteatum	1(1-1)	21	1(1-1)	2

Constant:

Species	C/A	Freq	C/A O	Freq O
Hypericum gramineum	1(1-1)	31	1(1-1)	16
Lepidosperma laterale	1(1-1)	48	1(1-1)	29

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus agglomerata	1(1-2)	7	2(1-3)	7
Eucalyptus baueriana	2(2-2)	2	2(1-2)	1
Eucalyptus elata	2(1-3)	17	2(1-3)	5
Eucalyptus fastigata	1(1-1)	5	2(1-3)	6
Eucalyptus muelleriana	2(1-2)	5	2(1-2)	6
Eucalyptus radiata subsp. *radiata*	1(1-3)	7	2(1-3)	6
Eucalyptus robertsonii subsp. *robertsonii*	1(1-1)	2	3(2-4)	<1
Eucalyptus smithii	1(1-1)	2	1(1-2)	2



Locations of survey sites allocated to DSF e44 Grey shading indicates extant native vegetation cover within the study area.

DSF e45: Southeast Mountain Dry Shrub Forest

Plate e45. Southeast Mountain Dry Shrub Forest (Map Unit e45) dominated by *Eucalyptus sieberi* with *Lomatia ilicifolia, Hibbertia hermanniifolia, Lomandra longifolia* and *Poa meionectes* near Mt Cathcart, Cathcart State Forest.

Sample Sites: 29
Area Extant (ha): 1800
Estimated % remaining: >90%
Area in conservation reserves (ha): 1100
Estimated % of pre-clearing area in conservation reserves: 50-60%
No. Taxa (total / unique): 192 / 0
No. Taxa per Plot (±sd): 25.4 (11.5)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Southeast Mountain Dry Shrub Forest is equivalent to Mountain Dry Shrub Forest (unit 45) described by Keith & Bedward (1999). It is usually dominated by *Eucalyptus sieberi* in pure stands between 20 and 30 m tall. It has a prominent sclerophyllous shrub stratum and a sparse groundcover dominated by rushes and bracken fern *Pteridium esculentum.* Southeast Mountain Dry Shrub Forest occurs on exposed stony ridges and upper slopes at 600 - 1 000 m elevation on granitoid substrates or more rarely on metasediments on the escarpment range and hinterland mountains. It differs from Southeast Foothills Dry Shrub Forest (Map Unit DSF e44) in the composition of its shrub stratum, the low frequency of co-dominant tree species and its less developed ground stratum. Similar assemblages occur to the south within the shrubby dry forest complex (Ecological Vegetation Class 21, Woodgate *et al.* 1994). A negligible area of Southeast Mountain Dry Shrub Forest has been cleared, over half being reserved while the remainder occurs within production forest on private and public land. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus sieberi* **Shrubs:** *Acacia terminalis, Epacris impressa, Leucopogon lanceolatus* var. *lanceolatus, Lomatia ilicifolia, Monotoca scoparia, Persoonia linearis, Platysace lanceolata* **Climbers:** *Billardiera scandens* **Groundcover:** *Joycea pallida, Lepidosperma laterale, Lomandra longifolia, Lomandra multiflora* subsp. *multiflora, Poa meionectes, Pteridium esculentum, Stylidium graminifolium*

Vegetation structure:

Stratum	Frequency (n=19)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	21.4 (7.6)	33.9 (15)
Small tree	26	7.8 (4.4)	13.2 (15.2)
Shrub	100	1.9 (1.4)	34.2 (13.9)
Ground cover	100	0.5 (0.2)	19.6 (18.1)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 7 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 16 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 7 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia terminalis	2(1-2)	72	1(1-1)	11
Daviesia ulicifolia	1(1-1)	31	1(1-1)	7
Dianella tasmanica	1(1-1)	31	1(1-1)	7
Dichelachne rara	1(1-1)	21	1(1-1)	5
Epacris impressa	1(1-1)	52	1(1-1)	4
Eucalyptus sieberi	3(3-3)	100	2(1-3)	16
Helichrysum scorpioides	1(1-1)	34	1(1-1)	7
Hibbertia obtusifolia	1(1-1)	38	1(1-1)	11
Joycea pallida	1(1-2)	41	1(1-2)	8
Leucopogon lanceolatus var. *lanceolatus*	1(1-2)	72	1(1-1)	23
Lomandra longifolia	1(1-2)	86	1(1-1)	44
Lomatia ilicifolia	1(1-1)	79	1(1-1)	6
Monotoca scoparia	1(1-2)	79	1(1-1)	12
Olearia erubescens	1(1-1)	21	1(1-1)	2
Persoonia linearis	1(1-1)	72	1(1-1)	29
Persoonia silvatica	1(1-1)	21	1(1-1)	2
Platysace lanceolata	1(1-1)	62	1(1-1)	13
Poa meionectes	1(1-1)	41	1(1-2)	16
Pteridium esculentum	2(1-2)	83	1(1-2)	37
Stylidium graminifolium	1(1-1)	55	1(1-1)	9
Tetratheca bauerifolia	1(1-1)	28	1(1-1)	<1

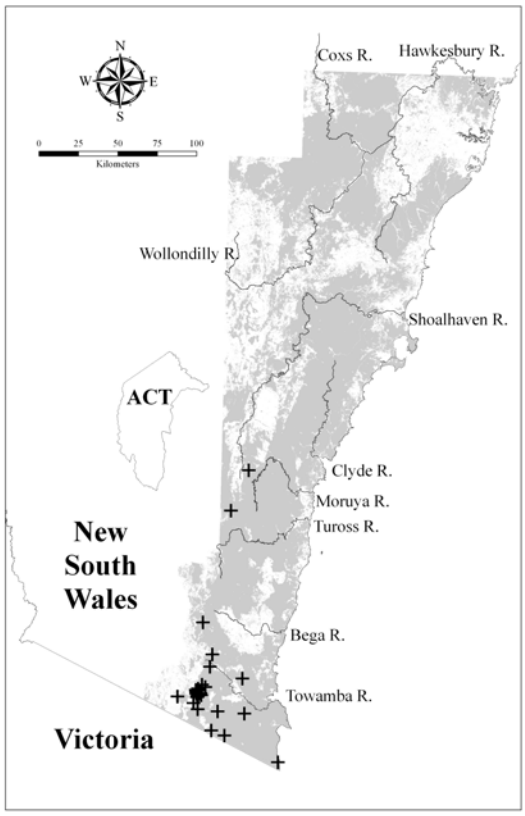
Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	41	1(1-1)	28
Gonocarpus tetragynus	1(1-1)	31	1(1-1)	20
Gonocarpus teucrioides	1(1-1)	31	1(1-1)	18
Lepidosperma laterale	1(1-2)	45	1(1-1)	29
Lomandra multiflora subsp. *multiflora*	1(1-1)	48	1(1-1)	25
Viola hederacea	1(1-1)	31	1(1-1)	22

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus consideniana	2(2-2)	3	1(1-2)	2

Eucalyptus cypellocarpa	1(1-2)	10	2(1-2)	10
Eucalyptus dives	1(1-1)	3	2(1-3)	4
Eucalyptus fraxinoides	2(1-2)	7	2(1-3)	1
Eucalyptus globoidea	1(1-4)	17	2(1-2)	12
Eucalyptus muelleriana	1(1-1)	3	2(1-2)	6
Eucalyptus obliqua	1(1-3)	17	2(1-3)	4
Eucalyptus radiata subsp. *radiata*	1(1-1)	3	2(1-3)	6
Eucalyptus smithii	2(2-2)	3	1(1-2)	2



Locations of survey sites allocated to DSF e45. Grey shading indicates extant native vegetation cover within the study area.

DSF e46A: Timbillica Dry Shrub Forest

Plate e46a. Timbillica Dry Shrub Forest (Map Unit e46a) dominated by *Eucalyptus consideniana* with *Allocasuarina littoralis, Hakea decurrens* ssp. *physocarpa, Daviesia buxifolia, Leptospermum trinervium* and *Acacia terminalis* on Imlay Road near Imlay Creek crossing, Yambulla State Forest.

Sample Sites: 20
Area Extant (ha): 22800
Estimated % remaining: >95%
Area in conservation reserves (ha): 3500
Estimated % of pre-clearing area in conservation reserves: 10-20%
No. Taxa (total / unique): 146 / 0
No. Taxa per Plot (±sd): 34.9 (7.1)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Timbillica Dry Shrub Forest is equivalent to Map Unit 46A of the same name described by Keith & Bedward (1999). It is a tall *Eucalyptus* forest typically around 26 m in height but frequently reaching 30 m. An open small tree stratum of *Allocasuarina littoralis ca*. 8 m tall is often present as well as a prominent sclerophyllous shrub stratum. The groundcover is dominated by grasses and graminoids and also contains a few forbs and the bracken fern *Pteridium esculentum.* Vines of *Billardiera scandens* twine among the shrubs and groundcover. Timbillica Dry Shrub Forest occupies low ridges and slopes in undulating granitoid terrain at 50 - 300 m elevation in the middle to lower reaches of the Wallagaraugh River catchment. A similar assemblage occurs east of Cann River in the lowlands of East Gippsland (Community 16.2, Forbes *et al.* 1982), although *E. consideniana* is less frequent and some differences in understorey composition (e.g. more abundant Proteaceae) are apparent. Negligible amounts of Timbillica Dry Shrub Forest have been cleared, and although numerous small patches are reserved mainly along the corridor within Wallagaraugh River Flora Reserve, most occurs within production forest. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Allocasuarina littoralis, Eucalyptus agglomerata, Eucalyptus consideniana, Eucalyptus globoidea, Eucalyptus sieberi* **Shrubs:** *Acacia terminalis, Aotus ericoides, Correa reflexa, Daviesia buxifolia, Epacris impressa, Hibbertia empetrifolia* subsp. *empetrifolia, Hovea linearis, Leucopogon lanceolatus* var. *lanceolatus, Lomatia ilicifolia, Monotoca scoparia, Persoonia levis, Persoonia linearis, Platylobium formosum, Platysace lanceolata* **Climbers:** *Billardiera scandens* **Groundcover:** *Amperea xiphoclada, Caustis flexuosa, Dampiera stricta, Dianella caerulea, Gahnia radula, Gonocarpus teucrioides, Lepidosperma laterale, Lomandra filiformis* subsp. *coriacea, Lomandra longifolia, Patersonia glabrata, Poa meionectes, Pteridium esculentum, Tetrarrhena juncea, Tetratheca pilosa* subsp. *latifolia, Xanthorrhoea concava, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=20)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	26.4 (6.3)	24 (5.8)
Small tree	55	8.7 (3.8)	17.4 (10.9)
Shrub	100	2 (1.1)	20.3 (11.5)
Ground cover	100	0.6 (0.3)	15 (11.6)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 17 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 29 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 17 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia myrtifolia	1(1-1)	25	1(1-1)	4
Acacia terminalis	1(1-2)	55	1(1-1)	11
Allocasuarina littoralis	1(1-3)	45	1(1-2)	17
Amperea xiphoclada	1(1-1)	40	1(1-1)	7
Anisopogon avenaceus	1(1-1)	30	1(1-2)	5
Aotus ericoides	1(1-1)	65	1(1-1)	3
Banksia marginata	1(1-1)	30	1(1-1)	3
Banksia serrata	1(1-1)	35	1(1-2)	9
Caustis flexuosa	1(1-1)	70	1(1-2)	7
Choretrum pauciflorum	1(1-1)	20	1(1-1)	1
Coopernookia barbata	1(1-1)	30	1(1-1)	1
Correa reflexa	1(1-1)	50	1(1-1)	5
Dampiera stricta	1(1-1)	40	1(1-1)	8
Daviesia buxifolia	1(1-2)	45	2(1-3)	<1
Daviesia latifolia	2(1-3)	20	1(1-2)	1
Deyeuxia quadriseta	1(1-1)	20	1(1-1)	2
Epacris impressa	1(1-1)	95	1(1-1)	4
Eucalyptus agglomerata	2(2-2)	50	2(1-3)	7
Eucalyptus consideniana	2(1-2)	75	1(1-2)	2
Eucalyptus globoidea	1(1-2)	60	2(1-2)	12
Eucalyptus sieberi	2(1-2)	70	2(1-3)	16
Gahnia radula	1(1-1)	50	1(1-2)	2
Gonocarpus teucrioides	1(1-1)	95	1(1-1)	17
Hakea sericea	1(1-1)	30	1(1-1)	7
Hibbertia empetrifolia subsp. *empetrifolia*	1(1-1)	60	1(1-1)	6
Hovea linearis	1(1-1)	50	1(1-1)	9
Kunzea ambigua	1(1-3)	20	1(1-2)	4
Lepidosperma laterale	1(1-1)	95	1(1-1)	28
Lomandra filiformis subsp. *coriacea*	1(1-1)	45	1(1-2)	10
Lomatia ilicifolia	1(1-1)	75	1(1-1)	6
Monotoca scoparia	1(1-2)	90	1(1-1)	12
Patersonia glabrata	1(1-1)	95	1(1-1)	10
Persoonia levis	1(1-1)	40	1(1-1)	13

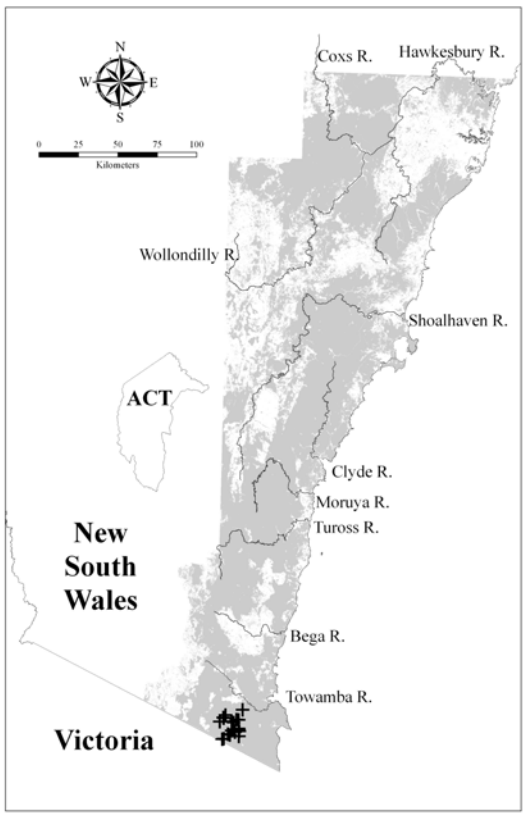
Persoonia linearis	1(1-1)	95	1(1-1)	29
Platylobium formosum	1(1-1)	50	1(1-1)	3
Platysace lanceolata	1(1-1)	50	1(1-1)	13
Poa meionectes	1(1-1)	80	1(1-2)	16
Pteridium esculentum	1(1-2)	95	1(1-2)	37
Rhytidosporum procumbens	1(1-1)	35	1(1-1)	3
Tetrarrhena juncea	1(1-1)	40	1(1-2)	5
Tetratheca pilosa subsp. *latifolia*	1(1-1)	65	1(1-1)	<1
Xanthorrhoea concava	1(1-1)	40	1(1-1)	4
Xanthosia pilosa	1(1-1)	40	1(1-1)	8

Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-1)	30	1(1-2)	10
Billardiera scandens	1(1-1)	55	1(1-1)	28
Dianella caerulea	1(1-1)	50	1(1-1)	28
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	50	1(1-1)	24
Lomandra glauca	1(1-1)	30	1(1-1)	10
Lomandra longifolia	1(1-1)	70	1(1-1)	44
Lomandra multiflora subsp. *multiflora*	1(1-1)	30	1(1-1)	25
Viola hederacea	1(1-1)	30	1(1-1)	22

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus angophoroides	1(1-2)	15	1(1-2)	1
Eucalyptus cypellocarpa	1(1-1)	5	2(1-2)	10
Eucalyptus muelleriana	2(2-2)	5	2(1-2)	6
Eucalyptus obliqua	1(1-1)	5	2(1-3)	4
Eucalyptus radiata subsp. *radiata*	2(2-2)	15	2(1-3)	6



Locations of survey sites allocated to DSF e46A. Grey shading indicates extant native vegetation cover within the study area.

DSF e46B: Southeast Lowland Dry Shrub Forest

Plate e46b. Southeast Lowland Dry Shrub Forest (Map Unit e46b) dominated by *Corymbia gummifera* and *E. sieberi* with *Banksia spinulosa, B. serrata, Pimelea linifolia* and *Acacia obtusifolia* north of Bellbird Creek in northern section of Ben Boyd National Park.

Sample Sites: 25
Area Extant (ha): 14266
Estimated % remaining: >90%
Area in conservation reserves (ha): 6900
Estimated % of pre-clearing area in conservation reserves: 40-50%
No. Taxa (total / unique): 197 / 0
No. Taxa per Plot (±sd): 36.7 (10.4)

Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Southeast Lowland Dry Shrub Forest is equivalent to Lowland Dry Shrub Forest (unit 46B) described by Keith & Bedward (1999). It is characterised by a variable canopy around 22 m tall and an open small tree stratum up to 8m tall. It has a diverse sclerophyllous shrub stratum and groundcover comprising scattered grasses, herbs and bracken *Pteridium esculentum.* Southeast Lowland Dry Shrub Forest occurs on low ridges and moderate dry slopes in the coastal foothills and plains usually below 150 m elevation on metasediments or Tertiary alluvium. Some of these latter sites with deep sandy soils support relatively tall forest dominated by *E. pilularis*. The most similar assemblage in East Gippsland (Community 15.1, Forbes *et al.* 1982) has more restricted occurrences of *C. gummifera* and some differences in understorey composition (e.g. lower frequencies of *Bossiaea obcordata* and *Chionochloa pallida*, higher frequency of *Banksia serrata*). Significant occurrences of Southeast Lowland Dry Shrub Forest remain on all tenures, relatively little having been cleared. Although a few stands are threatened by coastal development and overuse, the principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Allocasuarina littoralis, Banksia serrata, Corymbia gummifera, Eucalyptus globoidea, Eucalyptus sieberi* **Shrubs:** *Acacia suaveolens, Acacia terminalis, Aotus ericoides, Banksia spinulosa* var. *spinulosa, Bossiaea obcordata, Correa reflexa, Epacris impressa, Leptospermum trinervium, Lomatia ilicifolia, Monotoca scoparia, Persoonia levis, Persoonia linearis, Pimelea linifolia* subsp. *linifolia, Platysace lanceolata* **Climbers:** *Billardiera scandens* **Groundcover:** *Amperea xiphoclada, Anisopogon avenaceus, Dianella caerulea, Entolasia stricta, Gonocarpus teucrioides, Joycea pallida, Lepidosperma concavum, Lomandra longifolia, Patersonia glabrata, Pteridium esculentum, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=18)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	22.2 (5.1)	26 (16.5)
Small tree	78	7.9 (2.9)	19.1 (12.4)
Shrub	89	1.7 (1)	29.4 (17.6)
Ground cover	100	0.6 (0.2)	40.8 (15.3)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 16 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 28 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 16 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia myrtifolia	1(1-1)	28	1(1-1)	4
Acacia suaveolens	1(1-1)	52	1(1-1)	7
Acacia terminalis	1(1-2)	76	1(1-1)	11
Allocasuarina littoralis	1(1-2)	64	1(1-2)	17
Amperea xiphoclada	1(1-1)	40	1(1-1)	7
Anisopogon avenaceus	1(1-1)	44	1(1-2)	5
Aotus ericoides	1(1-1)	44	1(1-1)	3
Banksia serrata	2(1-3)	52	1(1-2)	9
Banksia spinulosa var. *spinulosa*	1(1-1)	48	1(1-2)	15
Bossiaea ensata	1(1-1)	24	1(1-1)	2
Bossiaea obcordata	1(1-1)	48	1(1-2)	7
Caustis flexuosa	2(1-2)	36	1(1-2)	7
Correa reflexa	1(1-1)	56	1(1-1)	5
Corymbia gummifera	2(2-2)	72	2(1-2)	16

Cyathochaeta diandra	2(1-2)	28	1(1-2)	8
Dianella caerulea	1(1-1)	64	1(1-1)	28
Epacris impressa	1(1-2)	52	1(1-1)	4
Eucalyptus globoidea	1(1-2)	40	2(1-2)	12
Eucalyptus pilularis	2(1-3)	32	2(1-3)	5
Eucalyptus sieberi	2(1-3)	68	2(1-3)	16
Gahnia radula	2(1-2)	24	1(1-2)	3
Gompholobium latifolium	1(1-1)	20	1(1-1)	3
Gonocarpus teucrioides	1(1-1)	88	1(1-1)	17
Hibbertia empetrifolia subsp. *empetrifolia*	1(1-1)	28	1(1-1)	6
Joycea pallida	2(1-2)	56	1(1-2)	8
Kennedia rubicunda	1(1-1)	32	1(1-1)	6
Lepidosperma concavum	2(1-2)	44	1(1-2)	2
Leptospermum trinervium	1(1-2)	48	1(1-2)	16
Lomandra confertifolia subsp. *leptostachya*	1(1-2)	20	1(1-1)	1
Lomandra glauca	1(1-1)	36	1(1-1)	10
Lomatia ilicifolia	1(1-1)	52	1(1-1)	6
Monotoca scoparia	1(1-1)	44	1(1-1)	12
Patersonia glabrata	1(1-1)	68	1(1-1)	10
Persoonia levis	1(1-1)	40	1(1-1)	13
Persoonia linearis	1(1-1)	88	1(1-1)	29
Pimelea linifolia subsp. *linifolia*	1(1-1)	68	1(1-1)	13
Platylobium formosum	2(1-2)	28	1(1-1)	3
Platysace lanceolata	1(1-1)	76	1(1-1)	13
Pteridium esculentum	2(1-3)	84	1(1-2)	37
Pultenaea daphnoides	1(1-1)	24	1(1-1)	4
Pultenaea linophylla	1(1-1)	32	1(1-1)	2
Rhytidosporum procumbens	1(1-1)	24	1(1-1)	3
Scaevola ramosissima	1(1-1)	20	1(1-1)	3
Tetratheca thymifolia	1(1-1)	32	1(1-1)	6
Xanthorrhoea concava	1(1-1)	20	1(1-1)	4
Xanthorrhoea resinifera	1(1-2)	20	1(1-2)	4
Xanthosia pilosa	1(1-1)	48	1(1-1)	8
Xanthosia tridentata	1(1-1)	36	1(1-1)	5

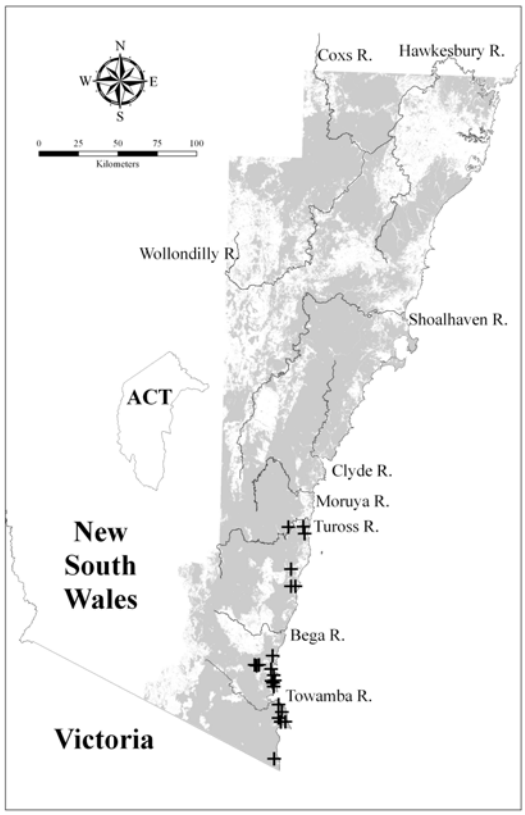
Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	44	1(1-1)	28
Entolasia stricta	1(1-1)	56	1(1-2)	34
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	32	1(1-1)	24
Lomandra longifolia	1(1-1)	40	1(1-1)	44

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	20	1(1-2)	9
Corymbia maculata	2(1-2)	8	2(1-3)	3
Eucalyptus agglomerata	2(1-2)	16	2(1-3)	7

Eucalyptus consideniana	1(1-2)	12	2(1-2)	2
Eucalyptus muelleriana	1(1-1)	8	2(1-2)	6



Locations of survey sites allocated to DSF e46B. Grey shading indicates extant native vegetation cover within the study area.

