

## GRASSES

### **Grappling with grasses – introduction to identification**

**Clarke I (2015) Name those Grasses. Identifying grasses, sedges and rushes.** Royal Botanic Gardens, Melbourne, Vic. 536 pp. ISBN 9780980407648.

A ‘how to identify’ guide for these groups, rather than a comprehensive species guide, although 206 species are covered as examples, many of them common. As with Clark & Lee’s (2003) general *Name that Flower*, this is a fabulous primer for improving your identification skills – in this case in three large groups that are often found intimidating. Illustrated throughout with excellent and well-labelled line drawings that help to decrypt the most difficult characters.

**Top-line national resources: *Flora of Australia* series (3 vols.), and *AusGrass*.**

**Mallett K & Orchard AE (eds) (2002) Flora of Australia Volume 43. Poaceae 1: Introduction and Atlas.** Flora of Australia Series. CSIRO Publishing / Australian Biological Resources Study (ABRS). 406 pp. ISBN-10 0643068023; ISBN1-13 (hbk) 9780643068025, (pbk) 9780643068032.

The first grasses volume of the national *Flora*. This volume includes keys to the tribes and genera of Australian grasses, along with a family description, small maps of distribution of all species, and a series of essays on grass structure and variation, classification, paleobotany, anatomy and ecophysiology, grass and grassland ecology, biogeography, and economic attributes. While the identification keys in this volume go down only to genus, it is an indispensable book for anyone developing an interest in the grasses. RECOMMENDED.

**Wilson A (ed.) (2009) Flora of Australia. Vol. 44A: Poaceae 2.** ABRS, Canberra / CSIRO, Melbourne. 410 pp. ISBN 9780643096295 (hb), 9780643096301 (pb).

Nationally comprehensive and authoritative flora treatments for the sub-families Pharoideae, Pooideae, Bambusoideae and Ehrhartoideae. Keys, descriptions, plus line illustrations of many species. RECOMMENDED.

**Mallett K (ed.) (2005) Flora of Australia Volume 44B: Poaceae 3: Centothecoideae — Chloridoideae.** Flora of Australia Series. CSIRO Publishing / Australian Biological Resources Study (ABRS). 504 pp. ISBN-10: (hbk) 0643069607, (pbk) 0643069615; ISBN-13 (hbk) 9780643069602, (pbk) 9780643069619.

Covers the native and naturalised species in subfamilies Arundinoideae, Danthonioideae, Aristidoideae, Micrairoideae and Chloridoideae (55 genera and over 450 species). These occur across the tropical and temperate zones and include *Triodia*, the Wallaby grasses, *Aristida*, Mitchell grasses, the Couches, Parramatta grasses, *Arundo* and *Phragmites*. Descriptions, identification keys, bibliographic information, and notes on ecology and distribution, and over 90 pages of illustrations RECOMMENDED.

**Sharp D & Simon BK (2014) AusGrass : grasses of Australia. Revised edition.** ABRS Identification Series. ABRS / CSIRO Publishing, Collingwood, Vic. Flash Drive – 2014: ISBN 9780643068612. **ELECTRONIC RESOURCE, INTERACTIVE – on Flash-Drive**

An interactive identification and information system, running on the user-friendly LucID system. Covers all the known 1323 species growing in Australia, both native and naturalised. Includes descriptions, comprehensive glossary of terms, species notes, over 2600 illustrations and photos, and more than 1400 maps. Previous versions (2002 et seq.) on CD-ROM and flash-drive still remain useful. HIGHLY RECOMMENDED. Slightly superseded by the on-line but static **AusGrass2** (Simon, Alfonso et al. 2016, q.v.)

**Simon BK, Alfonso Y, et al. (2015) AusGrass2: grasses of Australia.**

**ELECTRONIC RESOURCE, INTERACTIVE, on-line:** <http://ausgrass2.myspecies.info/>

A slight update and on-line version of the Sharp & Simon (2014) AusGrass revised edition, q.v. This version of this extremely valuable resource has been static since 2015, pending the securing of funding for update and hosting on a permanent basis.

### **Grasses – other resources**

**[Anon.] (2010) A guide to pasture species in NSW.** AgGuide Series. Tocal College, NSW Industry & Investment 144 pp. ISBN 9780731306275.

This is a pasture management guide, but includes some descriptive information and colour photographs of many grass and legume species (and cultivars) used in the industry in NSW.

**Bell U (2008) Common native grasses of south-west WA.** [self-published?, Mundaring WA]. 56 pp. [ISBN lacking]

Covers 44 species with brief plain-English descriptions and fair-quality colour photos. No keys.

