RESERVATION STATUS AND PRIORITIES FOR TASMANIAN PLANTS I. ANGIOSPERMAE (DICOTYLEDONAE)

by J.B. Kirkpatrick, L. Gilfedder, F. Duncan and Stephen Harris

(with two text-figures and three tables)

Almost one-fifth of Tasmanian native dicotyledonous angiosperms are not known from any national park or equivalent reserve. Extinct, endangered, vulnerable and unreserved species are most common among annuals and least common among woody plants. The unreserved species have their distributions concentrated between Launceston and Hobart in the dry, naturally grassy Midlands. A minimum reservation strategy is suggested for those species for which this option still exists.
Key Words: dicotyledonous angiosperms, reservation status, reservation strategy, Tasmania.

In BANKS, M.R. et al. (Eds), 1991 (31:iii): *ASPECTS OF TASMANIAN BOTANY — A TRIBUTE TO WINIFRED CURTIS. Roy. Soc. Tasm.* Hobart: 163–172.

INTRODUCTION

The last quarter-century has seen a massive loss of Tasmanian natural vegetation to pasture, plantation and impoundment (Kirkpatrick 1988). While Tasmania has 22% of its land surface within secure national parks and equivalent reserves, recent botanical surveys, particularly in lowland dry sclerophyll vegetation, indicate that a large proportion of Tasmanian native plant species are either totally unreserved or poorly reserved (Brown *et al.* 1977, Kirkpatrick *et al.* 1980, Brown *et al.* 1983, Duncan 1985, Kirkpatrick *et al.* 1988a,b). The most recent list of unreserved and poorly reserved higher plant species for Tasmania is that of Duncan (1985). A much-expanded information base, with new herbarium records and the records from recent major vegetation surveys, has made a new analysis appropriate, and there is a need for information on the appropriate locations for species reservation.

In this paper we assess the reservation status of all Tasmanian native dicotyledonous angiosperm species listed in Buchanan *et al.* (1989) and undertake a distributional analysis to indicate the most appropriate areas for reservation, where reservation is still possible. We also classify the unreserved and poorly-reserved species into the conservation status classes of Briggs & Leigh (1988) from a purely Tasmanian perspective.

METHODS

In order to be considered adequately reserved under this classification, a species had to occur in at least one large population (if not a Tasmanian endemic) or two large and separated populations (if an endemic) within reserves that require the permission of both Tasmanian Houses of Parliament for revocation (i.e. national park (NP), state reserve (SR), nature reserve (NR), aboriginal site, historic site (HS), or game reserve) or within the Western Tasmania World Heritage Area (WHA), which is protected under an international convention. Forest reserves, state recreation areas, protected areas and conservation areas without statutory management plans do not yet enjoy the security of tenure of the above reserves. The level adopted for non-endemic species assumes that species will be reserved in part of their range outside Tasmania. The level of reservation adopted as sufficient in this study is less than minimal in the context of the importance of preservation of the genetic variability of species. It has been adopted to allow easy identification of major reservation deficiencies and major reservation requirements.

To determine which species fulfilled the reservation criteria, the following sources were used:
– quadrat data sets for grassy ecosystems (Kirkpatrick *et al.* 1988a), wet eucalypt forests (Kirkpatrick *et al.* 1988b), alpine vegetation (Kirkpatrick 1986), wetlands (Kirkpatrick & Harwood 1983) and heath (Kirkpatrick 1977);
– conservation status assessments of Brown *et al.* (1983), Jarman *et al.* (1984, 1988), Duncan & Brown (1985) and Duncan (1985);
– recently published and unpublished species lists for reserves or parts of reserves (e.g. Brown & Bayly-Stark 1979a,b, Harris & Kirkpatrick 1982);
– specimens in the Herbarium of the Tasmanian Museum and Art Gallery (HO) and the National Herbarium in Sydney and Melbourne.

