

INDEX OF CHROMOSOME NUMBERS OF TASMANIAN SPERMATOPHYTES

by R.J.E. Wiltshire and the late W.D. Jackson

(with two tables)

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A preliminary index of chromosome numbers for spermatophytes indigenous to Tasmania is presented, with reference citations. This compilation includes reports for 166 species provenanced from Tasmanian material, many previously published, and also 55 unpublished results (mostly from the work of WDJ). Selected reports of species indigenous to Tasmania but derived elsewhere (usually material from New Zealand or the Australian mainland) are also included as a basis for further study. In total, chromosome numbers are listed for 400 species (409 taxa, including subspecies and varieties) out of a total estimated spermatophyte flora of 1568 described indigenous species. Ten of the 108 families have been examined in some detail (>45% of species), but the four most speciose families (625/1568 species; Orchidaceae, Asteraceae, Poaceae and Cyperaceae) have a total of only four Tasmanian reports, despite highly variable chromosome complements. Five other speciose families (Apiaceae, Brassicaceae, Juncaceae, Rhamnaceae and Scrophulariaceae) have no Tasmanian reports despite demonstrating cytological variability at generic, inter- and intra-specific levels. Further cytological investigation of these taxa is essential for a clearer understanding of the Tasmanian flora.

Key Words: chromosome numbers, cytology, plants, Tasmania, spermatophytes.

INTRODUCTION

This index is a preliminary attempt to catalogue the existing reports of the chromosome numbers of spermatophytes (seed plants) indigenous to Tasmania and, in doing so, mark the contribution of the late Professor Bill (William Dalziel) Jackson. Bill Jackson's contribution to our understanding of Tasmanian botany, both as an inspirational teacher and as a researcher in the fields of ecology and eucalypt genetics, is without peer and is widely known. Bill's cytological investigation of the Tasmanian flora is less widely appreciated, since it was a focus of his early research career in the late 1950s and early 1960s, and because only a fraction of the work was formally published.

Bill Jackson's cytological studies were a continuation of an area of study with a long history at the University of Tasmania. This work was commenced not in the Botany Department but in the Physics Department with the early work of F.D. Cruickshank and Professor A.L. McAulay (McAulay *et al.* 1936, McAulay 1937, McAulay & Cruickshank 1937), who made some of the first investigations of the eucalypt chromosome complement and behaviour during meiosis. A major impetus to cytological investigation of other elements of the Tasmanian flora was the appointment of cytogeneticist Horace Newton Barber (trained as a research cytologist at the John Innes Horticultural Institute, 1936–1940) as the inaugural Professor of Botany at the University of Tasmania (1947–1963). Barber supervised a number of postgraduate students in cytological studies during the 1950s and 1960s, including H.F. Gulline, C. Venkata Rao and W.D. Jackson. However, some of the results of these studies remained unpublished (particularly those of W.D. Jackson) or were reported in informal ways.

This paper catalogues some of these determinations of chromosome numbers of the Tasmanian flora by W.D. Jackson, his contemporaries and his students. Where possible, these previously unpublished reports are supported by collection numbers for material lodged in the

Tasmanian Herbarium (HO) and/or by published reports from locations on the Australian mainland, New Zealand or other localities.

Reports of chromosome numbers were available for 166 (of an estimated 1568, from Buchanan 2002) indigenous spermatophyte species from material collected in Tasmania. In addition, selected reports were included for material from non-Tasmanian provenances as a basis for further studies, increasing the number of species for which chromosome numbers have been determined to 400 or 26% of the spermatophyte flora of Tasmania. This was made possible by the comprehensive listing of chromosome numbers in the *Index of chromosome numbers of indigenous New Zealand spermatophytes* compiled by Dawson (2000), from which many reports of non-Tasmanian material have been drawn, and which we gratefully acknowledge.

CONVENTIONS FOLLOWED

Chromosome numbers are reported from species indigenous to Tasmania, following Buchanan (2002). Reports are derived from material of Tasmanian origin, where possible, but otherwise chromosome numbers are reported from Australia or New Zealand (or other sources, if variable), although not all reports from non-Tasmanian provenances are cited.

Previously unpublished reports of chromosome numbers from Tasmanian provenances are included, supplemented by published reports from other provenances. Herbarium specimens lodged at the Tasmanian Herbarium (HO) are recorded if available, using the HO specimen number, or the collector's specimen number, e.g. (*Brown 1004*) or W.D. Jackson unpub (*3867*).

Taxonomic groups with extensive nomenclatural revisions, particularly in the Poaceae, may be incompletely reported for chromosome counts not recorded from Tasmanian material.

Nomenclature used in table 1 follows Buchanan (2002), where synonyms are listed.

The authors have not validated all original reports cited in table 1. Many are derived from collations of chromosome numbers, including Darlington & Wylie (1955) and supplementary volumes of the *Index to Plant Chromosome Numbers* (IPCN), and reports from 1986 onward have been derived from the *Index to Plant Chromosome Numbers* project based at the Missouri Botanical Garden, accessed during November 2002 (<http://mobot.mobot.org/W3T/Search/ipcn.htm>). The original sources of many reports of non-Tasmanian material (particularly New Zealand records) have been drawn from *Index of chromosome numbers of indigenous New Zealand spermatophytes* compiled by Dawson (2000).

RESULTS

Chromosome counts from 166 species recorded from Tasmanian material, including 55 previously unpublished reports, are listed in table 1. Counts are also reported for an additional 234 species of spermatophytes indigenous to Tasmania, but derived from material from other localities, giving a total of 400 species or 26% of the estimated indigenous spermatophyte flora. There is a very uneven representation of families assayed for chromosome number, however, with several families comprehensively studied (Cupressaceae, Podocarpaceae, Plantaginaceae and Ranunculaceae). But 45 of 108 families have no records for species found in Tasmania (table 2). The chromosome counts for Tasmanian material are particularly poor for the four most speciose families (625/1568 species; Orchidaceae, Asteraceae, Poaceae and Cyperaceae).

In other locations, these families and many other families indigenous to Tasmania show evidence of chromosome number variability (tables 1, 2). A conservative estimate of variation in ploidy within families is 46%, and a similar proportion of families show variation in chromosome number between genera (44%), between species (33%) and even within species (20%).

DISCUSSION

The aim of this paper is to provide those working with the Tasmanian flora with convenient access to the chromosome numbers of species published to date, and to include unpublished reports. Although these reports total 26% of the indigenous Tasmanian seed plants, only 11% of these were from Tasmanian-provenanced material and the representation of the flora is very uneven. Six families have been surveyed extensively, usually because of concerted individual effort: Cupressaceae (6/6 species by H.F. Gulline and Y. Sundar Rao); Liliaceae (16/38 species by W.D. Jackson and W.M. Curtis); Podocarpaceae (5/5 species by Y. Sundar Rao); Proteaceae (17/28 species by C. Venkata Rao); Ranunculaceae (22/23 species by Y. Menadue and R.K. Crowden); Thymeliaceae (13/19 species by F.D. Cruickshank). The records from these six families comprise nearly half (79/166) of all the Tasmanian counts.

In contrast, there are only four chromosome counts recorded from Tasmanian material of the four most speciose families (Orchidaceae, Asteraceae, Poaceae and Cyperaceae) that comprise 40% of the Tasmanian seed plants. Cytological studies in these groups would be valuable, given the high level of endemism, and the prevalence of polyploidy and variation in chromosome number in all four families.

The other families well represented in the Tasmanian flora, with variable chromosome complements recorded elsewhere, but few or no records in Tasmania, include: Apiaceae (39 species), Brassicaceae (20 species), Epacridaceae (89 species), Fabaceae (53 species), Juncaceae (33 species), Rhamnaceae (23 species), Rutaceae (22 species) and Scrophulariaceae (24 species). Clearly, there is scope for additional cytological studies that will contribute to our understanding of the evolution of the Tasmanian flora.

Tables 1 and 2 follow on pages 41–49.

