Margaret Preston, Banksia tree. *Plate 26 in* Margaret Preston's monotypes, *edited by Sydney Ure Smith, Sydney, no date (1949).*

CHAPTER 12

FLORA

ALEX GEORGE AND ALISON McCUSKER

LITERATURE ON THE plants of Australia is extensive and spread through many thousands of publications. Although most of these are written in English, there are important works in other languages, particularly German, French and Latin. There is no complete bibliography of this literature and the present list is only a guide to the major historical and modern works. Several of those listed are themselves bibliographic, notably Burbidge (1963, 1978), and many others contain good reading lists on their special subjects.

The earliest writings on Australian flora were those of William Dampier who collected plants on the northwest coast in 1699 (W. Dampier, *A voyage to New Holland*, London, James Knapton, 1703 and 1709; facs, Gloucester, Alan Sutton, 1981). Some of his specimens were described in 1704 by John Ray (*Historia plantarum*, London, vol 3, Appendix: 225–6), before the modern system of naming plants was developed by Linnaeus. Dampier's collection was reviewed by A.S. George in *The Western Australian naturalist* (11, 8, 1971, 173–8). The first Australian plants named under the Linnaean system were described by N.L. Burmann in his *Flora Indica* (Amsterdam, Lugduni Batavorum, 1768, 233–5). Two years later, extensive botanical investigation began on the east coast of the continent with the visit of Joseph Banks and Daniel Solander on Cook's first voyage of 1768–71.

Botanical exploration and writing began in earnest following European settlement in 1788, and by 1810 several significant works had appeared. Besides those listed below, an important early account of the plants of the Sydney region was 'Observaciones sobre el suelo, naturales y plantas del Puerto Jackson y Bahia-Botanica' by the Spaniard Antonio Cavanilles (*Annales de historia natural* 3, 1800, 206–39). This was based on the collections of Luis Née and Fadeo Haenke, gathered on the Malaspina expedition which visited Sydney in 1793.

Collections and notes by pioneer settler James Drummond formed the basis of a similar paper on the flora of the Swan River colony. Written by John Lindley, this was published as *Sketch of the vegetation of the Swan River colony of Western Australia . . . together with an alphabetical and systematic index to the first twenty-three volumes of Edward's Botanical Register* (London, James Ridgway, 1839–40). It included descriptions of about two hundred new plants.

Early writing on Australian flora was by Europeans who either visited the continent and took back data and specimens, or received collections from explorers and settlers. There were neither botanists nor facilities for the systematic study of plants in Australia. The collectors and explorers themselves, however, often described the vegetation in their journals, especially in relation to its

pastoral potential, and in some cases botanists contributed appendices describing the plants. Robert Brown made such a contribution to Charles Sturt's *Narrative of an expedition into central Australia* (1849; facs, LBSA, 1965), while John Lindley did likewise for Thomas Mitchell's *Journal of an expedition into the interior of tropical Australia* (1848; facs, Greenwood Press, 1967). Later in the nineteenth century Ralph Tate contributed the botanical text to the *Report on the work of the Horn Scientific Expedition to central Australia* (London, Dulau, 1896), while together with Ferdinand von Mueller he wrote a similar contribution for the report of the Elder Exploring Expedition which in 1891–92 travelled from South Australia through the Great Victoria Desert to Perth (*Transactions of the Royal Society of South Australia* 16, 3, 1896, 333–83).

The English botanist Joseph Hooker, who visited Tasmania during the Ross voyage of exploration in southern regions in 1839–43, made an important contribution to the knowledge of Australian plants. In Tasmania he botanised extensively with the resident magistrate Ronald Gunn. Back in England he worked up the collections and wrote a long essay on the plant geography of Australia (Hooker, 1855–59).

By the 1820s attempts were being made to foster research on Australian flora, but it was not until the arrival of Mueller in 1847 that indigenous botany began to flourish. Mueller dominated Australian botany for 50 years. He explored many parts of the continent, had contact with collectors who sent him plant specimens from all states, and corresponded widely overseas. He was director of the botanic gardens and herbarium in Melbourne from 1853 to 1873 and continued as government botanist of Victoria until his death in 1896. In his writings he concentrated on descriptive botany, naming many genera and species and compiling floristic lists for Victoria and Australia. He also wrote on economic botany (especially forestry), on the acclimatisation of plants, and on medicinal and drug plants. A bibliography of over one thousand publications by Mueller has recently been compiled (D.M. Churchill, T.B. Muir and D.M. Sinkora, 'The published works of Ferdinand J.H. Mueller (1825–1896)', *Muelleria* 4, 1, 1978, 1–120; 4, 2, 1979, 123–68; 5, 4, 1984, 229–48).

It was Mueller's ambition to prepare the first complete Australian flora in which all plants known for the continent would be described. He was dissuaded from doing so by botanists in England, chiefly because the major historical collections, an essential source of reference, were stored in herbaria in Britain and Europe. The task fell instead to George Bentham, a dedicated English botanist. Working mainly at the Royal Botanic Gardens, Kew, Bentham described 8125 species in his *Flora Australiensis* (1863–78; facs, 1967); it has remained until recently the most important single reference work on Australian plants and is only now being superseded by the new *Flora of Australia* (1981–).

By the time the last volume of *Flora Australiensis* was published, amateur and professional botanists were active in most states and were beginning to produce books and papers, such as McAlpine's census of fungi (1895) which brought together information on these plants for the first time. The increasing impact of exotic plants following land clearing can be seen in two original works on weeds, J. McC. Black (1909) and A.J. Ewart and J.R. Tovey, *The weeds, poison plants, and naturalised aliens of Victoria* (Melbourne, Government Printer, 1909).

In the twentieth century research on Australian flora has been undertaken increasingly by resident botanists, although European botanists continued to play a major role in the early decades. Just before 1900 the Englishman Spencer Le Marchant Moore visited the newly discovered goldfields of Western Australia and made the first extensive botanical survey of the region. His results—descriptions of plants, a floristic analysis and observations on adaptations to drought—appeared in 1898 in the *J of the Linnean Society—Botany* 34, 1898–1900, 171–261.