DSF e47: Eden Dry Shrub Forest

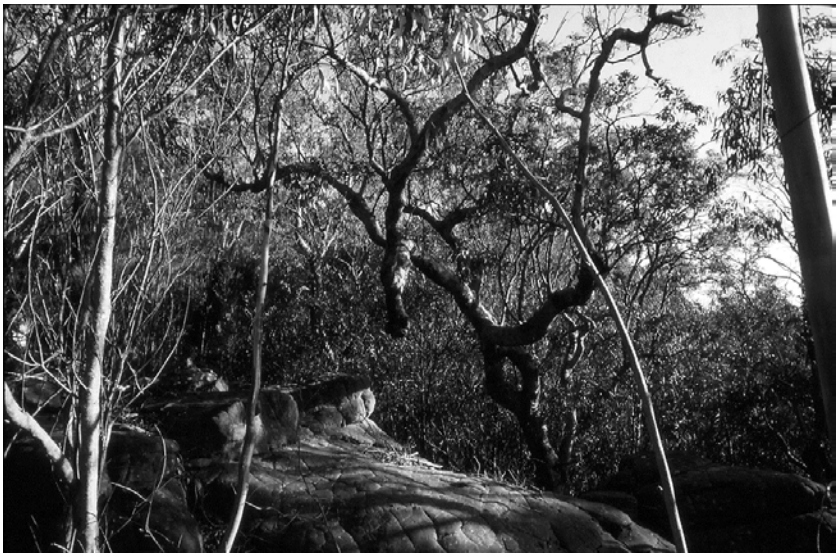


Plate e47. Eden Dry Shrub Forest (Map Unit e47) dominated by *Angophora floribunda* and *E. sieberi* with *Allocasuarina littoralis* and *Acacia falciformis* in the upper Merrica River catchment, Nadgee Nature Reserve.

Sample Sites: 22
Area Extant (ha): 17100
Estimated % remaining: >95%
Area in conservation reserves (ha): 12300

Estimated % of pre-clearing area in conservation reserves: 65-75%
No. Taxa (total / unique): 170 / 0
No. Taxa per Plot (±sd): 25.8 (8.2)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Eden Dry Shrub Forest is equivalent to Map Unit 47 of the same name described by Keith & Bedward (1999). It has a low – medium forest canopy typically around 20 m in height and less frequently reaching 26 m. Typically, an open stratum of small trees is present, dominated by *Allocasuarina littoralis* up to 6 m tall. It has an open sclerophyllous shrub stratum and groundcover comprising a mixture of grasses, graminoids, herbs and bracken fern *Pteridium esculentum.* Eden Dry Shrub Forest occupies coastal mountain ridges and coastal plateaux up to 800 m elevation on metasediments from the Nadgee coast to Mt Imlay. Although no similar assemblages have been explicitly described south of the Eden region (Austin 1978, Forbes *et al.* 1982), one may exist within the lowland sclerophyll forest complex in East Gippsland (Ecological Vegetation Class 16, Woodgate *et al.* 1994). Relatively little Eden Dry Shrub Forest has been cleared, most being reserved while about one-quarter occurs within public and private production forest. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided. Two intense fires occurred within 8 years over a large portion of the range of Eden Dry Shrub Forest in the 1970's. A long fire-free interval may therefore be necessary to ensure population recovery of some species and restoration of vegetation structure.

Floristic Summary:
Trees: *Allocasuarina littoralis, Angophora floribunda, Eucalyptus sieberi* **Shrubs:** *Acacia terminalis, Epacris impressa, Leucopogon lanceolatus* var. *lanceolatus, Persoonia linearis, Platysace lanceolata, Pultenaea daphnoides* **Climbers:** *Billardiera scandens* **Groundcover:** *Dianella caerulea, Gahnia radula, Gonocarpus teucrioides, Lomandra longifolia, Pteridium esculentum, Tetrarrhena juncea, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=22)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	19.4 (6.6)	24.8 (15.2)
Small tree	50	6.4 (3)	33.9 (26.4)
Shrub	100	2.5 (1.4)	36.6 (19.8)
Ground cover	100	0.9 (0.5)	41 (26.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 9 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 19 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 9 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia obtusifolia	2(1-3)	32	1(1-2)	9
Acacia terminalis	2(1-3)	77	1(1-1)	11
Allocasuarina littoralis	2(1-3)	64	1(1-2)	17
Angophora floribunda	2(1-2)	50	1(1-2)	9
Banksia serrata	1(1-2)	36	1(1-2)	9
Billardiera scandens	1(1-1)	59	1(1-1)	28
Caustis flexuosa	2(1-3)	36	1(1-2)	7
Dianella caerulea	1(1-1)	64	1(1-1)	28
Dillwynia glaberrima	2(1-2)	27	1(1-1)	1
Epacris impressa	1(1-2)	77	1(1-1)	4
Eucalyptus sieberi	2(2-3)	91	2(1-3)	16
Gahnia radula	1(1-2)	73	1(1-2)	2
Gonocarpus teucrioides	1(1-2)	77	1(1-1)	17

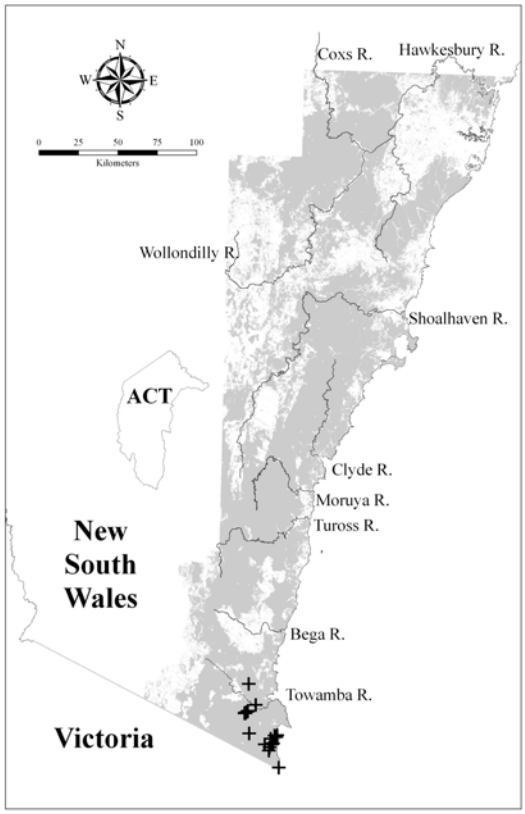
Hierochloe rariflora	1(1-1)	32	1(1-2)	4
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	64	1(1-1)	24
Ozothamnus cuneifolius	1(1-1)	32	1(1-1)	1
Persoonia linearis	1(1-1)	64	1(1-1)	29
Platysace lanceolata	1(1-1)	86	1(1-1)	13
Pteridium esculentum	2(1-3)	91	1(1-2)	37
Pultenaea daphnoides	1(1-1)	45	1(1-1)	4
Pultenaea scabra	1(1-2)	27	1(1-2)	2
Tetrarrhena juncea	2(1-3)	73	1(1-2)	5
Xanthosia pilosa	1(1-1)	73	1(1-1)	8

Constant:

Species	C/A	Freq	C/A O	Freq O
Lomandra longifolia	1(1-1)	45	1(1-1)	44

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus agglomerata	1(1-2)	14	2(1-3)	7
Eucalyptus baxteri	2(2-2)	9	1(1-2)	<1
Eucalyptus elata	1(1-1)	5	2(1-3)	5
Eucalyptus globoidea	2(1-2)	14	2(1-2)	12
Eucalyptus longifolia	2(2-2)	5	1(1-2)	2
Eucalyptus muelleriana	2(2-2)	5	2(1-2)	6
Eucalyptus obliqua	1(1-1)	9	2(1-3)	4
Eucalyptus smithii	2(2-2)	5	1(1-2)	2



Locations of survey sites allocated to DSF e47. Grey shading indicates extant native vegetation cover within the study area.

DSF e48: Mumbulla Dry Shrub Forest

Plate e48. Mumbulla Dry Shrub Forest (Map Unit e48) dominated by *Eucalyptus sieberi* with *E. agglomerata, Allocasuarina littoralis, Acacia obtusifolia* and *Lepidosperma urophorum* on Lizard Road, Biamanga National Park.

Sample Sites: 15
Area Extant (ha): 4500
Estimated % remaining: >95%
Area in conservation reserves (ha): 3500
Estimated % of pre-clearing area in conservation reserves: 70-80%
No. Taxa (total / unique): 154 / 1
No. Taxa per Plot (±sd): 33.1 (18.5)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Mumbulla Dry Shrub Forest is equivalent to Map Unit 48 of the same name described by Keith & Bedward (1999). This low open forest typically reaches up to 20 m tall, often with an open sub-stratum of small trees of around 6 m in height. It has a sparse sclerophyllous shrub stratum and open groundcover comprising mainly grasses and graminoids. Mumbulla Dry Shrub Forest occupies coastal mountain ridges at 150 - 650 m elevation on the Bega tonalite on Mumbulla and Dr George Mountains. Outlying stands may occur at Mt Imlay and the upper Wog Wog Creek area. No similar assemblages have been described in East Gippsland (Forbes *et al.* 1982). Its distribution to the north is likely to be limited due to the lack of tonalite coastal mountain habitat. A negligible area of Mumbulla Dry Shrub Forest has been cleared, most being reserved while about one-sixth occurs within production forest. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Allocasuarina littoralis, Eucalyptus agglomerata, Eucalyptus sieberi* **Shrubs:** *Acacia terminalis, Bossiaea obcordata, Correa reflexa, Hakea macraeana, Persoonia linearis, Platysace lanceolata, Pomaderris lanigera* **Climbers:** *Billardiera scandens, Clematis aristata* **Groundcover:** *Entolasia stricta, Joycea pallida, Lepidosperma laterale, Lepidosperma urophorum, Lomandra confertifolia* subsp. *rubiginosa, Lomandra multiflora* subsp. *multiflora, Patersonia glabrata, Senecio velleioides, Tetratheca thymifolia, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=15)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	93	18.5 (4.6)	21.1 (14.9)
Small tree	67	8.5 (6.5)	22 (17)

Shrub	87	1.6 (1.2)	15.2 (16.1)
Ground cover	100	0.7 (0.3)	29 (20.2)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 10 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 18 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 10 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia mearnsii	1(1-2)	33	1(1-2)	7
Acacia terminalis	1(1-1)	47	1(1-1)	11
Allocasuarina littoralis	2(1-2)	93	1(1-2)	17
Arrhenechthites mixta	1(1-1)	20	1(1-1)	1
Bossiaea obcordata	1(1-1)	40	1(1-2)	7
Coopernookia barbata	1(1-1)	20	1(1-1)	1
Correa reflexa	1(1-1)	67	1(1-1)	5
Daviesia mimosoides	1(1-1)	27	1(1-2)	2
Eucalyptus agglomerata	2(2-2)	40	2(1-3)	7
Eucalyptus sieberi	2(1-3)	87	2(1-3)	16
Hakea macraeana	1(1-1)	80	1(1-1)	1
Hibbertia dentata	1(1-1)	33	1(1-1)	6
Joycea pallida	2(2-3)	73	1(1-2)	8
Lepidosperma urophorum	1(1-2)	80	1(1-2)	7
Lomandra confertifolia subsp. *rubiginosa*	1(1-1)	87	1(1-1)	4
Lomandra confertifolia subsp. *similis*	1(1-1)	20	1(1-2)	2
Lomandra multiflora subsp. *multiflora*	1(1-1)	73	1(1-1)	25
Marsdenia suaveolens	1(1-1)	27	1(1-1)	3
Olearia ramulosa subsp. *D*	1(1-1)	20	1(1-1)	<1
Patersonia glabrata	1(1-1)	53	1(1-1)	10
Persoonia linearis	1(1-1)	93	1(1-1)	29
Phyllanthus gunnii	1(1-1)	20	1(1-1)	2
Platysace lanceolata	1(1-1)	100	1(1-1)	13
Plectranthus graveolens	1(1-1)	33	1(1-1)	1
Pomaderris lanigera	1(1-1)	40	1(1-1)	1
Scaevola aemula	1(1-1)	20	1(1-2)	<1
Senecio velleioides	1(1-1)	40	1(1-1)	1
Tetratheca thymifolia	1(1-1)	40	1(1-1)	6
Xanthosia pilosa	1(1-1)	47	1(1-1)	8
Xerochrysum bracteatum	1(1-1)	20	1(1-1)	2

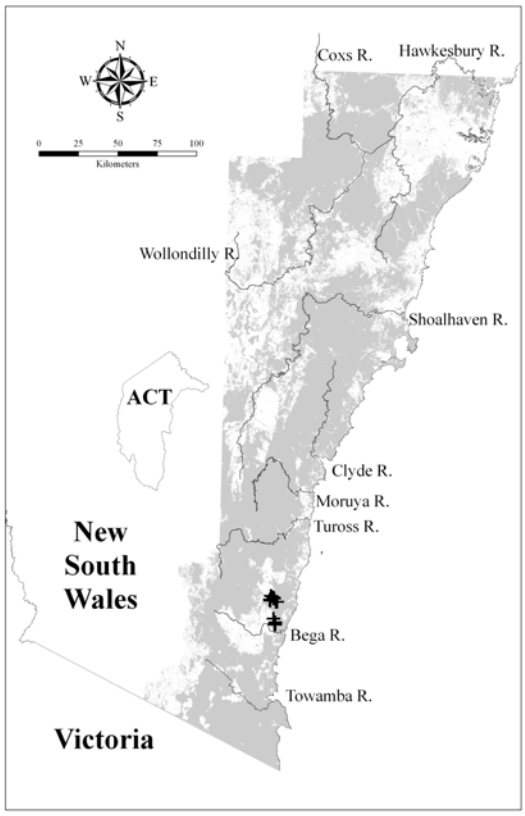
Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-2)	33	1(1-2)	10
Billardiera scandens	1(1-1)	40	1(1-1)	28
Clematis aristata	1(1-1)	40	1(1-1)	20
Dianella caerulea	1(1-1)	33	1(1-1)	28
Entolasia stricta	1(1-1)	60	1(1-2)	34
Glycine clandestina	1(1-1)	33	1(1-1)	26

Lepidosperma laterale	1(1-1)	40	1(1-1)	29
Pteridium esculentum	1(1-1)	33	1(1-2)	37

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	2(1-2)	20	1(1-2)	9
Eucalyptus elata	1(1-1)	7	2(1-3)	5
Eucalyptus globoidea	2(2-2)	20	2(1-2)	12
Eucalyptus muelleriana	1(1-1)	7	2(1-2)	6



Locations of survey sites allocated to DSF e48. Grey shading indicates extant native vegetation cover within the study area.

DSF e49: Southeast Coastal Dry Shrub Forest

Plate e49. Southeast Coastal Dry Shrub Forest (Map Unit e49) dominated by *Eucalyptus sieberi* with *Acacia obtusifolia, Tetratheca thymifolia, Podolobium ilicifolium, Coopernookia barbata* and *Lomandra multiflora* on Sugarloaf Road, near The Sugarloaf, Yowaka section of South East Forests National Park.

Sample Sites: 43
Area Extant (ha): 31800
Estimated % remaining: >95%
Area in conservation reserves (ha): 8000
Estimated % of pre-clearing area in conservation reserves: 20-30%
No. Taxa (total / unique): 202 / 0
No. Taxa per Plot (±sd): 26.9 (9.6)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Southeast Coastal Dry Shrub Forest is equivalent to Coastal Dry Shrub Forest (unit 49) described by Keith & Bedward (1999). It is characterised by a *Eucalyptus* canopy up to 25 m tall, sometimes with an open stratum of small trees around 8 m tall. It has an open sclerophyllous shrub stratum with vines of *Billardiera scandens* twining amongst the shrubs. The sparse groundcover comprises sclerophyll herbs. Southeast Coastal Dry Shrub Forest is widespread on coastal mountain ridges, dry slopes and coastal plateaux on metasediments at 100 - 500 m elevation. It may occur up to 900 m elevation on hinterland mountains (Big Jack Mountain, Mt Poole) and in the dissected terrain north of Bemboka. It differs from the more restricted Mumbulla Dry Shrub Forest (Map Unit DSF e48) in understorey composition and subdominant tree species and occupies different substrates. Although no similar assemblages have been explicitly described in East Gippsland (Forbes *et al.* 1982), one may exist within the lowland sclerophyll forest complex (Ecological Vegetation Class 16, Woodgate *et al.* 1994). Relatively little Southeast Coastal Dry Shrub Forest has been cleared. Although the largest area remains on State Forest, substantial areas occur on all tenures. Although some areas on private land may be threatened by clearing, the principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Logging followed by regeneration burns and thinning may change the relative abundance of eucalypt species, particularly *E. sieberi* (Bridges 1983). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus Allocasuarina littoralis, Eucalyptus agglomerata, Eucalyptus sieberi* **Shrubs:** *Acacia obtusifolia, Acacia terminalis, Coopernookia barbata, Leucopogon lanceolatus* var. *lanceolatus, Lomatia ilicifolia, Monotoca scoparia, Persoonia linearis, Platysace lanceolata, Podolobium ilicifolium* **Climbers:** *Billardiera scandens* **Groundcover:** *Dianella caerulea, Gonocarpus teucrioides, Lepidosperma laterale, Lomandra multiflora* subsp. *multiflora, Patersonia glabrata, Pteridium esculentum, Stylidium graminifolium, Tetratheca thymifolia, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=18)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	20.7 (4.6)	30.8 (10)
Small tree	39	9.1 (3.5)	15.9 (11.2)

Shrub	100	2.1 (1.3)	22.2 (13.4)
Ground cover	94	0.5 (0.3)	12.5 (10.9)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 10 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 19 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 10 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia myrtifolia	1(1-2)	19	1(1-1)	4
Acacia obtusifolia	1(1-2)	58	1(1-2)	9
Acacia terminalis	1(1-1)	56	1(1-1)	11
Allocasuarina littoralis	2(1-3)	47	1(1-2)	17
Amperea xiphoclada	1(1-1)	28	1(1-1)	7
Billardiera scandens	1(1-1)	63	1(1-1)	27
Bossiaea obcordata	1(1-1)	23	1(1-2)	7
Caustis flexuosa	1(1-1)	28	1(1-2)	7
Coopernookia barbata	1(1-1)	51	1(1-1)	1
Dianella caerulea	1(1-1)	58	1(1-1)	28
Epacris impressa	1(1-1)	28	1(1-1)	4
Eucalyptus agglomerata	2(1-2)	65	2(1-3)	7
Eucalyptus sieberi	3(2-3)	95	2(1-3)	16
Gonocarpus teucrioides	1(1-1)	53	1(1-1)	17
Hakea macraeana	1(1-2)	23	1(1-1)	1
Hibbertia empetrifolia subsp. *empetrifolia*	1(1-1)	26	1(1-1)	6
Joycea pallida	1(1-2)	28	1(1-2)	8
Lepidosperma laterale	1(1-1)	60	1(1-1)	28
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	58	1(1-1)	23
Lomatia ilicifolia	1(1-1)	56	1(1-1)	6
Monotoca scoparia	1(1-1)	70	1(1-1)	12
Opercularia aspera	1(1-1)	23	1(1-1)	8
Patersonia glabrata	1(1-1)	47	1(1-1)	10
Persoonia linearis	1(1-1)	91	1(1-1)	28
Platysace lanceolata	1(1-1)	74	1(1-1)	13
Podolobium ilicifolium	1(1-1)	74	1(1-1)	8
Polyscias sambucifolia	1(1-1)	19	1(1-1)	6
Pultenaea daphnoides	1(1-1)	30	1(1-1)	4
Stylidium graminifolium	1(1-1)	58	1(1-1)	9
Tetratheca thymifolia	1(1-1)	49	1(1-1)	6
Xanthorrhoea australis	1(1-2)	40	1(1-2)	1
Xanthosia pilosa	1(1-1)	53	1(1-1)	7

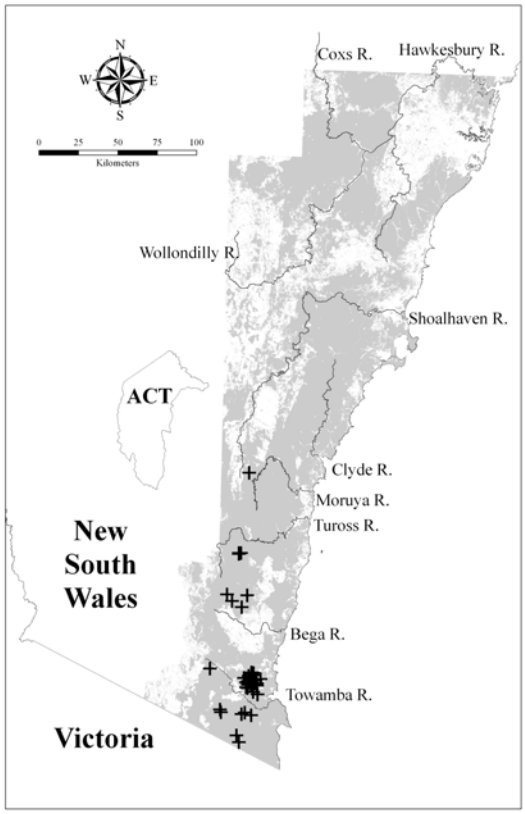
Constant:

Species	C/A	Freq	C/A O	Freq O
Entolasia stricta	1(1-1)	40	1(1-2)	34
Lomandra multiflora subsp. *multiflora*	1(1-1)	44	1(1-1)	25
Pomax umbellata	1(1-1)	30	1(1-1)	14

Pteridium esculentum	1(1-1)	44	1(1-2)	37

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	5	1(1-2)	9
Corymbia gummifera	2(1-2)	5	2(1-2)	16
Eucalyptus angophoroides	2(2-2)	2	1(1-2)	1
Eucalyptus consideniana	1(1-1)	2	2(1-2)	2
Eucalyptus cypellocarpa	1(1-1)	5	2(1-2)	10
Eucalyptus elata	1(1-1)	2	2(1-3)	5
Eucalyptus globoidea	1(1-1)	2	2(1-2)	12
Eucalyptus muelleriana	2(1-2)	5	2(1-2)	6
Eucalyptus obliqua	1(1-1)	2	2(1-3)	4
Eucalyptus smithii	1(1-2)	9	1(1-2)	2
Eucalyptus stenostoma	1(1-1)	5	2(1-2)	<1



Locations of survey sites allocated to DSF e49. Grey shading indicates extant native vegetation cover within the study area.

DSF e50: Genoa Dry Shrub Forest

Plate e50. Genoa Dry Shrub Forest (Map Unit e50) dominated by *Eucalyptus mackintii* with *E. agglomerata* and *E. dives* and a shrubby understorey of *Hakea decurrens* subsp. *physocarpa, Leucopogon microphyllus, Caustis flexuosa* and *Pteridium esculentum* in the Genoa River gorge, Genoa section of South East Forests National Park.

Sample Sites: 7
Area Extant (ha): 3000
Estimated % remaining: >95%
Area in conservation reserves (ha): 2100
Estimated % of pre-clearing area in conservation reserves: 55-70%
No. Taxa (total / unique): 81 / 0
No. Taxa per Plot (±sd): 22.7 (7.7)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Genoa Dry Shrub Forest is equivalent to Map Unit 50 of the same name described by Keith & Bedward (1999). It is characterised by a *Eucalyptus* canopy around 18 m in height with a prominent sclerophyllous shrub stratum. The sparse groundcover comprises grasses and graminoids with a variety of forbs and sprawling vines of *Hardenbergia violacea.* Genoa Dry Shrub Forest is restricted to dry ridges and slopes on sandstone terrain at 300 - 740 m around the Genoa River and on Mt Imlay. Although no similar assemblages have been explicitly described south of the Eden region (Austin 1978, Forbes *et al.* 1982), Genoa Dry Shrub Forest is likely to extend across the Victorian border in the Genoa sandstone terrain within Coopracambra National Park. About one-fifth of this assemblage has been cleared for pine plantations, most of the remainder being reserved while about one-third occurs within production forest on private or public land. The principal threat is frequent disturbance regimes that include logging (outside reserves) and fire in combination. These regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned disturbances need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Acacia falciformis, Eucalyptus agglomerata* **Shrubs:** *Acacia terminalis, Cassinia longifolia, Correa reflexa, Hibbertia obtusifolia, Lomatia ilicifolia, Monotoca scoparia, Persoonia linearis, Platysace lanceolata, Podolobium ilicifolium* **Climbers:** *Hardenbergia violacea* **Groundcover:** *Caustis flexuosa, Dianella revoluta* var. *revoluta, Joycea pallida, Lomandra longifolia, Lomandra multiflora* subsp. *multiflora, Pomax umbellata, Rhytidosporum procumbens*

Vegetation structure:

Stratum	Frequency (n=7)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	18.1 (4)	30.7 (9.8)
Small tree	57	4.6 (1.5)	12.5 (6.5)
Shrub	86	1.4 (0.6)	30 (24.7)
Ground cover	100	0.5 (0.3)	16.7 (9.8)

Diagnostic Species:

A 0.04 ha plot located in this Map Unit is expected to contain at least 7 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 17 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 7 positive diagnostic species.