TABLE 1
Chromosome numbers of indigenous Tasmanian spermatophytes

Family	Species	Locality	n	2n	Authority
AIZOACEAE (FICOIDEAE)	<i>Tetragonia tetragonoides</i> (Pallas) Kuntze	*aTaiwan, bNZ, cPortual	8a, 16b	16c	aHsu 1968, bHair & Beuzenberg 1959, cJ.E. Rodrigues in Moore 1982
APIACEAE	<i>Apium annuum</i> P.S.Short	*Australia		22	Short 1979
APIACEAE	<i>Apium prostratum</i> Labill. ex Vent., var. <i>filiforme</i> (A.Rich.) Kirk	*Australia *NZ	11 11	22	Bell & Constance 1966 Beuzenberg & Hair 1963
APIACEAE	<i>Hydrocotyle pterocarpa</i> F.Muell.	*unknown		48	Hair 1980a
APIACEAE	<i>Hydrocotyle sibthorpioides</i> Lamk.	*unknown		24	Hamal <i>et al.</i> 1986
APIACEAE	<i>Hydrocotyle tripartita</i> R.Br. ex A.Rich.	*NZ		24	Webb & Beuzenberg 1987
ASTERACEAE	<i>Abrotanella forsteroides</i> (Hook.f.) Benth.	Mt Wellington, Dove L.		36	Beuzenberg & Hair 1984
ASTERACEAE	<i>Abrotanella scapigera</i> (F.Muell.) Benth.	Mt Field West, Cradle Mt		18	Beuzenberg & Hair 1984
ASTERACEAE	<i>Bedfordia linearis</i> DC.	Tasmania		60	Beuzenberg 1975
ASTERACEAE	<i>Brachyscome aculeata</i> (Labill.) Less.	*Australia	9a, 9llb, 18ll+2Bb	18b	aStace 1981, bWatanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome angustifolia</i> A.Cunn. ex DC.	*Australia	5ll	10	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome cardiocarpa</i> F.Muell. ex Benth.	*Australia		36	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome decipiens</i> Hook.f.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome diversifolia</i> (Graham ex Hook.) Fisch. & var. <i>diversifolia</i>	*Australia		24	Watanabe & Short 1992
ASTERACEAE	<i>Brachyscome graminea</i> (Labill.) F.Muell.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome perpusilla</i> (Steetz) J.M.Black	*Australia		18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome radicans</i> Steetz in Lehm.	*Australia	13ll	26	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome radicata</i> Hook.f.	*NZ		90	Beuzenberg & Hair 1984
ASTERACEAE	<i>Brachyscome rigidula</i> (DC.) G.Davis	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Brachyscome spathulata</i> Gaud. in Freycinet subsp. <i>glabra</i>	*Australia *Australia	9ll,27ll 9	18	Watanabe <i>et al.</i> 1996 Stace 1981
ASTERACEAE	<i>Brachyscome spathulata</i> subsp. <i>spathulata</i>	*Australia	9, 18, 27, 36, 45	18	Stace 1981
ASTERACEAE	<i>Brachyscome tenuiscapa</i> Hook.f. var. <i>tenuiscapa</i>	*Australia	9ll,27ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Celmisia asteliifolia</i> Hook.f.	*Australia	54, 108	108,216	Hair 1980
ASTERACEAE	<i>Centipeda elatinooides</i> (Less.) Benth. & Hook. ex	*India		20	Gupta & Gill 1989
ASTERACEAE	<i>Cotula australis</i> (Sieber ex Sprengel) Hook.f.	*aAustralia, bunknown, cNZ	a20, b18	c36	aDavis 1962, bKeil 1979, cBeuzenberg & Hair 1984
ASTERACEAE	<i>Euchiton traversii</i> (Hook.f.) Holub	*NZ		28	Groves 1977
ASTERACEAE	<i>Lagenophora huegellii</i> Benth. in Endl.	*Australia		18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Lagenophora stipitata</i> (Labill.) Druce	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Olearia algida</i> N.A.Wakef.	*Australia		18	Beuzenberg & Hair 1984
ASTERACEAE	<i>Olearia ciliata</i> (Benth.) F.Muell. ex Benth.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Olearia phlogopappa</i> (Labill.) DC.	*Australia	18ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Olearia ramulosa</i> (Labill.) Benth.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Picris angustifolia</i> DC. subsp. <i>angustifolia</i>	*Australia		10	Holzappel 1994
ASTERACEAE	subsp. <i>merxmulleri</i> Lack & S.Holzappel	*aNZ, bAustralia	5lla	10b	aMurray & de Lange 1999, bHolzappel 1994
ASTERACEAE	<i>Pseudognaphalium luteo-album</i> (L.) Hilliard & B.L.Burtl	*aAustralia, bNZ	7a	14b	aTurner 1970, bGroves 1977, bDawson & Beuzenberg 2000
ASTERACEAE	<i>Senecio biserratus</i> Belcher	*aAustralia, bNZ	50a	c. 96, 100b	aLawrence 1985, bBeuzenberg & Groves 1974
ASTERACEAE	<i>Senecio glomeratus</i> Desf. ex Poiret	*aAustralia, bNZ	30a	60b	aLawrence 1985, bBeuzenberg & Groves 1974
ASTERACEAE	<i>Senecio qunnii</i> (Hook.f.) Belcher	*Australia	30	60	Lawrence 1980
ASTERACEAE	<i>Senecio hispidulus</i> A.Rich.	*aAustralia, bNZ	30a	60b	aLawrence 1985, bBeuzenberg & Groves 1974
ASTERACEAE	<i>Senecio linearifolius</i> A.Rich.	*Australia	30	60	Lawrence 1980
ASTERACEAE	<i>Senecio minimus</i> Poiret	*aAustralia, bNZ	30a	60b	aLawrence 1985, bBeuzenberg & Groves 1974
ASTERACEAE	<i>Senecio quadridentatus</i> Labill.	*aAustralia, bNZ	20a	40b	aTurner 1970, bBeuzenberg & Groves 1974
ASTERACEAE	<i>Senecio odoratus</i> Hornem.	*Australia	30	60	Lawrence 1980
ASTERACEAE	<i>Senecio orarius</i> J.Black	*Australia		70	Lawrence 1980
ASTERACEAE	<i>Senecio pectinatus</i> DC	*Australia	40	80	Lawrence 1980
ASTERACEAE	<i>Senecio spathulatus</i> A.Rich.	*Australia	20	40	Lawrence 1980
ASTERACEAE	<i>Senecio squarrosus</i> A.Rich.	*Australia	30	60	Lawrence 1980
ASTERACEAE	<i>Senecio vaqus</i> F.Muell.	*Australia	49	98	Lawrence 1980
ASTERACEAE	<i>Solenogyne dominii</i> L.Adams	*Australia	9a	18b	aAdams 1979, bWatanabe <i>et al.</i> 1996
ASTERACEAE	<i>Solenogyne qunnii</i> (Hook.f.) Cabrera	*Australia	9		Adams 1979
ASTERACEAE	<i>Taraxacum aristum</i> Haqf. & Markl.	*unknown		16	Hughes & Richards 1988
ASTERACEAE	<i>Vittadinia cuneata</i> DC.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Vittadinia gracilis</i> (Hook.f.) N.Burb.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Vittadinia muelleri</i> N.Burb.	*Australia	9ll	18	Watanabe <i>et al.</i> 1996
ASTERACEAE	<i>Xerochrysum bracteatum</i> (Vent.) Tzvelev	*unknown	13		Gupta & Gill 1981
BRASSICACEAE	<i>Cardamine aff. corymbosa</i> Hook.f., sensu H.J.Hewson	*NZ		48	Moore 1960
BRASSICACEAE	<i>Lepidium hyssopifolium</i> Desv.	*unknown		32	Johnson 1993
BRUNONIAEAE	<i>Brunonia australis</i> Smith ex R.Br	aQueechey Hill, bvarious locations	9a	18a, 36b	aJackson 1958, bPeacock 1963
CAMPANULACEAE	<i>Isotoma fluviatilis</i> (R.Br.) F.Muell	*abAustralia, cNZ	7a	14a, 28bc	Stace & James 1996, bMcComb 1970, cBeuzenberg & Hair 1983
CAMPANULACEAE	<i>Lobelia anceps</i> L.f.	*Australia	7	14	Stace & James 1996
CAMPANULACEAE	<i>Lobelia gibbosa</i> Labill.	*Australia	10		Stace & James 1996
CAMPANULACEAE	<i>Lobelia pratensis</i> Benth.	*Australia	7,21	14,42	Stace & James 1996
CAMPANULACEAE	<i>Lobelia thombifolia</i> Vriese in Lehm.	*Australia	10		Stace & James 1996
CAMPANULACEAE	<i>Pratia irigua</i> (R.Br.) Benth.	*Australia	21		Stace & James 1996
CAMPANULACEAE	<i>Pratia pedunculata</i> (R.Br.) Benth.	*NZ		28	Murray <i>et al.</i> 1992

Table 1 cont.