Records earlier than 1970 were not accepted as sole evidence of reservation. In most cases the areas covered

by such records have been revisited by one of the authors since 1970.

Each of the unreserved taxa was mapped on the 10 × 10 km National Mapping grid square system. These data were used to construct a map of unreserved species concentration (fig. 1) and to conduct an iterative analysis of potential reserve locations following the method of Kirkpatrick (1983), with endemic species requiring two reserves, other species one reserve, and endangered and vulnerable species scoring 3 and 2 respectively, while other species scored 1. In the first instance of reservation, endemic species scored 6, 4 and 1 respectively. Putatively extinct species were excluded from the analysis.

Status as extinct, unknown, endangered or vulnerable was determined following the general rules of Briggs & Leigh (1988) within the restricted context of Tasmania. Chi-squared was used to test for concentrations of elements of species in each of the classes and for lack of reservation in general.

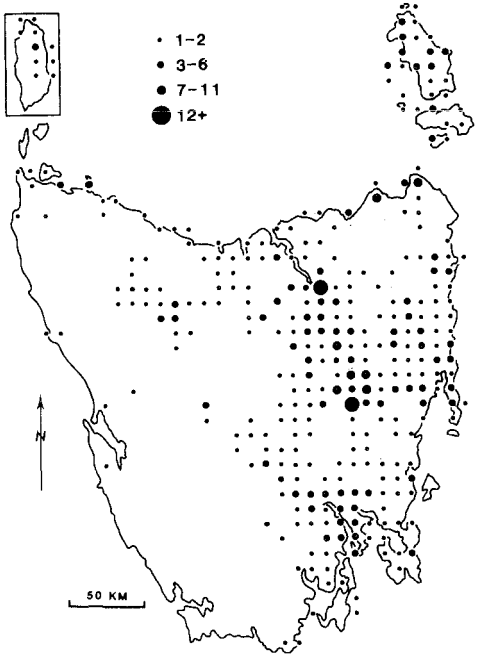

FIG. 1 — Numbers of unreserved dicotyledonous angiosperms in 10 × 10 km National Mapping grid squares.

RESULTS AND DISCUSSION

Of the native angiosperms under discussion, 168 species are not known to occur within the state reserve system, while a further 19 are inadequately reserved endemic species (table 1, see pp.167–171). These constitute 19.9% of the total number of native dicotyledonous species in Tasmania (Buchanan *et al.* 1989) and include 36 in the Asteraceae, 17 in the Fabaceae, and seven to ten in each of the Myrtaceae, Epacridaceae, Rhamnaceae, Scrophulariaceae, Brassicaceae, and Haloragaceae (table 1). Of the families with more than seven native species, the Rhamnaceae and Haloragaceae have more than 30% of their native species in table 1.

The species fall into several distributional classes. Many have the southern parts of their range in the Bass Strait islands or northern Tasmania. Many more are confined to the grassy ecosystems of Tasmania. There are concentrations of unreserved species on the central east coast of Tasmania and in the Midlands, although in absolute terms the Midlands has the most species (fig. 1).

There is a concentration of annual species within the extinct, endangered and vulnerable classes compared to the flora as a whole and the unreserved species as a whole (table 2, see p. 173). Woody plants would seem to be least prone to endangerment and extinction in Tasmania, but this phenomenon may be due to the fact that small herbs and annuals are more often overlooked or not identified in vegetation surveys. The extinct species (which include species that have been described for Tasmania then "lost", and may still be rediscovered) are either microendemics, with an original range less than 100 × 100 km, or grassy ecosystem species that extend to the mainland, where most survive, albeit in a parlous state.