Positive Diagnostic Species:

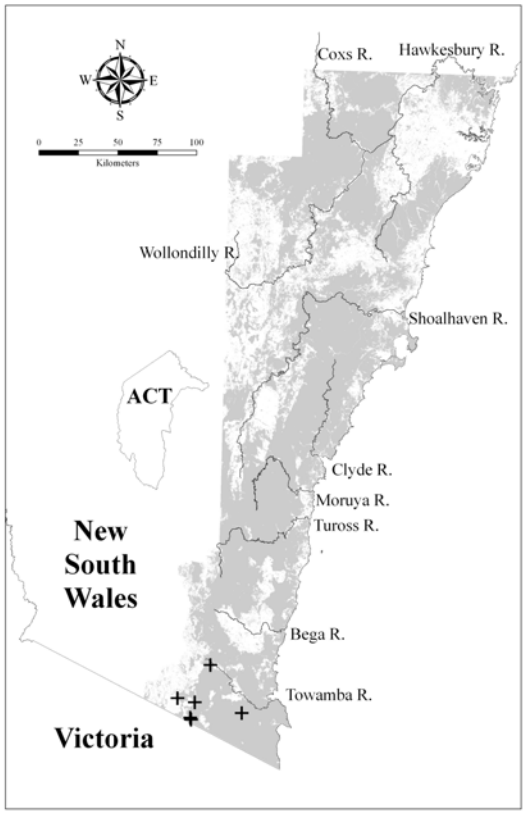
Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-3)	57	1(1-2)	10
Banksia marginata	2(1-2)	29	1(1-1)	3
Cassinia longifolia	1(1-1)	57	1(1-2)	6
Caustis flexuosa	1(1-2)	43	1(1-2)	7
Choretrum pauciflorum	1(1-1)	29	1(1-1)	1
Correa reflexa	1(1-1)	43	1(1-1)	5
Eucalyptus agglomerata	3(2-3)	71	2(1-3)	7
Hakea macraeana	1(1-1)	29	1(1-1)	1
Joycea pallida	1(1-2)	71	1(1-2)	8
Leucopogon microphyllus	1(1-1)	29	1(1-1)	3
Lomatia ilicifolia	1(1-1)	71	1(1-1)	6
Monotoca scoparia	2(1-2)	100	1(1-1)	12
Oxylobium arborescens	4(2-4)	29	1(1-1)	<1
Ozothamnus cuneifolius	1(1-1)	29	1(1-1)	1
Persoonia linearis	1(1-2)	86	1(1-1)	29
Platysace lanceolata	1(1-1)	100	1(1-1)	13
Podolobium ilicifolium	1(1-2)	71	1(1-1)	9
Pomax umbellata	1(1-2)	86	1(1-1)	14
Rhytidosporum procumbens	1(1-1)	43	1(1-1)	3

Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia terminalis	2(1-2)	43	1(1-1)	11
Dianella revoluta var. *revoluta*	1(1-1)	57	1(1-1)	15
Hardenbergia violacea	1(1-2)	43	1(1-1)	17
Hibbertia obtusifolia	1(1-1)	43	1(1-1)	11
Lomandra longifolia	1(1-2)	71	1(1-1)	44
Lomandra multiflora subsp. *multiflora*	1(1-1)	57	1(1-1)	25

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus angophoroides	1(1-1)	14	1(1-2)	1
Eucalyptus consideniana	1(1-1)	14	2(1-2)	2
Eucalyptus croajingolensis	3(3-3)	14	2(1-2)	<1
Eucalyptus globoidea	2(2-2)	14	2(1-2)	12
Eucalyptus mckintii	3(3-3)	14	2(2-3)	<1
Eucalyptus radiata subsp. *radiata*	2(2-2)	14	2(1-3)	6
Eucalyptus sieberi	2(2-2)	14	2(1-3)	16



Locations of survey sites allocated to DSF e50. Grey shading indicates extant native vegetation cover within the study area.

HL e51: Southeast Rhyolite Rock Scrub

Plate e51. Southeast Rhyolite Rock Scrub (Map Unit e51) open variant with *Xanthorrhoea australis*, scattered *Eucalyptus sieberi* and *Kunzea ambigua* on The Sugarloaf, Yowaka section of South east Forests National Park.

Sample Sites: 16
Area Extant (ha): 50
Estimated % remaining: >95%
Area in conservation reserves (ha): 40
Estimated % of pre-clearing area in conservation reserves: 75-85%
No. Taxa (total / unique): 179 / 3
No. Taxa per Plot (±sd): 32.1 (15.9)
Class: Southern Volcanic Scrubs
Related TEC: n/a

Southeast Rhyolite Rock Scrub is equivalent to Rhyolite Rock Scrub (unit 51) described by Keith & Bedward (1999). It is characterised by dense but patchy shrub strata, 2 - 7 m tall with occasional small trees emerging above. The groundcover comprises mainly scattered tussocks of grasses and graminoids and the lilioid herb *Stypandra glauca.* Southeast Rhyolite Rock Scrub is restricted to skeletal soils on outcrops of rhyolite at 100 - 400 m elevation on the coastal range west of Pambula. This assemblage contains a large number of rare, threatened and locally endemic species and is unique to the Eden region. Another rhyolite scrub assemblage with a different complement of rare and threatened species occurs to the north in Deua National Park. The highly restricted stands of Rhyolite Rock Scrub occur on all tenures and, although none have been cleared, they are threatened by grazing and frequent fire regimes. Occurrences on private land are subject to grazing by domestic goats, while feral goats potentially threaten stands on all tenures. Frequent fires used in hazard reduction or grazing management may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided. Post-fire seedling recruitment in shrub populations may be poor on skeletal soils if drought follows fire. Long fire-free intervals also potentially threaten Rhyolite Rock Scrub if the length of intervals exceeds the combined longevity of standing plants and seed banks. Nevertheless, particular care is needed to avoid escape of hazard reduction fires onto the outcrops from adjacent production forest and grazing areas.

Floristic Summary:
Trees: *Allocasuarina littoralis* **Shrubs:** *Dodonaea truncatiales, Kunzea ambigua, Leionema ralstonii, Logania albiflora, Melaleuca armillaris* subsp. *armillaris, Platysace lanceolata, Pultenaea retusa* **Groundcover:** *Dendrobium speciosum, Entolasia stricta, Lepidosperma laterale, Lepidosperma urophorum, Notodanthonia longifolia, Stypandra glauca*

Vegetation structure:

Stratum	Frequency (n=14)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	57	14.4 (5.7)	6.6 (5.9)
Small tree	71	6.9 (2.6)	18.1 (19.5)
Shrub	100	2.6 (1.1)	32 (21.4)
Ground cover	100	0.6 (0.3)	7.9 (9.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 10 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 19 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 10 positive diagnostic species.

Positive Diagnostic Species:

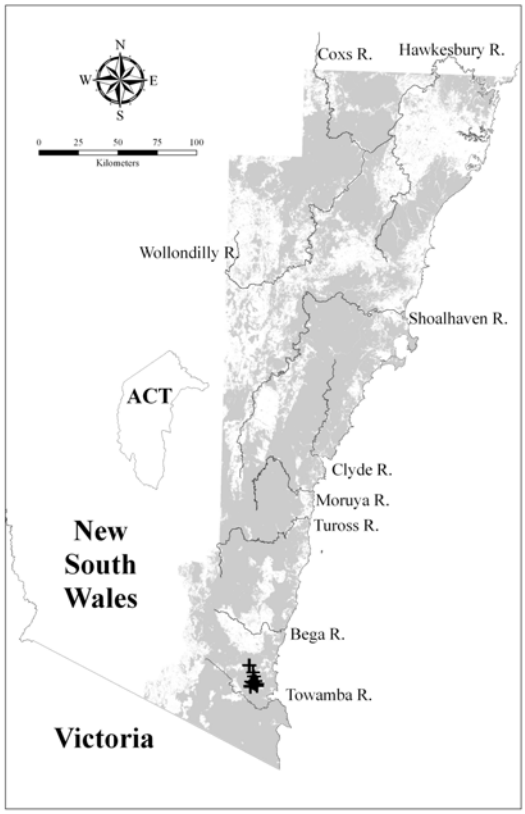
Species	C/A	Freq	C/A O	Freq O
Allocasuarina littoralis	1(1-1)	88	1(1-2)	17
Beyeria lasiocarpa	1(1-1)	38	1(1-2)	1
Calytrix tetragona	2(1-2)	38	1(1-2)	2
Dendrobium speciosum	1(1-1)	44	1(1-1)	1
Dodonaea triquetra	1(1-1)	31	1(1-2)	6
Dodonaea truncatiales	1(1-1)	44	1(1-2)	<1
Entolasia stricta	1(1-1)	69	1(1-2)	34
Eucalyptus agglomerata	1(1-2)	31	2(1-3)	7
Eucalyptus smithii	1(1-1)	25	1(1-2)	2
Hakea macraeana	1(1-1)	38	1(1-1)	1
Hierochloe rariflora	1(1-1)	25	1(1-2)	4
Hovea purpurea	1(1-1)	31	1(1-1)	<1
Isotoma axillaris	1(1-1)	38	1(1-1)	<1
Kunzea ambigua	2(2-2)	88	1(1-2)	3
Lasiopetalum macrophyllum	1(1-1)	25	1(1-2)	<1
Leionema ralstonii	1(1-1)	69	1(1-2)	<1
Lepidosperma urophorum	1(1-1)	75	1(1-2)	7
Leucopogon attenuatus	1(1-1)	25	1(1-1)	<1
Leucopogon setiger	1(1-3)	25	1(1-1)	1
Logania albiflora	1(1-1)	44	1(1-1)	1
Lomandra confertifolia subsp. *rubiginosa*	1(1-2)	25	1(1-1)	4
Melaleuca armillaris subsp. *armillaris*	2(1-2)	88	1(1-2)	1
Notodanthonia longifolia	1(1-1)	75	1(1-2)	5
Ozothamnus obcordatus subsp. *major*	1(1-1)	31	1(1-1)	<1
Philotheca myoporoides subsp. *myoporoides*	1(1-2)	31	1(1-1)	<1
Platysace lanceolata	1(1-1)	94	1(1-1)	13
Pomaderris intermedia	1(1-1)	25	1(1-1)	<1
Pomaderris lanigera	1(1-1)	25	1(1-1)	1
Pseudanthus divaricatissimus	1(1-1)	25	1(1-1)	<1
Pultenaea retusa	1(1-1)	50	1(1-1)	1
Schoenus melanostachys	1(1-1)	25	1(1-2)	2
Stypandra glauca	1(1-1)	63	1(1-2)	5
Westringia davidii	1(1-2)	25	0(0-0)	0

Constant:

Species	C/A	Freq	C/A O	Freq O
Cheilanthes sieberi	1(1-1)	38	1(1-1)	14
Eucalyptus sieberi	1(1-1)	38	2(1-3)	16
Lepidosperma laterale	1(1-1)	56	1(1-1)	29
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	31	1(1-1)	24
Persoonia linearis	1(1-1)	31	1(1-1)	29
Poa meionectes	1(1-1)	31	1(1-2)	16
Pomax umbellata	1(1-1)	31	1(1-1)	14

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus elata	1(1-1)	6	2(1-3)	5
Eucalyptus maidenii	1(1-1)	6	2(1-2)	2



Locations of survey sites allocated to HL e51. Grey shading indicates extant native vegetation cover within the study area.

HL e52: Southeast Mountain Rock Scrub

Plate e52. Southeast Mountain Rock Scrub (Map Unit e52) with clumped stands of *Melaleuca armillaris* and *Kunzea ambigua* with *Epacris microphylla* and *Lepidosperma gunnii* on massive granitoid outcrops near Mt Poole, Mt Poole Flora Reserve.

Sample Sites: 8
Area Extant (ha): 170
Estimated % remaining: >95%
Area in conservation reserves (ha): 160
Estimated % of pre-clearing area in conservation reserves: >90%
No. Taxa (total / unique): 101 / 1
No. Taxa per Plot (±sd): 24.1 (5.6)
Class: Southern Volcanic Scrubs
Related TEC: n/a

Southeast Mountain Rock Scrub is equivalent to Mountain Rock Scrub (unit 52) described by Keith & Bedward (1999). It is dominated by a dense but patchy shrub stratum 4 m tall with occasional small trees emerging above. The groundcover comprises scattered tussocks of graminoids and the lilioid herb *Stypandra glauca.* Southeast Mountain Rock Scrub is restricted to skeletal soils on granitoid outcrops at 500 - 1000 m elevation on hinterland and escarpment mountains in the south-west (e.g. Mt Poole, White Rock Mountain, Pheasants Peak). This assemblage lacks the complement of rare, threatened and endemic plant species characteristic of the lower elevation rhyolite outcrops (Map Unit HL e51), as well as including some shrub species that are absent from that assemblage. A similar assemblage has a restricted distribution on granitoid peaks in East Gippsland including Maramingo Hill, Genoa Peak and Mt Kaye. This assemblage is included within Rocky Outcrop Shrubland (Ecological Vegetation Class 28, Woodgate *et al.* 1994), along with other assemblages on non-granitoid substrates that share few species in common. Southeast Mountain Rock Scrub remains uncleared and is almost entirely contained within reserves. Frequent regimes fire may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided. Post-fire seedling recruitment in shrub populations may be poor on skeletal soils if drought follows fire. Long fire-free intervals also potentially threaten Mountain Rock Scrub if the length of intervals exceeds the combined longevity of standing plants and seed banks. The level of grazing by feral goats is unknown, but potentially problematic.

Floristic Summary:
Trees: *Eucalyptus sieberi, Eucalyptus smithii* **Shrubs:** *Acacia longifolia, Correa reflexa, Grevillea victoriae* subsp. *nivalis, Hakea macraeana, Kunzea ambigua, Platysace lanceolata* **Groundcover:** *Goodenia ovata, Hierochloe rariflora, Lepidosperma laterale, Lepidosperma urophorum, Lomandra longifolia, Stypandra glauca*

Vegetation structure:

Stratum	Frequency (n=3)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	67	13.5 (2.1)	7.5 (3.5)
Small tree	-	- (-)	- (-)
Shrub	100	4 (1.7)	46.7 (24.7)
Ground cover	100	0.5 (-)	15 (13.2)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 6 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 20 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 6 positive diagnostic species.

Positive Diagnostic Species:

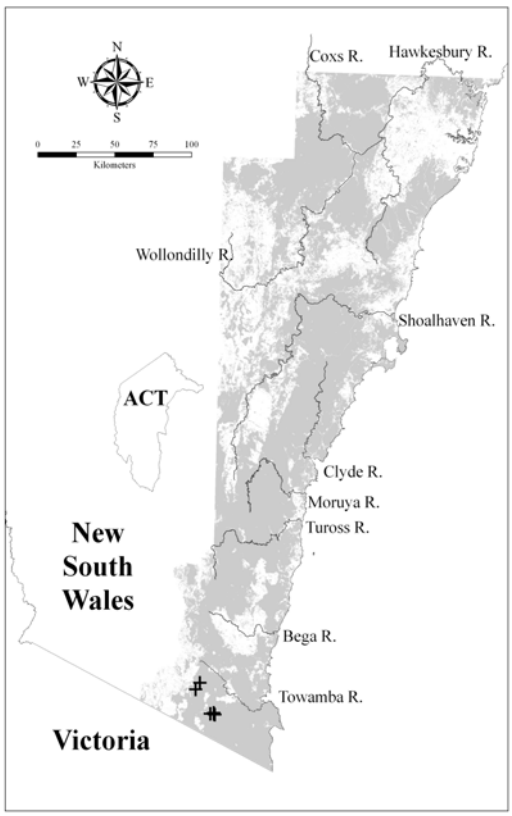
Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-1)	63	1(1-2)	10
Cassinia longifolia	1(1-1)	38	1(1-2)	6
Correa reflexa	1(1-1)	88	1(1-1)	5
Derwentia perfoliata	1(1-1)	25	1(1-1)	1
Eucalyptus sieberi	1(1-1)	75	2(1-3)	16
Eucalyptus smithii	1(1-2)	50	1(1-2)	2
Goodenia ovata	1(1-1)	75	1(1-1)	7
Grevillea victoriae subsp. *nivalis*	1(1-2)	50	1(1-2)	<1
Hakea macraeana	2(1-3)	50	1(1-1)	1
Hierochloe rariflora	1(1-1)	50	1(1-2)	4
Hovea purpurea	1(1-1)	25	1(1-1)	<1
Kunzea ambigua	3(2-5)	63	1(1-2)	4
Lasiopetalum ferrugineum	1(1-1)	25	1(1-2)	2
Lepidosperma laterale	1(1-1)	88	1(1-1)	29
Lepidosperma urophorum	1(1-1)	75	1(1-2)	7
Leptospermum scoparium	1(1-1)	25	1(1-2)	<1
Platysace lanceolata	1(1-1)	75	1(1-1)	13
Pomaderris lanigera	1(1-1)	38	1(1-1)	1
Schoenus apogon	1(1-1)	25	1(1-1)	2
Stypandra glauca	1(1-1)	75	1(1-2)	5

Constant:

Species	C/A	Freq	C/A O	Freq O
Allocasuarina littoralis	1(1-2)	38	1(1-2)	17
Gonocarpus teucrioides	1(1-1)	38	1(1-1)	18
Lomandra longifolia	1(1-1)	63	1(1-1)	44
Poranthera microphylla	1(1-1)	38	1(1-1)	15
Xanthosia pilosa	1(1-1)	38	1(1-1)	8

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus elata	1(1-1)	13	2(1-3)	5
Eucalyptus globoidea	1(1-1)	13	2(1-2)	12



Locations of survey sites allocated to HL e52. Grey shading indicates extant native vegetation cover within the study area.

HL e53: Southern Montane Heath

Plate e53. Southern Montane Heath (Map Unit e53) dominated by *Allocasuarina nana* with *Brachyloma daphnoides, Notodanthonia tenuior* and scattered emergent *Eucalyptus dalrympleana* on Bald Hill, Bondi Gulf Nature Reserve.

Sample Sites: 30
Area Extant (ha): 6700
Estimated % remaining: >95%
Area in conservation reserves (ha): 3600
Estimated % of pre-clearing area in conservation reserves: 50-65%
No. Taxa (total / unique): 144 / 4
No. Taxa per Plot (±sd): 19.3 (8.1)
Class: Southern Montane Heaths

Related TEC: n/a

Southern Montane Heath is equivalent to Montane Heath (unit 53 of Keith & Bedward 1999) and Upper Shoalhaven Montane Heath (unit 123 of Tindall *et al.* 2004) combined. It comprises a closed shrub canopy of *Allocasuarina nana* exceeding 1 m in height, with a variety of other shrubs present at lower densities and a sparse scattering of eucalypt saplings 10 m tall emerging from the shrub canopy. The groundcover comprises scattered tussocks of grasses and graminoids. Southern Montane Heath has a restricted distribution with disjunct occurrences on the western fall of the Budawang Range from Corang to Mongarlowe, along the Bendoura and Minuma Ranges from Bendoura to Snowball and possibly on the Bombalawa and Gourock Ranges in the Hereford Hall area. Further south it occurs on the edge of the Monaro Tableland in the upper Tuross and Numeralla Rivers area in the north-west and the Bombala area in the south-west. Southern Montane Heath occurs on skeletal sandy loams derived from metasedimentary, acid volcanic or granitic substrates. It is typically found on exposed slopes and ridges between 600m to 800m ASL, although an unusual stand occurs on a granitoid substrate at 560 m elevation in the White Rock River area. No similar assemblages occur in East Gippsland (Woodgate *et al.* 1994). Less than 5% of Southern Montane Heath has been cleared for pine plantations or rough grazing. Further clearing and grazing potentially threatens some of the remainder on private and leasehold land in the Numeralla area. Extreme fire frequencies if sustained, may threaten stands on all tenures, particularly where Southern Montane Heath adjoins pine plantations or grazing lands. Frequent regimes fire may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). The absence of serotinous obligate seeders, such as *Banksia canei, Hakea dactyloides* and *Allocasuarina distyla*, from Montane Heath around Bombala (*cf.* Wadbilliga) may be a consequence of such regimes in this area during the last 150 years (Banks 1990). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided. The absence of serotinous obligate-seeding shrubs from some stands, particularly in the south may reflect historical regimes of high-frequency fire. Post-fire seedling recruitment in shrub populations may be poor on skeletal soils if drought follows fire. The risk of recruitment failure is greater under frequent fire regimes. Long fire-free intervals also potentially threaten Montane Heath if the length of intervals exceeds the combined longevity of standing plants and seed banks.

Floristic Summary:
Shrubs: *Allocasuarina nana, Brachyloma daphnoides, Hakea dactyloides, Monotoca scoparia* **Groundcover:** *Austrostipa pubinodis, Gonocarpus tetragynus, Joycea pallida, Lepidosperma gunnii, Lomandra glauca, Stylidium graminifolium*

Vegetation structure:

Stratum	Frequency (n=28)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	11	8.3 (5.9)	2.3 (2.3)
Tree canopy	25	7.7 (3.9)	19 (25.1)
Small tree	14	1.3 (0.2)	2.5 (1.9)
Shrub	86	1.3 (0.8)	83.2 (16.6)
Ground cover	100	0.4 (0.2)	21.4 (30.7)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 6 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 13 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 6 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Allocasuarina nana	5(4-5)	100	1(1-2)	1
Amperea xiphoclada	1(1-2)	30	1(1-1)	7
Austrodanthonia tenuior	1(1-1)	37	1(1-2)	2
Austrostipa pubinodis	1(1-2)	43	1(1-1)	<1
Brachyloma daphnoides	1(1-2)	83	1(1-1)	6
Dampiera stricta	1(1-1)	27	1(1-1)	8
Epacris impressa	1(1-1)	23	1(1-1)	4
Eucalyptus dives	1(1-2)	20	2(1-3)	4
Gompholobium huegelii	1(1-1)	30	1(1-1)	2
Gonocarpus tetragynus	1(1-1)	60	1(1-1)	20
Hakea dactyloides	1(1-2)	60	1(1-1)	12
Hibbertia pedunculata	2(1-3)	23	1(1-1)	<1

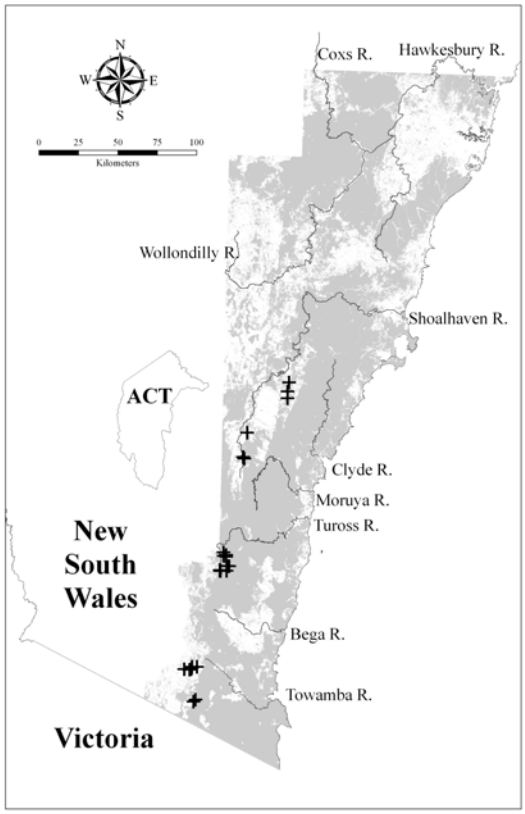
Isopogon prostratus	1(1-2)	33	1(1-1)	<1
Joycea pallida	1(1-2)	47	1(1-2)	8
Kunzea sp. *'Wadbilliga'*	2(1-3)	20	1(1-1)	<1
Lepidosperma gunnii	1(1-1)	40	1(1-1)	4
Lepidosperma tortuosum	1(1-1)	37	1(1-1)	<1
Lomandra glauca	1(1-2)	60	1(1-1)	10
Mirbelia platylobioides	1(1-2)	23	1(1-1)	1
Monotoca scoparia	1(1-1)	43	1(1-1)	12
Patersonia longifolia	1(1-1)	33	1(1-1)	2
Persoonia asperula	1(1-1)	30	1(1-1)	<1
Persoonia chamaepeuce	1(1-1)	27	1(1-1)	1
Platysace lanceolata	1(1-1)	37	1(1-1)	13
Stylidium graminifolium	1(1-2)	73	1(1-1)	9

Constant:

Species	C/A	Freq	C/A O	Freq O
Lomandra longifolia	1(1-1)	30	1(1-1)	44

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus consideniana	1(1-1)	3	2(1-2)	2
Eucalyptus croajingolensis	1(1-1)	3	2(1-3)	<1
Eucalyptus dalrympleana subsp. *dalrympleana*	1(1-1)	3	1(1-2)	3
Eucalyptus gregsoniana	2(2-2)	3	2(1-2)	<1
Eucalyptus ovata	1(1-1)	3	2(1-3)	1
Eucalyptus pauciflora	1(1-1)	17	1(1-2)	3
Eucalyptus recurva	2(2-2)	3	0(0-0)	0
Eucalyptus rossii	2(1-2)	7	3(1-3)	2
Eucalyptus rubida subsp. *rubida*	1(1-1)	10	1(1-2)	2
Eucalyptus sieberi	1(1-2)	10	2(1-3)	16



Locations of survey sites allocated to HL e53. Grey shading indicates extant native vegetation cover within the study area.