Family	Species	Locality	n	2n	Authority
CAMPANULACEAE	<i>Pratia surrepens</i> (Hook.f.) F.E.Wimmer	*Australia	14, 21	28, 42	Stace & James 1996
CAMPANULACEAE	<i>Wahlenbergia ceracea</i> Loth.	*Australia	9		Smith 1992
CAMPANULACEAE	<i>Wahlenbergia gracilentia</i> Loth.	aTasmania, *bAustralia		18	aHF Gulline unpub, bSmith 1992
CAMPANULACEAE	<i>Wahlenbergia gracilis</i> (Forst.f.) A.DC.	aTasmania, *bAustralia		18	aHF Gulline unpub, bSmith 1992
CAMPANULACEAE	<i>Wahlenbergia gymnoclada</i> Loth.	aTasmania, *bAustralia	9b	18a	aHF Gulline unpub, bSmith 1992
CAMPANULACEAE	<i>Wahlenbergia littorcola</i> P.J.Smith in Jessop & Tolken	*Australia	27, 36		Smith 1992
CAMPANULACEAE	<i>Wahlenbergia multicaulis</i> Benth. in Endl.	*Australia	18, 27, 36		Smith 1992
CAMPANULACEAE	<i>Wahlenbergia saxicola</i> A.DC.	Mt Wellington		72	HF Gulline unpub
CAMPANULACEAE	<i>Wahlenbergia stricta</i> (R.Br.) Sweet	Tasmania		36	HF Gulline unpub
CARYOPHYLLACEAE	<i>Colobanthus affinis</i> (Hook.) Hook.f.	*NZ	c. 40		Sneddon in Dawson & Beuzenberg 2000
CARYOPHYLLACEAE	<i>Scleranthus biflorus</i> (Forst. & Forst.f.) Hook.f.,	*NZ		48	Beuzenberg & Hair 1983
CARYOPHYLLACEAE	<i>Scleranthus brockiei</i> P.A.Williamson	*NZ		48	Beuzenberg & Hair 1983
CARYOPHYLLACEAE	<i>Spergularia media</i> (L.) C.Presl	*unknown		18	Labadie 1976
CASUARINACEAE	<i>Allocasuarina littoralis</i> (Salisb.) L.A.S.Johnson	aTasmania, bc*Australia		22c, 44c, 48ab	aN Purcell unpub, bMorawetz & Samuel 1989, cBarlow 1958
CASUARINACEAE	<i>Allocasuarina monilifera</i> (L.A.S.Johnson)	aTasmania, *bAustralia		22b, 44a	aN Purcell unpub, bBarlow 1959
CASUARINACEAE	<i>Allocasuarina paludosa</i> (Sieber ex Sprengel)	*Australia		22b, 44b, 52a	N Purcell unpub, bBarlow 1959
CASUARINACEAE	<i>Allocasuarina verticillata</i> (Lam.) L.A.S.Johnson	Hobart		26	N Purcell unpub, Barlow 1959
CENTROLEPIDACEAE	<i>Centrolepis fascicularis</i> Labill.	near Smithton	13	26	Briggs 1966
CHENOPODIACEAE	<i>Atriplex billardierei</i> (Moq.) Hook.f.	*NZ	9, 9ll		de Lange et al. 1997
CHENOPODIACEAE	<i>Atriplex cinerea</i> Poiret in Lam.,	*NZ	27ll		de Lange et al. 1998
CHENOPODIACEAE	<i>Sarcocornia quinqueflora</i> (Bunge ex Ung.-Sternb.)	*NZ	9	18	Hair & Beuzenberg 1960
CLUSIACEAE	<i>Hypericum gramineum</i> Forst.f.	*NZ	8		Hair & Beuzenberg 1959
CLUSIACEAE	<i>Hypericum japonicum</i> Thunb.	*NZ	8		Hair & Beuzenberg 1959
CONVOLVULACEAE	<i>Calystegia sepium</i> (L.) R.Br.	*cosmopolitan	11	22	many in Dawson 2000
CONVOLVULACEAE	<i>Calystegia soldanella</i> (L.) R.Br.	*cosmopolitan	11	22	many in Dawson 2000
CONVOLVULACEAE	<i>Dichondra repens</i> Forst. & Forst.f.	*aNZ, bTaiwan	15a	30a, 24b	aHair 1963, bHsu 1967
CRASSULACEAE	<i>Crassula moschata</i> Forst.f.	*aNZ, bSouth Africa		28a, b32	aMoore 1960, bMerxmuller et al. 1971
CRASSULACEAE	<i>Crassula pedunculata</i> (Smith) Meigen	*NZ		42	Murray & de Lange 1999
CUNONIACEAE	<i>Bauera rubioides</i> Andrews	*Australia		32	S Smith-White in Darlington & Wylie 1955
CUPRESSACEAE	<i>Athrotaxis cupressoides</i> D.Don	National Park, Pine Valley, Hartz Mt	11a	22ab	aGulline 1952, bSundar Rao 1959
CUPRESSACEAE	<i>Athrotaxis laxifolia</i> Hook.	National Park, Cradle Mt	11a	22ab	aGulline 1952, bSundar Rao 1959
CUPRESSACEAE	<i>Athrotaxis selaginoides</i> D.Don	National Park, Wyllys Craig, Cradle Mt, Hartz Mt	11a	22ab	aGulline 1952, bSundar Rao 1959
CUPRESSACEAE	<i>Callitris oblonga</i> Rich.	Tasmania		22	Sundar Rao 1959
CUPRESSACEAE	<i>Callitris rhomboidea</i> R.Br. ex Rich.	Tasmania	11a	22	aHF Gulline unpub, Sundar Rao 1959
CUPRESSACEAE	<i>Diselma archeri</i> Hook.f.	Tasmania		22	Sundar Rao 1959
CYPERACEAE	<i>Bolboschoenus caldwellii</i> (V.Cook) Soják	*unknown		c. 90	Harriman 1981
CYPERACEAE	<i>Bolboschoenus medianus</i> (V.Cook) Soják	*unknown		c. 94	Harriman 1981
CYPERACEAE	<i>Carex albulata</i> Allan	*NZ		c. 60	Dawson & Beuzenberg 2000
CYPERACEAE	<i>Carex breviculmis</i> R.Br.	*Japan	34a	64a, 72b	aTanaka 1939, bOkuno 1939
CYPERACEAE	<i>Carex curta</i> Gooden	*Mediterranean		56	Stoeva 1994
CYPERACEAE	<i>Carex pumila</i> Thunb. ex Murr.	*Japan	41	82	Tanaka 1939
CYPERACEAE	<i>Eleocharis acuta</i> R.Br.	*aNZ, bAustralia		20a, 40b	Briggs 1970
CYPERACEAE	<i>Eleocharis gracilis</i> R.Br.	*Australia		20	Briggs 1970
CYPERACEAE	<i>Eleocharis pusilla</i> R.Br.	*Australia		30	Briggs 1970
CYPERACEAE	<i>Eleocharis sphacelata</i> R.Br.	*Australia		94-100, c. 140, c. 157, 176-184, c. 188	Briggs 1970
CYPERACEAE	<i>Isolepis aucklandica</i> Hook.f.	*NZ	21	42	Moore 1960
CYPERACEAE	<i>Isolepis setacea</i> (L.) R.Br.	*Slovakia		28	Mi_ieta 1986
CYPERACEAE	<i>Lepidosperma gunnii</i> Boeck.	Mt Nelson	108		WD Jackson unpub 3867
CYPERACEAE	<i>Schoenoplectus pungens</i> (M.Vahl) Palla	*aUSA, bCanada		74a, 78b	aHarriman 1981, bLöve & Löve 1981
CYPERACEAE	<i>Schoenoplectus validus</i> (M.Vahl) A. & D.Löve	*Cosmopolitan	19, 20, 21	38, 40, 42, 80	many in Dawson 2000
DROSERACEAE	<i>Drosera binata</i> Labill	*Australia		32a, 46b	aRothfels & Heimbürger 1968, bKondo 1969
DROSERACEAE	<i>Drosera glanduligera</i> Lehm	*Australia		22	Kondo & Oliver 1979
DROSERACEAE	<i>Drosera macrantha</i> Endl.	*Australia		30	Kondo & Lavarack 1984
DROSERACEAE	<i>Drosera peltata</i> Thunb.	*aThailand, bJapan	16a, 20b		aLarsen 1966, bKondo 1969
DROSERACEAE	<i>Drosera spatulata</i> Labill.	*aNZ, bJapan, cAustralia	10a	20a, 40bc, 60b, 80d	aBeuzenberg & Hair 1983, bc many in Dawson 2000, dRothfels & Heimbürger 1968
EPACRIDACEAE	<i>Acrotiche serrulata</i> (Labill.) R.Br.	*Australia	9		Smith-White 1948
EPACRIDACEAE	<i>Astroloma humifusum</i> (Cav.) R.Br.	Tasmania		24	Smith-White 1948
EPACRIDACEAE	<i>Astroloma pinifolium</i> (R.Br.) Benth.	*E. Australia	7	14	Smith-White 1948
EPACRIDACEAE	<i>Cyathodes glauca</i> Labill.	National Park		24	Smith-White 1955

Table 1 cont.