Figure 2 and table 3 (see p. 174) show areas indicated by the iterative analysis as being most appropriate for reservation. Many of these areas have been recommended for reservation in previous studies. Among the top eight, three are in the Midlands, and two are in northern Tasmania, while one is in the northwest and two are on the central east coast. Many of these localities are also known to be important for the conservation of monocotyledonous angiosperms and plant communities. The importance of the natural remnants in the Midlands is emphasised by the recommendations in table 3. As previously noted (Fensham & Kirkpatrick 1989) the opportunities for reservation are rapidly declining as clearance progresses. Adequate reservation for many species could be achieved by providing, through legislation, appropriate security of tenure for existing inadequately protected reserves (e.g. forest reserves, protected areas, most conservation areas). Other areas identified in this study

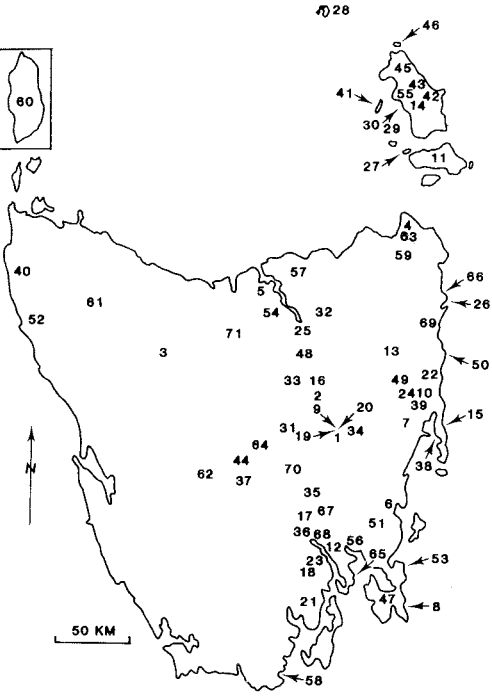

FIG. 2 — Locations of areas proposed for reserves in table 3: 1–12, in order of priority; 13–71 not in significant order.

(1) Tunbridge area
(2) Barton Road, Epping Forest
(3) Middlesex Plains–Vale of Belvoir
(4) Cape Portland–Petal Point
(5) Mt Vulcan–Dans Hill
(6) Prosser River, Orford
(7) Bluemans Creek
(8) Cape Hauy
(9) lagoon, Midlands
(10) Hardings Falls
(11) Cape Barren Island
(12) Meehan Range
(13) Tower Hill
(14) Walkers Hill, Flinders Island
(15) Friendly Beaches–Mt Peter
(16) Powranna Road, Epping Forest
(17) Harry Walker Tier
(18) Mt Wellington
(19) Bells Lagoon
(20) lagoon, Midlands
(21) Snug Tier–Snug Plains
(22) Dukes Marshes
(23) Queens Domain, Hobart
(24) Old Coach Road (Royal George–Cranbrook)
(25) Cataract Gorge–Trevallyn SRA
(26) Humbug Hill, Georges Bay
(27) Long Island
(28) Deal Island
(29) Little Chalky Island
(30) Blue Rocks, Flinders Island
(31) Arthurs Lake area
(32) Eaglehawk Creek
(33) Brumbys Creek
(34) Macquarie River, Ross
(35) St James Cemetery, Jericho
(36) Platform Peak
(37) Duckholes Lagoon, near Strickland
(38) Coles Bay area
(39) West Swan River
(40) Nelson River
(41) Prime Seal Island
(42) Patriarchs Wildlife Sanctuary
(43) Summer Camp Gully
(44) Dee Lagoon
(45) Hogan Lagoon, Flinders Island
(46) Inner Sister Island
(47) Pirates Road, Taranna
(48) "Mountford", Longford
(49) Mt Foster
(50) Piccaninny Point
(51) Jacob Hill
(52) Norfolk Ranges
(53) Cape Frederick Hendrick
(54) Bridgenorth
(55) Emitta area, Flinders Island
(56) hills near Richmond
(57) Lefroy
(58) Recherche Bay
(59) Mt Cameron
(60) Mt Stanley, King Island
(61) Micklethwaite Marsh
(62) Butlers Gorge
(63) marshlands on lower Ringarooma River
(64) Waddamana
(65) Calverts Hill
(66) Big Lagoon, Bay of Fires
(67) Kempton Quoin
(68) Mt Dromedary
(69) Pyramid Hill
(70) Clyde River
(71) Reedy Marshes, Deloraine