**Burbidge NT (1984) Australian grasses. Revised edn.** Angus and Robertson, Sydney. 283 pp. ISBN 0207148392.

Now very outdated, and mainly of historical interest. Species are arranged alphabetically, with descriptions and clear line drawings.

**Charles Sturt University Virtual Herbarium (ongoing) On-Line Grasses Guide.**

**ELECTRONIC RESOURCE – ON-LINE:** <http://www.csu.edu.au/herbarium/> , acc. Aug. 2015.

Provides scanned images of herbarium sheets, and locality information, for all grass specimens in the CSU Herbarium – 50 or so taxa mainly from central and southern NSW.

**Clayton WD, Vorontsova MS, Harman KT & Williamson H (2006 onwards) GrassBase - The Online World Grass Flora.**

<http://www.kew.org/data/grasses-db.html> (accessed 22 June 2015).

**ELECTRONIC RESOURCE: ON-LINE with downloadable files, or fully INTERACTIVE with downloadable app.**

An on-line, interactive identification and information retrieval system drawing from a DELTA database. GrassBase contains detailed technical morphological descriptions of all the world's grass species, with full nomenclatural details plus an indication of global distribution. A linked synonymy

database enables navigation of the many competing names in this huge global family. The descriptions can be browsed or downloaded (free) as static documents for further use, or can be used as the basis for a customised interactive key by installing the linked INTKEY program. Species descriptions also contain some external links for further information. See also Watson & Dallwitz *Grass genera of the world*.

For Australia, the *AusGrass* system (Sharp & Simon 2014, *q.v.*) or various other resources (see *Grasses* and *Grassland Plants* sections of this bibliography) are to be preferred for routine identifications, but this DELTA tools contain a great deal of data and may be useful to the specialist or for newly introduced or cultivated grasses.

**Clifford HT & Watson L (1977) Identifying grasses - data, methods and illustrations.**

University of Queensland Press, St Lucia, Qld. 146 pp. ISBN 0702213128.

Keys to genera in eastern Australia; detailed discussion of grass morphology and variation. Now very dated.

**Crowder S & Siggers B (2010) Grasses of the Northern Territory savannas – a field guide.**

Greening Australia (NT) Ltd. 84 pp. ISBN 9781875345861.

Useful, sturdy ringbound guide to 66 common native and introduced species occurring north from about Tennant Creek. Good plain-language descriptions and notes, including on stock palatability, with fair to good colour photos.

**Department of Agriculture and Food. [2013?] Common plants in the Kimberley. WA**

Department of Agriculture and Food, South Perth.

**ELECTRONIC RESOURCE: ON-LINE.**

<https://www.agric.wa.gov.au/rangelands/common-plants-kimberley> (accessed 27 July 2015).

A basic plain-English resource for the pastoral rangelands, covering 28 species (27 of them grasses): very general descriptions, notes on values as pasture condition indicators and forage, and fair-quality colour photos.

**Elliott M & Watsford P (2008) Grasses of subtropical eastern Australia: an introductory field guide to common grasses – native and introduced.**

Nullum Publications (PO Box 1152, Murwillumbah NSW 2484; email [nullumbooks@gmail.com](mailto:nullumbooks@gmail.com)). 105 pp. ISBN-10: 0975682326; ISBN-13: 9780975682326.

Useful spiral-bound field guide to common species for the area roughly Coffs Harbour to Bundaberg and inland to the escarpment. A simple pictorial key to 126 species, with very basic descriptive information, but with fair line drawings and supplemented by a **CD-ROM** of good colour images for each.

**Gibbs J (2001) Grass identification manual -- for everyone : a pictorial guide to recognition of native and exotic grasses in the Northern and Southern Lofty Botanical Regions of South Australia.** University of South Australia, Mawson Lakes, SA. 103 pp. ISBN 0646416197.

Compact spiral bound and field-hardy guide to about 110 species, with very brief descriptions and fair-quality colour photos and line drawings of diagnostic features.

**Hooker NB (2012) Grass genera in Townsville.** School of Marine and Tropical Biology, James

Cook University, Townsville, Qld. 107 pp. [ISBN lacking?]

**ELECTRONIC RESOURCE: free PDF:**

[https://researchonline.jcu.edu.au/22416/1/Grass\\_Genera\\_in\\_Townsville\\_full\\_version\\_2012.pdf](https://researchonline.jcu.edu.au/22416/1/Grass_Genera_in_Townsville_full_version_2012.pdf) A very useful regional resource, comprising a dichotomous key to genera well illustrated with line drawings of diagnostic features; sets of diagnostic characters for the various tribes of the family in the area; and generic treatments with lists of local species (and in some cases species-level detail). Good line illustrations, sheet scans, and colour photos throughout.