Family	Species	Locality	n	2n	Authority
EPACRIDACEAE	<i>Epacris impressa</i> Labill.	*Australia	13		Smith-White 1955
EPACRIDACEAE	<i>Epacris obtusifolia</i> Smith	*Australia	13		Smith-White 1948
EPACRIDACEAE	<i>Epacris paludosa</i> R.Br.	*Australia	13		Smith-White 1948
EPACRIDACEAE	<i>Epacris serpyllifolia</i> R.Br.	aNational Park, *bAustralia	13b, 26a		Smith-White 1955
EPACRIDACEAE	<i>Leptecophylla divaricata</i> (Hook.f.) C.M.Weiller	National Park		24	Smith-White 1955
EPACRIDACEAE	<i>Leptecophylla juniperina</i> (Forst. & Forst.f.) C.M.Weiller				
EPACRIDACEAE	subsp. <i>juniperina</i>	*NZ	11a	20b	aSands 1960, bDawson2000
EPACRIDACEAE	subsp. <i>parvifolia</i> (R.Br.) C.M.Weiller	National Park, Mt Wellington		20	Smith-White 1955
EPACRIDACEAE	<i>Leucopogon australis</i> R.Br.	*W. Australia	12		Smith-White 1955
EPACRIDACEAE	<i>Leucopogon ericoides</i> (Smith) R.Br.	*Australia	6	12	Smith-White 1948
EPACRIDACEAE	<i>Leucopogon esquamatus</i> R.Br.	*Australia	4	8	Smith-White 1948
EPACRIDACEAE	<i>Leucopogon hookeri</i> Sonder	*Australia	14	28	Smith-White 1955
EPACRIDACEAE	<i>Leucopogon lanceolatus</i> (Smith) R.Br.	*Australia	24		Smith-White 1948
EPACRIDACEAE	<i>Leucopogon montanus</i> (R.Br.) J.H.Willis	*Australia		28,42	S Smith-White in Darlington & Wylie 1955
EPACRIDACEAE	<i>Leucopogon parviflorus</i> (Andrews) Lindley	*NZ	11a	22b	aSands 1960, bDawson2000
EPACRIDACEAE	<i>Leucopogon virgatus</i> (Labill.) R.Br.	*Australia	10	20	Smith-White 1948
EPACRIDACEAE	<i>Lissanthe strigosa</i> (Smith) R.Br.	*Australia	7		Smith-White 1948
EPACRIDACEAE	<i>Monotoca elliptica</i> (Smith) R.Br.	*Australia	12	24	Smith-White 1948
EPACRIDACEAE	<i>Monotoca scoparia</i> (Smith) R.Br.	*Australia	12		Smith-White 1948
EPACRIDACEAE	<i>Pentachondra pumila</i> (Forst. & Forst.f.) R.Br.	*aAustralia, bNZ		a28, b52, c.52	aSmith-White 1955, bDawson2000
EPACRIDACEAE	<i>Planocarpa petiolaris</i> (DC.) Weiller	National Park		24	Smith-White 1955
EPACRIDACEAE	<i>Richea dracophylla</i> R.Br.	National Park	13		Smith-White 1955
EPACRIDACEAE	<i>Richea gunnii</i> Hook.f.	National Park	13		Smith-White 1955
EPACRIDACEAE	<i>Richea pandanifolia</i> Hook.f.	National Park	13		Smith-White 1955
EPACRIDACEAE	<i>Richea scoparia</i> Hook.f.	National Park	13	26	Smith-White 1955
EPACRIDACEAE	<i>Richea sprengeloides</i> R.Br.	National Park	13		Smith-White 1955
EPACRIDACEAE	<i>Sprengelia incarnata</i> Smith	aBlackmans Bay, bAustralia	12b	24a	aCurtis unpub, bSmith-White 1948
ERICACEAE	<i>Gaultheria depressa</i> Hook.f.	*NZ	11	22	Armstrong 1964
ERICACEAE	<i>Gaultheria hispida</i> R.Br.	*Australia		22	Callan 1941
ERICACEAE	<i>Gaultheria tasmanica</i> (Hook.f.) Middleton	Tasmania		22	Callan 1941, Middleton & Wilcock 1990
FABACEAE	<i>Glycine clandestina</i> J.Wendl.	*unknown		40	Lackey 1980, Haivankar & Patil 1990
FABACEAE	<i>Glycine latrobeana</i> (Messin.) Benth.	*unknown		40	Singh <i>et al.</i> 1988
FABACEAE	<i>Glycine microphylla</i> (Benth.) Tind.	*unknown		40	Singh <i>et al.</i> 1988
FABACEAE	<i>Pultenaea daphnoides</i> J.Wendl. var. <i>obcordata</i> (Andrews) Benth.	Tasmania		16	Curtis 1952
FABACEAE	<i>Hardenbergia violacea</i> (Schneev.) Stearn	*unknown		22	Lackey 1980
FABACEAE	<i>Pultenaea juniperina</i> Labill.	Lunawanna, Bruny I., Smithton, West Coast, Forestier Penn		18	Curtis 1952
		Eaglehawk Neck, Penzance		27	Curtis 1952
		Hobart, various locations		36	Curtis 1952
FABACEAE	<i>Pultenaea stricta</i> Sims	S.Tasmania		16	Curtis 1952
FABACEAE	<i>Pultenaea tenuifolia</i> R.Br. ex Sims	Bridport		16	Curtis 1952
FAGACEAE (NOTHOFAGACEAE)	<i>Nothofagus cunninghamii</i> (Hook.) Oersted	Mt Wellington (650m)	14	28	WD Jackson unpub (3878)
GERANIACEAE	<i>Geranium potentilloides</i> L'Hérit. ex DC.	*New Guinea		36, 56	Borgman 1964
GERANIACEAE	<i>Geranium sessiliflorum</i> Cav.	*unknown	28	56	Warburg 1938
GERANIACEAE	<i>Pelargonium inodorum</i> Willd.	*aNZ, bSouth Africa	11a	18b	aHair & Beuzenberg 1960, bVan der Walt & Vorster 1989
GOODENIACEAE	<i>Dampiera stricta</i> (Sm.) R.Br.	Bicheno	9	18	Jackson 1958
GOODENIACEAE	<i>Goodenia elongata</i> Labill.	St Helens	8	16	Jackson 1958
GOODENIACEAE	<i>Goodenia humilis</i> R.Br.	Low Head	8	16	Jackson 1958
GOODENIACEAE	<i>Goodenia laneta</i> R.Br.	Mt Nelson	8	16	Jackson 1958
GOODENIACEAE	<i>Goodenia ovata</i> Sm.	Tolosa St, Glenorchy	8	16	Jackson 1958
GOODENIACEAE	<i>Scaevola hookeri</i> (Vriese) F.Muell. ex Hook.f.	Mt Wellington	8	16	Jackson 1958
GOODENIACEAE	<i>Selliera radicans</i> Cav.	Glenorchy	8,24	16,48	Jackson 1958
GOODENIACEAE	<i>Selliera radicans</i> Cav.	*NZ	8	16	Hair & Beuzenberg 1960
GOODENIACEAE	<i>Velleia montana</i> Hook.f.	King William Saddle	8	16	Jackson 1958
GOODENIACEAE	<i>Velleia paradoxa</i> R.Br.	Springfield, Glenorchy	8	16	Jackson 1958
HALORAGACEAE	<i>Gonocarpus micranthus</i> Thunb.	*aThailand, bJapan		12	Larsen 1966, bNishikawa 1989
HYDROCHARITACEAE	<i>Vallisneria americana</i> Mich.	*Japan		40	Uchiyama 1989
IRIDACEAE	<i>Diplarrena latifolia</i> Benth.	King William Saddle		32?	WD Jackson unpub (3866)
IRIDACEAE	<i>Diplarrena moraea</i> Labill.	aMt Nelson, b*unknown	15a	30-32b	aWD Jackson unpub (3865), bGoldblatt 1979
IRIDACEAE	<i>Libertia pulchella</i> Sprengel	*aNZ, bNew Guinea	19	38	aHair <i>et al.</i> 1967, bBorgmann 1964
IRIDACEAE	<i>Patersonia fragilis</i> (Labill.) Aschers & Graebner, Syn. Mitteleur	*unknown	42		Goldblatt 1979
IRIDACEAE	<i>Patersonia occidentalis</i> R.Br.	*unknown		22	Goldblatt 1979

Table 1 cont.