Two Germans, Ludwig Diels and Ernst Pritzel, visited Western Australia in 1900–01 and botanised extensively there. They published their taxonomic results mainly in the paper 'Fragmenta phytographiae Australiae Occidentalis' (1904). Diels wrote a seminal work in German on the vegetation and plant geography of the state, *Die Pflanzenwelt von West-Australien* (1906), as well as a worldwide taxonomic revision of the family Droseraceae (sundews), which includes many Australian species (*Das Pflanzenreich* 26, 1906, 1–137).

In 1914 the Danish botanist Carl E.H. Ostenfeld also carried out fieldwork in Western Australia, travelling as far north as Derby. He published the results in three papers, in *Dansk botanisk arkiv* 2, 6, 1916, 1–44, and 2, 8, 1918, 1–66, and in *Biologiske meddelelser Kongelige Danske Videnskabernes Selskab* 3, 2, 1921, 1–144. The first was a major paper on Australian seagrasses.

On the other side of Australia the Czech Karel Domin travelled widely in Queensland where he described the vegetation and collected many specimens. His work appeared as *Beiträge zur Flora und Pflanzengeographie Australiens* (Stuttgart, E. Schweizerbart, 1914–29) in the series *Bibliotheca botanica*, Hefte 85 and 89. Domin also described new species from Australian specimens that he studied in collections at the Royal Botanic Gardens, Kew.

Until about 1950 Australian botanists with a few exceptions dominated taxonomic research in their own states—C.A. Gardner in Western Australia; J.M. Black, J.B. Cleland and R.S. Rogers in South Australia; F.M. Bailey, C.T. White and W.D. Francis in Queensland; R.H. Anderson, W.F. Blakely and J.H. Maiden in New South Wales; A.J. Ewart and W.H. Nicholls in Victoria; and L. Rodway in Tasmania. The later years of this period also saw the emergence of several who were to become major figures in the postwar era: J.H. Willis (Victoria), J.W. Vickery and L.A.S. Johnson (New South Wales), N.T. Burbidge (Australian Capital Territory) and S.T. Blake (Queensland).

During the past thirty years botanical institutions in most states have been able to expand both staff and facilities, resulting in studies of a wide range of plant groups. Books and research papers have appeared steadily. The *Australian J of botany*, published since 1953 by CSIRO, contains papers on taxonomy, ecology and other aspects of botany. Other significant journals are those of the Royal Society in each state and the *Proceedings of the Linnean Society of New South Wales*; these publish papers from all the natural sciences. The major Australian herbaria now issue house journals containing taxonomic and ecological contributions.

There was no resident botanist in the Northern Territory until the arrival of G.M. Chippendale in the 1950s to establish a herbarium at Alice Springs. Chippendale published a 'Check list of Northern Territory plants' (*Proceedings of the Linnean Society of New South Wales* 96, 4, 1972, 207–67) which also provided data on plant distribution on a broad scale. In 1981, some 50 botanists contributed to the *Flora of central Australia*, edited by J.P. Jessop, which described the plants of the whole arid region of the continent.

While much taxomony has been of a regional or ad hoc nature, there is a current trend towards Australia-wide studies of genera and families. This trend will become dominant over the next twenty years while the new *Flora of Australia*, begun in 1981, is produced.

While many families of Australian plants have been or are now being studied in detail, some groups have been written about more extensively than others. Prominent among these is the genus *Eucalyptus*, containing about six hundred species, which occurs in most regions of Australia and is of major botanical and economic importance. The first species to be described, *E. obliqua*, was published by C.L. L'Héritier de Brutelle in *Sertum Anglicum* (Paris, Didot, 1789, 18) and the discovery of new species is still continuing. Mueller (1879–84) recognised the importance of the genus and was followed by J.H. Maiden's elaborate work (1903–33). W.F. Blakely (1934; 1965) was also an essential text for students of the genus for many years. Tropical eucalypts were the subject of a detailed revision by the Queensland botanist S.T. Blake, published as 'Studies on northern Australian species of *Eucalyptus*' in the *Australian J of botany* 1, 2, 1953, 185–352. In Western Australia C.A. Gardner produced the series 'Trees of Western Australia' in the *J of Agriculture* with fine line drawings of 117 eucalypts, later brought together as *Eucalypts of Western Australia* (Perth, Western Australian Dept of Agriculture, 1979).

Taxonomic and morphological studies of *Eucalyptus* have continued to flourish. An important paper 'Developmental morphology of the floral organs of *Eucalyptus*, 1. The inflorescence', by D.J. and S.G.M. Carr (*Australian J of botany* 7, 2, 1959, 109–41), opened up new avenues of investigation. A new classification was proposed in 1971 by L.D. Pryor and L.A.S. Johnson (*A classification of the eucalypts*, Canberra, Australian National University). A significant popular work is S. Kelly's *Eucalypts* (Melbourne, Nelson, 1969–78, 2 vols), featuring watercolour paintings of several hundred species; a little-known forerunner of this work was *40 Australian eucalypts in*

colour (Sydney, Dymock's Book Arcade, 1949). Of more specialised nature is *Eucalyptus seed* (Canberra, CSIRO, 1980); besides illustrating the seed of each species, the book describes reproduction, seed morphology and classification, commercial seed production and testing, and germination procedures. It includes an extensive bibliography and a glossary. N. Hall's *Botanists of the eucalypts* (Melbourne, CSIRO, 1978) details all the people who have been involved in the discovery and naming of eucalypts.

The Australian flora also contains a large number of grasses, both native and introduced. Many are economically important, especially as pasture plants, and some are dominant components of the vegetation. Studies of their taxonomy were rather spasmodic until the 1930s when a visit by the English botanist C.E. Hubbard inspired more extensive systematic work, with outstanding contributions by S.T. Blake, whose many detailed systematic surveys were published from the 1940s to the early 1970s, mostly in the *Proceedings of the Royal Society of Queensland, contributions from the Queensland Herbarium* and in papers published by the University of Queensland.