HL e54: Mt Nadgee Heath

Plate e54. Mt Nadgee Heath (Map Unit e54) dominated by *Allocasuarina nana* with *A. paludosa, Leptospermum trinervium, Leucopogon esquamatus, Lepidosperma concava* and emergent *Eucalyptus baxteri* on Mt Nadgee plateau, Nadgee Nature Reserve.

Sample Sites: 18
Area Extant (ha): 370
Estimated % remaining: >95%
Area in conservation reserves (ha): 370
Estimated % of pre-clearing area in conservation reserves: 100%
No. Taxa (total / unique): 137 / 0
No. Taxa per Plot (±sd): 32.9 (8.1)

Class: South Coast Heaths
Related TEC: n/a

Mt Nadgee Heath is equivalent to Map Unit 54 of the same described by Keith & Bedward (1999). It has a diverse open shrub canopy over 1 m tall interspersed with scattered individuals of *Eucalyptus baxteri* emerging from the shrub stratum. The groundcover is dominated by sedges with some grasses, herbs and small ferns also present. Swards of *Xanthorrhoea resinifera* occur in damper sites. Mt Nadgee Heath is restricted to rocky Devonian sandstone plateaux around Mt Nadgee and west of Green Cape at elevations up to 450 m and possibly on damper soils than Southeast Coastal Lowland Heath (Map Unit HL e55). No similar assemblages occur outside the Eden region (Austin 1978, Woodgate *et al.* 1994). Almost all of this restricted unit occurs in reserves. Frequent regimes fire may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus baxteri* **Shrubs:** *Banksia paludosa, Darwinia camptostylis, Dillwynia glaberrima, Epacris impressa, Epacris microphylla* var. *microphylla, Epacris obtusifolia, Leptospermum continentale, Leptospermum trinervium, Leucopogon esquamatus, Monotoca scoparia, Persoonia levis, Pimelea linifolia* subsp. *linifolia* **Climbers:** *Cassytha glabella* **Groundcover:** *Burchardia umbellata, Dampiera stricta, Drosera peltata, Gonocarpus tetragynus, Lepidosperma concavum, Lepidosperma filiforme, Lepyrodia scariosa, Lindsaea linearis, Lomandra glauca, Xanthosia pilosa*

Vegetation structure:

Stratum	Frequency (n=18)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	44	13.3 (8)	7.9 (4.8)
Small tree	28	5.2 (2.2)	26 (11.9)
Shrub	89	1.8 (1)	36.2 (22.5)
Ground cover	94	0.9 (0.6)	51.2 (23.9)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 17 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 27 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 17 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Allocasuarina nana	2(2-3)	39	2(1-4)	1
Allocasuarina paludosa	3(1-3)	22	1(1-3)	1
Aotus ericoides	1(1-1)	39	1(1-1)	3
Baeckea linifolia	1(1-1)	28	1(1-2)	1
Banksia paludosa	1(1-2)	78	1(1-2)	3
Banksia serrata	2(1-2)	33	1(1-2)	9
Bossiaea ensata	1(1-1)	28	1(1-1)	2
Bossiaea heterophylla	1(1-1)	33	1(1-1)	6
Burchardia umbellata	1(1-1)	72	1(1-1)	2
Cassytha glabella	1(1-1)	83	1(1-1)	8
Caustis pentandra	2(1-2)	28	1(1-1)	1
Dampiera stricta	1(1-1)	72	1(1-1)	8
Darwinia camptostylis	1(1-1)	56	1(1-2)	<1
Dillwynia glaberrima	1(1-1)	72	1(1-1)	1
Dillwynia sericea	1(1-1)	33	1(1-1)	2
Drosera peltata	1(1-1)	44	1(1-1)	2
Empodisma minus	1(1-2)	22	1(1-2)	3
Epacris impressa	1(1-1)	61	1(1-1)	4

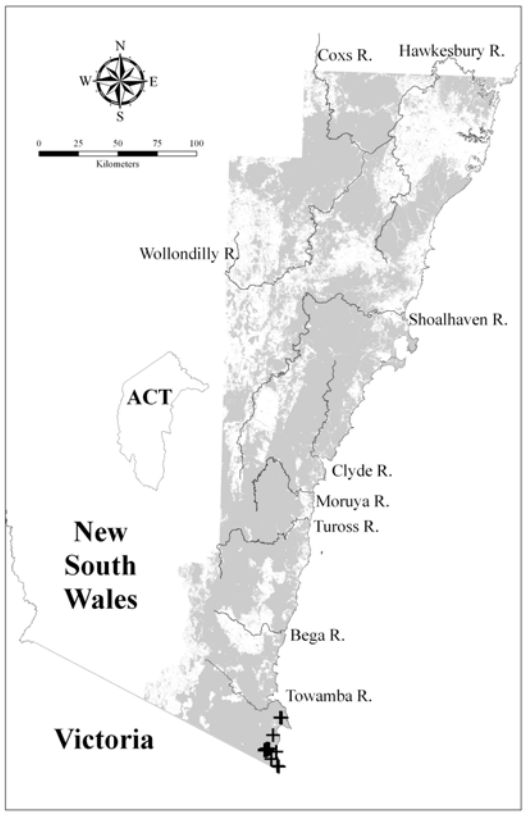
Epacris microphylla var. *microphylla*	2(1-2)	56	1(1-1)	5
Epacris obtusifolia	1(1-1)	44	1(1-1)	2
Eucalyptus baxteri	1(1-2)	67	2(1-2)	<1
Gahnia sieberiana	1(1-1)	33	1(1-1)	5
Gompholobium huegelii	1(1-1)	22	1(1-1)	2
Gonocarpus tetragynus	1(1-1)	56	1(1-1)	20
Gymnoschoenus sphaerocephalus	2(1-2)	33	2(1-3)	1
Hakea decurrens	1(1-1)	28	1(1-2)	<1
Hakea teretifolia	1(1-1)	28	1(1-2)	4
Hibbertia riparia	1(1-2)	39	1(1-1)	2
Hypolaena fastigiata	1(1-1)	33	1(1-1)	1
Leionema diosmeum	1(1-2)	28	2(1-2)	<1
Lepidosperma concavum	1(1-3)	44	1(1-2)	2
Lepidosperma filiforme	1(1-2)	61	1(1-2)	2
Lepidosperma gladiatum	3(1-3)	22	1(1-1)	<1
Lepidosperma neesii	1(1-2)	22	1(1-2)	1
Leptocarpus tenax	2(1-2)	22	1(1-2)	2
Leptospermum continentale	1(1-1)	61	1(1-1)	3
Leptospermum trinervium	2(1-2)	89	1(1-2)	15
Lepyrodia scariosa	1(1-3)	67	1(1-2)	6
Leucopogon esquamatus	1(1-1)	67	1(1-1)	1
Lindsaea linearis	1(1-1)	67	1(1-1)	7
Lomandra glauca	1(1-2)	50	1(1-1)	10
Melaleuca squarrosa	1(1-3)	22	2(1-3)	1
Mitrasacme polymorpha	1(1-1)	28	1(1-1)	3
Monotoca scoparia	1(1-1)	44	1(1-1)	12
Persoonia levis	1(1-1)	67	1(1-1)	13
Pimelea linifolia subsp. *linifolia*	1(1-1)	50	1(1-1)	13
Plinthanthesis paradoxa	1(1-1)	22	1(1-1)	<1
Rhytidosporum procumbens	1(1-1)	22	1(1-1)	3
Ricinocarpos pinifolius	1(1-1)	22	1(1-1)	1
Selaginella uliginosa	1(1-2)	22	1(1-1)	2
Sowerbaea juncea	1(1-1)	33	1(1-1)	1
Symphionema paludosum	1(1-1)	33	1(1-1)	<1
Xanthorrhoea resinifera	1(1-3)	22	1(1-2)	4
Xanthosia pilosa	1(1-1)	56	1(1-1)	8

Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia terminalis	1(1-1)	33	1(1-1)	11
Allocasuarina littoralis	1(1-1)	39	1(1-2)	17
Eucalyptus sieberi	1(1-2)	33	2(1-3)	16
Gonocarpus teucrioides	1(1-1)	39	1(1-1)	18
Lomandra longifolia	1(1-2)	39	1(1-1)	44

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	11	1(1-2)	9
Corymbia gummifera	2(2-2)	6	2(1-2)	16
Eucalyptus consideniana	1(1-1)	6	2(1-2)	2



Locations of survey sites allocated to HL e54. Grey shading indicates extant native vegetation cover within the study area.

HL e55: Southeast Coastal Lowland Heath

Plate e55. Southeast Coastal Lowland Heath (Map Unit e55) dominated by *Allocasuarina paludosa, Banksia paludosa* and *Epacris impressa* on Impressa Moor in Nadgee Nature Reserve.

Sample Sites: 25
Area Extant (ha): 1900
Estimated % remaining: >90%
Area in conservation reserves (ha): 1700
Estimated % of pre-clearing area in conservation reserves: 75-90%
No. Taxa (total / unique): 170 / 3
No. Taxa per Plot (±sd): 34.6 (8.9)
Class: South Coast Heaths
Related TEC: n/a

Southeast Coastal Lowland Heath is equivalent to Coastal Lowland Heath (unit 55) described by Keith & Bedward (1999). It is characterised by a diverse open shrub canopy up to 1 m tall with occasional eucalypts up to 5 m tall emerging from the shrub stratum. The relatively dense and diverse groundcover is dominated by sedges and a distinctive array of herbs, with occasional grasses and small ferns also present. Southeast Coastal Lowland Heath is restricted to gentle slopes on coastal deposits of Tertiary alluvium and Recent sands below 100 m elevation south from Pambula. It is distinguished from Mt Nadgee Heath by several shrub and herb species which are apparently unique to the lowland assemblage. Unlike Mt Nadgee Heath, the mainly continuous vegetation cover is not punctuated by outcrops of rock. A similar assemblage extends to the south along the East Gippsland coastal plain (Ecological Vegetation Classes 7 and 8, Woodgate *et al.* 1994). Almost all of this restricted unit occurs within reserves. Frequent regimes fire may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Allocasuarina littoralis, Banksia serrata* **Shrubs:** *Acacia suaveolens, Allocasuarina paludosa, Banksia paludosa, Correa reflexa, Dillwynia glaberrima, Epacris impressa, Gompholobium huegelii, Hibbertia empetrifolia* subsp. *empetrifolia, Leptospermum continentale, Pimelea linifolia* subsp. *linifolia* **Climbers:** *Cassytha glabella* **Groundcover:** *Anisopogon avenaceus, Bossiaea ensata, Burchardia umbellata, Dampiera stricta, Entolasia stricta, Gonocarpus teucrioides, Hypolaena fastigiata, Lepidosperma neesii, Lindsaea linearis, Lomandra glauca, Mitrasacme polymorpha, Patersonia glabrata, Phyllanthus hirtellus, Scaevola ramosissima, Schoenus brevifolius, Selaginella uliginosa*

Vegetation structure:

Stratum	Frequency (n=25)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	0	0 (0)	0 (0)
Tree canopy	8	5.5 (0.7)	8 (9.9)
Small tree	0	0 (0)	0 (0)
Shrub	76	1.7 (1)	49 (28)
Ground cover	100	0.7 (0.3)	73.6 (32.6)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 18 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 28 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 18 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia myrtifolia	1(1-1)	32	1(1-1)	4
Acacia suaveolens	1(1-1)	56	1(1-1)	7
Allocasuarina littoralis	1(1-1)	44	1(1-2)	17
Allocasuarina paludosa	3(2-3)	80	1(1-2)	1
Anisopogon avenaceus	1(1-1)	48	1(1-2)	5
Argentipallium obtusifolium	1(1-2)	32	0(0-0)	0
Astroloma humifusum	1(1-1)	24	1(1-1)	4
Austrostipa mollis	1(1-2)	20	2(1-2)	<1
Banksia paludosa	1(1-2)	68	1(1-2)	3
Banksia serrata	1(1-2)	48	1(1-2)	9
Bossiaea ensata	1(1-1)	44	1(1-1)	2
Bossiaea prostrata	1(1-1)	24	1(1-1)	3
Burchardia umbellata	1(1-1)	80	1(1-1)	2
Cassytha glabella	1(1-1)	92	1(1-1)	7
Correa reflexa	1(1-1)	40	1(1-1)	5
Cryptandra ericoides	1(1-1)	32	1(1-1)	<1
Dampiera stricta	1(1-1)	60	1(1-1)	8
Darwinia camptostylis	1(1-2)	28	1(1-1)	<1
Dillwynia glaberrima	1(1-2)	40	1(1-1)	1
Dillwynia sericea	1(1-1)	36	1(1-1)	2
Drosera peltata	1(1-1)	20	1(1-1)	2
Entolasia stricta	1(1-1)	68	1(1-2)	34
Epacris impressa	1(1-1)	88	1(1-1)	4
Euphrasia collina subsp. *collina*	1(1-1)	20	0(0-0)	0
Gahnia radula	1(1-2)	32	1(1-2)	3
Gompholobium huegelii	1(1-1)	40	1(1-1)	2
Gonocarpus teucrioides	1(1-1)	56	1(1-1)	17
Grevillea lanigera	1(1-2)	24	1(1-1)	<1
Hakea decurrens	1(1-3)	36	1(1-1)	<1
Hakea teretifolia	1(1-2)	32	1(1-2)	4
Hakea ulicina	2(1-2)	36	1(1-1)	<1
Helichrysum scorpioides	1(1-1)	32	1(1-1)	7
Hibbertia empetrifolia subsp. *empetrifolia*	1(1-2)	60	1(1-1)	6

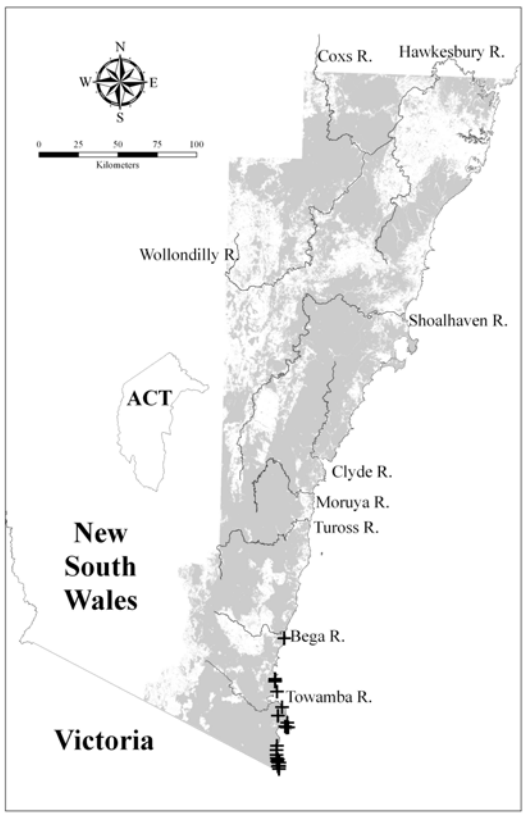
Hibbertia riparia	1(1-1)	36	1(1-1)	2
Hybanthus vernonii	1(1-1)	32	1(1-1)	<1
Hypolaena fastigiata	1(1-1)	48	1(1-1)	1
Lasiopetalum macrophyllum	2(1-3)	20	1(1-2)	<1
Lepidosperma concavum	2(1-2)	28	1(1-2)	2
Lepidosperma neesii	2(1-2)	44	1(1-2)	1
Leptocarpus tenax	1(1-3)	36	1(1-2)	2
Leptospermum continentale	1(1-1)	84	1(1-1)	2
Lindsaea linearis	1(1-1)	80	1(1-1)	7
Lomandra glauca	1(1-1)	76	1(1-1)	10
Melaleuca armillaris subsp. *armillaris*	1(1-2)	36	2(1-2)	1
Mirbelia rubiifolia	1(1-1)	24	1(1-1)	3
Mitrasacme polymorpha	1(1-1)	48	1(1-1)	3
Patersonia glabrata	1(1-1)	68	1(1-1)	10
Phyllanthus hirtellus	1(1-1)	44	1(1-1)	14
Pimelea linifolia subsp. *linifolia*	1(1-1)	84	1(1-1)	13
Scaevola ramosissima	1(1-1)	40	1(1-1)	3
Schoenus brevifolius	3(3-3)	56	1(1-2)	1
Selaginella uliginosa	1(1-1)	44	1(1-1)	2
Xanthorrhoea resinifera	3(1-4)	20	1(1-1)	4
Xanthosia tridentata	1(1-1)	36	1(1-1)	5

Constant:

Species	C/A	Freq	C/A O	Freq O
Leptospermum trinervium	1(1-1)	32	1(1-2)	16
Persoonia levis	1(1-1)	32	1(1-1)	13

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Corymbia gummifera	1(1-1)	20	2(1-2)	16
Eucalyptus cephalocarpa	2(2-2)	4	0(0-0)	0
Eucalyptus globoidea	2(1-2)	8	2(1-2)	12



Locations of survey sites allocated to HL e55. Grey shading indicates extant native vegetation cover within the study area.

FrW e56: Southeast Hinterland Heath

Plate e56. Southeast Hinterland Heath (Map Unit e56) variant dominated by *Callistemon paludosus, Kunzea ericoides, Gahnia sieberiana* and *Allocasuarina nana* on the White Rock River track, Genoa section of the South East Forests National Park.

Sample Sites: 13
Area Extant (ha): 360
Estimated % remaining: >90%
Area in conservation reserves (ha): 80
Estimated % of pre-clearing area in conservation reserves: 15-25%
No. Taxa (total / unique): 156 / 1
No. Taxa per Plot (±sd): 29.4 (9.0)

Class: Coastal Heath Swamps
Related TEC: n/a

Southeast Hinterland Heath is equivalent to Hinterland Heath (unit 56) described by Keith & Bedward (1999). It is characterised by an open shrub canopy up to 2 m tall, with scattered emergent trees. The relatively dense groundcover is dominated by sedges with grasses, herbs and small ferns also present. Southeast Hinterland Heath is restricted to small soaks in the southern granitoid hinterland, typically at 150 - 500 m elevation, but reaching 650 m in the Myanba Creek area. This assemblage lacks many of the shrub and forb species characteristic of the more coastal heath assemblages (Map Units HL e54 and HL e55). The most similar assemblage in East Gippsland is a lowland clay heathland entity (within Ecological Vegetation Class 7, Woodgate *et al.* 1994), which, like Southeast Hinterland Heath, is locally restricted but scattered widely in the hinterland. Although almost all of this restricted unit occurs on public land, a small portion is reserved and most occurs within production forest. The principal threats entail small scale clearing, earthworks, erosion, sedimentation and burning associated with logging and road building, even though the paucity of merchantable timber generally precludes direct logging of this assemblage. Frequent fire regimes may reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure to avoid losses of diversity.

Floristic Summary:
Trees: Shrubs: *Allocasuarina paludosa, Callistemon citrinus, Hakea sericea, Leptospermum continentale, Melaleuca squarrosa* **Groundcover:** *Empodisma minus, Gahnia radula, Lepidosperma filiforme, Leptocarpus tenax, Lindsaea linearis, Patersonia fragilis, Selaginella uliginosa, Xyris gracilis*

Vegetation structure:

Stratum	Frequency (n=11)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	-	- (-)	- (-)
Small tree	82	8.7 (3)	2.2 (2)
Shrub	100	2.5 (0.7)	55 (20.1)
Ground cover	100	0.9 (0.4)	76.8 (22.8)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 10 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 22 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 10 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Allocasuarina paludosa	3(2-4)	69	1(1-3)	1
Banksia marginata	1(1-1)	23	1(1-1)	3
Boronia parviflora	1(1-1)	23	1(1-1)	<1
Bossiaea prostrata	1(1-1)	38	1(1-1)	3
Burchardia umbellata	1(1-1)	31	1(1-1)	2
Callistemon citrinus	2(2-3)	69	1(1-1)	1
Cryptostylis subulata	1(1-1)	31	1(1-1)	1
Dampiera stricta	1(1-1)	38	1(1-1)	8
Drosera peltata	1(1-1)	38	1(1-1)	2
Empodisma minus	1(1-2)	85	1(1-2)	3
Epacris obtusifolia	1(1-2)	31	1(1-1)	2
Epacris paludosa	1(1-1)	23	1(1-2)	1
Eucalyptus consideniana	1(1-1)	38	2(1-2)	2
Eucalyptus ignorabilis	1(1-2)	23	0(0-0)	0
Eucalyptus ovata	1(1-1)	23	2(1-3)	1
Gahnia radula	2(1-2)	77	1(1-2)	2
Gleichenia microphylla	1(1-3)	23	1(1-2)	1
Hakea sericea	2(1-2)	46	1(1-1)	7

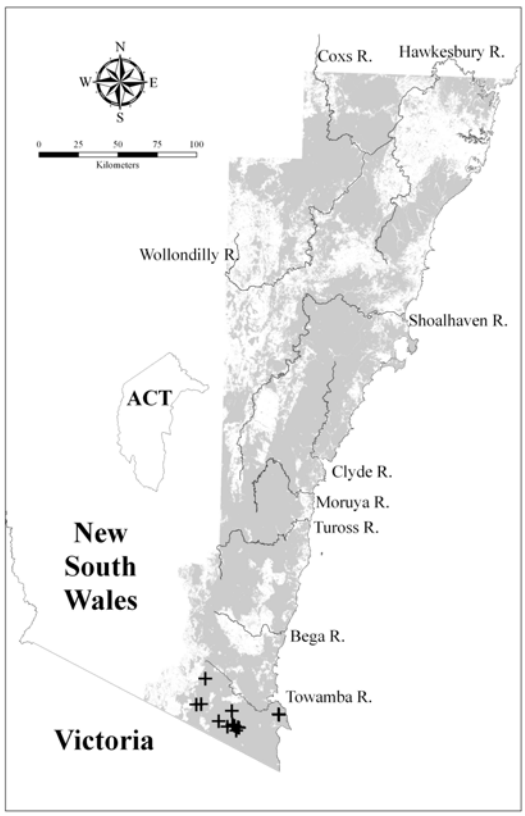
Hypericum japonicum	1(1-1)	38	1(1-1)	2
Lepidosperma filiforme	2(1-3)	46	1(1-2)	2
Lepidosperma limicola	2(1-3)	31	1(1-2)	1
Leptocarpus tenax	1(1-2)	54	1(1-2)	2
Leptospermum continentale	1(1-2)	92	1(1-1)	3
Lindsaea linearis	1(1-1)	77	1(1-1)	7
Melaleuca squarrosa	2(2-3)	62	2(1-3)	1
Mitrasacme serpyllifolia	1(1-1)	31	1(1-2)	<1
Patersonia fragilis	1(1-1)	46	1(1-1)	<1
Rhytidosporum procumbens	1(1-1)	31	1(1-1)	3
Schoenus brevifolius	3(2-5)	31	1(1-2)	1
Selaginella uliginosa	1(1-1)	62	1(1-1)	2
Sphaerolobium vimineum	1(1-1)	23	1(1-1)	<1
Sprengelia incarnata	1(1-1)	38	1(1-2)	1
Tetrarrhena juncea	1(1-2)	38	1(1-2)	5
Thysanotus tuberosus subsp. *tuberosus*	1(1-1)	31	1(1-1)	2
Xanthosia dissecta	1(1-1)	38	1(1-1)	<1
Xyris gracilis	1(1-1)	54	1(1-1)	1
Xyris operculata	1(1-2)	23	1(1-1)	1

Constant:

Species	C/A	Freq	C/A O	Freq O
Gonocarpus tetragynus	1(1-1)	38	1(1-1)	20
Gonocarpus teucrioides	1(1-1)	38	1(1-1)	18
Lagenifera stipitata	1(1-1)	31	1(1-1)	14
Lomandra longifolia	1(1-2)	31	1(1-1)	44
Poa meionectes	1(1-2)	31	1(1-2)	16

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus agglomerata	1(1-1)	8	2(1-3)	7
Eucalyptus angophoroides	1(1-1)	15	1(1-2)	1
Eucalyptus conspicua	1(1-1)	8	1(1-1)	<1
Eucalyptus globoidea	1(1-1)	15	2(1-2)	12
Eucalyptus radiata subsp. *radiata*	1(1-1)	8	2(1-3)	6
Eucalyptus viminalis	1(1-1)	8	2(1-3)	5



Locations of survey sites allocated to FrW e56. Grey shading indicates extant native vegetation cover within the study area.

FrW e57: Southeast Lowland Swamp

Plate e57. Southeast Lowland Swamp (Map Unit e57) dominated by *Melaleuca squarrosa, Epacris paludosa, Sprengelia incarnata* and sedges on Timbillica Road in Sidlings Swamp Flora Reserve. *Eucalyptus cephalocarpa* occurs on the swamp edge in background.