have good prospects for secure reservation at the time of writing (December 1989). Completion of more thorough botanical surveys in state reserves is likely to reduce the list of species considered to be unreserved or poorly reserved in Tasmania, particularly if surveys are directed towards reserves in the east of the state. The priorities for survey include Coal River Gorge NR, St Patricks Head SR and the non-plateau portion of the Ben Lomond NP.

The data and recommendations presented in this paper cannot be considered the final word on the reservation of dicotyledonous plants in Tasmania. Our taxonomic and distributional knowledge constantly changes. However, we are confident that the pattern of proposed reservation will withstand the test of time.

ACKNOWLEDGEMENTS

We gratefully acknowledge the help of Rod Fensham, Fiona Coates, Mick Brown, Jill Hickie, Adrian Pyrke and the staff of the Herbarium of the Tasmanian Museum and Art Gallery (Hobart and Launceston), the National Herbarium of NSW and the National Herbarium of Victoria. Dr G. van der Geer drew the figures.

REFERENCES

BRIGGS, J.D. & LEIGH, J.H., 1988: Rare or threatened Australian plants. *Aust. Nat. Parks Wildl. Serv. Spec. Publ.* 14.

BROWN, M.J. & BAYLY-STARK, H.J., 1979a: Vegetation of Maria Island. *Tasm. Nat. Parks Wildl. Serv., Wildl. Div. Tech. Rep.* 79/1.

BROWN, M.J. & BAYLY-STARK, H.J., 1979b: The plant communities of the East Risdon Nature Reserve. *Tasm. Nat.* 58: 1–11.

BROWN, M.J., HOGGINS, D.D. & BAYLY-STARK, H.J., 1977: Conservation of flora in Tasmania. *Tasm. Nat. Parks Wildl. Serv., Tech. Rep.* 77/4.

BROWN, M.J., KIRKPATRICK, J.B. & MOSCAL, A., 1983: *AN ATLAS OF TASMANIA'S ENDEMIC FLORA.* Tasmanian Conservation Trust, Hobart.

BUCHANAN, A.M., MCGEARY-BROWN, A. & ORCHARD, A.E., 1989: A census of the vascular plants of Tasmania. *Tasm. Herb. Occ. Publ.* 2.

DUNCAN, F., 1985: Tasmania's vegetation and its response to forest operations. Working Paper 6 — *ENVIRONMENTAL IMPACT STATEMENT INTO THE TASMANIAN WOODCHIP EXPORTS BEYOND 1986.* Tasmanian Forestry Commission, Hobart.

DUNCAN, F.D. & BROWN, M.J., 1985: Dry sclerophyll vegetation in Tasmania. *Tasm. Nat. Parks Wildl. Serv., Wildl. Div. Tech. Rep.* 85/1.

FENSHAM, R.J. & KIRKPATRICK, J.B., 1989: The conservation of original vegetation remnants in the Midlands, Tasmania. *Pap. Proc. R. Soc. Tasm.* 123: 229–246.

FIRTH M.J., 1969: The flora of Rocky Cape. *Rec. Q. Vic. Mus.* 3: 1–16.

HARRIS, S. & KIRKPATRICK, J.B., 1982: The vegetation of Schouten Island, Tasmania. *Pap. Proc. R. Soc. Tasm.* 116: 117–141.

JARMAN, S.J., BROWN, M.J. & KANTVILAS, G., 1984: *RAINFOREST IN TASMANIA.* Tasmanian National Parks and Wildlife Service, Hobart.

JARMAN, S.J., KANTVILAS, G. & BROWN, M.J., 1988: Buttongrass moorland in Tasmania. *Tasmanian Forest Res. Counc. Inc. Res. Rep.* 2.