Nancy T. Burbidge, working first in Perth and later in Canberra, studied the genus *Triodia* (spinifexes) and published a revision of the genus in the *Australian J of botany* (1, 1, 1953, 121–84). Burbidge also wrote three volumes in the series *Australian grasses* (A & R, 1966–70) which contain line drawings and semitechnical descriptions of the grasses of several regions.

In Western Australia C.A. Gardner's only volume (1952) of a planned state flora dealt with grasses. More recently M. Lazarides, working in Canberra, has made extensive studies of grasses and published several books and many papers. In *The grasses of central Australia* (ANUP, 1970), he provided a taxonomic and ecological account of the species of the arid regions; his taxonomic papers have appeared mainly in the *Australian J of botany* and *Brunonia* (for example, 3, 2, 1980, 271–333). Joyce W. Vickery, based at Sydney, also wrote extensively on grasses, publishing mainly in *Contributions from the National Herbarium of New South Wales*. Foremost among her papers were revisions of the Australian species of *Festuca* (1939), *Deyeuxia* (1940), *Agrostis* (1941), *Danthonia* (1956) and *Poa* (1970). In Brisbane Blake's work on grasses has been continued by B.K. Simon who, besides taxonomic papers, has produced *A preliminary check-list of Australian grasses* (Technical bulletin 3, Dept of Primary Industries, Botany Branch, Brisbane, 1978), listing all native and introduced species.

Grasses have been the subject of one of the first applications of the computer to plant taxonomy in Australia. *Australian grass genera* by L. Watson and M.J. Dallwitz (Canberra, Australian National University, 1980) contains highly technical descriptions and keys for all genera in Australia, produced by computer from a data bank. An update on microfiche was produced in August 1981.

Inevitably the orchids have attracted much attention in Australia as they have elsewhere in the world, and here major contributions have come from amateur botanists. In the nineteenth century the surveyor R.D. Fitzgerald took up the tradition of fine botanical art and combined it with taxonomy to produce *Australian orchids* (1875–94; facs, 1977). Early this century a South Australian medical practitioner, R.S. Rogers, became the Australian authority on orchids and wrote, besides many papers, *An introduction to the study of South Australian orchids* (Adelaide, Government Printer, 1911). Following him came W.H. Nicholls in Victoria and the Rev H.M.R. Rupp in New South Wales, both prolific writers. Many of Nicholls's papers appeared in the *Victorian naturalist* and his work culminated in the posthumously published *Orchids of Australia* (1969). Rupp published mostly in the *Proceedings of the Linnean Society of New South Wales*; his major work was *The orchids of New South Wales* (Sydney, Government Printer, 1943). In Western Australia, semipopular works were *West Australian orchids* by Emily Pelloe (Perth, The Author, 1930) and *Orchids of the west* by Rica Erickson (Perth, Paterson Brokensha, 1951), each illustrated by its author. A similar book was *Native orchids of Tasmania* by M.J. Firth (Devonport, Tas, C.L. Richmond 1965). Of historical interest is Rosa Fiveash's *Australian orchids* with text by N. Lothian (Adelaide, Rigby, 1974), which reproduced 99 watercolour paintings by Fiveash, who also illustrated many of R.S. Rogers's works.

The wattles of the genus *Acacia*, so numerous in Australia, have been widely studied for many

years and are being even more intensively investigated today. More than 700 Australian species have been named by botanists but there has not been an account of the genus as a whole for Australia since that by George Bentham in *Flora Australiensis* 1 (1864; facs, 1967) which covered the 293 species known at the time. Ferdinand von Mueller, besides naming new acacias in many papers, made a special study which included detailed lithographs, published in thirteen parts as *Iconography of Australian species of Acacia and cognate genera* (Melbourne, Government Printer, 1887–88). Early this century J.H. Maiden and W.F. Blakely extensively studied *Acacia*, especially the collections of W.V. Fitzgerald and others in Western Australia. They described 50 new species in the *J of the Royal Society of Western Australia* (13, 1927. 1–36).

More recently there have been studies of *Acacia*, essentially on a state or regional basis. Significant publications resulting from this work include *Acacias of South Australia* by D.J.E. Whibley (Adelaide, Government Printer, 1980) and 'A revision of Acacia Mill. in Queensland' by L. Pedley in *Austrobaileya* 1, 1978–79, 75–337. Important papers on the taxonomy of *Acacia* have been published by Mary D. Tindale, mainly in the series *Contributions from the National Herbarium of New South Wales* and its successor *Telopea* and by B.R. Maslin, chiefly in *Nuytsia*, the bulletin of the Western Australian Herbarium. On a popular note, Marion Simmons' *Acacias of Australia* (Melbourne, Nelson, 1981) provides descriptions, keys for identification, notes on cultivation, line drawings, colour photos and a short bibliography.

From the beginning of European settlement the poisonous and medicinal properties of plants have drawn attention and much has been written about them. The first important synthesis was E. Hurst's *The poison plants of New South Wales* (Sydney, Poison Plants Committee, 1942). In 1948 CSIRO published L.J. Webb's *Guide to the medicinal and poisonous plants of Queensland* which included an extensive bibliography. A similar but more elaborate work was by C.A. Gardner and H.W. Bennetts (1956). The most comprehensive work to date is S.L. Everist (1974).

Australian botanical literature reflects the concentration of research on the flowering plants. Ferns and gymnosperms have usually been included in floras but have rarely been treated in specialist publications. One of the earliest such works was *Victorian ferns* by R.W. Bond (Melbourne, Field Naturalists' Club of Victoria, 1934), revised by N.A. Wakefield as *Ferns of Victoria and Tasmania* (1955). Two recent books have covered all Australian ferns. *Australian ferns and fern allies* by D.L. Jones and S.C. Clemesha (Sydney, Reed, 1976) gave illustrated descriptions and cultivation notes for 312 species; *Ferns, fern allies and conifers of Australia* by H.T. Clifford and J. Constantine (UQP, 1980) provided keys to families, genera and species.