Family	Species	Locality	n	2n	Authority
JUNCACEAE	<i>Juncus bufonius</i> L.	*W.Europe	54a	106b	aCope & Stace 1985, bLove & Love 1980
JUNCACEAE	<i>Juncus falcatu</i> E.Meyer	*W.North America		c. 42	Chinnappa & Chmielewski 1987
JUNCACEAE	<i>Juncus gregiflorus</i> L.A.S.Johnson	*NZ		40	Beuzenberg & Hair 1983
JUNCACEAE	<i>Luzula australasica</i> Steudel	*Australasia		24	Collet & Westerman 1987
JUNCACEAE	<i>Luzula densiflora</i> (Nordensk.) Edqar	*Australasia		12	Collet & Westerman 1987
JUNCACEAE	<i>Luzula flaccida</i> (Buchenau) Edqar	*Australasia		12	Collet & Westerman 1987
JUNCAGINACEAE	<i>Triglochin procerum</i> R.Br.	*Australia		16b, 32ab, 62-64b	aBriggs 1966, bRobb & Ladiges 1981
JUNCAGINACEAE	<i>Triglochin striatum</i> Ruiz Lopez & Pavón	*unknown, bNZ	12a	24b	aTalavera & García Murillo 1992, bMurray & de Lange 1999
LAURACEAE	<i>Cassytha pubescens</i> R.Br.	*Australia	24		Weber 1981
LEMNACEAE	<i>Lemna disperma</i> Hegelm.	*unknown		40	Urbanska-Worytkiewicz 1980
LEMNACEAE	<i>Lemna trisulca</i> L.	*unknown		20, 40, 60, 80	Urbanska-Worytkiewicz 1980
LEMNACEAE	<i>Wolffia australiana</i> (Benth.) Hartog & Pias	*NZ, Australia	20	40	Urbanska-Worytkiewicz 1980
LILIACEAE	<i>Arthropodium milleflorum</i> (DC.) J.F.Macbride	Tasmania		22	WD Jackson unpub
LILIACEAE	<i>Arthropodium minus</i> R.Br.	*unknown	11	22	Westphalen & Conran 1994
LILIACEAE	<i>Arthropodium strictum</i> R.Br.	bcTasmania	33a	66abc	aWestphalen & Conran 1994, bJackson unpub, cHF Gulline unpub
LILIACEAE	<i>Astelia alpina</i> R.Br.	Tasmania		c. 80	WD Jackson unpub
LILIACEAE	<i>Bulbine bulbosa</i> (R.Br.) Haw.	Tasmania		24, 48	HF Gulline unpub
LILIACEAE	<i>Bulbine semibarbata</i> (R.Br.) Haw.	bTasmania		26abc	aStraub 1938, bHF Gulline unpub, cWatson 1988
LILIACEAE	<i>Chamaescilla corymbosa</i> (R.Br.) F.Muell. ex Benth.	Tasmania		44	WD Jackson unpub
LILIACEAE	<i>Dianella longifolia</i> R.Br. var. <i>longifolia</i>	Tasmania		16, 32, 48	Curtis 1952
LILIACEAE	<i>Dianella revoluta</i> R.Br.	Tasmania, many locations	8	16, 32, 48	Curtis 1952
LILIACEAE	<i>Dianella tasmanica</i> Hook.f.	Tasmania, many locations	8	76, 80, c. 80, 84	Curtis 1952
LILIACEAE	<i>Dianella tasmanica</i> Hook.f.	*Australia, several locations		16, 64	Curtis 1952
LILIACEAE	<i>Drymphila cyanocarpa</i> R.Br.	a Mt Lloyd, bTasmania		a24, b20	aMenadue & Orchard 1985 (AM Buchanan 5648) , bWD Jackson unpub
LILIACEAE	<i>Herpolirion novae-zelandiae</i> Hook.f.	Mathinna Plains		16	Menadue & Orchard 1985 (AM Buchanan 5077)
LILIACEAE	<i>Hypoxis glabella</i> R.Br. var. <i>glabella</i>	Tasmania		22	WD Jackson unpub
LILIACEAE	<i>Laxmannia orientalis</i> Keighery	Tasmania		16	WD Jackson unpub
LILIACEAE	<i>Thelionema caespitosum</i> (R.Br.) R.Henderson	Tasmania		18	WD Jackson unpub
LILIACEAE	<i>Thysanotus patersonii</i> R.Br.	Risdon Hill	44a	80	aWD Jackson unpub (3850)
LILIACEAE	<i>Wurmbea dioica</i> (R.Br.) F.Muell.	aTasmania, b*unknown		a20, 40, b22	aWD Jackson unpub, bMacfarlane 1980
LYTHRACEAE	<i>Lythrum hyssopifolia</i> L.	*Spain	10		Silvestre 1986
LYTHRACEAE	<i>Lythrum salicaria</i> L.	*aJapan, bFinland		30a, 60b	aNishikawa 1989, bArohonka 1982
MIMOSACEAE	<i>Acacia dealbata</i> Link	*Australia	13a	26b	aKumari 1989, aSinghal 1990, bAtchison 1948
MIMOSACEAE	<i>Acacia melanoxylon</i> R.Br.	*unknown		26	Atchison 1948, Coulaud 1995
MIMOSACEAE	<i>Acacia suaveolens</i> (Smith) Willd.	*Australia		26	Morrison 1987
MIMOSACEAE	<i>Acacia verticillata</i> (L'Hérit.) Willd.	*unknown		26	Tijo 1948
MYRTACEAE	<i>Calytrix tetragona</i> Labill.	*unknown		22	Rye 1979
MYRTACEAE	<i>Eucalyptus amygdalina</i> Labill.	Tasmania	11		McAulay & Cruickshank 1937
MYRTACEAE	<i>Eucalyptus cordata</i> Labill.	Tasmania	11		McAulay & Cruickshank 1937
MYRTACEAE	<i>Eucalyptus dalrympleana</i> Maiden	*unknown		22	Ruggeri 1960
MYRTACEAE	<i>Eucalyptus globulus</i> Labill.	Tasmania	11a	22b	aMcAulay et al. 1936, bWD Jackson unpub
MYRTACEAE	<i>Eucalyptus gunnii</i> Hook.f.	Tasmania		22	Atchison 1947
MYRTACEAE	<i>Eucalyptus johnstonii</i> Maiden,	Tasmania	11		McAulay et al. 1936
MYRTACEAE	<i>Eucalyptus obliqua</i> L'Hérit	Tasmania	11		McAulay & Cruickshank 1937
MYRTACEAE	<i>Eucalyptus pauciflora</i> Sieber ex Sprengel	Tasmania	11		McAulay & Cruickshank 1937
MYRTACEAE	<i>Eucalyptus rubida</i> Deane & Maiden	Tasmania		22	Atchison 1947
MYRTACEAE	<i>Eucalyptus pulchella</i> Desf.	Tasmania	11a	22b	aMcAulay & Cruickshank 1937, bAtchison 1947
MYRTACEAE	<i>Eucalyptus urnigera</i> Hook.f.	Tasmania		22	Jackson unpub
MYRTACEAE	<i>Eucalyptus viminalis</i> Labill.	Tasmania	11a	22b	aMcAulay & Cruickshank 1937, bAtchison 1947
MYRTACEAE	<i>Leptospermum glaucescens</i> S.Schauer	*NZ		22	Dawson 1987
MYRTACEAE	<i>Leptospermum lanigerum</i> (Aiton) Smith	*NZ		22	Dawson 1987
MYRTACEAE	<i>Leptospermum rupestre</i> Hook.f.	*NZ		22	Dawson 1987
MYRTACEAE	<i>Leptospermum scoparium</i> Forst. & Forst.f.				
	var. <i>eximium</i> B.L.Burt	*NZ		22	Dawson 1987
	var. <i>scoparium</i>	*NZ		22	Dawson 1987
ONAGRACEAE	<i>Epilobium billardierianum</i> Sér. ex DC. subsp. <i>billardierianum</i>	*NZ	18	36	Hair 1977
	subsp. <i>cinereum</i> (A.Rich.) Raven & Engelhorn	*NZ	18	36	Hair 1977
ONAGRACEAE	<i>Epilobium fugitivum</i> Raven & Engelhorn	Tasmania		36	Hair 1977
	subsp. <i>intermedium</i> Raven & Engelhorn	*NZ		36	Hair 1977
ONAGRACEAE	<i>Epilobium gunnianum</i> Hausskn	*NZ		36	Hair 1977
ONAGRACEAE	<i>Epilobium hirtigerum</i> A.Cunn.	*NZ		36	Hair 1977
ONAGRACEAE	<i>Epilobium pallidiflorum</i> Sol. ex A.Cunn.	*NZ	18	36	Hair 1977
ONAGRACEAE	<i>Epilobium perpusillum</i> Hauskn.	Tasmania	18		Beuzenberg in West & Raven 1977
ONAGRACEAE	<i>Epilobium rotundifolium</i> Forst.f.,	*NZ	18	36	Hair 1977
ONAGRACEAE	<i>Epilobium sarmentaceum</i> Hausskn.	*NZ		36	Hair 1977
ONAGRACEAE	<i>Epilobium tasmanicum</i> Hausskn.	*NZ	18	36	Hair 1977
ONAGRACEAE	<i>Epilobium willisii</i> Raven & Engelhorn	*NZ		36	Hair 1977

Table 1 cont.