KIRKPATRICK, J.B., 1977: *THE DISAPPEARING HEATH.* Tasmanian Conservation Trust, Hobart.

KIRKPATRICK, J.B., 1983: An iterative method for establishing priorities for the selection of Nature Reserves: an example from Tasmania. *Biol. Conserv.* 25: 127–134.

KIRKPATRICK, J.B., 1986: Conservation of plant species, alliances and associations of the treeless high country of Tasmania. *Biol. Conserv.* 37: 43–57.

KIRKPATRICK, J.B., 1988: Heritage and development in Tasmania. *Aust. Geog.* 19: 46–63.

KIRKPATRICK, J.B., BROWN, M.J. & MOSCAL, A., 1980: *THREATENED PLANTS OF TASMANIA'S EAST COAST.* Tasmanian Conservation Trust, Hobart.

KIRKPATRICK, J.B., GILFEDDER, L. & FENSHAM, R., 1988a: *CITY PARKS AND CEMETERIES: TASMANIA'S REMNANT GRASSLANDS AND GRASSY WOODLANDS.* Tasmanian Conservation Trust, Hobart.

KIRKPATRICK, J.B. & HARWOOD, C.E., 1983: The conservation of Tasmanian wetland macrophytic species and communities. *Pap. Proc. R. Soc. Tasm.* 117: 5–20.

KIRKPATRICK, J.B., PEACOCK, R.J., CULLEN, P.J. & NEYLAND, M.G., 1988b: *THE WET EUCALYPT FORESTS OF TASMANIA.* Tasmanian Conservation Trust, Hobart.

(accepted 10 August 1990)

J.B. Kirkpatrick and L. Gilfedder
Department of Geography and Environmental Studies, University of Tasmania, GPO Box 252C, Hobart, Tasmania, Australia 7001
F. Duncan
Forestry Commission, GPO Box 207B, Hobart, Tasmania, Australia 7001
S. Harris
Department of Parks, Wildlife and Heritage, GPO Box 44A, Hobart, Tasmania, Australia 7001

TABLE 1
Poorly Reserved Endemic and Unreserved Dicotyledonous Plant Species*

Species	Conservation status†	Distri-bntion‡	Lifeform§	Proposed reserve location¶
Amaranthaceae				
Alternanthera denticulata	X		H	–
Ptilotus spathulatus			H	1, 2, 12, 23
Apiaceae				
Eryngium ovinum	E		H	12
Hydrocotyle capillaris			AH	4
H. comocarpa			AH	42
H. laxiflora	V		H	23
Asteraceae				
Bedfordia arborescens			T	11
Brachyglottis brunonis		le	S	18, 68
Brachyscome parvula			H	4, 55
B. perpusilla			H	4
B. sieberi var. *gunnii*	P	e	H	10, 15, 49
B. radicata	X		H	–
B. rigidula			H	1, 12
Calocephalus citreus	X		H	–
C. lacteus			H	1, 9
Cotula vulgaris			AH	4, 46
Helichrysum lycopodioides		e	S	6, 7
H. obtusifolium	K		H	–
H. pleurandroides	P	e	S	31
H. selaginoides	X	le	S	–
H. spiceri	X	le	H	–
Helipterum albicans	E		H	3
H. anthemoides	V		H	3
H. australe	E		AH	2
H. demissum	E		AH	70
Isoetopsis graminifolia	E		AH	1
Leptorhynchos elongatus	E		H	35
Millotia tenuifolia			AH	4, 12
Odixia achlaena	P	le	S	51
Podotheca angustifolia	X		AH	–
Rutidosis multiflora			AH	2, 4
Senecio macrocarpus	X		H	–
S. orarius	K		H	–
S. squarrosus			AH/H	11
S. vagus	V		H	14
S. velleoides	V		H	21, 47
Taraxacum cygnorum	K		H	–
Vittadinia australasica	X		H	–
V. cuneata			H	1, 23
V. gracilis	E		H	1
V. megacephala	X		H	–
V. muelleri			H	1, 12, 23
Bignoniaceae				
Pandorea pandorana	E		CS	43
Boraginaceae				
Myosotis exarrhena	K		H	–
Brassicaceae				
Ballantinia antipoda	X		AH	–
Barbarea australis	X	le	AH/H	–