The non-vascular plants—fungi, algae, lichens, mosses and liverworts—have similarly not fared well. The only nineteenth-century works of note were W.H. Harvey (1858–63) and D. McAlpine (1895). J.B. Cleland (1934) was for many years the only useful reference to these plants in southern Australia. Two very good recent handbooks, both well illustrated, are *Fungi of south-eastern Australia* by E. Macdonald and J. Westerman (Melbourne, Nelson, 1979), and *Common Australian fungi* by A.M. Young (UNSWP, 1982), with a key to genera.

Following Harvey's work, research and writing on algae was intermittent for decades. A.H.S. Lucas (1936–47) is still the only comprehensive work, although the recent *Seaweeds of Australia* by B. Fuhrer *et al* (Sydney, Reed, 1981) provides excellent colour photographs of common species. Over the past few decades detailed studies of some algal groups have been made by H.B.S. Womersley in Adelaide and V. May in Sydney.

Descriptions of Australian mosses and liverworts were first brought together by L.A. Rodway (1914–16) but sixty years passed before the next major work, G.A.M. Scott and I.G. Stone (1976). The liverworts are described in *Southern Australian liverworts* by G.A.M. Scott (AGPS, 1985).

Australian lichens, too, were originally described in divers publications. The first workers to bring them together for an Australian region were R.B. Filson and R.W. Rogers (1979). A review of lichens at the generic level has been provided by R.W. Rogers (1981). This technical book gives keys to genera and detailed descriptions.

Many local and regional descriptive studies of vegetation have been made, but there are few comprehensive works on a state or continental scale. A pioneer account was J.G. Wood's *The*

vegetation of South Australia (Adelaide, Government Printer, 1937), extensively rewritten by R.L. Specht (1972). Complementing this work is *The native forest and woodland vegetation of South Australia* by C.D. Boomsma and N.G. Lewis (South Australia, Woods and Forests Dept, Bulletin 25, undated) which describes plant communities and forest formations and gives details of the distribution of individual species. The yearbooks published by the Australian Bureau of Statistics for each state contain concise accounts of flora and vegetation.

A major descriptive work on regional vegetation was that of N.C.W. Beadle (1948). This was followed by a similar study by A.B. Costin, *A study of the ecosystems of the Monaro region of New South Wales with special reference to soil erosion* (Sydney, Government Printer, 1954). In the 1950s and 1960s CSIRO embarked on a series of studies of the pastoral regions of Australia. These included investigations of soil, landform, climate and vegetation, and saw publication as the *CSIRO land research series*, over twenty of which have appeared since 1953. Besides large-scale maps they contain many black and white photographs. In the 1960s J.S. Beard began mapping the vegetation of Western Australia. This project resulted in the series *Vegetation survey of Western Australia 1: 250 000 Series* (Perth, Vegmap Publications, 1972–80) and the *1: 1 000 000 Series* (UWAP, 1974–81). Each issue contains a vegetation map and a text describing the vegetation formation, landforms, geology and climate. Two major syntheses appeared almost simultaneously in 1981, both published by Cambridge University Press. *The vegetation of Australia* by N.C.W. Beadle provides descriptions and black and white photographs of all plant communities and their alliances. It also covers the environment, floristics, evolution and physiological adaptations. In *Australian vegetation*, edited by R.H. Groves, 22 authors have contributed chapters on the major vegetation types, as well as phytogeography, evolution of the flora, conservation and alien plants.

The most important early work on Australian phytogeography was that of J.D. Hooker (1855); indeed, it was the only work of real significance in this field until Diels (1906) wrote on the phytogeography of southern Western Australia in more detail. A further assessment of West Australian vegetation was made by C.A. Gardner in 'The vegetation of Western Australia', (*J of the Royal Society of Western Australia* 28, 1942, xi–lxxxvi); his concepts were greatly expanded by N.T. Burbidge (1960) to cover the whole continent. Since Gardner's time the theory of continental drift has gained wider acceptance and influenced thought on plant distribution. A synthesis of current opinion of Australian phytogeography has been provided by B.A. Barlow in 'The Australian flora: its origin and evolution', (*Flora of Australia* 1, 1981, 25–75).

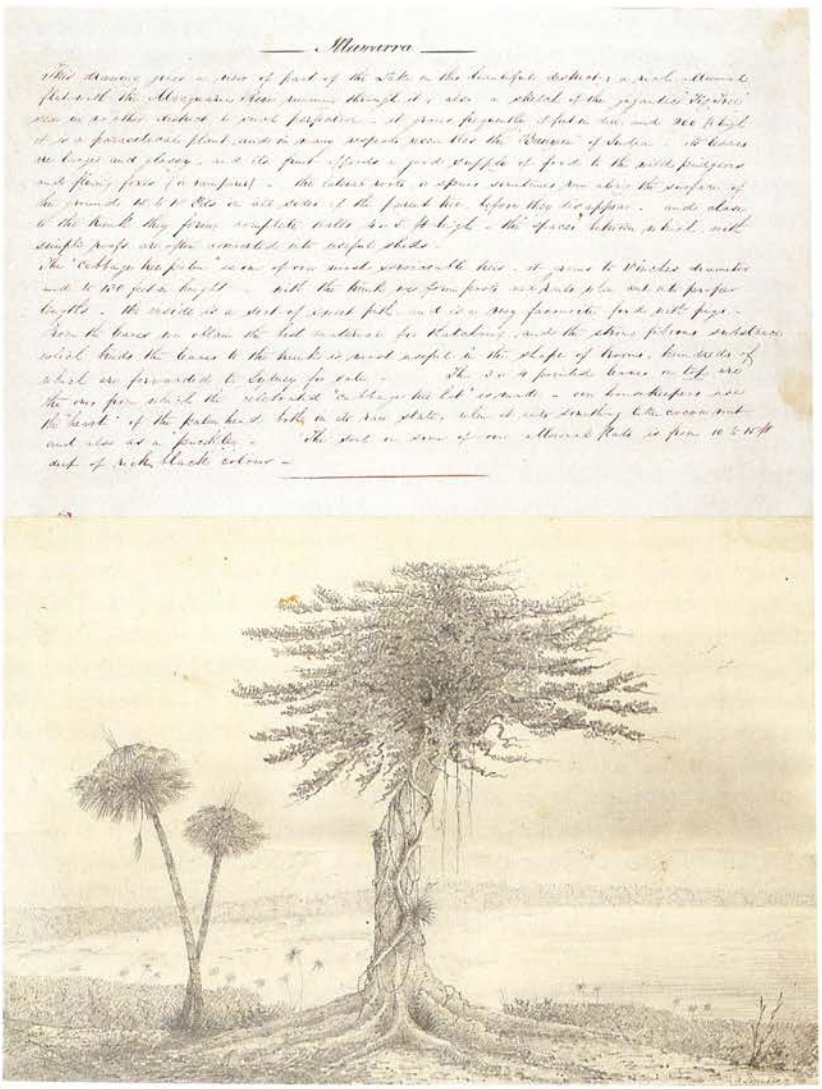
Popular writing on Australian flora has begun to flourish only recently, although two early books of note were *Western Australian wildflowers* by Emily Pelloe (Melbourne, de Garis, 1921) and the *The native flowers of Victoria* by E.E. Pescott (Melbourne, Robertson, 1914). Thistle Y. Harris (1948, 1953) gave the genre an impetus after World War II, but the formation of wildflower societies and an active environmental movement during the past 25 years led to a wider interest and market. Popular demand led to the *Flowers and plants* series being promoted by the publisher A.H. & A.W. Reed. Recently Costermans (1981) followed in the same vein.