Family	Species	Locality	n	2n	Authority
ORCHIDACEAE	<i>Calochilus robertsonii</i> Benth.	*Australia		24	Peakall & James 1989
ORCHIDACEAE	<i>Microtis parviflora</i> R.Br.	*Australia		44	Beuzenberg in Bates 1984
ORCHIDACEAE	<i>Microtis unifolia</i> (Forst.f.) Rchb.f	*aNZ, bAustralia	22b	88a	aBeuzenberg in Bates 1984, bPeakall & James 1989
ORCHIDACEAE	<i>Pterostylis nutans</i> R.Br.	*Australia		42	Peakall & James 1989
ORCHIDACEAE	<i>Spiranthes australis</i> Lindley	*unknown		30	Vij et al. 1981
ORCHIDACEAE	<i>Thelymitra carnea</i> R.Br.	*NZ		62	Molloy & Dawson 1998
ORCHIDACEAE	<i>Thelymitra cyanea</i> (Lindley) Benth	*NZ		40	Molloy & Dawson 1998
ORCHIDACEAE	<i>Thelymitra ixiooides</i> Swartz	*aNZ, bAustralia		28	aMolloy & Dawson 1998, bDawson & Beuzenberg in Dawson 2000
ORCHIDACEAE	<i>Thelymitra malvina</i> M.A.Clem., D.L.Jones & Molloy	*NZ		26	Molloy & Dawson 1998
ORCHIDACEAE	<i>Thelymitra pauciflora</i> R.Br.	*NZ		26	Molloy & Dawson 1998
ORCHIDACEAE	<i>Townsonia viridis</i> (Hook.f.) Schlechter	*unknown			Kores 1995
ORCHIDACEAE	<i>Spiranthes australis</i> (R.Br.) Lindley	*india	15a, 16a	30b	a Mehra & Vij 1970, bVij & Shekhar 1983
OXALIDACEAE	<i>Oxalis maqellanica</i> Forst.f.,	*aNZ, bNew Guinea	10a	10b	aBeuzenberg & Hair 1983, bBorgman 1964
PLANTAGINACEAE	<i>Plantago antarctica</i> Decne.	Interlaken		12	MJ Brown & WD Jackson in Love 1982 (<i>Brown 1002</i>)
PLANTAGINACEAE	<i>Plantago bellidioides</i> Decne. in DC.	Ordance Pt		12	MJ Brown & WD Jackson in Love 1982 (<i>HO26421</i>)
PLANTAGINACEAE	<i>Plantago daltonii</i> Decne. in DC.	Tasmania		12	WD Jackson unpub
PLANTAGINACEAE	<i>Plantago debilis</i> R.Br.	Barbers Mine, Fingai		12	MJ Brown & WD Jackson in Love 1982 (<i>HO19563</i>)
PLANTAGINACEAE	<i>Plantago gaudichaudii</i> Barnéoud	*Australia		12, 24, 36	Briggs 1973
PLANTAGINACEAE	<i>Plantago glabrata</i> Hook.f., Hook.	Lake Augusta		24	MJ Brown & WD Jackson in Love 1982 (<i>Brown 1007</i>)
PLANTAGINACEAE	<i>Plantago glacialis</i> B.G.Briggs, Carolin & Pulley	*Australia		12	WD Jackson unpub, Briggs 1973
PLANTAGINACEAE	<i>Plantago gunnii</i> Hook.f., Hook.	Mt Projection		36	MJ Brown & WD Jackson in Love 1982 (<i>HO19558</i>)
PLANTAGINACEAE	<i>Plantago hispida</i> R.Br.	Tasmania		12	MJ Brown & WD Jackson in Love 1982 (<i>Brown 1004</i>)
PLANTAGINACEAE	<i>Plantago paradoxa</i> Hook.f., Hook.	Iris R, Middlesex Plains		48	MJ Brown & WD Jackson in Love 1982 (<i>HO19559</i>)
PLANTAGINACEAE	<i>Plantago tasmanica</i> Hook.f., Hook. var. <i>tasmanica</i>	aMiddlesex Plains, bProjection Bluff		12	aWD Jackson unpub (<i>3853</i>), bMJ Brown & WD Jackson in Love 1982 (<i>Brown 1001</i>)
PLANTAGINACEAE	<i>Plantago triantha</i> Sprengel	Cox Bight, South Coast		12	MJ Brown & WD Jackson in Love 1982 (<i>HO19555</i>)
PLANTAGINACEAE	<i>Plantago varia</i> R.Br.	Mt Nelson		24	WD Jackson (<i>3852</i>), MJ Brown & WD Jackson in Love 1982 (<i>HO19557</i>)
POACEAE	<i>Agrostis muelleriana</i> Vickery	*NZ	21		Beuzenberg & Hair 1983
POACEAE	<i>Austrostrecha littoralis</i> (Labill.) E.Alexeev	*NZ		28	Hair 1968, Beuzenberg & Hair 1983
POACEAE	<i>Deschampsia cespitosa</i> (L.) P.Beauv.	*cosmopolitan	13, 14	26, 28, 52	many in Dawson 2000
POACEAE	<i>Dichelachne crinita</i> (L.f.) Hook.f.	*NZ		70	Beuzenberg & Hair 1983
POACEAE	<i>Echinopogon ovatus</i> (Forst.f.) P.Beauv.,	*NZ	21		Beuzenberg & Hair 1983
POACEAE	<i>Ehrharta stipoides</i> Labill.	*aAustralia, bNZ		48	aParthasarathy 1939, bDawson & Beuzenberg 2000
POACEAE	<i>Elymus scaber</i> (R.Br.) A.Löve	*unknown		42	Lu 1993
POACEAE	<i>Hierochloa redolens</i> (Vahl) Roemer & Schultes	*Falkland Islands		56	Moore 1967
POACEAE	<i>Imperata cylindrica</i> (L.) Raeuschel	*unknown	10		Bir & Singh 1983
POACEAE	<i>Poa labillardierei</i> Steudel	*Australia		28, 56, 84	May & Campbell 1991
POACEAE	<i>Spinifex sericeus</i> R.Br.	*NZ		18	Hair & Beuzenberg 1966
POACEAE	<i>Themeda triandra</i> Forsk.	*South Africa		40, 50, 60, 100	Liebenberg et al. 1993
POACEAE	<i>Trisetum spicatum</i> (L.) Richter	*cosmopolitan	14	28	many in Dawson 2000
PODOCARPACEAE	<i>Laqarostrobos franklinii</i> (Hook.f.) Quinn	Tasmania	15a	30ab	aHair & Beuzenberg 1958a, bSundar Rao 1959
PODOCARPACEAE	<i>Microcachrys tetragona</i> (Hook.) Hook.f.	Tasmania	15a	30ab	aHair & Beuzenberg 1958a, bSundar Rao 1959
PODOCARPACEAE	<i>Microstrobos niphophilus</i> J.Garden & L.A.S.Johnson	Tasmania	13a	26ab	aHair & Beuzenberg 1958a, bSundar Rao 1959
PODOCARPACEAE	<i>Phyllocladus asplenifolius</i> (Labill.) Rich. ex Hook.f.	Tasmania		18	Sundar Rao 1959
PODOCARPACEAE	<i>Podocarpus lawrencei</i> Hook.f.	Tasmania		38	Sundar Rao 1959
POLYGONACEAE	<i>Muehlenbeckia axillaris</i> (Hook.f.) Endl.	*NZ	10	20	Beuzenberg & Hair 1983
POLYGONACEAE	<i>Persicaria hydropiper</i> (L.) Spach	*Bulgaria		20	Stoeva 1985
POLYGONACEAE	<i>Rumex brownii</i> Campdera	*unknown		40	Degraeve 1975
PORTULACACEAE	<i>Montia fontana</i> L. subsp. <i>chondrosperma</i> (Fenzl) Walters	*Morocco		20	Galland 1988
POTAMOGETONACEAE	<i>Potamogeton crispus</i> L	*India	13	26, 52	Ghosh & Bhattacharya 1980
POTAMOGETONACEAE	<i>Potamogeton pectinatus</i> L.	*cosmopolitan	39	42, 78, 86	many in Dawson 2000
PRIMULACEAE	<i>Samolus repens</i> (Forst. & Forst.f.) Pers.	*NZ	26		Hair & Beuzenberg 1959
PROTEACEAE	<i>Agastachys odorata</i> R.Br.	aFlorentine, Thumbs	13a	26	aVenkata Rao 1957, Wiltshire & Stace 1997
PROTEACEAE	<i>Banksia marginata</i> Cav.	Hobart	14		Venkata Rao 1957
PROTEACEAE	<i>Banksia serrata</i> L.f.	Botanical Gardens, Hobart.	14		Venkata Rao 1957
PROTEACEAE	<i>Bellenden montana</i> R.Br.	aMt Wellington, National Park, Guilford, bPine Lake, Central Plateau	5a	10	aVenkata Rao 1957, bWiltshire & Stace 1997
PROTEACEAE	<i>Cenarrhenes nitida</i> Labill.	aFlorentine, Thumbs, bHartz Mt	14ab	26c, 28a	aVenkata Rao 1957, bRamsay 1963, cWiltshire & Stace 1997
PROTEACEAE	<i>Conospermum hookeri</i> (Meisn.) E.M.Bennett	Tasmania		22	Venkata Rao 1957
PROTEACEAE	<i>Grevillea australis</i> R.Br.	Launceston	10		Venkata Rao 1957
PROTEACEAE	<i>Hakea lissosperma</i> R.Br.	Mt Wellington	10		Venkata Rao 1957

Table 1 cont.