**Hooker NB & Jackes BR (2009) Grasses of James Cook University, Townsville Campus. Part A: A pictorial key to grass genera in North Queensland:** 30 pp. ISBN 9780980558616 (pdf).

Free PDF formerly on-line at <http://researchonline.jcu.edu.au/2103/> is no longer available at April 2019; users please advise of any new internet location.

A very user-friendly and heavily illustrated non-interactive dichotomous key to genera, followed by tabulated diagnostic characters for grass Tribes in the region. Don't be misled by the first part of the title – as the second clause indicates, this Part A (but not Part B – see next) is designed to be applicable to the Queensland pastoral districts of Cook, North Kennedy and Burke, i.e. Qld north of a line roughly Mackay to Cloncurry.

**Hooker NB (2009) Grasses of James Cook University, Townsville Campus. Part B: Generic descriptions and key to species.** 102 pp. ISBN: 9780980558623 (pdf)

Free PDF formerly on-line at <http://researchonline.jcu.edu.au/2104/> is no longer available at April 2019; users please advise of any new internet location.

A non-interactive 'artificial' dichotomous key to species, with brief plain-English genus descriptions and species descriptions mostly embedded in the terminal key leads. Illustrated with fair-quality scans of herbarium specimens and some colour photos. Also includes lists of grass species by habitat. The PDF format is a little irritating in the absence of internal navigation tools (other than page numbers) to locate the start of each artificial group.

A brief "Addendum to *Grasses of James Cook University, Townsville Campus Part B*", with a couple of errata and a list of four additional grasses found on the JCU campus, was formerly available from the SGAP Queensland website – current internet location of this document unknown.

**Jacobs SWL, Whalley RDB, and Wheeler DJB (2008) Grasses of New South Wales. 4th edition.** University of New England, Armidale NSW. 450 pp. ISBN 9781921208225.

Spiral-bound field guide with detailed introductory chapters on grass morphology and classification, three keys to genera (one pictorial), and then brief but detailed descriptions of genera and species with diagnostic line drawings. RECOMMENDED

**Jessop J, Dashorst GRM, James FM (2006) Grasses of South Australia – an illustrated guide to the native and naturalised species.** Wakefield Press, Kent Town, SA. 554 pp. ISBN 186254 6940.

Comprehensive for the State. Detailed descriptions, notes on synonymy, distribution, habitat; Keys. Excellent line illustrations for each species, and a few in colour. RECOMMENDED

**Klaphake V (2010) Guide to the grasses of Sydney.** Self-published (470 Bulli Creek Rd, Byabarra NSW 2446; phone 02 6587 1210). 107 pp. (No ISBN).

Simple illustrated keys, with minimal text and lots of good quality line drawings. covering 171 native and introduced grass species of the area (about half the total) in 76 genera. Previous editions (2003, 2004, 2005, 2006, published as “Guide to the commoner species of grasses of Sydney”, cover fewer species and are out-dated. See also next entry.

**Klaphake V (2002) Key to the grasses of Sydney.** Self-published (470 Bulli Creek Rd, Byabarra NSW 2446; phone 02 6587 1210). 176 pp. (No ISBN).

A more comprehensive work than Klaphake (2010), covering about 300 species, more than 90% of those in the area, but now somewhat dated. Simple keys, with minimal text and lots of good quality line drawings.

**Klaphake V (2005) Guide to the grasses of the Blue Mountains.** Self-published (470 Bulli Creek Rd, Byabarra NSW 2446; phone 02 6587 1210). 104 pp. (No ISBN).

With 184 native and introduced grass species this covers almost all those occurring in the Blue Mountains area. Simple keys, with minimal text and lots of good quality line drawings to illustrate species and key characters.

**Lamp CA, Forbes SJ, & Cade JW (2001) Grasses of temperate Australia : a field guide. Rev. edn.** C.H. Jerram, Bloomings Books, Melbourne, Vic. 310 pp. ISBN 0646411896.

Lists over 100 species of economic, horticultural or weed interest, with line drawings and some colour photos.. An illustrated key aids identification.

**Lane P, Morris D, & Shannon G (1999) Common grasses of Tasmania : an agriculturists' guide.** Tasmanian Environment Centre, Hobart. 83 pp. ISBN 090916018X.