On the cultivation of native plants two significant works are *Australian native plants* by J.W. Wrigley and M. Fagg (Sydney, Collins, 1979) and the *Encyclopaedia of Australian plants* by W.R. Elliott and D.L. Jones (Melbourne, Lothian, 1980–). Both contain many colour photographs.

The Society for Growing Australian Plants has been very active in promoting the cultivation of native flora. It publishes a regular journal, *Australian plants*, which first appeared in December 1959. The society has produced guides such as *Western Australian plants for horticulture* by K. Newbey (part 1 1968, part 2 1972), *The language of botany* by C.N. Debenham (1962), *Cradle of incense* by G.W. Althofer (1978), *Prostanthera* (mint bushes), *Acacias of New South Wales* by I. Armitage (1977) and *Australian plant genera* by J.A. Baines (1981). The latter is a very useful reference on the meaning of generic names and includes information on the distribution and number of species in each genus. *Western Australian plant names and their meanings* by F.A. Sharr (UWAP, 1978), provides the meanings not only of genera but also of all species in that state.

Archival material on Australian botany can be difficult to locate since it is spread through many

institutions. The journals and correspondence of many early collectors and botanists are housed in Europe, especially at the British Library, the British Museum (Natural History), the Royal Botanic Gardens, Kew, and the Archives Nationales, Paris. In Australia the major herbaria hold fieldbooks, correspondence and manuscripts of botanists employed by or associated with them. Some universities hold material by and on former members of staff, and the Mitchell Library in Sydney, the National Library in Canberra and the Battye Library in Perth are also important repositories. Usually, however, it is a long and tortuous road to trace all the material needed for a detailed study of a particular person. A guide to archival sources can be gained from the bibliographies in chapters of two recent works, *Scientists in nineteenth century Australia: a documentary history* by Ann Mozley Moyal (Melbourne, Cassell, 1976), and the two-volume set *People and plants in Australia* and *Plants and man in Australia* edited by D.J. and S.G.M. Carr (Sydney, Academic Press, 1981).



Abraham Lincolne, Illawarra. *Pencil in his sketchbook,* Australian sketches, *1838–44. Lincolne, who travelled extensively in the Illawarra region in the 1830s and 1840s, accompanied this pencil sketch of the fig tree and the cabbage tree palm with a detailed description in which he noted the beauty and various domestic uses of these two native trees.*

MITCHELL LIBRARY

ASTON, H.I. *Aquatic plants of Australia: a guide to the identification of the aquatic ferns and flowering plants of Australia, both native and naturalized.* MUP, 1973. 368 p, illus, maps.

Descriptions, distribution and ecology of over 200 species. Keys for identification. Extensive bibliography.

BAILEY, F.M. *The Queensland flora.* Brisbane, Diddams, 1899–1905. 7 vols, illus.

Largely extracted from Bentham's *Flora Australiensis* with additional records and species. Descriptions and keys. Some rare species illustrated. Vol 7 (not numbered) is a general index.

BAILEY, F.M. *A synopsis of the Queensland flora, containing both the phaenogamous and cryptogamous plants. [With Supplements 1–3].* Brisbane, Government Printer, 1883–90. 4 vols.

A list of orders (= families), genera and species native and naturalised in Qld (1268 genera, 4734 species). Brief descriptions and distributional notes.

BEADLE, N.C.W. *et al, Handbook of the vascular plants of the Sydney district and Blue Mountains.* Armidale, NSW, Privately published, 1962. 597 p, illus, map.

Treats about 1800 indigenous and 420 exotic species of ferns, gymnosperms and flowering plants. Brief keys and descriptions to families and genera, and amplified keys to species. Notes on distribution, habitat and flowering times. A forerunner of *Flora of the Sydney region* (Sydney, Reed, 1972) which covers a slightly larger area and contains some colour plates.

BEADLE, N.C.W. *The vegetation and pastures of western New South Wales, with special reference to soil erosion.* Sydney, Dept of Conservation of NSW, 1948. 281 p, illus, maps.

Describes the soils and vegetation formations of the region. Includes chapters on exploration and settlement, landforms and geology, climate and plant succession. Extensive bibliography.

BENTHAM, G. *Flora Australiensis: a description of the plants of the Australian territory.* London, L. Reeve, 1863–78. 7 vols.

The standard Australian flora for over a century, still useful and widely used. Keys and descriptions for the 8125 species then known. Facsimile edition, A. Archer, 1967.

BLACK, J. McC. *Flora of South Australia.* Adelaide, Government Printer, 1922–29. 4 pts, illus, map.