Species	Conservation status†	Distribution‡	Lifeform§	Proposed reserve location¶
Hutchinsia tasmanica	X	le	AH	–
Lepidium desvauxii	V		AH	17, 58
L. hyssopifolium	E		H	19
L. pseudotasmanicum			AH	17, 23
Stenopetalum lineare	V		AH	26
Brunoniaceae				
Brunonia australis	V		H	16
Callitrichaceae				
Callitriche umbonata	V		AH	48
Campanulaceae				
Lobelia pratioides	V		H	15
Pratia irrigua	V	le	H	27, 28
Caryophyllaceae				
Scleranthus diander	V		H	1
S. fasciculatus	K		H	–
Stellaria caespitosa	K		AH	–
Chenopodiacae				
Atriplex suberecta	V		H	29
Chenopodium erosum	K		AH	–
C. pumilio	V		AH	46
Convolvulaceae				
Calystegia marginata	K		H	11
C. sepium	K		H	–
C. soldanella			H	50
Wilsonia humilis			S	4
W. rotundifolia			S	1, 4, 11
Crassulaceae				
Crassula exserta	K		AH	–
C. pedicellosa	K		AH	–
Cucurbitiaceae				
Sicyos australis	V		AH	46
Dilleniaceae				
Hibbertia obtusifolia	K		S	–
H. calycina	E		S	69
H. rufa	X		S	–
Epacridaceae				
Acrotriche cordata			S	41
Epacris acuminata	P	e	S	18
E. apsleyensis	P	le	S	10
E. curtisiae		le	S	52
E. exserta	P	le	S	25, 39
E. virgata	PV	e	S	5
Leucopogon esquamatus			S	11, 43
L. lanceolatus			S	53
Pentachondra ericaefolia		e	S	36, 67
Euphorbiacae				
Bertya rosmarinifolia	V		S	54
Fabaceae				
Acacia axillaris	V	e	S	6, 22, 24
A. pataczekii		e	S	13, 49
A. retinodes			S	55
Bossiaea ensata	K		S	–
B. obcordata	E		S	13
Desmodium varians var. *gunnii*	V		H	15
Glycine latrobeana			H	2, 4, 16, 54
Gompholobium ecostatum	V		S	14
Goodia pubescens			S	31

Species	Conservation status†	Distribution‡	Lifeform§	Proposed reserve location¶
Hardenbergia violacea	V		S	56
Hovea lanceolata	K		S	–
Pultenaea hibbertioides	V		S	57
P. humilis	E		S	2, 16
P. palacea	V		S	4
P. prostrata	E		S	1
P. selaginoides	PV	le	S	10
Viminaria juncea	E		S	38
Geraniaceae				
Pelargonium littorale	K		H	–
Goodeniaceae				
Goodenia amplexans	X		S	–
G. barbata	X		S	–
Scaevola aemula	V		H	6
S. albida	V		H	30
S. calendulacea	K		H	–
Velleia paradoxa	V		H	12
Haloragaceae				
Haloragis aspera	V		H	16
H. heterophylla			H	2
H. myriocarpa	V		H	45
Myriophyllum crispatum	K		H	–
M. glomeratum	K		H	–
M. integrifolium	V		H	2, 4, 16
M. muelleri			H	4, 11
Lamiacae				
Lycopus australis	X		S	–
Mentha australis	K		H	–
Prostanthera cuneata	X		S	–
P. rotundifolia	V		S	25
Westringia angustifolia	P	e	S	21
Lauraceae				
Cassytha pedicellosa	X		H	–
Lentibulariaceae				
Utricularia australis			AqH	39
Loganiaceae				
Mitrasacme paradoxa	V		AH	59
Lythraceae				
Lythrum salicaria	V		AH	63
Malvaceae				
Gynatrix pulchella			S	4, 11
Menyanthaceae				
Nymphoides crenata	X		AqH	–
Villarsia exaltata			AqH	63
Monimiaceae				
Hedycarea angustifolia			T	60
Myoporaceae				
Myoporum parvifolium			S	55
Myrtaceae				
Callistemon paludosus			S	10, 24
Eucalyptus barberi	P	e	T	7
E. perriniana			T	37
E. morrisbyi	P	le	T	65
E. risdonii	P	le	T	12
E. rubida			T	17, 37
Melaleuca pustulata	P	le	S	7