Covers 41 species, with plain-English descriptions, notes on habitat and agricultural significance, and comments on similar species, with fair-quality line-drawings; no keys.

**MacDonald S & Haslam S (2009) Grasses – native and introduced grasses of the Noosa Biosphere Reserve and Surrounding Regions.** Noosa Integrated Catchment Association Inc. [P.O. Box 172, Tewantin Qld 4565; email [admin@noosariver.com.au](mailto:admin@noosariver.com.au)]. 140 pp. ISBN-13: 9780646509822.

A large-format book (A4) featuring full size colour images of 108 grasses (63 native and 45 introduced), scanned in colour from fresh-pressed specimens, with brief descriptive information. No keys.

**Mitchell M (2002) Native grasses : identification handbook for temperate Australia. 3<sup>rd</sup> edn.** Landlinks Press, Collingwood, Vic. 43 pp. ISBN 064306656X.

Describes and illustrates only 17 widespread species. Spiral bound.

**Muir S, Rose HI, McCormick LH (undated – 2009?) Grasses of the Border Rivers-Gwydir Catchments Field Guide.** NSW Dept of Industry & Investment / Border Rivers-Gwydir Catchment Management Authority. 115 pp. ISBN 9780 734719621.

Ring-bound field guide to almost 100 native and introduced species of this region of north-central NSW. Short plain-English descriptions, distributional and management information, and excellent

colour photos.

**NSW Department of Primary Industries (2016) Grasses of the NSW slopes and adjacent plains.** NSW Department of Primary Industries, Tocal College, NSW (<https://www.tocal.nsw.edu.au/publications>). 170 pp.

Field-hardy easy reference guide to a selection of the more common species, with good starter notes on grass structure and diagnostic features, colour images, plain-English text.

**Paterson JG (1992) Description and key to the identification of grasses in south-western Australia. 2nd edn.** Western Australian Department of Agriculture, Perth. (Bulletin 4210) 110 pp. [ISBN lacking?]

Covers 216 common species of the south-west; some are treated in short notes under a genus heading, others are given longer treatments. Adequate line illustrations. Contains a simple branching key.

**Roberts BR & Silcock RG (1993) Western grasses : a grazier's guide to the grasses of south west Queensland. 'Management edition'.** USQ Press, Toowoomba, Qld. 141 pp. ISBN 0949414603.

Covers c. 50 grass species, with a tabular key that does not require a microscope. Short descriptions, notes on soils and fodder value, and line drawings. Introductory chapters on management in pasture. Supersedes 1982 edition (Darling Downs Institute Press, Toowoomba, Qld, ISBN 0909306281).

**Rolfe J, Golding T & Cowan D (1998) Is your pasture past it? The glove box guide to native pasture identification in north Queensland.**

Queensland Department of Primary Industries, Brisbane. Information Series QI97083. 67 pp. ISBN-10: 0724267506; ISBN-13: 9780724267507.

An illustrated guide to native (and some non-native) pasture grasses in the Cape York Peninsula, Mareeba, Dalrymple, northeast Flinders, and Bowen districts. Also has notes on the growth behaviour, forage value, and condition-indicator value of each species.

**Romanowski N (2011) Australian grasses: a gardener's guide to native grasses, sedges, rushes and grasstrees.** Hyland House. 192 pp. ISBN 9781864471168.

Not comprehensive for any of the title groups, but describes about 200 species, illustrated with colour photos, and supplemented by cultivation info.

**Rose H, Rose C, Campbell T [2007?] Grasses of the North Coast of NSW.** NSW Department of Primary Industry. 82 pp. ISBN 073471775X.

Covers 74 common species, with good photos, dot-point descriptions, and notes on distribution, management, and similar species. No identification keys. Pretty much superseded by Rose & Rose (2012) – see next.

**Rose H & Rose C (2012) Grasses of coastal NSW.** NSW Department of Primary Industries (enquiries: Continuing Education, Tocal College, Paterson NSW 2421, email [info@tocal.com](mailto:info@tocal.com)). 208 pp. ISBN 9781742562605.

Fair-quality photos and short descriptive notes for about 260 of the 450 grasses (native and exotic)

that occur in the coastal strip of NSW, plus notes on distribution, significance and management. Good graphic intro to the structure of the plant and flowering parts. No keys.

**Rose H, Kidson J, Rose C & Edwards C (2013) Grasses of the NSW Tablelands.** NSW Department of Primary Industries. 176 pp. ISBN 9781742565507.