Sample Sites: 20
Area Extant (ha): 1700
Estimated % remaining: >70%
Area in conservation reserves (ha): 1000
Estimated % of pre-clearing area in conservation reserves: 50-65%
No. Taxa (total / unique): 105 / 0
No. Taxa per Plot (±sd): 18.8 (5.1)

Class: Coastal Heath Swamps
Related TEC: n/a

Southeast Lowland Swamp is equivalent to Lowland Swamp (unit 57) described by Keith & Bedward (1999). It has a dense but variable shrub stratum up to 2 m tall, with scattered emergent *Eucalyptus* trees occurring mainly around the edges of swamps. The tall dense groundcover is dominated by sedges with grasses and small ferns also present. Southeast Lowland Swamp is restricted to waterlogged soils on Tertiary alluvium, sandy colluvial granitoid soils and Holocene sands below 100 m elevation in broad open flat gullies in the Nadgee area and lower Wallagaraugh River catchment. A similar assemblage occurs within the riparian scrub complex (Ecological Vegetation Class 17, Woodgate *et al.* 1994) in similar lowland habitats east of Orbost in East Gippsland. Southeast Lowland Swamp includes some stands (e.g. around Nadgee Lake) with affinities to coastal lagoon wetlands (Ecological Vegetation Class 11, Woodgate *et al.* 1994) in East Gippsland. A relatively small area of Southeast Lowland Swamp has been cleared and about two-thirds is represented in reserves. Outside reserves, the principal threat is sedimentation from road building, burning and logging activities within swamp catchments. Frequent fires used in hazard reduction may reduce diversity by interrupting life-cycle processes of woody species. Long fire-free intervals also potentially threaten diversity of small shrubs and forbs that may be excluded by competition from the dense sedge stratum (Keith 1996). Thus to maintain diversity, intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure, and shorter than the combined longevity of standing plants and seed banks.

Floristic Summary:
Shrubs: *Baeckea linifolia, Dillwynia glaberrima, Epacris obtusifolia, Epacris paludosa, Leptospermum continentale, Melaleuca squarrosa, Sprengelia incarnata* **Climbers:** *Cassytha glabella* **Groundcover:** *Empodisma minus, Gleichenia dicarpa, Gymnoschoenus sphaerocephalus, Leptocarpus tenax, Selaginella uliginosa, Xanthorrhoea resinifera, Xyris operculata*

Vegetation structure:

Stratum	Frequency (n=19)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	-	- (-)	- (-)
Small tree	16	8 (6.1)	12.7 (15)
Shrub	74	2.5 (0.6)	49.3 (19.2)
Ground cover	100	1.3 (0.4)	75.5 (21.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 7 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 15 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 7 positive diagnostic species.

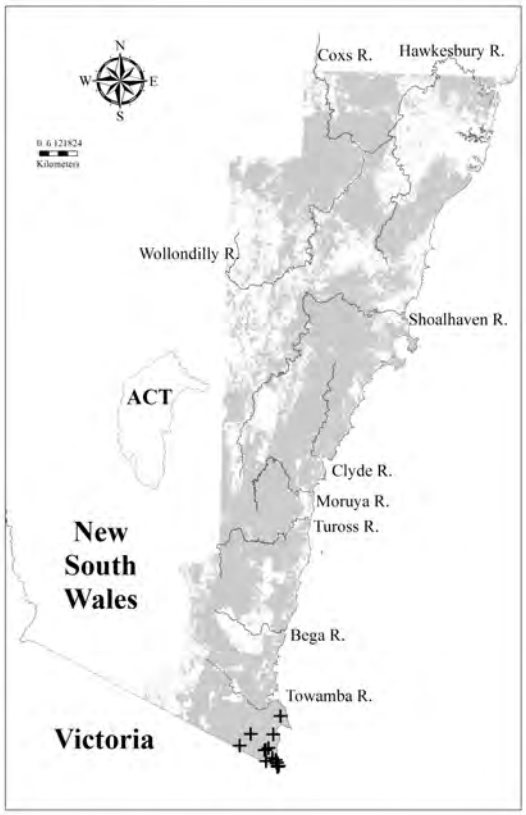
Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Baeckea linifolia	1(1-3)	55	1(1-1)	1
Banksia paludosa	1(1-1)	25	1(1-2)	3
Boronia muelleri	1(1-2)	20	1(1-2)	<1
Burchardia umbellata	1(1-1)	25	1(1-1)	2
Callistemon citrinus	1(1-1)	20	1(1-2)	1
Cassytha glabella	1(1-1)	60	1(1-1)	8
Dillwynia glaberrima	1(1-1)	45	1(1-1)	1
Drosera peltata	1(1-1)	35	1(1-1)	2
Empodisma minus	2(1-3)	70	1(1-2)	2
Epacris microphylla var. *microphylla*	1(1-2)	30	1(1-1)	5
Epacris obtusifolia	1(1-1)	75	1(1-1)	1
Epacris paludosa	1(1-2)	40	1(1-1)	<1
Eurychorda complanata	1(1-1)	20	1(1-1)	1
Gahnia clarkei	1(1-1)	30	1(1-2)	2
Gleichenia dicarpa	4(3-5)	45	1(1-2)	2
Gymnoschoenus sphaerocephalus	3(1-4)	65	2(1-3)	1

Hakea teretifolia	1(1-1)	35	1(1-2)	4
Lepidosperma forsythii	3(2-3)	30	1(1-2)	<1
Leptocarpus tenax	2(1-2)	85	1(1-2)	2
Leptospermum continentale	1(1-2)	50	1(1-1)	3
Leucopogon esquamatus	1(1-1)	20	1(1-1)	1
Lycopodiella lateralis	1(1-1)	20	1(1-1)	<1
Melaleuca squarrosa	3(2-3)	95	2(1-2)	1
Selaginella uliginosa	1(1-1)	40	1(1-1)	2
Sowerbaea juncea	1(1-1)	20	1(1-1)	1
Sprengelia incarnata	1(1-1)	70	1(1-2)	1
Xanthorrhoea resinifera	1(1-1)	50	1(1-2)	4
Xyris operculata	1(1-2)	55	1(1-1)	1

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus baxteri	1(1-2)	15	1(1-2)	<1
Eucalyptus consideniana	1(1-1)	5	2(1-2)	2
Eucalyptus conspicua	1(1-1)	5	1(1-1)	<1
Eucalyptus ovata	1(1-1)	10	2(1-3)	1



Locations of survey sites allocated to FrW e57. Grey shading indicates extant native vegetation cover within the study area.

FrW e59: Southeast Sub-alpine Bog

Plate e59. Southeast Sub-alpine Bog (Map Unit e59) dominated by *Baeckea utilis, Hakea microcarpa, Epacris breviflora,* and *Baloskion australe* with *Pratia surrepens* along the drainage line at Nunnock Swamp, Tantawangalo section of South East Forests National Park.

Sample Sites: 18
Area Extant (ha): 2700
Estimated % remaining: 50-70%
Area in conservation reserves (ha): 880
Estimated % of pre-clearing area in conservation reserves: 15-25%
No. Taxa (total / unique): 200 / 15
No. Taxa per Plot (±sd): 25.6 (10.2)
Class: Montane Bogs and Fens
Related TECs: Montane Peatlands and Swamps EEC (TSC); Temperate Highland Peat Swamps on Sandstone (EPBC).

Southeast Sub-alpine Bog is equivalent to Sub-alpine Bog (unit 59) described by Keith & Bedward (1999). It features a diverse open shrub stratum over 1 m tall dominated by species in the Myrtaceae and Epacridaceae. Scattered emergent trees including occur mainly around the edges of swamps. The continuous groundcover is dominated by sedges with occasional grasses and a diverse range of herbs. Southeast Subalpine Bog is restricted to waterlogged broad open flat gullies on alluvium derived from granitoid substrates or metasediments above 800 m elevation on the edge of the Monaro Tableland. Perennial and ephemeral lakes have developed in basalt depressions on the tableland, although most of these are located to the west of the study area. Their flora and vegetation is described by Benson & Jacobs (1994). There is usually development of substantial peat and standing water is common in winter. A similar assemblage extends further north (Tableland Bog FrW p53) and also south into East Gippsland (Community 1.2, Forbes *et al.* 1982). Almost 72% of this unit has been cleared or heavily degraded by grazing and over half of the remainder occurs on private land where it is subject to further clearing, continuing degradation by trampling, grazing, nutrification, sedimentation and weed invasion associated with pastoral land uses. The spongy peat soils are especially vulnerable to trampling by stock, which must therefore be excluded if degradation is to be minimised. Bogs in State Forest may be affected by sedimentation and burning in adjacent forest, but to a lesser extent than those in pastoral areas. Some stands may also be threatened by peat mining, as has occurred at Killarney Swamp near Bombala. Frequent fires used in hazard reduction and grazing management may reduce diversity by interrupting life-cycle processes of woody species. Intense fires may consume peat, changing habitat structure of the bogs for many years (Keith 1996). Thus intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure, and very intense fires need to be excluded if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus pauciflora* **Shrubs:** *Baeckea utilis, Epacris paludosa, Hakea microcarpa, Leptospermum myrtifolium, Hymenanthera dentata, Melaleuca ericifolia* **Groundcover:** *Asperula gunnii, Baloskion australe, Empodisma minus, Gonocarpus micranthus.*

Vegetation structure:

Stratum	Frequency (n=10)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	40	8.6 (3)	15.3 (23.2)
Small tree	10	12 (-)	5 (-)
Shrub	100	1.7 (0.7)	41.7 (22.7)
Ground cover	100	0.6 (0.3)	72 (28.5)

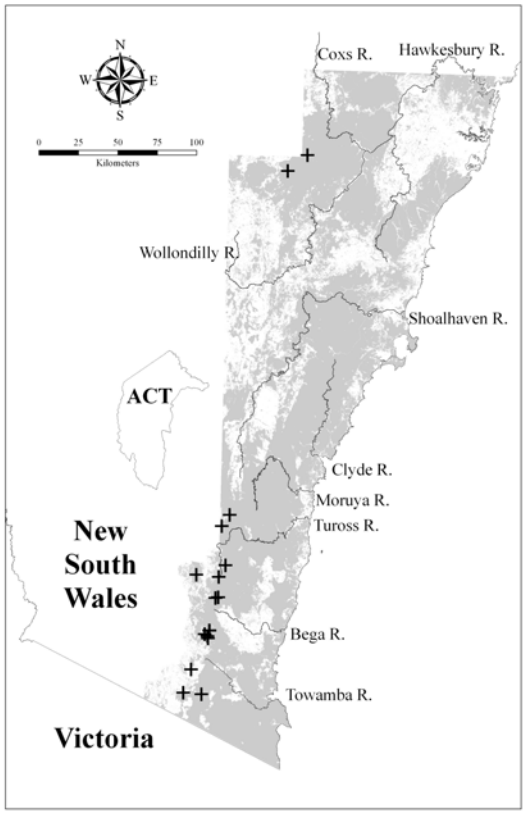
Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 7 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 17 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 7 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Asperula gunnii	1(1-2)	44	1(1-1)	<1
Baeckea utilis	2(1-2)	83	1(1-1)	<1
Baloskion australe	1(1-2)	83	1(1-1)	<1
Banksia marginata	1(1-2)	28	1(1-1)	3
Baumea rubiginosa	2(1-3)	22	1(1-2)	1
Brachyscome scapigera	1(1-1)	22	1(1-1)	<1
Carex gaudichaudiana	1(1-3)	22	1(1-2)	1
Empodisma minus	2(1-4)	72	1(1-2)	3
Epacris breviflora	1(1-1)	33	1(1-1)	<1
Epacris microphylla var. *microphylla*	2(1-3)	39	1(1-1)	5
Epacris paludosa	2(1-3)	61	1(1-1)	<1
Eucalyptus pauciflora	1(1-2)	44	1(1-2)	3
Gentianella diemensis	1(1-1)	22	1(1-1)	<1
Geranium neglectum	1(1-1)	22	1(1-1)	1
Gonocarpus micranthus	1(1-2)	61	1(1-1)	1
Grevillea lanigera	1(1-2)	22	1(1-1)	<1
Hakea microcarpa	1(1-1)	83	1(1-1)	<1
Hydrocotyle peduncularis	1(1-2)	33	1(1-1)	9
Hypericum japonicum	1(1-2)	33	1(1-1)	2
Hypoxis hygrometrica	1(1-1)	28	1(1-1)	1
Leptospermum continentale	1(1-1)	28	1(1-1)	3
Leptospermum myrtifolium	1(1-2)	72	1(1-1)	1
Lepyrodia anarthria	2(1-2)	28	1(1-3)	<1
Luzula flaccida	1(1-1)	22	1(1-1)	4
Patersonia fragilis	1(1-1)	22	1(1-1)	<1
Pratia surrepens	1(1-1)	22	1(1-1)	<1
Ranunculus pimpinellifolius	1(1-2)	22	1(1-1)	<1
Schoenus apogon	1(1-1)	22	1(1-1)	2
Stylidium graminifolium	1(1-1)	39	1(1-1)	9
Utricularia dichotoma	1(1-1)	28	1(1-1)	<1
Velleia montana	1(1-1)	22	1(1-1)	<1
Veronica gracilis	1(1-1)	22	1(1-1)	<1

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus dalrympleana subsp. *dalrympleana*	1(1-1)	11	1(1-2)	3
Eucalyptus dives	1(1-1)	6	2(1-3)	4
Eucalyptus ovata	1(1-1)	11	2(1-3)	1
Eucalyptus rubida subsp. *rubida*	1(1-1)	11	1(1-2)	2
Eucalyptus stellulata	1(1-1)	6	1(1-2)	1
Eucalyptus viminalis	1(1-1)	11	2(1-3)	5



Locations of survey sites allocated to FrW e59. Grey shading indicates extant native vegetation cover within the study area.

FoW e60: Southeast Floodplain Wetlands

Plate e60. Southeast Floodplain Wetlands (Map Unit e60) dominated by *Phragmites australis* with scattered *Melaleuca ericifolia* at Whelans Swamp on Princes Highway south of Eden.

Sample Sites: 11
Area Extant (ha): 1800
Estimated % remaining: 15-25%
Area in conservation reserves (ha): 100
Estimated % of pre-clearing area in conservation reserves: <5%
No. Taxa (total / unique): 119 / 2
No. Taxa per Plot (±sd): 23.9 (12.1)
Class: Coastal Floodplain Wetlands
Related TECs: Freshwater Wetland on Coastal Floodplains EEC, River Flat Eucalypt Forest on Coastal Floodplains EEC (TSC).

Southeast Floodplain Wetlands is equivalent to Floodplain Wetlands (unit 60) described by Keith & Bedward (1999). This unit comprises a complex of plant assemblages including reedlands, herbfields, scrubs and swamp forests but not all of these have been sampled quantitatively. Herbaceous wetlands are dominated by *Phragmites australis, Eleocharis sphacelata* and *Typha* spp. and typically have standing water for much of the year. The wooded floodplain swamp forests are dominated by scattered *Eucalyptus ovata*, and may have patchy thickets of *Melaleuca ericifolia* with *Hymenanthera dentata*. The diverse groundcover is patchy and poorly developed beneath dense patches of shrubs. It includes herbs *Callitriche muelleri, Persicaria decipiens, Centella asiatica, Dichondra repens, Geranium solanderi, Lagenifera stipitata, Lobelia alata, Pratia purpurascens, Rumex brownii* and *Senecio minimus*, sedges *Carex* spp., *Eleochaeris acuta, Isolepis habra* and *Juncus planifolius*, and ferns *Adiantum aethiopicum, Blechnum minus* and *Pteris tremula*. Remnants of forested wetlands occur around the margins of the floodplains. Southeast Floodplain Wetlands are restricted to the floodplains of major Rivers on riverine alluvium. More than three quarters of Southeast Floodplain Wetlands have been cleared for agriculture and coastal development, while three-quarters of the remainder occur on private land where they are threatened by further clearing, nutrification, weed invasion, trampling and grazing. Much of the remaining area, including that on public land, is wooded wetland. Some herbaceous wetlands persist in varying states of degradation near the town of Bega and at Jellat Jellat. Floodplain vegetation on Australia's southeast coast is generally depleted by clearing and degraded by grazing and weed invasion (e.g. Pressey 1989). In East Gippsland the most similar assemblage is restricted to areas adjacent to coastal lagoons (Ecological Vegetation Type 11, Woodgate *et al.* 1994).

Floristic Summary:
Shrubs: *Hymenanthera dentata, Melaleuca ericifolia* **Groundcover:** *Acaena novae-zelandiae, Carex appressa, Centella asiatica, Lobelia anceps, Persicaria decipiens, Persicaria praetermissa, Phragmites australis, Ranunculus inundatus, Ranunculus plebeius, Senecio minimus*

Vegetation structure:

Stratum	Frequency (n=11)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	55	10.2 (4.1)	20.2 (16.8)
Small tree	45	6.8 (0.8)	63 (12)
Shrub	73	2.6 (0.5)	33.1 (31.2)
Ground cover	100	0.9 (0.6)	41.8 (26.5)

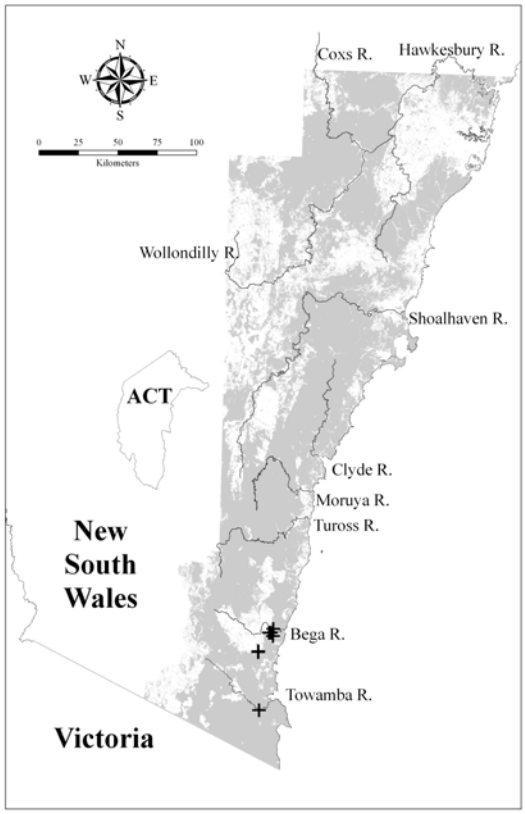
Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 7 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 14 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 7 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acaena novae-zelandiae	1(1-1)	45	1(1-1)	7
Alisma plantago-aquatica	1(1-1)	36	1(1-1)	<1
Alternanthera denticulata	1(1-1)	27	1(1-1)	1
Blechnum minus	1(1-2)	36	1(1-1)	<1
Callitriche muelleri	1(1-2)	27	1(1-1)	<1
Calystegia sepium	1(1-2)	36	1(1-2)	<1
Carex appressa	3(2-4)	82	1(1-1)	4
Carex gaudichaudiana	1(1-1)	36	1(1-2)	1
Centella asiatica	1(1-1)	45	1(1-1)	4
Eucalyptus ovata	1(1-2)	27	2(1-3)	1
Hymenanthera dentata	1(1-2)	45	1(1-1)	6
Hypolepis muelleri	2(1-3)	27	1(1-2)	1
Isolepis habra	1(1-1)	27	1(1-1)	<1
Isolepis inundata	1(1-2)	36	1(1-1)	1
Juncus gregiflorus	1(1-1)	27	1(1-1)	<1
Juncus planifolius	1(1-1)	27	1(1-1)	1
Juncus usitatus	1(1-1)	27	1(1-1)	2
Lobelia anceps	1(1-1)	64	1(1-1)	1
Lycopus australis	2(1-3)	36	1(1-2)	<1
Lythrum salicaria	1(1-1)	36	1(1-1)	<1
Melaleuca ericifolia	3(3-4)	91	2(1-4)	1
Persicaria decipiens	1(1-1)	55	1(1-1)	1
Persicaria praetermissa	1(1-2)	45	1(1-1)	<1
Phragmites australis	1(1-2)	45	1(1-2)	1
Pteris tremula	1(1-1)	27	1(1-1)	1
Ranunculus amphitrichus	1(1-1)	27	1(1-1)	<1
Ranunculus inundatus	1(1-1)	55	1(1-1)	1
Ranunculus plebeius	1(1-1)	45	1(1-1)	1
Senecio minimus	1(1-1)	45	1(1-1)	1

Constant:

Species	C/A	Freq	C/A O	Freq O
Adiantum aethiopicum	1(1-1)	36	1(1-2)	9
Viola hederacea	1(1-1)	36	1(1-1)	22



Locations of survey sites allocated to FoW e60. Grey shading indicates extant native vegetation cover within the study area.

DSF e61: Coastal Foredune Scrub

Plate e61. Coastal Foredune Scrub (Map Unit e61) dune variant with *Banksia integrifolia, Acacia sophorae, Westringia fruticosa, Leucopogon parviflorus, Isolepis nodosa* and *Lomandra longifolia* on the foredune at Picnic Point, northern section of Mimosa Rocks National Park. Headland variant dominated by *Allocasuarina verticillata* in background.

NOTE: DSF e61 and GL e62 are generally only spatially separable at very fine mapping scales, with e62 tending to occur as small linear patches in association with e61. For the purposes of this project these units were mapped as a single combined e61e62 unit, and the figures below apply to the combined e61e62 unit.

Sample Sites: 35 (DSF e61); 30 (GL e62)
Area Extant (ha): 3100
Estimated % remaining: 35-50%
Area in conservation reserves (ha): 1700
Estimated % of pre-clearing area in conservation reserves: 25-35%
No. Taxa (total / unique): 94 / 1
No. Taxa per Plot (±sd): 43.4 (18.1)
Class: South Coast Sands Dry Sclerophyll Forests
Related TEC: n/a

Coastal Foredune Scrub is equivalent to Coastal Scrub (unit 61) described by Keith & Bedward (1999). It is characterised by a variable shrub stratum up to 3 m tall that includes numerous species that occur at low frequencies but are apparently exclusive to this assemblage. Occasionally small trees (*Eucalyptus botryoides*) emerge above the shrub stratum. The patchy groundcover includes the prostrate succulent herb *Carpobrotus glaucescens*, the sedge *Isolepis nodosa* and the herb *Oxalis perennans*. Coastal Foredune Scrub is restricted to foredunes immediately adjacent to the coast. Coastal Sand Forest (Map Unit DSF p64) may be adjacent to Coastal Foredune Scrub in more sheltered sites on sand dunes. Beach Strand Grassland (Map Unit GL e62) occurs between Coastal Foredune Scrub and the high tide mark. Coastal Foredune Scrub occurs throughout the coast and similar assemblages extend both north and south of the study area. In East Gippsland *Leptospermum laevigatum* becomes a dominant shrub species (Community 20, Forbes *et al.* 1982; Ecological Vegetation Class 1, Woodgate *et al.* 1994). More than half of Coastal Foredune Scrub has been cleared for coastal development. Although most of the remainder is represented within reserves, some of these reserved areas and some off-reserve sites are threatened by intense recreational usage and development pressures. Causes of continuing degradation include rubbish dumping, small-scale clearing and burning, firewood harvesting, trampling and weed invasion.

Floristic Summary:
Trees: *Banksia integrifolia* subsp. *integrifolia* **Shrubs:** *Acacia longifolia, Leucopogon parviflorus, Rhagodia candolleana* subsp. *candolleana* **Groundcover:** *Actites megalocarpa, Carpobrotus glaucescens, Isolepis nodosa, Lomandra longifolia, Muehlenbeckia adpressa, Oxalis perennans, Pteridium esculentum, Spinifex sericeus, Zoysia macrantha*

Vegetation structure:

Stratum	Frequency (n=3)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	-	- (-)	- (-)
Small tree	33	6 (0)	10 (0)
Shrub	100	1.8 (0.6)	58.3 (12.6)
Ground cover	100	0.6 (0.3)	36.7 (12.6)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 5 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 29 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 5 positive diagnostic species.