Family	Species	Locality	n	2n	Authority
PROTEACEAE	<i>Hakea microcarpa</i> R.Br.	Florentine		20	Venkata Rao 1957
PROTEACEAE	<i>Lomatia polymorpha</i> R.Br.	Mt Wellington, National Park	11	22	Venkata Rao 1957
PROTEACEAE	<i>Lomatia tasmanica</i> W.M.Curtis	SW Tasmania		33	Lynch <i>et al.</i> 1998
PROTEACEAE	<i>Lomatia tinctoria</i> (Labill.) R.Br.	aMt Wellington, National Park, hTasman Peninsula	11a	22	Lynch <i>et al.</i> 1998
PROTEACEAE	<i>Orites acicularis</i> (R.Br.) Roemer & Schultes	Mt Wellington, National Park	14	28	Venkata Rao 1957
PROTEACEAE	<i>Orites diversifolia</i> R.Br.	aSnug Tiers, bHartz Mt	15a	28b, 30a	aVenkata Rao 1957, bWiltshire & Stace 1997
PROTEACEAE	<i>Orites milliganii</i> Meisn. in DC.	Thumbs	14		Venkata Rao 1957
PROTEACEAE	<i>Persoonia gunnii</i> Hook.f., Hook.	National Park	7		Venkata Rao 1957
PROTEACEAE	<i>Telopea truncata</i> (Labill.) R.Br.	Hobart	11	22	Venkata Rao 1957
RANUNCULACEAE	<i>Caltha phyloptera</i> A.W.Hill	Cradle Mt, Horse track to Plateau		48	WD Jackson unpub
RANUNCULACEAE	<i>Clematis aristata</i> R.Br. ex Ker Gawler	Watronchulus Hill, Neika	8		WD Jackson unpub (3825)
RANUNCULACEAE	<i>Clematis gentianoides</i> DC.	aMt Nelson (slopes)	8a	16b	aWD Jackson unpub (3826), bGodley 1976
RANUNCULACEAE	<i>Clematis microphylla</i> DC.	Saxon Ck, Harford Rd	8		WD Jackson unpub (3816)
RANUNCULACEAE	<i>Ranunculus acaulis</i> Banks & Soland. ex DC.	Ocean Beach, Strahan		48	Menadue & Crowden 1985 (HO88516)
RANUNCULACEAE	<i>Ranunculus amphitrichus</i> Colenso	six locations		96	Menadue & Crowden 1985 (HO88312)
RANUNCULACEAE	<i>Ranunculus collicola</i> Menadue	Second Lagoon, Central Plateau		48	Menadue 1986 (HO88749)
RANUNCULACEAE	<i>Ranunculus collinus</i> R.Br. ex DC.	Mt Wellington (1300m)	24	48	Menadue 1986 (HO88834)
RANUNCULACEAE	<i>Ranunculus decurvus</i> (Hook.f.) Melville	aJericho, bPine Lake		16	WD Jackson unpub (3836)
		Arthurs Lakes	24	48	WD Jackson unpub (3835)
RANUNCULACEAE	<i>Ranunculus glabrifolius</i> Hook.	Iris R., Cradle Mt. aLagoon of Islands, bHazelwood Lac.	32a	48b	Menadue & Crowden 1985 (HO88516) aWD Jackson unpub (3841), bMenadue & Crowden 1985 (HO88874)
RANUNCULACEAE	<i>Ranunculus gunnianus</i> Hook.	Pine Lake (bogs)	24a	48b	aWD Jackson unpub, bMenadue & Crowden 1985 (HO88835)
RANUNCULACEAE	<i>Ranunculus jugosus</i> Menadue	L. Augusta		48	bMenadue & Crowden 1985 (HO81877)
RANUNCULACEAE	<i>Ranunculus lappaceus</i> Smith in Rees	aMt Nelson (slopes), bOujin Hill	8	16	aWD Jackson unpub (3829), bMenadue 1986 (HO88316)
RANUNCULACEAE	<i>Ranunculus nanus</i> Hook.	aArthurs Lakes, bSecond Lagoon	8	16	aJackson unpub 3837, bMenadue & Crowden 1985 (HO88314)
RANUNCULACEAE	<i>Ranunculus pascuinus</i> (Hook.f.) Melville	aLagoon of Islands, bMiddlesex Plains, cBlackbog Ck., Cradle Mt Rd	8	16	WD Jackson unpub a(3831), b(3832), cbMenadue & Crowden 1985 (HO88517)
RANUNCULACEAE	<i>Ranunculus pimpinellifolius</i> Hook.	aBarren Tier Marsh, bClarence Weir	8	16	aWD Jackson unpub (3830), bbMenadue & Crowden 1985 (HO88841)
RANUNCULACEAE	<i>Ranunculus prasinus</i> Menadue	Whites Lag., Tunbridge		48	Menadue & Crowden 1985 (HO88842)
RANUNCULACEAE	<i>Ranunculus pumilio</i> R.Br. ex DC.	Brownwater Lag., L. Crescent		14	bMenadue & Crowden 1985 (HO88518)
RANUNCULACEAE	<i>Ranunculus scapiger</i> Hook.	aMt Wellington (1000m), bClarence Weir	8	16	aWD Jackson unpub (3833), bMenadue & Crowden 1985 (HO88845)
RANUNCULACEAE	<i>Ranunculus sessiliflorus</i> R.Br. ex DC.	Geilston Bay		14	Menadue & Crowden 1985 (HO88840)
RANUNCULACEAE	<i>Ranunculus setaceus</i> Rodway	aPine L. (margin), bBen Lomond Plateau		16	aWD Jackson unpub (3801), bMenadue & Crowden 1985 (HO88306)
RANUNCULACEAE	<i>Ranunculus triplodontus</i> Melville	aArthurs Lakes, bL. Augusta	24a	48ab	aWD Jackson unpub (3838), bMenadue 1986 (HO88837)
RESTIACEAE	<i>Baloskion tetraphyllum</i> (Labill.) B.G.Briggs &	Strahan		22	Briggs 1966
RESTIACEAE	<i>Empodisma minus</i> (Hook.f.) L.A.S.Johnson &	*Australia		24	B.G. Briggs in Johnson & Cutler 1973
RESTIACEAE	<i>Hypolaena fastigiata</i> R.Br.	*Australia		66	Briggs 1966
RESTIACEAE	<i>Leptocarpus tenax</i> (Labill.) R.Br.	*Australia		22	Briggs 1966
RESTIACEAE	<i>Sporadanthus tasmanicus</i> (Hook.f.) B.G.Briggs & L.A.S.Johnson	Navarre R. to King William Ra.		18	Briggs 1966
RHAMNACEAE	<i>Pomaderris apetala</i> Labill. subsp. <i>maritima</i> N.G.Walsh & F.Coates	*NZ		36	Hair 1963
RHAMNACEAE	<i>Pomaderris aspera</i> Sieber ex DC.	*NZ	12	24	Harvey & Rattenbury 1985
ROSACEAE	<i>Acaena novae-zelandiae</i> Kirk	*aNZ, bAustralia	21a	42b	aDawson 1960, bMoore 1964
ROSACEAE	<i>Acaena pallida</i> (Kirk) Allan	*NZ	21		Dawson 1960
ROSACEAE	<i>Geum urbanum</i> L.	*Britain		42	Wentworth <i>et al.</i> 1991
RUBIACEAE	<i>Coprosma moorei</i> Rodway	*unknown		44	Beuzenberg 1983
RUBIACEAE	<i>Coprosma pumila</i> Hook.f.	Tasmania	c. 220		Dawson 1995
RUBIACEAE	<i>Coprosma perpusilla</i> Colenso subsp. <i>perpusilla</i>	*NZ		132	Beuzenberg 1983
RUBIACEAE	<i>Nertera granadensis</i> (L.f.) Druce	*NZ		22	Hair 1963
RUTACEAE	<i>Acradenia frankliniae</i> Milligan ex Kippist	Corinna, Pieman R.		38	WD Jackson unpub (2312)
RUTACEAE	<i>Boronia anemonifolia</i> A.Cunn. in Field	*Australia	18		Smith-White 1954
RUTACEAE	<i>Boronia nana</i> Hook.	*Australia	18		Stace & Armstrong 1992
RUTACEAE	<i>Boronia parviflora</i> Smith	*Australia	9	18	Smith-White 1954
RUTACEAE	<i>Boronia pilosa</i> Labill.	*Australia	11		Smith-White 1954

Table 1 cont.

Family	Species	Locality	n	2n	Authority
RUTACEAE	<i>Correa alba</i> Andrews	aClifton Beach, *bAustralia Tasmania	16b	32a	aWD Jackson unpub (2416), bSmith-White1954
RUTACEAE	<i>Correa backhouseana</i> Hook.			32	WD Jackson unpub (2457)
RUTACEAE	<i>Correa lawrenceana</i> Hook.	*Australia	16		Smith-White 1954
RUTACEAE	<i>Nematolepis squamea</i> (Labill.) Paul G.Wilson	National Park	16		Smith-White 1954
RUTACEAE	<i>Philotheca virgata</i> (Hook.f.) Paul G.Wilson	*Australia		c. 28	Stace & Armstrong 1992
RUTACEAE	<i>Zieria littoralis</i> J.A.Armstrong	*Australia	36ab	72a	aStace & Armstrong 1992, bSmith-White 1954
RUTACEAE	<i>Zieria veronicea</i> (F.Muell.) Benth.	*Australia	18	36	Stace & Armstrong 1992
SAPINDACEAE	<i>Dodonaea viscosa</i> Jacq.	*NZ	14	28	Hair & Beuzenberg 1959
SAPINDACEAE	subsp. <i>spatulata</i> (Smith) J.West	*Australia	14		West 1984
SCROPHULARIACEAE	<i>Chionohebe ciliolata</i> (Hook.f.) B.G.Briggs & Ehrend.	*NZ		42	Hair 1970
SCROPHULARIACEAE	<i>Euphrasia collina</i> R.Br.?	*Australia	54-70	60-70	Barker <i>et al.</i> 1988
SCROPHULARIACEAE	<i>Euphrasia gibbsiae</i> Du Rietz ?	*Australia		132	Barker <i>et al.</i> 1988
SCROPHULARIACEAE	<i>Glossostigma elatinooides</i> (Benth.) Benth. ex Hook.f.	*NZ	5	10	Beuzenberg & Hair 1983
SCROPHULARIACEAE	<i>Gratiola nana</i> Benth. in DC.	*NZ	15		Hair <i>et al.</i> 1967
SCROPHULARIACEAE	<i>Limosella australis</i> R.Br.	*NZ	30		Hair & Beuzenberg 1960
SCROPHULARIACEAE	<i>Mazus pumilio</i> R.Br.	*NZ	52		Hair & Beuzenberg 1960
SCROPHULARIACEAE	<i>Mimulus repens</i> R.Br.	*NZ		20	Hair & Beuzenberg 1959
SOLANACEAE	<i>Solanum laciniatum</i> Aiton	*acNZ, bAustralia	46ab	92c, 96d	aBaylis 1954, b1963, cGerasimenko & Reznikova 1968, d Beuzenberg & Hair 1983
STACKHOUSIACEAE	<i>Stackhousia gunnii</i> Hook.f.	Tunbridge	10		WD Jackson unpub (2568)
STACKHOUSIACEAE	<i>Stackhousia monogyna</i> Labill.	aMt Nelson, b*unknown Pleman R Heads	10a, 9,15b		aWD Jackson unpub (3879), bTurner 1966
STACKHOUSIACEAE	<i>Stackhousia viminea</i> Smith in Rees		10		WD Jackson unpub (2572)
STYLIDIACEAE	<i>Stylidium armeria</i> (Labill.) Labill.	Port Davey	30		Jackson and Wiltshire 2001, WD Jackson unpub (3812)
STYLIDIACEAE	<i>Stylidium dilatatum</i> W.D.Jackson & R.J.E.Wiltshire	Waterworks, Hobart	30	60	Jackson and Wiltshire 2001, WD Jackson unpub (3805)
STYLIDIACEAE	<i>Stylidium graminifolium</i> Swartz ex Willd.	Proctors Rd	15	30	Jackson and Wiltshire 2001, WD Jackson unpub (3802)
THYMELAEACEAE	<i>Kelleria dieffenbachii</i> (Hook.) Endl.	*NZ		18	Dawson 1989
THYMELAEACEAE	<i>Pimelea cinerea</i> R.Br.	Neika, Mt Wellington		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea curviflora</i> R.Br.	Dunorlan, Launceston		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea drupacea</i> Labill.	Taranna, Hobart		108	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea flava</i> R.Br.	Glenorochy, Murdunna		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea glauca</i> R.Br.	Triabunna		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea humilis</i> R.Br.	Campania, Glenorochy, Sandy Bay		72	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea ligustrina</i> Labill.	Mt Lloyd		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea linifolia</i> Smith	Hastings		90	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea nivea</i> Labill.	Collinsvale, Glenorochy, Sandy Bay		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea pauciflora</i> R.Br.	Dunorlan, Launceston		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea pygmaea</i> F.Muell. & C.Stuart ex Meisn.	James R., L. Augusta		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea sericea</i> R.Br.	Mt Arthur		36	Cruickshank 1953
THYMELAEACEAE	<i>Pimelea serpyllifolia</i> R.Br.	King I		36	Cruickshank 1953
TYPHACEAE	<i>Typha domingensis</i> Pers.	*Australia		30	Finlayson <i>et al.</i> 1985
TYPHACEAE	<i>Typha orientalis</i> C.Presl	*aNZ, bAustralia	30a	60	aHair <i>et al.</i> 1967, bFinlayson <i>et al.</i> 1985
URTICACEAE	<i>Australina pusilla</i> (Desf. ex Poiret) Gaudich.	*NZ	12	24	Beuzenberg & Hair 1960
URTICACEAE	<i>Parietaria debilis</i> Forst.f.	*aJuan Fernandez Islands. bArgentina	8a	16b	aSun <i>et al.</i> 1990, bFernandez <i>et al.</i> 1990
VIOLACEAE	<i>Hymenanchera dentata</i> R.Br. ex DC	*NZ		64	Dawson 1995
VIOLACEAE	<i>Viola cunninghamii</i> Hook.f.	*NZ	12	24	Hair & Beuzenberg 1960
WINTERACEAE	<i>Tasmania lanceolata</i> (Poiret) A.C.Smith dwarf form	Mt Wellington (1300m)	13a	28b, 26c	aWD Jackson unpub (3869), bHF Gulline unpub (probably incorrect), cS Smith-White in Darlington & Wylie 1955
	tree form	Guilford Junction	13a	26b	aWD Jackson unpub (3870), bRaven & Kyhos 1965
XANTHORRHOACEAE	<i>Lomandra longifolia</i> Labill.	Proctors Rd	16a	16b,32ab	aWD Jackson unpub (3823), bBriggs 1986
XANTHORRHOACEAE	<i>Lomandra nana</i> (A.Lee) A.Lee	aRichmond,*b unknown	7a	14a,28b	aWD Jackson unpub (3821), bBriggs 1986
XANTHORRHOACEAE	<i>Xanthorrhoea arenaria</i> Bedford	Waterhouse Pt	11	22	WD Jackson unpub (3864)
XANTHORRHOACEAE	<i>Xanthorrhoea australis</i> R.Br.	aGrasstree Hill, *bAustralia	11	22	aWD Jackson unpub (3863), bBriggs 1966
XYRIDACEAE	<i>Xyris gracilis</i> R.Br.	*Australia		26	Briggs 1966
XYRIDACEAE	<i>Xyris muelleri</i> Malme	Tullah		26	Briggs 1966
XYRIDACEAE	<i>Xyris operculata</i> Labill.	W. Montagu	13	26	Briggs 1966
ZANNICHELLIACEAE	<i>Lepilaena bilocularis</i> Kirk	*NZ		12	Hair <i>et al.</i> 1967