Comb-bound guide to about 180 native and introduced species, with good colour photos and brief plain-language descriptions, plus notes on similar species, management, and distribution.

**Shaw R & Fesuk S (2003) Grasses of the northern rangelands.** Centre for Pest Information Technology & Transfer, University of Queensland. (1 CD-ROM) No ISBN.

**ELECTRONIC RESOURCE, INTERACTIVE – on CD-ROM**

CD-ROM interactive identification key, running on the LUCID system, plus species information including descriptions, distributions, ecology, management and economic role.

NOT SEEN OR EVALUATED: an evaluation in *Bush Tracks* (Greening Australia, 2004) states “it is a bit difficult to get started at first as there are no instructions or introduction”.

**Simon BK (1993) A key to Australian grasses. 2<sup>nd</sup> edn.** Queensland Department of Primary Industry, Brisbane. 206 pp. ISBN 0724253815.

Keys to all genera and species; now very dated.

**Simon BK & Latz P (1994) A key to the grasses of the Northern Territory, Australia.** , Conservation Commission of the Northern Territory, Palmerston, NT. (Northern Territory botanical bulletin no.17) 71 pp. ISBN 0724527222.

An on-line free PDF formerly at <http://www.lrm.nt.gov.au/plants-and-animals/herbarium/identifying-plants> appears to be no longer available.

Bare keys to genera and species; no illustrations.

**Watsford P (2004) Grasses of the Tweed Valley of NSW. An introductory guide to locally common grasses: native and introduced.** Nullum Publications (PO Box 1152 Murwillumbah NSW 2484). 83 pp. ISBN 097568230X.

Covers 35 common grass species with good plain-English descriptions, notes on habitat and similar species, and fair-quality line drawings. 15 sedges, rushes and other ‘grass-likes’ are given abbreviated treatment, and a useful list is provided of the 107 grasses that occur in the Tweed.

**Watson L & Dallwitz MJ (1992 onwards). Grass genera of the world: descriptions, illustrations, identification, and information retrieval; including synonyms, morphology, anatomy, physiology, phytochemistry, cytology, classification, pathogens, world and local distribution, and references.** Version: 2<sup>nd</sup> April 2015. (No ISBN).

**ELECTRONIC RESOURCE: ON-LINE with downloadable files (also available on DVD), or fully INTERACTIVE with downloadable app.** Website: <http://delta-intkey.com/www/data.htm>

An on-line, interactive identification and information retrieval system drawing from a DELTA database. Descriptive data is directly available on the website, or as a DVD; the interactive identification component requires downloading (free) of the linked Intkey app. The database contains detailed morphological, anatomical and physiological descriptions of over 800 grass

genera. Detailed notes are lacking for many characters, but the copious character illustrations facilitate differentiating between character states. INTKEY allows generation of lists of genera exhibiting or lacking particular features or combinations of features, and to cross-reference attributes to geographical distributions. The package is illustrated with exemplar line drawings, photographs and micrographs.

The *AusGrass* system (Sharp & Simon 2014, *q.v.*) or various other resources (see *Grasses* and *Grassland Plants* sections of this bibliography) are to be preferred for routine identifications, but this DELTA system contains a great deal of data and may be useful to the specialist or for newly introduced or cultivated grasses. See also Clayton et al. *Grassbase – online world grass flora* for a similar DELTA-format global approach down to species level.

**Weiller CM, Henwood MJ, Lenz J, & Watson L (1995- ?). Pooideae (Poaceae) in Australia - descriptions and illustrations.** No ISBN.

**ELECTRONIC RESOURCE: ON-LINE:** <http://biodiversity.uno.edu/delta/pooid/www/index.htm>

A mothballed incomplete project. The descriptions provided on this site cover six tribes, 59 genera and 303 taxa of specific and subspecific rank of the subfamily Pooideae in Australia. Some of the images referred to in the descriptions are not yet available, and part of the genus *Bromus* and several species from tribe Aveneae are not included.

The *AusGrass* system (Sharp & Simon 2002, *q.v.*) or various of the recommended hardcopy resources are to be preferred.

**Jacobs SWL, Whalley RDB, & Wheeler DJB (2008) Grasses of New South Wales. 4<sup>th</sup> edn.** University of New England, Armidale, NSW. 450 pp. ISBN 9781921208225.

Very useful, the best hard-copy fieldbook for the State. Spiral-bound A4 format. Many line illustrations and picture-keys to genera. RECOMMENDED. The third (2002) edition, authored as Wheeler, Jacobs & Whalley, remains useful but some names are obsolete.