Positive Diagnostic Species:

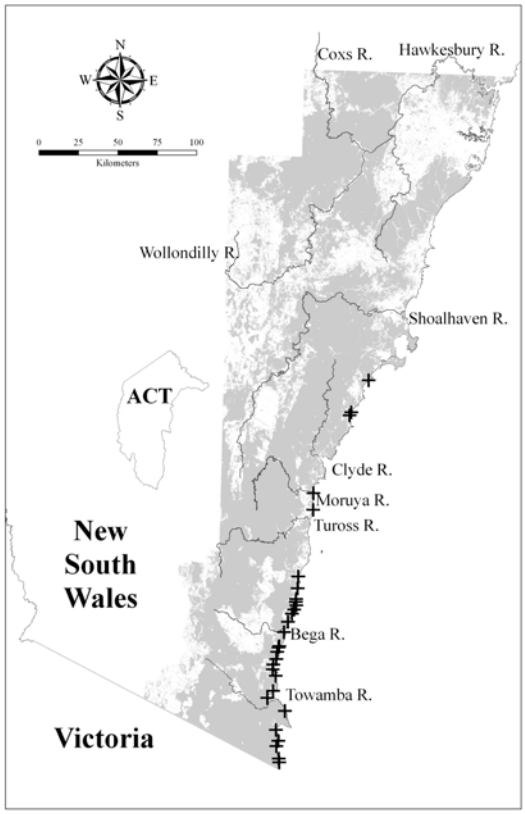
Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-1)	91	1(1-2)	9
Acaena novae-zelandiae	1(1-1)	34	1(1-1)	7
Actites megalocarpa	1(1-1)	51	1(1-1)	<1
Banksia integrifolia subsp. *integrifolia*	1(1-1)	91	1(1-2)	2
Calystegia soldanella	1(1-1)	23	1(1-1)	<1
Carpobrotus glaucescens	1(1-1)	74	1(1-1)	<1
Dichelachne crinita	1(1-1)	26	1(1-1)	1
Isolepis nodosa	1(1-1)	74	1(1-1)	1
Leptospermum laevigatum	1(1-2)	26	1(1-3)	1
Leucopogon parviflorus	1(1-1)	71	1(1-1)	<1
Melaleuca armillaris subsp. *armillaris*	1(1-3)	26	2(1-2)	1
Monotoca elliptica	1(1-1)	37	1(1-1)	2
Muehlenbeckia adpressa	1(1-1)	40	1(1-1)	<1
Oxalis perennans	1(1-1)	66	1(1-1)	13
Pelargonium australe	1(1-1)	26	1(1-1)	<1
Rhagodia candolleana subsp. *candolleana*	1(1-1)	63	1(1-1)	<1
Spinifex sericeus	1(1-1)	63	1(1-1)	<1
Zoysia macrantha	1(1-1)	71	1(1-2)	<1

Constant:

Species	C/A	Freq	C/A O	Freq O
Lomandra longifolia	1(1-1)	46	1(1-1)	44
Pteridium esculentum	1(1-1)	40	1(1-2)	37

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus botryoides	1(1-1)	3	2(1-3)	3



Locations of survey sites allocated to DSF e61. Grey shading indicates extant native vegetation cover within the study area.

GL e62: Beach Strand Grassland

Plate e62. Beach Strand Grassland (Map Unit e62) at Little Austinmer beach dominated by *Spinifex sericeus* and *Zoysia macrantha*.

NOTE: DSF e61 and GL e62 are generally only spatially separable at very fine mapping scales, with e62 tending to occur as small linear patches in association with e61. For the purposes of this project these units were mapped as a single combined e61e62 unit, and the figures below apply to the combined e61e62 unit.

Sample Sites: 35 (DSF e61); 30 (GL e62)
Area Extant (ha): 3100
Estimated % remaining: 35-50%
Area in conservation reserves (ha): 1700
Estimated % of pre-clearing area in conservation reserves: 25-35%
No. Taxa (total / unique): 94 / 1
No. Taxa per Plot (±sd): 43.4 (18.1)
Class: Maritime Grasslands
Related TEC: n/a

Beach Strand Grassland has a sparse ground stratum dominated by grasses *Spinifex sericeus* and *Festuca littoralis,* with scattered patches of the prostrate succulent herb *Carpobrotus glaucescens*. Beach Strand Grassland is restricted to mobile, unconsolidated calcareous sands on beach strands directly above the high tide mark on the seaward side of Coastal Foredune Scrub (Map Unit DSF e61) on beach foredunes. Individual occurrences are generally linear in shape and less than 20 m wide. Coastal Foredune Scrub and Beach Strand Grassland (Map Units DSF e61 and GL e62) were therefore mapped together as a mosaic. Similar assemblages extend both north and south of the study area. In East Gippsland similar vegetation is included within the coastal dune scrub complex (Community 20, Forbes *et al.* 1982; Ecological Vegetation Class 1, Woodgate *et al.* 1994). Beach Strand Grassland is a very resilient, species-poor assemblage. Its principal species tolerate a wide range of physical disturbances and are widely dispersed by wind and wave action. There are numerous beaches represented in reserves. Beach strands subject to intense recreational usage have grassland with reduced density due to trampling. Some stands include maritime weeds such as *Cakile edentula*.

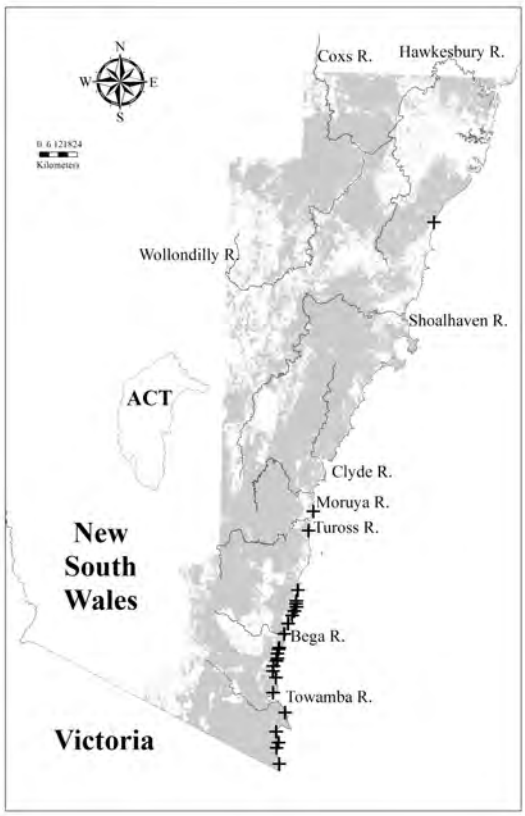
Vegetation structure:

Stratum	Frequency (n=1)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	-	- (-)	- (-)
Small tree	-	- (-)	- (-)
Shrub	-	- (-)	- (-)
Ground cover	100	0.3 (0)	50 (0)

Diagnostic Species:

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Actites megalocarpa	1(1-1)	23	1(1-1)	<1
Austrofestuca littoralis	1(1-1)	73	1(1-1)	<1
Calystegia soldanella	1(1-1)	33	1(1-1)	<1
Carpobrotus glaucescens	1(1-1)	53	1(1-1)	<1
Isolepis nodosa	1(1-2)	20	1(1-1)	1
Spinifex sericeus	1(1-1)	100	1(1-1)	<1



Locations of survey sites allocated to GL e62. Grey shading indicates extant native vegetation cover within the study area.

SL e65: River Mangrove

Sample Sites: no data
Area Extant (ha): 550
Estimated % remaining:
Area in conservation reserves (ha): 210
Estimated % of pre-clearing area in conservation reserves: <5%
No. Taxa (total / unique): no data
No. Taxa per Plot (±sd): no data
Class: Mangrove Swamps
Related TEC: Protected Marine Vegetation.

No quantitative data are available for this assemblage. The dominant species is *Aegiceras corniculata* which varies in stature from a shrub to a small tree. There may be a sparse cover of herbaceous species that are associated more commonly with Saltmarsh (Map Unit SL p509). Estuarine Wetland (River Mangrove) is restricted to the upper tidal zone on mudflats north from Merimbula Lake, where the dominant species reaches its southern limit. *A. corniculata* also occurs as an emergent in Saltmarsh of other estuaries within the region (e.g. Bermagui River). Its distribution continues further north along the New South Wales coast. Mangroves have an important role in estuarine productivity and in supporting breeding populations of fish and other marine organisms. The principal threats entail degradation associated with foreshore and catchment development, and intensifying recreational use of the lake.

SL e67: Seagrass Meadows (*Halophila*)

Sample Sites: no data
Area Extant (ha): 610
Estimated % remaining:
Area in conservation reserves (ha): 60
Estimated % of pre-clearing area in conservation reserves: 5-10%
No. Taxa (total / unique): no data
No. Taxa per Plot (±sd): no data
Class: Seagrass Meadows
Related TEC: Protected Marine Vegetation

No quantitative data are available for this unit. The dominant species is *Halophila ovalis* which may co-occur with other seagrass species (Map Units SL e68 - SL e70). Seagrass Meadows (Halophila) are restricted to soft substrates in the sub-tidal zone of coastal estuaries such as Wallagoot, Cuttagee and Wallaga Lakes. More work is required to

establish its relationship to other seagrass assemblages. Sea grass meadows have an important role in estuarine productivity and in supporting breeding populations of fish and other marine organisms. Potential threats include degradation caused by development or pasture improvement in estuary catchments, although the relevant catchments are partially protected in conservation reserves.

SL e68: Seagrass Meadows (*Posidonia*)

Sample Sites: no data
Area Extant (ha): 260
Estimated % remaining:
Area in conservation reserves (ha): 20
Estimated % of pre-clearing area in conservation reserves: <5%
No. Taxa (total / unique): no data
No. Taxa per Plot (±sd): no data
Class: Seagrass Meadows
Related TEC: Protected Marine Vegetation

No quantitative data are available for this unit. The dominant species is *Posidonia australis* which may co-occur with other seagrass species (Map Units SL e67, SL e 68 & SL e 70). Seagrass Meadows (Posidonia) are restricted to soft substrates in the sub-tidal zone of coastal estuaries such as Merimbula Lake and the Bermagui River estuary. More work is required to establish its relationship to other seagrass assemblages in the region. Sea grass meadows have an important role in estuarine productivity and in supporting breeding populations of fish and other marine organisms. Potential threats include degradation caused by development or pasture improvement in estuary catchments.

SL e69: Seagrass Meadows (*Ruppia*)

Sample Sites: no data
Area Extant (ha): 150
Estimated % remaining:
Area in conservation reserves (ha): 60
Estimated % of pre-clearing area in conservation reserves: 5-10%
No. Taxa (total / unique): no data
No. Taxa per Plot (±sd): no data
Class: Seagrass Meadows
Related TEC: Protected Marine Vegetation

No quantitative data are available for this unit. The dominant species are *Ruppia polycarpa* and *R. megacarpa* which may co-occur with other seagrass species (Map Units SL e67, SL e 68 & SL e 70). Seagrass Meadows (Ruppia) are restricted to soft substrates in the sub-tidal zone of coastal estuaries. Scattered occurrences include Curalo Lagoon near Eden, Middle Lagoon, Baragoot Lake and Wallaga Lake. More work is required to establish its relationship to other seagrass assemblages in the region. Sea grass meadows have an important role in estuarine productivity and in supporting breeding populations of fish and other marine organisms. Potential threats include degradation caused by development or pasture improvement in estuary catchments, although the some of the catchments are partially protected in conservation reserves.

SL e70: Seagrass Meadows (*Zostera*)

Plate e70. Seagrass Meadow (Zostera) (Map Unit e70) dominated by *Zostera capricorni* in the shallows of Lake Illawarra at Windang.

Sample Sites: no data
Area Extant (ha): 1400
Estimated % remaining:
Area in conservation reserves (ha): 80
Estimated % of pre-clearing area in conservation reserves: <5%
No. Taxa (total / unique): no data
No. Taxa per Plot (±sd): no data
Class: Seagrass Meadows
Related TEC: Protected Marine Vegetation

No quantitative data are available for this unit. The dominant species is *Zostera capricorni* which may co-occur with other seagrass species (Map Units SL e67 - SL e69). Seagrass Meadows (Zostera) are restricted to soft substrates in the sub-tidal zone of coastal estuaries. Further work is required to establish its relationship to other seagrass assemblages in the region. This is the most widespread seagrass assemblage. Sea grass meadows have an important role in estuarine productivity and in supporting breeding populations of fish and other marine organisms. Potential threats include degradation caused by development or pasture improvement in estuary catchments, although some of these catchments are partially protected in conservation reserves.

DSF eW1: Wadbilliga Dry Shrub Forest

Plate eW1. Wadbilliga Dry Shrub Forest (Map Unit eW1) dominated by *Eucalyptus sieberi* with *Podolobium ilicifolium, Xanthorrhoea concava* and *Lomandra confertifolia* subsPage *similis* near the eastern end of the Razorback Trail, Wadbilliga National Park.

Sample Sites: 20
Area Extant (ha): 6600
Estimated % remaining: >95%
Area in conservation reserves (ha): 6600
Estimated % of pre-clearing area in conservation reserves: >95%
No. Taxa (total / unique): 112 / 0
No. Taxa per Plot (±sd): 20.8 (6.4)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Wadbilliga Dry Shrub Forest is equivalent to Map Unit W1 of the same name described by Keith & Bedward (1999). It features a tall canopy, frequently up to 30 m in height, composed of a mix of *Eucalyptus* species. A prominent stratum of sclerophyllous shrubs is present and the sparse groundcover is dominated by graminoid species. Wadbilliga Dry Shrub Forest occupies narrow ridges and upper slopes on metasediments at 400 - 1000 m elevation. Its rugged and inaccessible habitat and its distribution almost entirely within Wadbilliga National Park have protected this assemblage from past clearing activities. Although not currently threatened, increases in fire frequency would very likely result in losses of species diversity if an increase in ignitions occurred in future. Frequent fire regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Acacia falciformis, Eucalyptus cypellocarpa, Eucalyptus fraxinoides, Eucalyptus sieberi* **Shrubs:** *Acacia obtusifolia, Leucopogon lanceolatus* var. *lanceolatus, Notelaea venosa, Persoonia linearis, Platysace lanceolata, Polyscias sambucifolia* **Climbers:** *Billardiera scandens, Smilax australis* **Groundcover:** *Dianella caerulea, Dianella tasmanica, Lomandra longifolia, Pteridium esculentum*

Vegetation structure:

Stratum	Frequency (n=8)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	25.8 (4.9)	28.1 (7)
Small tree	50	18 (8.1)	26.3 (23.9)
Shrub	75	2.5 (0.5)	14.2 (9.2)
Ground cover	88	1 (-)	28.6 (21.4)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 8 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 16 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 8 positive diagnostic species.

Positive Diagnostic Species:

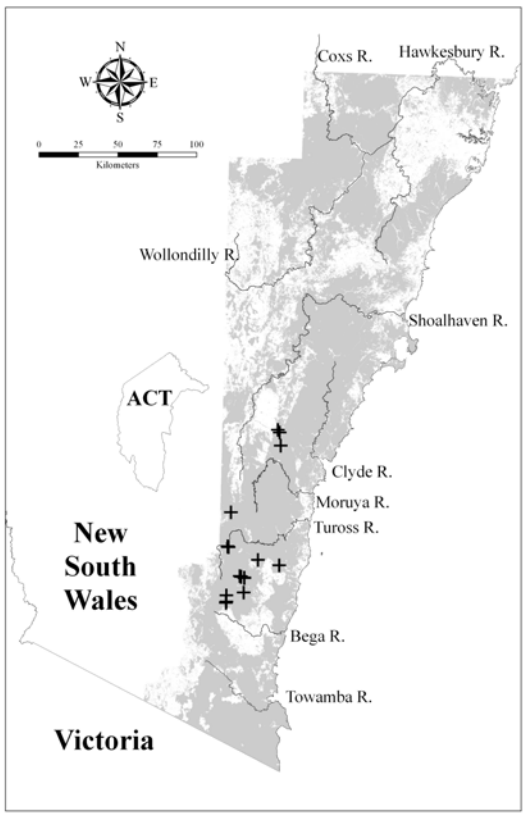
Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-1)	60	1(1-2)	10
Acacia obliquinervia	1(1-1)	20	1(1-1)	1
Acacia obtusifolia	1(1-1)	75	1(1-2)	9
Billardiera scandens	1(1-1)	60	1(1-1)	28
Choretrum candollei	1(1-2)	25	1(1-1)	1
Dianella caerulea	1(1-1)	70	1(1-1)	28
Dianella tasmanica	1(1-2)	55	1(1-1)	7
Eucalyptus cypellocarpa	1(1-1)	60	2(1-2)	10
Eucalyptus elata	1(1-3)	25	2(1-3)	5
Eucalyptus fraxinoides	1(1-1)	40	2(1-3)	1
Eucalyptus radiata subsp. *radiata*	1(1-2)	35	2(1-3)	6
Eucalyptus sieberi	1(1-1)	85	2(1-3)	16
Exocarpos strictus	1(1-1)	35	1(1-1)	9
Hakea eriantha	1(1-1)	30	1(1-1)	2
Hierochloe rariflora	1(1-1)	20	1(1-2)	4
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	90	1(1-1)	23
Lomandra longifolia	1(1-1)	85	1(1-1)	44
Notelaea venosa	1(1-1)	60	1(1-1)	12
Persoonia linearis	1(1-1)	95	1(1-1)	29
Platysace lanceolata	1(1-1)	40	1(1-1)	13
Polyscias sambucifolia	1(1-1)	50	1(1-1)	6
Pteridium esculentum	1(1-1)	95	1(1-2)	37
Stylidium graminifolium	1(1-1)	35	1(1-1)	9

Constant:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus globoidea	1(1-1)	30	2(1-2)	12
Podolobium ilicifolium	1(1-1)	30	1(1-1)	9
Smilax australis	1(1-1)	40	1(1-1)	16

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	10	1(1-2)	9
Eucalyptus angophoroides	1(1-1)	5	1(1-2)	1
Eucalyptus fastigata	1(1-2)	20	2(2-3)	6
Eucalyptus muelleriana	1(1-1)	10	2(1-2)	6
Eucalyptus obliqua	2(2-2)	15	2(1-3)	4
Eucalyptus smithii	2(1-2)	10	1(1-2)	2



Locations of survey sites allocated to DSF eW1. Grey shading indicates extant native vegetation cover within the study area.

HL eW3: Wadbilliga Heath Forest

Plate eW3. Wadbilliga Heath Forest (Map Unit eW3) with *Eucalyptus pauciflora, E. latiuscula, Banksia canei, Kunzea* sPage C and *Leptospermum myrtifolium* south of Wadbilliga trig on the Razorback Trail, Wadbilliga National Park.

Sample Sites: 15
Area Extant (ha): 1600
Estimated % remaining: >95%
Area in conservation reserves (ha): 1600
Estimated % of pre-clearing area in conservation reserves: >95%
No. Taxa (total / unique): 74 / 0
No. Taxa per Plot (±sd): 19.2 (5.8)
Class: Southern Montane Heaths

Related TEC: n/a

Wadbilliga Heath Forest is equivalent to Map Unit W3 of the same name described by Keith & Bedward (1999). This low *Eucalyptus* forest is characterised by a prominent and diverse shrub stratum and groundcover of variable height, with small herbs interspersed with tussocks of *Gahnia sieberiana*. Wadbilliga Heath Forest occupies dry sites on a metamorphosed sandstone plateau at 1100 - 1350 m elevation. It occupies more exposed sites than Southern Escarpment Ash Dry Forest (Map Unit WSF p78) and less exposed sites than Southern Montane Heath (Map Unit HL e53). This assemblage is distinguished from the latter by the presence of a tree stratum and a more open shrub stratum. It is found almost exclusively on the Wadbilliga Mountain plateau and associated ridges to the south-west within Wadbilliga National Park. Although not currently threatened, extremes in fire frequency, if sustained, would very likely result in losses of species diversity. The most western stands may have been exposed to higher frequencies prior to park dedication (unpubl. data). Frequent fire regimes reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Eucalyptus kybeanensis, Eucalyptus pauciflora* **Shrubs:** *Acacia obliquinervia, Acrotriche serrulata, Allocasuarina nana, Banksia canei, Boronia algida, Brachyloma daphnoides, Dillwynia sericea, Hakea dactyloides, Hibbertia pedunculata, Kunzea* sp. 'Wadbilliga', *Leptospermum lanigerum, Monotoca scoparia, Oxylobium ellipticum, Persoonia asperula, Persoonia silvatica, Platysace lanceolata* **Groundcover:** *Gahnia sieberiana, Lepidosperma laterale, Stylidium graminifolium*

Vegetation structure: Not available

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 9 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 15 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 9 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia obliquinervia	1(1-1)	40	1(1-1)	1
Acrotriche serrulata	1(1-1)	47	1(1-1)	3
Allocasuarina nana	1(1-1)	73	2(1-4)	1
Baeckea denticulata	1(1-1)	20	2(2-3)	<1
Baeckea utilis	1(1-1)	27	1(1-2)	<1
Banksia canei	1(1-1)	100	1(1-2)	<1
Boronia algida	1(1-1)	40	1(1-2)	<1
Brachyloma daphnoides	1(1-1)	40	1(1-1)	7
Choretrum pauciflorum	1(1-1)	27	1(1-1)	1
Dillwynia sericea	1(1-1)	73	1(1-1)	2
Epacris robusta	1(1-1)	27	0(0-0)	0
Eucalyptus dalrympleana subsp. *dalrympleana*	1(1-1)	27	1(1-2)	3
Eucalyptus kybeanensis	1(1-1)	47	0(0-0)	0
Eucalyptus latiuscula	1(1-1)	20	1(1-1)	<1
Eucalyptus pauciflora	1(1-1)	47	2(1-2)	3
Gahnia sieberiana	1(1-1)	67	1(1-1)	4
Gahnia subaequiglumis	1(1-1)	33	1(1-2)	<1
Gleichenia dicarpa	1(1-1)	20	1(1-2)	2
Hakea dactyloides	1(1-1)	60	1(1-1)	12
Hibbertia pedunculata	1(1-1)	60	1(1-2)	<1
Kunzea sp. *'Wadbilliga'*	1(1-1)	67	2(1-3)	<1
Leptospermum lanigerum	1(1-1)	67	1(1-2)	1
Leucopogon gelidus	1(1-1)	27	1(1-1)	<1
Lomatia fraseri	1(1-1)	33	1(1-1)	1
Monotoca scoparia	1(1-1)	53	1(1-1)	12

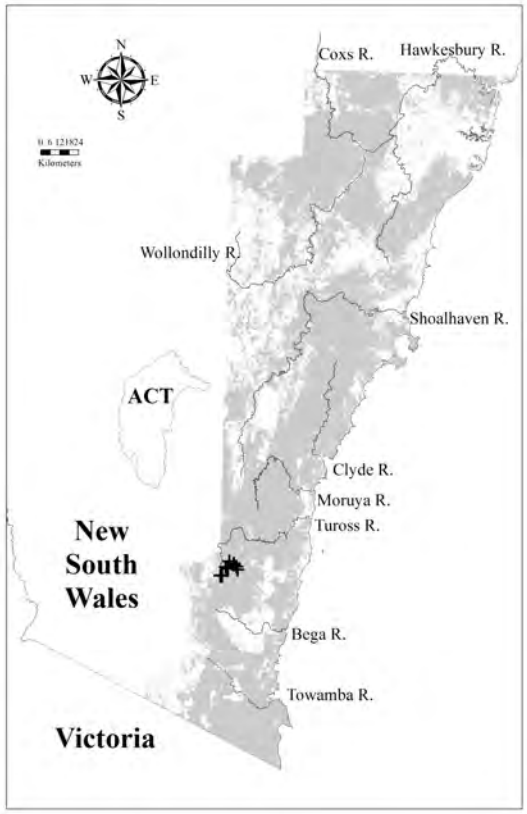
Oxylobium ellipticum	1(1-1)	40	1(1-1)	<1
Persoonia asperula	1(1-1)	47	1(1-1)	<1
Persoonia silvatica	1(1-1)	40	1(1-1)	2
Platysace lanceolata	1(1-1)	60	1(1-1)	13
Stylidium graminifolium	1(1-1)	73	1(1-1)	9
Styphelia triflora	1(1-1)	27	1(1-1)	<1

Constant:

Species	C/A	Freq	C/A O	Freq O
Lepidosperma laterale	1(1-1)	40	1(1-1)	29
Lomandra glauca	1(1-1)	33	1(1-1)	10

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus radiata subsp. *radiata*	1(1-1)	13	2(1-3)	6
Eucalyptus sieberi	1(1-1)	7	2(1-3)	16



Locations of survey sites allocated to HL eW3. Grey shading indicates extant native vegetation cover within the study area.

DSF eW5: Wadbilliga Gorge Dry Forest

Plate eW5. Wadbilliga Gorge Dry Forest (Map Unit eW5) dominated by *Eucalyptus agglomerata* and *E. consideniana* with *Allocasuarina littoralis, Persoonia linearis* and *Dodonaea triquetra* on the lower slopes of the Wadbilliga River gorge, Wadbilliga trail, Wadbilliga National Park.

Sample Sites: 34
Area Extant (ha): 16000
Estimated % remaining: >85%
Area in conservation reserves (ha): 11000
Estimated % of pre-clearing area in conservation reserves: 55-65%
No. Taxa (total / unique): 243 / 0
No. Taxa per Plot (±sd): 35.8 (8.2)
Class: South East Dry Sclerophyll Forests
Related TEC: n/a

Wadbilliga Gorge Dry Forest is equivalent to Map Unit W5 of the same name described by Keith & Bedward (1999). It is characterised by a mix of tree species forming a canopy up to around 20 m in height. A prominent small tree stratum is also present and the shrub stratum is sclerophyllous and highly variable in composition. The groundcover includes graminoids, herbs, the vine *Glycine clandestina* and bracken fern *Pteridium esculentum*. Wadbilliga Gorge Dry Forest occupies steep to moderate dry slopes on metasediments and granitoid substrates at 200 - 500 m elevation. It differs from other assemblages in the dissected northern terrain in tree composition and the presence of a subcanopy, albeit patchy and probably extends further north in similar habitat. It is restricted to the gorges of Tuross and Brogo Rivers and their tributaries, principally within Wadbilliga National Park. Although not presently a serious threat, frequent fire regimes if they occurred would reduce diversity by interrupting life-cycle processes of woody species (Keith 1996). Intervals between planned and unplanned fires need to be long enough to allow replenishment of seed banks and restoration of habitat structure if losses of diversity are to be avoided.