Species	Conservation status†	Distribution‡	Lifeform§	Proposed reserve location¶
Onagraceae				
Epilobium obscurum	K		H	–
E. pallidiflorum			H	61
Pittosporaceae				
Billardiera alpina	E		S	3
Polygonaceae				
Persicaria lapathifolia	K		AH	–
P. strigosa			AH	63
Polygonum decipiens	V		AH/H	34
P. plebeium	K		AH	–
P. subsessile	K		H	–
Portulacaceae				
Calandrinia granulifera			AH	4
Proteaceae				
Banksia integrifolia	X		T	–
Hakea ulicina			S	11, 55
Isopogon ceratophyllus			S	11, 42
Ranunculaceae				
Myosurus minimus	X		AH	–
Ranunculus prasinus	E	e	H	9, 20
R. sessiliflorus			AH	4, 59
Rhamnaceae				
Cryptandra amara	E		S	1
Discaria pubescens	V		S	64
Pomaderris elachophylla			S	62
P. intermedia			S	11, 42
P. phylicifolia			S	6
Stenanthemum pimeleoides	PV	e	S	2, 6, 7
Spyridium microphyllum	PV	le	S	39
S. obcordatum	PV	le	S	5
S. ulicinum	P	e	S	6, 18
Rubiaceae				
Asperula charophyton	X		H	–
A. scoparia			H	1, 9, 31, 35
A. subsimplex			H	31
Rutaceae				
Phebalium daviesii	X	le	S	–
Santalaceae				
Thesium australe	X		H	–
Sapindaceae				
Dodonaea filiformis	P	e	S	10, 25, 32
Scrophulariaceae				
Euphrasia amphisysepala	V	le	H	8, 47
E. phragmostoma	PV	le	H	8
Euphrasia scabra	V		AH	22
E. semipicta	PV	le	H	8
Gratiola pubescens	K		H	–
Veronica distans var. *pubescens*	V		H	58
V. notabilis	K		H	–
V. scutellata	V		H	33
V. serpyllifolia			H	3
Solanaceae				
Solanum opacum	X		AH	–
Stackhousiaceae				
Stackhousia gunnii	E	le	H	1
S. pulvinaris	E		H	3
S. viminea			H	40

Species	Conservation status†	Distribution‡	Lifeform§	Proposed reserve location¶
Sterculiaceae				
Lasiopetalum micranthum	V	le	S	7, 24
Stylidiaceae				
Levenhookia dubia	X		AH	–
Thymeleaceae				
Pimelea axiflora ssp. *axiflora*	V		S	60
P. filiformis		le	S	32, 71
P. pauciflora			S	44
P. phylicoides	K		S	–
P. stricta			S	66
Tremandaceae				
Tetratheca gunnii	E	le	S	5
Violaceae				
Viola caleyana	K		H	–
Zygophyllaceae				
Zygophyllum apiculatum	K		S	–

* Including extinct and threatened species.
† X = extinct, E = endangered, V = vulnerable, K = status unknown, P = poorly reserved (for endemic species only).
‡ e = endemic species, le = local endemic (range <100 km^2).
§ AH = annual herb, AqH = aquatic herb, H = perennial herb, CS = climbing shrub, S = shrub, T = tree.
¶ As numbered in figure 2.