A very useful concise flora based largely on original work. A second, revised edition issued 1943–55, part 4 revised by Enid L. Robertson. A supplement of 385p by Hansjoerg Eichler, containing many corrections, additions and nomenclatural changes, issued 1965. Part 1, 3rd ed, 466 p, revised and edited by John P. Jessop, issued 1978.

BLACK, J. McC. *The naturalised flora of South Australia.* Adelaide, Privately published, 1909, 192 p, illus.

The first Australian work on the introduced plants of a large region. Contains keys to genera and species, and concise descriptions.

BLACKALL, W.E. AND GRIEVE, B.J. *How to know Western Australian wildflowers.* UWAP, 1954–75. 4 vols, illus.

Illustrated popular keys to the flora of south WA. From part 2 onwards gives general distribution, and from part 3 flowering period. Parts 3A and 3B revised 1980–81; part 4, supplement, issued in 1983.

BLAKELY, W.F. *A key to the eucalypts.* Sydney, The Workers Trustees, 1934, 339 p, illus.

A key and standard reference to all species of *Eucalyptus* then known, together with descriptions, distribution, habitat and flowering times. The third edition published in 1965 includes Forestry and Timber Bureau leaflet no 92 (24 p) by R.D. Johnston and R. Marryatt, bringing the nomenclature up to date.

BLOMBERY, A.M. *What wildflower is that?* Sydney, Hamlyn, 1972. 304 p, illus.

Photographs and brief notes on selected Australian plants. Useful popular introductory work.

BROWN, R. *Prodromus florae Novae Hollandiae et insulae Van Diemen.* London, Richard Taylor, 1810. 145–592 p.

The first flora of Australia, with Latin descriptions, based largely on Brown's collections made from 1801 to 1805. A second volume planned to contain pp 1–144 was never published. The facsimile edition (Weinheim, Bergstr, H.R. Engelmann, 1960) includes the supplement of 1830 and an introduction in English by W.T. Stearn.

BURBIDGE, N.T. *Dictionary of Australian plant genera: gymnosperms and angiosperms.* A & R, 1963. 345 p, maps.

A very useful reference for information on genera, with notes on general distribution and numbers of species.

BURBIDGE, N.T. 'The phytogeography of the Australia region', *Australian J of botany* 8, 2, 1960, 75–211.

A major analysis and discussion of the plant geography of Australia.

BURBIDGE, N.T. *Plant taxonomic literature in Australian libraries.* Melbourne, CSIRO in association with Australian Biological Resources Study, 1978, 520 p.

Over 8000 botanical and related works arranged alphabetically under author, together with a list of libraries where each is held.

BURBIDGE, N.T. AND GRAY, M. *Flora of the Australian Capital Territory.* ANUP, 1970. 447 p, illus.

Lengthy descriptive keys to over 1000 species comprising the flora of the ACT (excluding Jervis Bay area).

CATCHESIDE, D.G. *Mosses of South Australia.* Adelaide, Government Printer, 1980. 364 p, illus. (Handbook of the flora and fauna of SA).

Descriptions of families, genera and species with keys. Chapter on structure, biology, ecology and study techniques. Glossary and bibliography.

CLAYTON, M.N. AND KING, R.J. eds, *Marine botany: an Australian perspective.* Melbourne, Longman Cheshire, 1981. 468 p, illus, maps.

An excellent overview covering history, taxonomy, ecology, biogeography and physiology of marine plants. Also includes chapters on mangroves, salt marshes and coral reefs. Extensive bibliography.

CLELAND, J.B. *Toadstools and mushrooms and other large fungi of South Australia.* Adelaide, Government Printer, 1934–35. 2 vols, illus.

Descriptions of families, genera and 578 species. Keys for identification. Chapters on structure, biology, toxicity and collection of fungi. Glossary and short bibliography.

COCHRANE, G.R. *et al, Flowers and plants of Victoria.* Sydney, Reed, 1968. 216 p, illus, maps.

Semipopular work with photographs, arranged in floristic regions. Captions add information on species, including distribution. Text chapters describe predominant plants of each region.

COSTERMANS, L.F. *Native trees and shrubs of south-eastern Australia.* Adelaide, Rigby, 1981. 422 p, illus, maps.

Describes the trees and woody shrubs of the region, the environment, ecology and places of special interest. A well-presented and very useful work.

COSTIN, A.B. *et al, Kosciusko alpine flora.* Melbourne, CSIRO, 1979. 408 p, illus, maps.

Detailed account of the flora of a very interesting area of Australia's 'high country'. Descriptions of all species (about 200) with keys suitable for field use and the history of the area. Superbly illustrated.

CUNNINGHAM, G.M. *et al, Plants of western New South Wales.* Sydney, Government Printer in association with the Soil Conservation Service of NSW, 1982. 766 p, illus, maps.
Describes and illustrates over 2000 species. Chapter on environment including vegetation communities. Bibliography and glossary.

CURTIS, W.M. *The student's flora of Tasmania.* 4 vols, Hobart, Government Printer, 1956– . illus.
A concise but thorough account of the Tasmanian gymnosperm and angiosperm flora. Descriptions, keys and distributional notes.

DIELS, L. *Die Pflanzenwelt von West-Australien südlich des Wendekreises.* Leipzig, W. Engelmann, 1906. 413 p, illus, maps.
An important and still influential essay on the floristics and plant geography of southern WA. Text in German.

DIELS, L. AND PRITZEL, E. 'Fragmenta phytographiae Australiae occidentalis: Beiträge zur Kenntnis der Pflanzen Westaustraliens, ihrer Verbreitung und ihrer Lebensverhältnisse', *Botanische Jahrbücher* 35, 1904, 55–662.
The results of a major botanical expedition to WA in 1900–01. Includes descriptions in German, of many new species.

DOCKRILL, A.W. *Australian indigenous orchids.* Vol 1. *The epiphytes, the tropical terrestrial species.* Sydney, Society for Growing Australian Plants, 1969. 825 p, illus.
Contains a key to all genera of Australian orchids; keys and descriptions for all epiphytic species, with notes on distribution and habitat. Vol 2 on terrestrial species not issued.