Floristic Summary:
Trees: *Acacia mearnsii, Allocasuarina littoralis, Angophora floribunda, Eucalyptus angophoroides, Eucalyptus globoidea* **Shrubs:** *Leucopogon lanceolatus* var. *lanceolatus, Persoonia linearis* **Climbers:** *Glycine clandestina, Hardenbergia violacea* **Groundcover:** *Brachyscome spathulata, Desmodium varians, Dianella caerulea, Dichondra* spp., *Hydrocotyle laxiflora, Hypericum gramineum, Imperata cylindrica* var. *major, Lagenifera stipitata, Lepidosperma laterale, Lomandra longifolia, Lomandra multiflora* subsp. *multiflora, Microlaena stipoides, Oxalis perennans, Pomax umbellata, Pratia purpurascens, Pteridium esculentum*

Vegetation structure:

Stratum	Frequency (n=11)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	100	19.7 (3.3)	22.3 (10.1)
Small tree	73	8.3 (3.8)	9.8 (5.7)
Shrub	55	2.8 (0.4)	11.7 (9.3)
Ground cover	100	0.8 (0.3)	33.2 (23.6)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 13 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 29 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 13 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-1)	29	1(1-2)	10
Acacia mearnsii	1(1-2)	50	1(1-2)	7
Ajuga australis	1(1-1)	26	1(1-1)	3
Allocasuarina littoralis	1(1-1)	50	1(1-2)	17
Angophora floribunda	1(1-2)	82	1(1-2)	8
Arthropodium minus	1(1-1)	21	1(1-1)	1
Bossiaea buxifolia	1(1-1)	32	1(1-1)	3
Brachyscome spathulata	1(1-1)	41	1(1-1)	1
Desmodium varians	1(1-1)	88	1(1-1)	21
Dichondra spp.	1(1-1)	76	1(1-2)	25
Echinopogon caespitosus var. *caespitosus*	1(1-1)	32	1(1-1)	6
Eucalyptus angophoroides	1(1-1)	50	1(1-2)	1
Eucalyptus elata	1(1-1)	21	2(1-3)	5
Eucalyptus globoidea	1(1-2)	62	2(1-2)	12
Exocarpos strictus	1(1-1)	26	1(1-1)	9
Glycine clandestina	1(1-1)	65	1(1-1)	26
Hardenbergia violacea	1(1-1)	62	1(1-1)	17
Hydrocotyle laxiflora	1(1-1)	41	1(1-1)	15
Hypericum gramineum	1(1-1)	56	1(1-1)	16
Imperata cylindrica var. *major*	1(1-1)	41	1(1-2)	10
Indigofera australis	1(1-1)	26	1(1-1)	9
Lagenifera stipitata	1(1-1)	50	1(1-1)	14
Lepidosperma laterale	1(1-1)	65	1(1-1)	28
Leucopogon juniperinus	1(1-2)	38	1(1-1)	5
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	56	1(1-1)	23
Lomandra longifolia	1(1-1)	91	1(1-1)	44
Lomandra multiflora subsp. *multiflora*	1(1-1)	59	1(1-1)	25
Microlaena stipoides	1(1-2)	62	1(1-2)	36
Opercularia aspera	1(1-1)	35	1(1-1)	8
Oxalis perennans	1(1-1)	41	1(1-1)	13
Ozothamnus argophyllus	1(1-1)	24	1(1-1)	2
Persoonia linearis	1(1-1)	88	1(1-1)	28
Plantago debilis	1(1-1)	24	1(1-1)	7

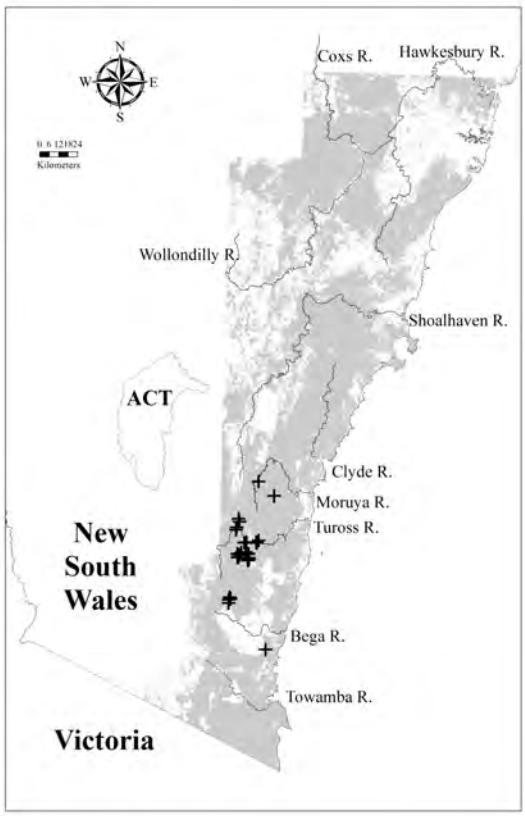
Pomax umbellata	1(1-1)	41	1(1-1)	14
Poranthera microphylla	1(1-1)	38	1(1-1)	15
Pratia purpurascens	1(1-1)	65	1(1-1)	17
Pteridium esculentum	1(1-1)	74	1(1-2)	37
Senecio glomeratus	1(1-1)	21	1(1-1)	<1
Vernonia cinerea var. *cinerea*	1(1-1)	32	1(1-1)	4
Viola betonicifolia	1(1-1)	24	1(1-1)	5

Constant:

Species	C/A	Freq	C/A O	Freq O
Clematis aristata	1(1-1)	35	1(1-1)	20
Dianella caerulea	1(1-1)	50	1(1-1)	28

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus agglomerata	1(1-2)	21	2(1-3)	7
Eucalyptus baueriana	1(1-3)	15	2(1-2)	1
Eucalyptus bosistoana	1(1-1)	6	1(1-2)	3
Eucalyptus consideniana	2(1-2)	12	2(1-2)	2
Eucalyptus cypellocarpa	1(1-1)	15	2(1-2)	10
Eucalyptus dives	1(1-2)	18	2(1-3)	4
Eucalyptus maidenii	1(1-1)	3	2(1-2)	2
Eucalyptus mannifera	1(1-2)	15	2(1-3)	4
Eucalyptus muelleriana	1(1-2)	15	2(1-2)	6
Eucalyptus radiata subsp. *radiata*	2(1-3)	12	2(1-3)	6
Eucalyptus sieberi	1(1-1)	6	2(1-3)	16
Eucalyptus tereticornis	2(2-2)	3	2(1-3)	7
Eucalyptus viminalis	1(1-2)	12	2(1-3)	4



Locations of survey sites allocated to DSF eW5. Grey shading indicates extant native vegetation cover within the study area.

FoW m15: Eden Shrubby Swamp Woodland

Plate m15. Eden Shrubby Swamp Woodland (Map Unit m15) in a swampy drainage west of the Princes Highway at Boydtown. An open tree layer dominated by *Eucalyptus baueriana* and *E. pilularis* grows above a prominent, diverse midstorey including *Banksia serrata*, *Allocasuarina littoralis*, *Monotoca elliptica* and *Melaleuca ericifolia*, and a tall, dense groundcover dominated by *Gahnia clarkei*, *Phragmites australis*, *Pteridium esculentum* and *Calochlaena dubia*.

Sample Sites: 8
Area Extant (ha): n/a
Estimated % remaining: >70%
Area in conservation reserves (ha): n/a

Estimated % of pre-clearing area in conservation reserves: >80%
No. Taxa (total / unique): 91 / 0
No. Taxa per Plot (±sd): 21.9 (12.6)
Class: Temperate Swamp Forests
Related TEC: n/a

Eden Shrubby Swamp Woodland is floristically equivalent to Gahnia Tea Tree Swamp Forest (*E. ovata-Gahnia clarkei*) identified by Beukers (undated). This unit typically has a sparse tree canopy, dense understorey of small trees and shrubs, and a dense groundcover dominated by sedges and ferns. It has been recorded from narrow swampy coastal creeklines on the far South Coast between Pambula and Nadgee. Sites occur on sandy alluvial soils derived from surrounding quartz-rich sedimentary and acid-volcanic substrates, at elevations below 100m ASL and with mean annual rainfall of 800-900mm.
With increasing frequency and depth of inundation, this alluvial unit may be replaced by Southeast Lowland Swamp (FrW e57). Sites with some tidal/saline influence may grade into Estuarine Creekflat Scrub (FoW p107).
Most records of this unit were not mapped by this project and its extent is underestimated on the vegetation map, because its habitat corresponds with fine-scale drainage patterns that are not discriminated by the available topographic data. In many locations it may be mapped as one of the surrounding moist gully units, such as Southeast Hinterland Wet Shrub Forest (WSF e14) or Southeast Lowland Gully Shrub Forest (WSF e37).
Eden Shrubby Swamp Woodland fits within the Coastal Floodplain Wetlands vegetation class (Keith 2004). It is conserved within Ben Boyd National Park and Nadgee Nature Reserve, and occurrences within nearby State Forests will generally be protected from direct impacts by prescriptions applied to riparian habitats. Fire and weed invasion represent the main potential pressures on this vegetation type.

Floristic Summary:
Trees: *Melaleuca squarrosa, M. ericifolia, Eucalyptus longifolia, E. ovata.* **Shrubs:** *Elaeocarpus reticulatus, Babingtonia pluriflora, Banksia integrifolia* subsp. *integrifolia,* **Climbers:** *Tylophora barbata* **Groundcover:** *Gahnia clarkei, Viola hederacea, Calochlaena dubia, Lobelia anceps, Pteridium esculentum, Gonocarpus teucrioides, Gleichenia microphylla, Gonocarpus micranthus.*

Vegetation structure:

Stratum	Frequency (n=8)	Height (m) (±StDev)	Cover (%) (±StDev)
Tree canopy	100	22.8 (6.6)	13.6 (16.4)
Small tree	100	7.4 (3.3)	53.1 (38.3)
Shrub	25	2.3 (0.4)	65 (21.2)
Ground cover	100	2.2 (1.2)	61.9 (36.7)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 3 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 12 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 3 positive diagnostic species.

Positive Diagnostic Species:

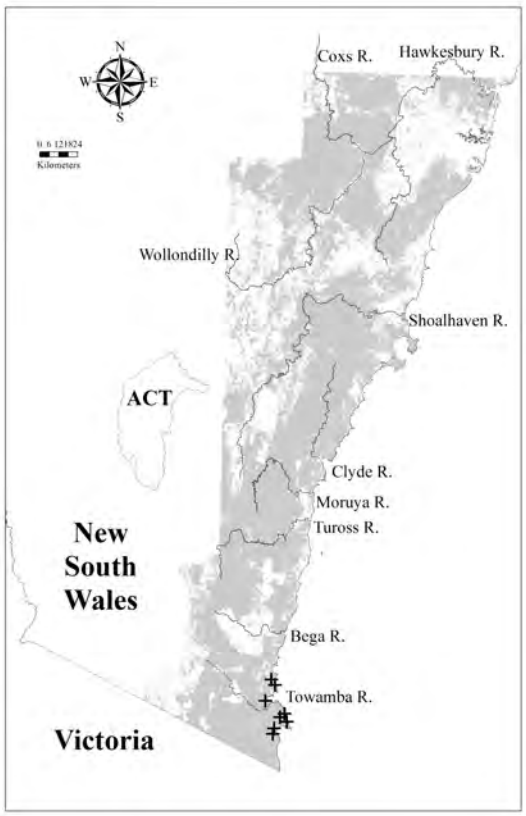
Species	C/A	Freq	C/A O	Freq O
Babingtonia pluriflora	1(1-1)	25	1(1-1)	1
Banksia integrifolia subsp. *integrifolia*	2(1-2)	25	1(1-2)	2
Calochlaena dubia	1(1-2)	63	1(1-3)	9
Elaeocarpus reticulatus	1(1-1)	75	1(1-1)	12
Eucalyptus longifolia	1(1-2)	38	1(1-2)	2
Eucalyptus ovata	3(2-3)	25	2(1-2)	1
Gahnia clarkei	3(2-4)	88	1(1-2)	2
Gleichenia microphylla	3(1-3)	25	1(1-2)	1
Gonocarpus micranthus	1(1-1)	25	1(1-1)	1
Lobelia anceps	1(1-1)	50	1(1-1)	1
Melaleuca ericifolia	2(1-3)	50	2(1-4)	1
Melaleuca squarrosa	2(2-5)	88	2(1-3)	1
Viola hederacea	1(1-1)	75	1(1-1)	22

Constant:

Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-1)	38	1(1-2)	10
Allocasuarina littoralis	1(1-2)	38	1(1-2)	17
Banksia serrata	1(1-3)	38	1(1-2)	9
Coprosma quadrifida	1(1-1)	38	1(1-1)	10
Dianella caerulea	1(1-1)	38	1(1-1)	28
Entolasia marginata	1(1-1)	38	1(1-1)	11
Gonocarpus teucrioides	1(1-1)	50	1(1-1)	18
Goodenia ovata	1(1-1)	38	1(1-1)	7
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	38	1(1-1)	24
Morinda jasminoides	1(1-1)	38	1(1-2)	9
Pteridium esculentum	2(1-2)	75	1(1-2)	37
Tylophora barbata	1(1-1)	50	1(1-1)	17

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-1)	25	1(1-2)	9
Eucalyptus baueriana	3(3-3)	13	2(1-2)	1
Eucalyptus baxteri	1(1-1)	13	1(1-2)	<1
Eucalyptus cypellocarpa	1(1-1)	13	2(1-2)	10
Eucalyptus globoidea	1(1-1)	13	2(1-2)	12
Eucalyptus obliqua	1(1-1)	13	2(1-3)	4
Eucalyptus pilularis	2(2-2)	25	2(1-3)	5
Eucalyptus sieberi	1(1-1)	13	2(1-3)	16



Locations of survey sites allocated to FoW m15. Grey shading indicates extant native vegetation cover within the study area.

GL m68: Southeast Tablelands Grassy Wetlands Complex

Plate m68. Southeast Tablelands Grassy Wetlands Complex (Map Unit m68) showing the characteristic treeless habitat of this unit on grazed flats adjacent to the Kybeyan River. Dense tussocks of *Poa labillardierei* var. *labillardierei* obscure a diverse range of moisture-loving herbs and sedges.

Sample Sites: 20
Area Extant (ha): 1000
Estimated % remaining: <50 %
Area in conservation reserves (ha): 390
Estimated % of pre-clearing area in conservation reserves: <30%
No. Taxa (total / unique): 188/5
No. Taxa per Plot (±sd): 29.5 (18.1)
Class: Temperate Montane Grasslands
Related TEC: n/a

Southeast Tablelands Grassy Wetlands is characterised by a tall and dense groundcover comprising a diverse range of forb species interspersed among tussocks of grasses and sedges. Trees and shrubs are generally absent but may occur occasionally in less water-logged sites. It has been recorded on open drainage flats associated with minor water courses in gently undulating country along the Great Dividing Range and Monaro Tableland between Breadbo and Bombala. Southeast Tablelands Grassy Wetlands is found across a wide range in elevation (750-1150 m ASL) in areas receiving from 750 – 950 mm of precipitation annually. Soils are typically derived from basalt or granite with a mantle of alluvium of varying depth depending on local drainage and topographic conditions. As soil drainage improves Southeast Tablelands Grassy Wetlands grades into Southern Range Wet Forest (WSF p338) on the Divide, and Sub-alpine Dry Shrub Forest (GW e24) or Southern Tableland Flats Forest (GW p220) further west. It may also be found within these or other map units on drainage features that were too small to be detected at the resolution of mapping employed in this project.

Southeast Tablelands Grassy Wetlands has been extensively modified by grazing, pasture improvement and weed invasion. Although small areas are represented in the western extremities of National Parks along the range, the majority of the former distribution lies further west and is inadequately represented in conservation reserves.

Floristic Summary:
Groundcover: *Acaena novae-zelandiae, Asperula conferta, Carex appressa, Carex inversa, Cyperus sphaeroideus, Elymus scaber* var. *scaber, Epilobium billardiereanum, Euchiton gymnocephalus, Geranium neglectum, Haloragis heterophylla, Helichrysum scorpioides, Hydrocotyle tripartita, Hypericum japonicum, Juncus filicaulis, Poa labillardierei* var. *labillardierei, Poa meionectes, Ranunculus pimpinellifolius, Rumex brownii, Scleranthus biflorus*

Vegetation structure:

Stratum	Frequency (n=20)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)

Tree canopy	15	15.5 (12.4)	44.3 (41.8)
Small tree	15	14 (3.5)	18.3 (7.6)
Shrub	30	1.4 (1.4)	19 (16.5)
Ground cover	100	0.9 (0.3)	89.5 (32.8)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 11 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 15 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 11 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acaena echinata	1(1-1)	35	1(1-1)	2
Acaena novae-zelandiae	1(1-1)	55	1(1-1)	7
Asperula conferta	1(1-1)	40	1(1-1)	4
Brachyscome graminea	1(1-1)	20	1(1-1)	<1
Carex appressa	1(1-3)	65	1(1-1)	4
Carex gaudichaudiana	2(1-2)	35	1(1-2)	1
Carex inversa	1(1-1)	55	1(1-1)	3
Cyperus sphaeroideus	1(1-2)	40	1(1-2)	<1
Dichelachne hirtella	1(1-1)	20	1(1-1)	<1
Elymus scaber var. *scaber*	1(1-1)	40	1(1-1)	5
Epilobium billardierianum	1(1-1)	80	1(1-1)	2
Eragrostis brownii	1(1-1)	20	1(1-1)	3
Eucalyptus pauciflora	1(1-2)	25	1(1-2)	3
Eucalyptus viminalis	1(1-3)	25	2(1-3)	4
Euchiton gymnocephalus	1(1-1)	55	1(1-1)	7
Euchiton sphaericus	1(1-1)	25	1(1-1)	3
Geranium antrorsum	1(1-1)	30	1(1-2)	<1
Geranium neglectum	1(1-1)	40	1(1-1)	1
Geranium retrorsum	1(1-1)	30	1(1-1)	<1
Gratiola peruviana	1(1-1)	20	1(1-1)	1
Haloragis heterophylla	1(1-1)	55	1(1-1)	1
Helichrysum scorpioides	1(1-1)	40	1(1-1)	7
Hemarthria uncinata var. *uncinata*	1(1-1)	30	1(1-1)	<1
Hydrocotyle tripartita	2(1-2)	60	1(1-1)	1
Hypericum japonicum	1(1-1)	55	1(1-1)	2
Juncus australis	1(1-1)	30	1(1-1)	1
Juncus falcatus	1(1-3)	20	1(1-1)	<1
Juncus filicaulis	1(1-1)	45	1(1-1)	1
Juncus planifolius	1(1-1)	30	1(1-1)	1
Juncus usitatus	1(1-2)	25	1(1-1)	2
Lachnagrostis filiformis	1(1-1)	25	1(1-1)	3
Leptospermum myrtifolium	1(1-1)	35	1(1-1)	1
Myriophyllum variifolium	1(1-3)	25	1(1-1)	<1
Oreomyrrhis eriopoda	1(1-1)	25	1(1-1)	1
Poa labillardierei var. *labillardierei*	2(1-4)	95	1(1-2)	12
Pratia surrepens	1(1-1)	20	1(1-1)	<1

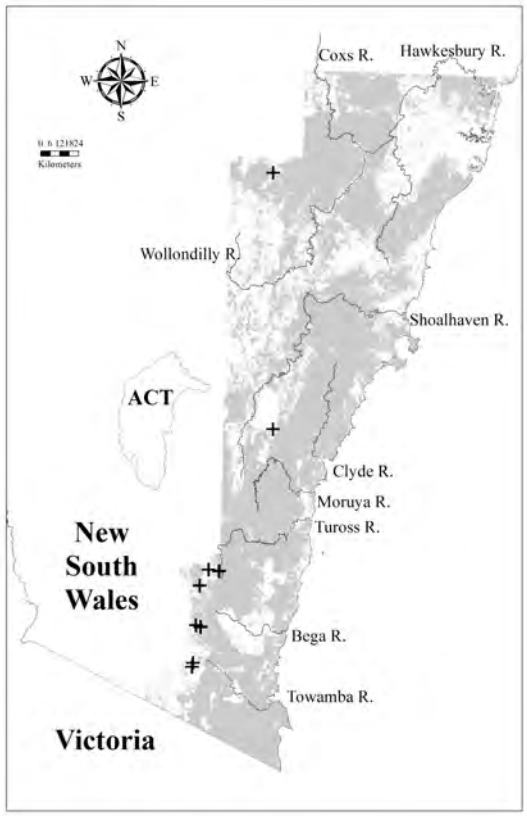
Ranunculus pimpinellifolius	1(1-1)	50	1(1-1)	<1
Rumex brownii	1(1-1)	40	1(1-1)	5
Rytidosperma nudiflorum	1(1-1)	20	1(1-1)	<1
Schoenus apogon	1(1-2)	20	1(1-1)	2
Scirpus polystachyus	1(1-2)	20	1(1-2)	<1
Scleranthus biflorus	1(1-1)	40	1(1-1)	2
Spiranthes sinensis subsp. *australis*	1(1-1)	25	1(1-1)	<1
Stellaria angustifolia	1(1-1)	35	1(1-1)	<1
Veronica gracilis	1(1-1)	20	1(1-1)	<1
Viola betonicifolia	1(1-1)	25	1(1-1)	5

Constant:

Species	C/A	Freq	C/A O	Freq O
Dichondra spp.	1(1-1)	30	1(1-2)	25
Hydrocotyle laxiflora	1(1-1)	30	1(1-1)	16
Poa meionectes	1(1-2)	40	1(1-2)	16

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus parvula	2(2-2)	5	1(1-1)	<1
Eucalyptus robertsonii subsp. *robertsonii*	1(1-1)	5	3(2-4)	<1
Eucalyptus rubida subsp. *rubida*	1(1-1)	10	1(1-2)	2
Eucalyptus stellulata	1(1-1)	10	1(1-2)	1



Locations of survey sites allocated to GL m68. Grey shading indicates extant native vegetation cover within the study area.

HL m83: South Coast Headland Scrub

Plate m83. South Coast Headland Scrub (Map Unit m83) on rocky sea cliffs at Bittangabee with a dense wind-pruned canopy including *Melaleuca armillaris* and *Banksia integrifolia* subsp. *integrifolia*.

Sample Sites: 9
Area Extant (ha): 20
Estimated % remaining: 50-95%
Area in conservation reserves (ha): 10
Estimated % of pre-clearing area in conservation reserves: 40-70%
No. Taxa (total / unique): 97/0
No. Taxa per Plot (±sd): 21 (10.2)
Class: Coastal Headland Heaths
Related TEC: n/a

South Coast Headland Scrub is characterised by a moderately diverse and sometimes patchy shrub stratum, generally around 2 m tall in exposed locations but often developing to the stature of small trees (6 –10 m) when protected from coastal winds. The groundcover is typically sparse and contains relatively low numbers of species dominated by small twining forbs and sedges. South Coast Headland Scrub shares many species in common with Coastal Foredune Scrub (DSF e61) but occurs in more exposed locations on coastal headlands and at the edge of sea cliffs. Soils are typically derived from sandstone although a thin mantle of quaternary aeolian sand may also be present. South Coast Headland Scrub has been recorded from Mimosa Rocks to Cape Howe and a similar assemblage occurs to the south in East Gippsland (Woodgate *et al.* 1994). Its distribution may extend slightly further to the north but it is replaced by Headland Grassland (GL p434) from around Narooma.

South Coast Headland Scrub is highly restricted in distribution with only a small area protected in conservation reserves. The remaining area is potentially affected by clearing and weed invasion associated with coastal urban developments. This unit belongs to the Coastal Headland Heaths vegetation class of Keith (2004).

Floristic Summary:
Trees: *Pittosporum undulatum* **Shrubs:** *Leptospermum laevigatum, Melaleuca armillaris* subsp. *armillaris, Monotoca elliptica* **Climbers:** *Billardiera scandens, Glycine clandestina* **Groundcover:** *Dichondra* spp., *Lepidosperma concavum*

Vegetation structure:

Stratum	Frequency (n=9)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	44	8.5 (2.6)	55 (38.1)
Small tree	33	6 (1.7)	50 (10)
Shrub	89	2.4 (1.1)	37.8 (33.1)
Ground cover	100	0.6 (0.4)	29 (32.5)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 3 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 13 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 3 positive diagnostic species.