TABLE 2
Ratios of Observed to Expected Values for the Native Flora as a Whole

Type of plant	Conservation status			Probability
	Unreserved	Threatened*	Extinct	
Annuals	1.47	1.77	3.61	$P < 0.001$
Herbaceous perennials	0.64	1.27	1.37	n.s.
Woody plants	1.20	0.85	0.70	n.s

* i.e. endangered and vulnerable.
n.s. = not significant.

TABLE 3
Areas Most Important for Reservation of Dicotyledonous Angiosperms

Number*	Name	Species†	Land tenure
(1)	Tunbridge area	*Cryptandra amara, Scleranthus diander, Isoetopsis graminifolia, Stackhousia gunnii, Vittadinia gracilis, V. muelleri, V. cuneata, Wilsonia rotundifolia, Asperula scoparia, Brachycome rigidula, Calocephalus lacteus, Ptilotus spathulatus, Pultenaea prostrata*	Vacant crown land & private
(2)	Barton Road block, Epping Forest	*Helipterum australe, Pultenaea humilis, Myriophyllum integrifolium, Stenanthemum pimeleoides, Rutidosis multiflora, Glycine latrobeana, Haloragis heterophylla, (Ptilotus spathulatus)*	Private
(3)	Middlesex Plains–Vale of Belvoir	*Billardiera alpina, Helipterum albicans, H. anthemoides, Stackhousia pulvinaris, Veronica serpyllifolia*	Private & crown land
(4)	Cape Portland–Petal Point	*Pultenaea palacea, Brachycome parvula, B. perpusilla, Calandrinia granulifera, Cotula vulgaris, Gynatrix pulchella, Millotia tenuifolia, Myriophyllum muelleri, Ranunculus sessiliflorus, Hydrocotyle capillaris, Wilsonia humilis, (Rutidosis multiflora), (Myriophyllum integrifolium), (Glycine latrobeana), (Wilsonia rotundifolia)*	Private wildlife sanctuary & coastal reserve
(5)	Mt Vulcan–Dans Hill	*Epacris virgata, Spyridium obcordatum, Tetratheca gunnii*	State forest
(6)	Prosser River, Orford	*Scaevola aemula, Helichrysum lycopodiodes, Pomaderris phylicifolia, Acacia axillaris, Spyridium ulicinum, (Stenanthemum pimelioides)*	Private
(7)	Bluemans Creek	*Lasiopetalum micranthum, Helichrysum lycopodioides, Melaleuca pustulata, Eucalyptus barberi, (Stenanthemum pimeleoides)*	State forest & private
(8)	Cape Hauy	*Euphrasia amphisysepala, E. semipicta, E. phragmostoma*	Forest reserve
(9)	lagoon, Midlands	*Ranunculus prasinus, (Asperula scoparia), (Calocephalus lacteus)*	Private
(10)	Hardings Falls	*Pultenaea selaginoides, Callistemon paludosus, Epacris apsleyensis, Dodonaea filiformis, Brachycome sieberi*	State forest & forest reserve
(11)	Cape Barren Island	*Bedfordia arborescens, Isopogon ceratophyllus, Hakea ulicina, Leucopogon esquamatus, Pomaderris intermedia, Calystegia marginata, Senecio squarrosus, (Gynatrix pulchella), (Myriophyllum muelleri), (Wilsonia rotundifolia)*	Vacant crown land
(12)	Meehan Range	*Eryngium ovinum, Velleia paradoxa, Eucalyptus risdonii, (Brachycome rigidula), (Millotia tenuifolia), (Vittadinia muelleri), (Ptilotus spathulatus), (Asperula scoparia)*	State recreation area, water catchment, city park, private

* 1–12 in order of priority.
† ( ) = area not chosen for this species