EVERIST, S.L. *Poisonous plants of Australia.* A & R, 1974. 684 p, illus.
Descriptions of all plants known or thought to be toxic, together with notes on toxicity and symptoms, and a bibliography.

EWART, A.J. *Flora of Victoria.* MUP, 1930. 1257 p, illus.
A concise flora covering about 2200 native and 461 exotic species of pteridophytes, gymnosperms and angiosperms. Brief keys and descriptions, notes on distribution and flowering time.

EWART, A.J. AND DAVIES, O.B. *The flora of the Northern Territory.* Melbourne, McCarron, Bird, 1917. 387 p, illus, map.
A concise flora with keys, adapted from Bentham's *Flora Australiensis*, and later records added.

FILSON, R.B. AND ROGERS, R.W. *Lichens of South Australia.* Adelaide, Government Printer, 1979. 197 p, illus, maps. (Handbook of the flora and fauna of SA).
Short descriptions and keys for genera and species. Chapters on lichen structure, chemistry and ecology. Extensive bibliography. The first major work on Australian lichens.

FITZGERALD, R.D. *Australian orchids.* Facs, Melbourne, Lansdowne Editions, 1977. 2 vols, illus.
Elegant, hand-coloured lithographs of orchids including detailed enlargements accompanying descriptive text. No pagination or index. First published 1875–94.

FLORA of Australia. AGPS, 1981– . illus.
The first modern flora of Australia, begun in 1981 and planned to be issued in about sixty-five volumes over twenty years. Contains keys to genera and species; concise descriptions; distribution including a map and citation of collections for each species. Vol 1 contains chapters on the flora project, the origin and evolution of the Australia flora, the system of classification used, a key to families and a glossary.

FRANCIS, W.D. *Australian rain-forest trees, excluding the species confined to the tropics.* Brisbane, Government Printer, 1929. 347 p, illus, map.
Detailed descriptions of about one hundred species and concise accounts of many others. Keys for identification. General discussion of rainforests. Third edition published in 1970.

GARDNER, C.A. *Enumeratio plantarum Australiae Occidentalis: a systematic census of the plants occurring in Western Australia.* Perth, Government Printer, 1931. 150 p.
First census of West Australian plants. Families, genera and species arranged in systematic order, with original references.

GARDNER, C.A. *Flora of Western Australia.* Vol 1, pt 1. *Graminae.* Perth, Government Printer, 1952. 400 p, illus.
Descriptions and distribution of all grasses known in W.A. Keys for identification. Glossary. The only volume published of a projected state flora.

GARDNER, C.A. AND BENNETTS, H.W. *The toxic plants of Western Australia.* Perth, Western Australian Newspapers Ltd, 1956. 253 p, illus, map.
Descriptions of the state's toxic plants, the symptoms caused and their toxic principles. Bibliography.

HARRIS, T.Y. *Australian plants for the garden: a handbook.* A & R, 1962. 356 p, illus.
Comprehensive work on growing Australian wildflowers. First published in 1953.

HARRIS, T.Y. *Wild flowers of Australia.* A & R, 1938. 198 p, illus.
The first major popular book on Australian plants. Featured 248 species, described and illustrated. Reprinted many times.

HARVEY, W.H. *Phycologia Australica or a history of Australian seaweeds.* London, Reeve, 1858–63. 5 vols, illus.
Descriptions and hand-coloured lithographs of the first major collections of Australian marine algae.

HOFFMAN, N. AND BROWN, A. *Orchids of south-west Australia.* UWAP, 1984. 382 p, illus, maps.
Colour photographs and brief descriptive notes for all orchids in the region. Distribution maps. An excellent popular work.

HOOKER, J.D. *The botany of the Antarctic voyage of H.M. discovery ships* Erebus *and* Terror *in the years 1839–1843, under the command of Captain Sir James Clark Ross.* Part 3. *Flora Tasmaniae.* London, Reeve, 1855–59. 2 vols.
The botanical results of a major expedition as well as collections by others, especially Ronald Gunn. Vol 1 contains an important essay on the plant geography of Australia. Vol 2 includes accounts of mosses, hepatics, fungi, algae and lichens. There is a separate volume of plates.

JESSOP, J.P. ed, *Flora of central Australia.* Sydney, Australian Systematic Botany Society and Reed, 1981, 537 p, illus, maps.
Keys and concise descriptions for about 2000 species of the arid regions. Introductory chapters on botanical exploration.

LABILLARDIERE, J.J.H. de *Novae Hollandiae plantarum specimen.* Paris, Huzard, 1804–06. 2 vols, illus.
Descriptions in Latin of plants collected by Labillardiere and other French explorers between 1792 and 1800. Fine but somewhat stylised line drawings.

LAMP, C.A. AND COLLETT, F. *A field guide to weeds in Australia* (Rev edn). Melbourne, Inkata Press, 1979. 376 p, illus.
Semipopular account of 283 weed species. First published in 1976.

LEHMANN, J.G.C. *Plantae preissianae.* Hamburg, Meissner, 1844–48. 2 vols.
Descriptions of over 2000 species from southwest WA, mainly collected by Ludwig Preiss from 1838 to 1843, some by James Drummond. Written in Latin by several European botanists.

LEIGH, J. *et al, Extinct and endangered plants of Australia.* Melbourne, Macmillan, 1984. 369 p, illus, maps.

Semipopular descriptions of 76 presumed extinct and 203 endangered plants. Introductory chapters on vegetation, threats to plants and suggested conservation methods.

LUCAS, A.H.S. AND PERRIN, F. *The seaweeds of South Australia.* Adelaide, Government Printer, 1936–47, 2 pts, illus.
Part 1 deals with green and brown seaweeds; part 2 with the red seaweeds. There is also an introduction and appendices by H.B.S. Womersley and J.R. Harris, and a glossary. Appendices describe families and list their genera.