Positive Diagnostic Species:

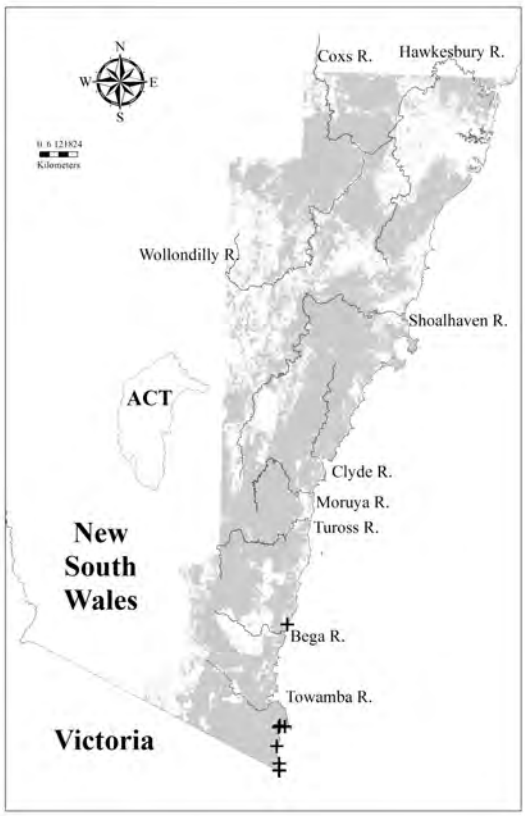
Species	C/A	Freq	C/A O	Freq O
Acacia longifolia	1(1-2)	89	1(1-2)	9
Allocasuarina verticillata	2(1-2)	22	1(1-2)	<1
Alyxia buxifolia	2(2-2)	22	1(1-1)	<1
Banksia integrifolia subsp. *integrifolia*	1(1-2)	33	1(1-2)	2
Correa reflexa	1(1-2)	33	1(1-1)	5
Gahnia radula	1(1-1)	33	1(1-2)	3
Isolepis nodosa	1(1-3)	33	1(1-1)	1
Lepidosperma concavum	1(1-2)	89	1(1-2)	2
Leptospermum laevigatum	2(2-3)	44	1(1-2)	1
Leucopogon parviflorus	1(1-1)	22	1(1-1)	<1
Libertia paniculata	1(1-1)	22	1(1-1)	2
Melaleuca armillaris subsp. *armillaris*	4(3-4)	89	1(1-2)	1
Monotoca elliptica	1(1-2)	44	1(1-1)	2
Notodanthonia longifolia	1(1-2)	33	1(1-2)	5
Poa poiformis var. *poiformis*	3(2-3)	22	1(1-2)	<1
Senecio lautus subsp. *maritimus*	1(1-1)	22	1(1-1)	<1
Westringia fruticosa	2(1-2)	22	1(1-1)	<1

Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	56	1(1-1)	28
Dichondra spp.	1(1-1)	56	1(1-2)	25
Glycine clandestina	1(1-1)	44	1(1-1)	26
Goodenia ovata	1(1-2)	33	1(1-1)	7
Kennedia rubicunda	1(1-1)	33	1(1-1)	6
Pittosporum undulatum	1(1-2)	44	1(1-1)	14
Senecio linearifolius	1(1-2)	33	1(1-1)	8

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Eucalyptus longifolia	1(1-1)	11	1(1-2)	2



Locations of survey sites allocated to HL m83. Grey shading indicates extant native vegetation cover within the study area.

WSF n183: South Coast Hinterland Wet Forest

Plate n183. South Coast Hinterland Wet Forest (Map Unit n183) near Government Corner on the Kings Highway on Clyde Mountain. Canopy trees include *Eucalyptus cypellocarpa, E. muelleriana* and *E. fastigata*, with scattered small trees of *to Acacia irrorata* subsp. *Irrorata* and *Synoum glandulosum* subsp. *glandulosum*, shrubs including *Notelaea venosa* and *Cyathea australis*, and a groundcover dominated by ferns and vines including *Cissus hypoglauca, Calochlaena dubia* and *Pteridium esculentum*.

Sample Sites: 76
Area Extant (ha): 69400
Estimated % remaining: >95%
Area in conservation reserves (ha): 30300
Estimated % of pre-clearing area in conservation reserves: 40-50%
No. Taxa (total / unique): 320/1
No. Taxa per Plot (±sd): 39.3 (10.1)
Class: South Coast Wet Sclerophyll Forests
Related TEC: n/a

South Coast Hinterland Wet Forest comprises a tall, multi-layered forest characterised by Eucalypts exceeding 30 m in height and a prominent sub-canopy of smaller trees. Tree ferns usually overtop a sparse shrub layer that is frequently festooned with a diverse array of climbing species arising from within a dense groundcover dominated by ferns and graminoid species. South Coast Hinterland Wet Forest shares many species with the closely related Clyde Gully Wet Forest (WSF p103) and these assemblages were considered a single unit (DSF 103) by Tindall *et al.* (2004). WSF n183 is found in moist sheltered gullies and slopes on the low coastal ranges from Yadboro to Bega but does not occur east of the Clyde River. WSF p103 occurs in similar habitats but occupies lower elevations in the slightly warmer and wetter region east of the Clyde River from Batemans Bay north to Yadboro. South Coast Hinterland Wet Forest occurs predominantly on sandy loam soils and is well represented within conservation reserves. Outside of these reserves it is primarily affected by forestry activities.

Floristic Summary:
Trees: *Cyathea australis, Elaeocarpus reticulatus, Eucalyptus cypellocarpa, Eucalyptus muelleriana, Pittosporum undulatum, Synoum glandulosum* subsp. *glandulosum* **Shrubs:** *Leucopogon lanceolatus* var. *lanceolatus, Notelaea venosa, Persoonia linearis, Pittosporum revolutum* **Climbers:** *Billardiera scandens, Cissus hypoglauca, Eustrephus latifolius, Geitonoplesium cymosum, Hibbertia dentata, Pandorea pandorana, Smilax australis, Tylophora barbata* **Groundcover:** *Blechnum cartilagineum, Calochlaena dubia, Desmodium varians, Dianella caerulea, Doodia aspera, Gahnia melanocarpa, Lomandra longifolia, Oplismenus imbecillis, Poa meionectes, Pteridium esculentum, Schelhammera undulata, Viola hederacea*

Vegetation structure:

Stratum	Frequency (n=59)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	-	- (-)	- (-)
Tree canopy	98	30.8 (5.4)	24.7 (13.3)
Small tree	97	12.6 (5.8)	35.1 (19.7)
Shrub	32	3.4 (1.9)	20.2 (16.5)
Ground cover	98	1 (0.7)	49.5 (28.7)

Diagnostic Species:
A 0.04 ha plot located in this Map Unit is expected to contain at least 19 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 31 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 19 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-2)	39	1(1-2)	10
Acacia irrorata subsp. *irrorata*	2(1-2)	28	1(1-1)	2
Acacia mabelliae	2(1-2)	21	1(1-2)	2
Angophora floribunda	1(1-2)	30	1(1-2)	9
Astrotricha latifolia	1(1-2)	11	1(1-1)	2
Blechnum cartilagineum	2(1-3)	80	1(1-2)	11
Callicoma serratifolia	2(1-3)	18	1(1-2)	3
Calochlaena dubia	2(1-3)	62	1(1-3)	9
Cassinia trinerva	1(1-1)	11	1(1-1)	3
Cissus hypoglauca	1(1-1)	67	1(1-2)	9
Clematis aristata	1(1-1)	38	1(1-1)	20
Clematis glycinoides var. *glycinoides*	1(1-1)	36	1(1-1)	10
Correa lawrenceana var. *cordifolia*	1(1-1)	8	1(1-1)	<1
Cyathea australis	1(1-1)	59	1(1-2)	8
Desmodium varians	1(1-1)	42	1(1-1)	21
Dianella caerulea	1(1-1)	58	1(1-1)	28
Doodia aspera	1(1-1)	51	1(1-2)	11
Elaeocarpus reticulatus	1(1-2)	87	1(1-1)	11
Eucalyptus cypellocarpa	1(1-2)	72	2(1-2)	10
Eucalyptus fastigata	2(1-2)	28	2(2-3)	6
Eucalyptus longifolia	1(1-1)	13	1(1-2)	2
Eucalyptus muelleriana	2(1-2)	68	2(1-2)	6
Eucalyptus saligna X botryoides	2(1-2)	11	2(1-3)	2
Eucalyptus scias subsp. *callimastha*	1(1-2)	7	1(1-2)	1
Eucalyptus smithii	1(1-2)	9	1(1-2)	2
Eustrephus latifolius	1(1-1)	75	1(1-1)	19
Gahnia melanocarpa	1(1-1)	49	1(1-1)	5
Galium binifolium	1(1-1)	12	1(1-1)	3
Geitonoplesium cymosum	1(1-1)	68	1(1-1)	15
Goodenia ovata	1(1-1)	37	1(1-1)	7
Hakea eriantha	1(1-1)	11	1(1-1)	2
Hibbertia dentata	1(1-1)	82	1(1-1)	6
Hydrocotyle geraniifolia	1(1-1)	8	1(1-1)	2

Hypolepis muelleri	1(1-1)	9	1(1-2)	1
Lastreopsis microsora subsp. *microsora*	2(1-2)	12	2(1-3)	4
Lepidosperma urophorum	1(1-2)	18	1(1-2)	7
Leucopogon lanceolatus var. *lanceolatus*	1(1-1)	54	1(1-1)	23
Libertia paniculata	1(1-1)	22	1(1-1)	2
Marsdenia rostrata	1(1-1)	39	1(1-2)	12
Notelaea venosa	1(1-1)	61	1(1-1)	11
Olearia argophylla	1(1-1)	11	1(1-2)	3
Oplismenus imbecillis	1(1-1)	47	1(1-2)	14
Oxalis chnoodes	1(1-1)	11	1(1-1)	1
Ozothamnus argophyllus	1(1-2)	28	1(1-1)	2
Pandorea pandorana	1(1-1)	76	1(1-1)	18
Persoonia linearis	1(1-1)	54	1(1-1)	28
Pittosporum revolutum	1(1-1)	46	1(1-1)	8
Pittosporum undulatum	1(1-1)	46	1(1-1)	14
Poa meionectes	1(1-1)	53	1(1-2)	16
Pomaderris aspera	1(1-1)	18	1(1-2)	5
Prostanthera incisa	1(1-3)	7	1(1-1)	1
Pseuderanthemum variabile	1(1-1)	28	1(1-2)	9
Psychotria loniceroides	1(1-1)	25	1(1-1)	3
Pteridium esculentum	1(1-1)	76	1(1-2)	37
Rapanea howittiana	1(1-1)	16	1(1-1)	5
Rubus moluccanus var. *trilobus*	1(1-1)	21	1(1-1)	2
Rubus rosifolius	1(1-1)	20	1(1-1)	3
Santalum obtusifolium	1(1-1)	7	1(1-1)	1
Schelhammera undulata	1(1-1)	62	1(1-1)	7
Schizomeria ovata	1(1-1)	7	1(1-2)	1
Senecio velleioides	1(1-1)	12	1(1-1)	1
Smilax australis	1(1-1)	80	1(1-1)	16
Sticherus lobatus	1(1-3)	7	1(1-2)	1
Synoum glandulosum subsp. *glandulosum*	1(1-1)	58	1(1-2)	6
Tetrarrhena juncea	1(1-2)	18	1(1-2)	5
Tristaniopsis collina	2(1-3)	38	1(1-2)	2
Tylophora barbata	1(1-1)	80	1(1-1)	16
Viola hederacea	1(1-1)	50	1(1-1)	22
Zieria smithii	1(1-1)	14	1(1-1)	2

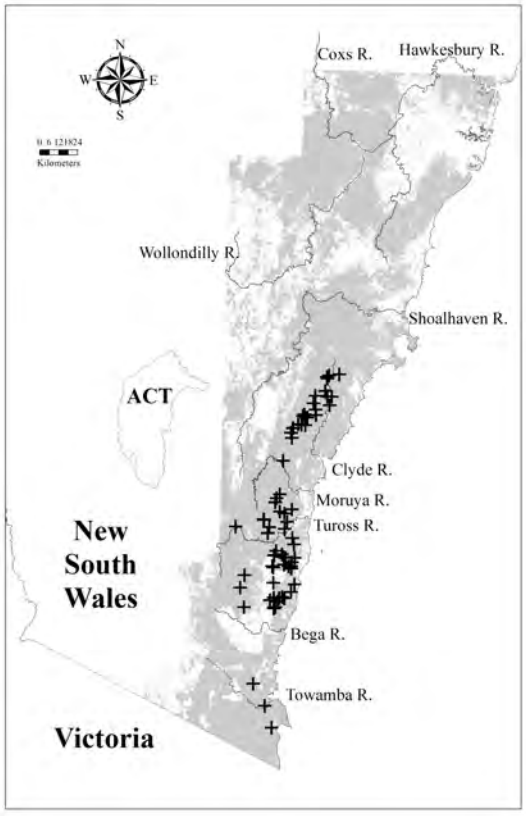
Constant:

Species	C/A	Freq	C/A O	Freq O
Billardiera scandens	1(1-1)	41	1(1-1)	27
Glycine clandestina	1(1-1)	34	1(1-1)	26
Lepidosperma laterale	1(1-1)	30	1(1-1)	29
Lomandra longifolia	1(1-1)	51	1(1-1)	44

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora costata	1(1-1)	3	1(1-3)	7

Eucalyptus agglomerata	1(1-1)	8	2(1-3)	7
Eucalyptus angophoroides	1(1-1)	1	1(1-2)	1
Eucalyptus baueriana	1(1-1)	1	2(1-2)	1
Eucalyptus bosistoana	1(1-2)	5	1(1-2)	3
Eucalyptus botryoides	2(1-2)	9	2(1-3)	3
Eucalyptus elata	1(1-3)	12	2(1-3)	5
Eucalyptus globoidea	1(1-2)	13	2(1-2)	12
Eucalyptus maidenii	2(1-2)	3	2(1-2)	2
Eucalyptus obliqua	2(2-2)	4	2(1-3)	4
Eucalyptus paniculata subsp. *paniculata*	1(1-1)	3	1(1-2)	3
Eucalyptus pilularis	2(2-2)	1	2(1-3)	5
Eucalyptus piperita	2(1-2)	18	2(1-3)	9
Eucalyptus radiata subsp. *radiata*	1(1-1)	1	2(1-3)	6
Eucalyptus sieberi	1(1-2)	25	2(1-3)	16
Syncarpia glomulifera subsp. *glomulifera*	4(1-4)	3	2(1-3)	8



Locations of survey sites allocated to WSF n183. Grey shading indicates extant native vegetation cover within the study area.

WSF n184: Clyde-Tuross Hinterland Forest

Plate n184. Clyde-Tuross Hinterland Forest (Map Unit n184) near Government Corner on the Kings Highway east of Clyde Mountain, with a canopy of *Eucalyptus muelleriana, E. cypellocarpa* and *E. sieberi*, scattered *Elaeocarpus reticulatus* and *Persoonia linearis* and a sparse groundcover of ferns and herbs.

Sample Sites: 33
Area Extant (ha): 19300
Estimated % remaining: >95%
Area in conservation reserves (ha): 7400
Estimated % of pre-clearing area in conservation reserves: 30-40%
No. Taxa (total / unique): 247/0
No. Taxa per Plot (±sd): 41.5 (10.9)
Class: Southern Lowland Wet Sclerophyll Forests
Related TEC: n/a

Clyde-Tuross Hinterland Forest is characterised by a tall *Eucalyptus* tree canopy rising to around 30 m in height with emergent individuals occasionally attaining 40 m. It has a prominent sub-canopy of smaller trees, typically 10 – 15 m in height, and a dense groundcover dominated by ferns and graminoids with a reasonable complement of small forbs also present. A shrub stratum is frequently present and is usually burdened down with a diversity of climbing species that emerge in a tangle from the groundcover. Clyde-Tuross Hinterland Forest is closely related to both WSF p103 and n183 but occurs in areas with elevation and annual rainfall intermediate between the two. It occurs primarily on sandy loam soils on the coastal range from Currowan to Tathra with isolated examples also found further west around Wadbilliga. Clyde-Tuross Hinterland Forest occurs predominantly on sandy loam soils and is well represented within conservation reserves. Outside of these reserves it is primarily affected by forestry activities.

Floristic Summary:
Trees: *Acacia maidenii, Eucalyptus muelleriana, Pittosporum undulatum* **Shrubs:** *Breynia oblongifolia, Indigofera australis, Notelaea venosa* **Climbers:** *Clematis glycinoides* var. *glycinoides, Eustrephus latifolius, Geitonoplesium cymosum, Glycine clandestina, Hibbertia dentata, Marsdenia rostrata, Pandorea pandorana, Rubus parvifolius, Smilax australis, Tylophora barbata* **Groundcover:** *Desmodium varians, Dichondra* spp.*, Doodia aspera, Gahnia melanocarpa, Goodenia ovata, Lepidosperma laterale, Microlaena stipoides, Oplismenus imbecillis, Pellaea falcata, Plectranthus parviflorus, Pratia purpurascens, Stellaria flaccida*

Vegetation structure:

Stratum	Frequency (n=26)	Height (m) (±StDev)	Cover (%) (±StDev)
Emergent	4	40 (-)	30 (-)
Tree canopy	100	27.8 (4.1)	23.4 (13.2)
Small tree	96	10.9 (4.3)	25 (21.2)
Shrub	54	2.3 (0.8)	23.8 (18.8)
Ground cover	92	0.8 (0.4)	35.6 (27.5)

Diagnostic Species:

A 0.04 ha plot located in this Map Unit is expected to contain at least 18 positive diagnostic species (95% confidence interval) provided the total number of native species in the plot is 33 or greater. A 95% confidence interval means that five percent of plots sampled (1 in 20 plots) in this Map Unit may contain fewer than 18 positive diagnostic species.

Positive Diagnostic Species:

Species	C/A	Freq	C/A O	Freq O
Acacia falciformis	1(1-1)	30	1(1-2)	10
Acacia maidenii	1(1-1)	42	1(1-1)	2
Arthropodium milleflorum	1(1-1)	24	1(1-1)	5
Asplenium flabellifolium	1(1-1)	36	1(1-1)	11
Breynia oblongifolia	1(1-1)	61	1(1-1)	12
Cassinia trinerva	1(1-2)	24	1(1-1)	3
Cissus hypoglauca	1(1-2)	33	1(1-2)	10
Claoxylon australe	1(1-1)	24	1(1-2)	3
Clematis glycinoides var. *glycinoides*	1(1-1)	61	1(1-1)	10
Coprosma quadrifida	1(1-1)	33	1(1-1)	10
Corymbia maculata	3(2-3)	27	2(1-3)	3
Desmodium varians	1(1-1)	88	1(1-1)	21
Doodia aspera	1(1-2)	73	1(1-2)	11
Eucalyptus bosistoana	2(1-2)	36	1(1-2)	3
Eucalyptus muelleriana	2(1-2)	70	2(1-2)	6
Eucalyptus smithii	2(1-2)	21	1(1-2)	2
Eustrephus latifolius	1(1-1)	91	1(1-1)	19
Gahnia melanocarpa	1(1-1)	55	1(1-1)	5
Geitonoplesium cymosum	1(1-1)	91	1(1-1)	16
Glycine clandestina	1(1-1)	64	1(1-1)	26
Goodenia ovata	1(1-1)	52	1(1-1)	7
Hibbertia dentata	1(1-1)	45	1(1-1)	6
Hibbertia scandens	1(1-1)	27	1(1-1)	5
Hymenanthera dentata	1(1-1)	24	1(1-1)	6
Indigofera australis	1(1-1)	58	1(1-1)	9
Lepidosperma laterale	1(1-1)	55	1(1-1)	28
Macrozamia communis	2(1-2)	36	1(1-2)	4
Marsdenia rostrata	1(1-1)	61	1(1-2)	12
Morinda jasminoides	1(1-1)	27	1(1-2)	9
Notelaea venosa	1(1-1)	61	1(1-1)	12
Notodanthonia longifolia	1(1-2)	30	1(1-2)	5
Oplismenus imbecillis	1(1-2)	64	1(1-2)	14
Ozothamnus argophyllus	1(1-2)	21	1(1-1)	2
Pandorea pandorana	1(1-1)	85	1(1-1)	18
Pellaea falcata	1(1-1)	73	1(1-2)	10
Pittosporum revolutum	1(1-1)	33	1(1-1)	8
Pittosporum undulatum	1(1-2)	58	1(1-1)	14
Plantago debilis	1(1-1)	24	1(1-1)	7
Plectranthus parviflorus	1(1-1)	73	1(1-1)	7
Poa ensiformis	2(1-2)	30	1(1-1)	2
Pomaderris aspera	1(1-1)	27	1(1-2)	5

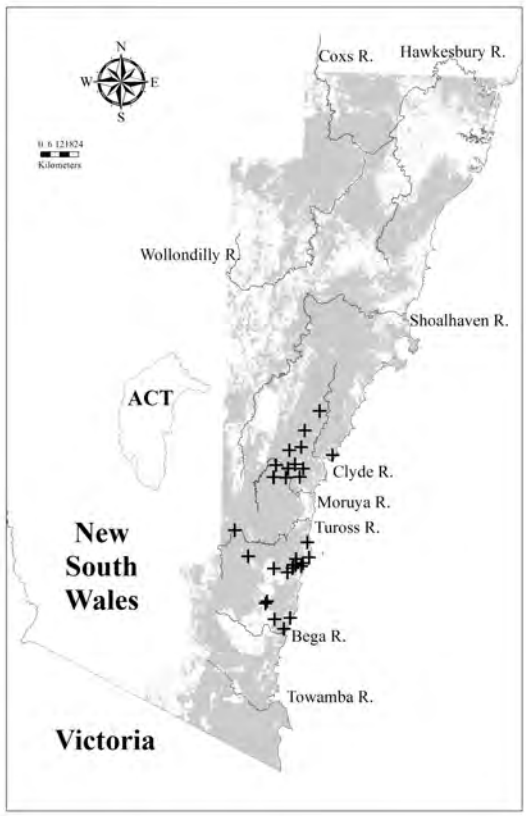
Pratia purpurascens	1(1-1)	48	1(1-1)	17
Pseuderanthemum variabile	1(1-1)	36	1(1-2)	9
Psychotria loniceroides	1(1-1)	27	1(1-1)	4
Rapanea howittiana	1(1-1)	21	1(1-1)	5
Rubus parvifolius	1(1-1)	58	1(1-1)	9
Sarcopetalum harveyanum	1(1-1)	27	1(1-1)	4
Senecio linearifolius	1(1-1)	33	1(1-1)	8
Sigesbeckia orientalis subsp. *orientalis*	1(1-1)	39	1(1-1)	7
Smilax australis	1(1-1)	70	1(1-1)	16
Solanum pungetium	1(1-1)	33	1(1-1)	5
Stellaria flaccida	1(1-2)	52	1(1-1)	10
Stephania japonica var. *discolor*	1(1-1)	24	1(1-1)	7
Tylophora barbata	1(1-1)	73	1(1-1)	17

Constant:

Species	C/A	Freq	C/A O	Freq O
Dichondra spp.	1(1-1)	42	1(1-2)	25
Entolasia stricta	1(1-1)	33	1(1-2)	34
Lomandra longifolia	1(1-1)	39	1(1-1)	44
Microlaena stipoides	1(1-1)	45	1(1-2)	36
Poa meionectes	1(1-1)	30	1(1-2)	16
Pteridium esculentum	1(1-1)	33	1(1-2)	37

Other tree species occurring less frequently in this community:

Species	C/A	Freq	C/A O	Freq O
Angophora floribunda	1(1-2)	15	1(1-2)	9
Corymbia gummifera	3(3-3)	3	2(1-2)	16
Eucalyptus angophoroides	2(2-2)	6	1(1-2)	1
Eucalyptus baueriana	1(1-3)	9	2(1-2)	1
Eucalyptus botryoides	1(1-1)	6	2(1-3)	3
Eucalyptus cypellocarpa	1(1-2)	9	2(1-2)	10
Eucalyptus elata	1(1-1)	6	2(1-3)	5
Eucalyptus globoidea	2(2-2)	3	2(1-2)	12
Eucalyptus longifolia	2(2-2)	12	1(1-2)	2
Eucalyptus maidenii	2(1-2)	12	2(1-2)	2
Eucalyptus paniculata subsp. *paniculata*	2(1-2)	18	1(1-2)	3
Eucalyptus saligna X botryoides	1(1-1)	9	2(1-3)	2
Eucalyptus sieberi	1(1-1)	3	2(1-3)	16
Eucalyptus tricarpa	2(2-2)	3	1(1-2)	1



Locations of survey sites allocated to WSF n184. Grey shading indicates extant native vegetation cover within the study area.

DSF p1: Castlereagh Ironbark Forest

Plate p1. Castlereagh Ironbark Forest (Map Unit p1) on the corner of Londonderry Road and The Northern Road, Castlereagh. The dominant tree species are *Eucalyptus fibrosa* and *E. sclerophylla* with a diverse shrub understorey including *Pultenaea parviflora, Daviesia ulicifolia* and *Melaleuca nodosa.*

Sample Sites: 42
Area Extant (ha): 1100
Estimated % remaining: 5-20%
Area in conservation reserves (ha): 290
Estimated % of pre-clearing area in conservation reserves: <5%
No. taxa (total / unique): 277 / 1
No. taxa per plot (±sd): 41.6 (8)