TABLE 2
Proportion of indigenous Tasmanian spermatophyte species with reported chromosome numbers in each family

	No. Genera	No. Species	Tasmanian counts	Other provenance counts	Total	%	Ploidy	Variation between genera	Variation between species	Variation within species
AIZOACEAE (FICOIDEAE)	3	4		1	1	25	*	*	*	
ALISMATACEAE	1	1			0	0				
AMARANTHACEAE	3	3			0	0				
APIACEAE (UMBELLIFERAE)	14	39		5	5	13	*	*	*	
APOCYNACEAE	2	2			0	0				
ARALIACEAE	2	2			0	0	*	*		
ASTERACEAE (COMPOSITAE)	47	184	3	44	47	26	*	*	*	*
BIGNONIACEAE	1	1			0	0				
BORAGINACEAE	3	3			0	0		*	*	
BRASSICACEAE (CRUCIFERAE)	8	20		2	2	10	*	*	*	
BRUNONIACEAE	1	1	1		1	100				
BURMANNIACEAE	1	1			0	0				
CALLITRICHACEAE	1	3			0	0	*	*	*	
CAMPANULACEAE	4	16	5	10	15	94	*	*	*	*
CAPRIFOLIACEAE	1	1			0	0				
CARYOPHYLLACEAE	8	15		4	4	27	*	*		
CASUARINACEAE	1	7	3	1	4	57	*		*	*
CENTROLEPIDACEAE	3	13	1		1	8				
CHENOPODIACEAE	9	13		3	3	23	*			
CLUSIACEAE (GUTTIFERAE, HYPERICACEAE)	1	2		2	2	100				
CONVOLVULACEAE	4	7		3	3	43		*		
CRASSULACEAE	1	7		2	2	29	*		*	
CUCURBITACEAE	1	1			0	0				
CUNONIACEAE	2	2		1	1	50		*		
CUPRESSACEAE	3	6	6		6	100				
CUSCUTACEAE	1	1			0	0				
CYMODOCEACEAE	1	1			0	0				
CYPERACEAE	18	119	1	14	15	13	*	*	*	*
DILLENiaceae	1	14			0	0				
DONATIACEAE	1	1			0	0				
DROSERACEAE	1	7		5	5	71	*		*	*
ELAEOCARPACEAE	2	2			0	0		*		
ELATINACEAE	1	1			0	0				
EPACRIDACEAE	17	89	12	18	30	34	*	*	*	*
ERICACEAE	1	4	1	2	3	75				
ESCALLONACEAE	2	2			0	0	*	*		
EUCRYPHIACEAE	1	2			0	0				
EUPHORBIACEAE	10	13			0	0	*	*		
FABACEAE (LEGUMINOSAE)	25	53	4	4	8	15	*	*	*	*
FAGACEAE (NOTHOFAGACEAE)	1	2	1		1	50				
FRANKENIACEAE	1	1			0	0				
GENTIANACEAE	2	10			0	0				
GERANIACEAE	2	7		3	3	43	*	*	*	*
GOODENIACEAE	5	12	9		9	75	*	*		*
GUNNERACEAE	1	1			0	0				
GYROSTEMONACEAE	1	1			0	0				
HAEMODORACEAE	1	1			0	0				
HALORAGACEAE	3	18		1	1	6		*		
HYDATELLACEAE	2	2			0	0				
HYDROCHARITACEAE	2	2		1	1	50				
IRIDACEAE	4	6	2	3	5	83	*	*	*	
JUNCACEAE	2	33		6	6	18	*	*	*	*
JUNCAGINACEAE	1	7		2	2	29	*		*	*
LAMIACEAE (LABIATAE)	7	10			0	0	*	*		
LAURACEAE	1	4			0	0	*	*		
LEMNACEAE	2	3		3	3	100	*			*
LENTIBULARIACEAE	1	6			0	0				
LILIACEAE	19	38	16	1	17	45	*	*	*	*
LINACEAE	1	2			0	0				
LOGANIACEAE	3	6			0	0				

Table 2 cont.

	No. Genera	No. Species	Tasmanian counts	Other provenance counts	Total	%	Ployploidy	Variation between genera	Variation between species	Variation within species
LYTHRACEAE	1	2		2	2	100	*		*	
MALVACEAE	4	4			0	0	*	*		
MENYANTHACEAE	2	4			0	0				
MIMOSACEAE	1	20		4	4	20				
MONIMIACEAE	2	2			0	0	*	*		
MYOPORACEAE	1	2			0	0				
MYRTACEAE	9	51	11	6	17	33				
OLEACEAE	2	1			0	0				
ONAGRACEAE	1	10	2	8	10	100				
ORCHIDACEAE	39	196		11	11	6	*	*	*	
OXALIDACEAE	1	4		1	1	25				
PITTOSPORACEAE	4	6			0	0				
PLANTAGINACEAE	1	13	11	2	13	100	*		*	*
PLUMBAGINACEAE	1	2			0	0				
POACEAE (GRAMINEAE)	45	126		13	13	10	*	*	*	*
PODOCARPACEAE	5	5	5		5	100		*	*	
POLYGALACEAE	1	5			0	0				
POLYGONACEAE	3	10		3	3	30	*	*		
PORTULACACEAE	4	6		1	1	17	*	*		
POSIDONIACEAE	1	1			0	0				
POTAMOGETONACEAE	1	6		2	2	33	*		*	
PRIMULACEAE	1	1		1	1	100				
PROTEACEAE	11	28	17		17	61	*	*	*	*
RANUNCULACEAE	4	23	22		22	96	*	*	*	*
RESTIONACEAE	10	14	2	3	5	36	*	*		
RHAMNACEAE	5	23		2	2	9	*	*	*	
ROSACEAE	4	12		3	3	25	*	*	*	*
RUBIACEAE	5	18	1	3	4	22	*	*	*	
RUPPIACEAE	1	3			0	0				
RUTACEAE	8	22	4	8	12	55	*	*	*	
SANTALACEAE	2	7			0	0				
SAPIINDACEAE	1	2		2	2	100		*		
SCROPHULARIACEAE	10	24		8	8	33	*	*	*	*
SOLANACEAE	2	4		1	1	25	*			*
STACKHOUSIACEAE	1	5	3		3	60				
STERCULIACEAE	1	4			0	0				
STYLIDIACEAE	3	8	3		3	38	*	*	*	
THYMELAEACEAE	2	19	13	1	14	74	*	*	*	*
TREMANDRACEAE	1	5			0	0				
TYPHACEAE	1	4		2	2	50	*		*	
URTICACEAE	3	4		2	2	50		*		
VIOLACEAE	2	7		2	2	29	*	*	*	
WINTERACEAE	1	1	1		1	100				
XANTHORRHOEACEAE	2	5	4		4	80	*	*	*	*
XYRIDACEAE	1	5	2	1	3	60				
ZANNICHELLIACEAE	1	6		1	1	17	*	*		
ZOSTERACEAE	2	2			0	0				
ZYGOPHYLLACEAE	1	1			0	0				
Total 108 families	484	1568	166	234	400	26	50	47	36	22
			11%	15%	26%		46%	44%	33%	20%

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