McALPINE, D. *Systematic arrangement of Australian fungi, together with host-index and list of works on the subject.* Melbourne, Government Printer, 1895. 237 p.
A census in systematic order with brief descriptions and distribution. Host-index in alphabetical order indicates fungi occurring on them. Extensive bibliography.

MAIDEN, J.H. *A critical revision of the genus* Eucalyptus. Sydney, Government Printer, 1903–33. 8 vols, illus.
Detailed work with descriptions, distribution and discussion of most of the species known to the author. Vol 8 includes descriptions of the seedlings of many species. No keys.

MAIDEN, J.H. *The useful native plants of Australia, including Tasmania.* Sydney, Turner & Henderson, 1889, 696 p.
Chapters on pasture plants, medicinal plants, gums, resins and kinos, oils, perfumes, dyes, tans, timbers, fibres and other properties.

MOORE, C. AND BETCHE, E. *Handbook of the flora of New South Wales: a description of the flowering plants and ferns indigenous to New South Wales.* Sydney, Government Printer, 1893. 582 p.
The first flora of NSW. Amplified keys to indigenous species, with brief descriptions of families and genera. Preface on the history of botanical exploration in the state. Plants introduced to NSW and the floras of Lord Howe and Norfolk islands listed.

MORCOMBE, M.K. *Australia's wildflowers.* Melbourne, Lansdowne, 1970. 128 p, illus, maps.
Beautiful photographs and brief notes on selected species. Descriptions of the flora of the major regions by five botanists.

MORLEY, B.D. AND TOELKEN, H.R. *Flowering plants in Australia.* Adelaide, Rigby, 1983. 415 p, illus, maps.
Descriptions and notes on the distribution and history of important genera and species for all families of flowering plants and gymnosperms. Keys to genera in each family.

MUELLER, F.J.H. von *Eucalyptographia: a descriptive atlas of the eucalypts of Australia and the adjoining islands.* Melbourne, Government Printer, 1879–84. illus.
Lithographs of *Eucalyptus* species, with accompanying text. Ten plates show anatomical details and seedlings. The first of several such works by Mueller.

MUELLER, F.J.H. von *Fragmenta phytographiae Australiae.* Melbourne, Government Printer, 1858–82. 12 vols, illus.
An important reference work to genera and species. Text in Latin. Vol 5 contains an index of families and genera in vols 1–5, and vol 10 an index to vols 6–10. Vol 11 contains lists of non-vascular plants, by other authors.

MUELLER, F.J.H. von *The plants indigenous to the colony of Victoria.* Melbourne. Government Printer, 1860–65, 2 vols, illus.
Descriptions and notes for each species; gives original place of publication of names, and synonymics. Lithographs of high quality, including some microscopical detail. The first major floristic work written and published in Australia.

NICHOLLS, W.H. *Orchids of Australia.* Ed by D.L. Jones and T.B. Muir. Melbourne, Nelson, 1969. 141 p, illus.
Beautiful watercolour plates with detailed enlargements. Concise descriptions and notes. An earlier edition in parts by Georgian House ceased publication after part 4.

RODWAY, L. *Tasmanian bryophyta.* Hobart, Royal Society of Tas, 1914–16. 2 vols.
Revisions and descriptions of the bryophytes of Tas, with keys (some synoptic) for identification; notes on distribution. The only such book on Australian bryophyta published before 1970. Vol 1 covers the mosses and vol 2 the hepatics.

RODWAY, L. *The Tasmanian flora.* Hobart, Government Printer, 1903. 320 p, illus.
Brief descriptions of the angiosperms, gymnosperms and ferns of Tas with keys designed for use by students.

ROGERS, R.W. *The genera of Australian lichens (lichenized fungi).* UQP, 1981, 124 p, illus.
Key for identification with descriptions of all Australian genera; general distribution; generic classification of Poelt; bibliography.

SCOTT, G.A.M. AND STONE, I.G. *The mosses of southern Australia.* London, Academic Press, 1976. 495 p, illus.
The first manual of Australian mosses. Detailed descriptions of common species, short accounts of others. Extensive bibliography. Illustrations are by Celia Rosser.

SMITH, J.E. *A specimen of the botany of New Holland.* London, J. Sowerby, 1793. 54 p, illus.
The first work specifically on Australian plants, with descriptions of plants collected by early settlers, particularly John White.

SPECHT, R.L. AND MOUNTFORD, C.P. eds, *Records of the American–Australian Scientific Expedition to Arnhem Land.* Vol 3. *Botany and plant ecology.* MUP, 1958. 522 p, illus, maps.
The results of a major expedition and the first detailed account of the region. Chapters on ecology, exploration, plant geography and ethnobotany.

SPICER, W.W. *A handbook of the plants of Tasmania.* Hobart, J. Walch, 1878. 160 p, illus.
A key to species, a systematic checklist of the flora and brief notes on distribution.

STANLEY, T.D. AND ROSS, E.M., *Flora of south-eastern Qld.* Brisbane, Qld Dept of Primary Industries, 1984– . 3 vols, illus.
A projected three-volume work, vol 1 contains technical descriptions and keys for identification for 78 families of dicotyledons. Illustrated glossary of terms and a key to families.

STONES, M. AND CURTIS, W.M. *The endemic flora of Tasmania.* London, Ariel Press, 1967–78. 6 vols, illus, maps.
Splendid watercolour paintings of 254 species restricted to Tas. Descriptive text and notes on cultivation in Britain and Tas.

TATE, R. *A handbook of the flora of extratropical South Australia, containing the flowering plants and ferns.* Adelaide, Education Dept, 1890. 303 p, map.
Handbook in the form of keys to families, genera and species. Systematic list of species with distribution in SA.

WILLIAMS, K.A.W. *Native plants of Queensland.* North Ipswich, Qld, The Author, 1979–84. 2 vols, illus, maps.
Over 700 colour photographs. Captions give notes on species.

WILLIS, J.H. *A handbook to plants in Victoria.* MUP, 1962–72. 2 vols.
A concise state flora in the form of an amplified key, with distributions in and beyond Vic. Not illustrated but cites many published illustrations.