

**Acacia Miscellany 14. Taxonomy of some Western Australian
"Uninerves-Racemosae" species (Leguminosae: Mimosoideae:
section *Phyllodineae*)**

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Abstract

Maslin, B.R. *Acacia* Miscellany 14. Taxonomy of some Western Australian "Uninerves-Racemosae" species (Leguminosae: Mimosoideae: section *Phyllodineae*). *Nuytsia* 10 (2): 181-203 (1995). Eight new species of *Acacia* section *Phyllodineae* from Western Australia are described, namely, *A. anthochaera* Maslin, *A. brumalis* Maslin, *A. chamaeleon* Maslin (syn: *A. stowardii* S. Moore non Maiden, and provisionally *A. leiophylla* var. *microcephala* Meissner), *A. dorsenna* Maslin, *A. gelasina* Maslin, *A. scleroclada* Maslin, *A. subrigida* Maslin and *A. wilcoxii* Maslin. Lectotypes are selected for *A. stowardii* S. Moore, *A. harveyi* Benth. and *A. leptopetala* Benth. The ten species included in the paper have racemose inflorescences and are referable to series *Uninerves* subseries *Racemosae* as defined by Benthham (1864).

Introduction

The ten species included here belong to *Acacia* section *Phyllodineae* DC. and are characterized by having "1-nerved" phyllodes (i.e. one nerve on each face when phyllodes are flat, or, a total of usually four nerves when phyllodes are terete, quadrangular, etc.) and globular or sometimes oblongoid heads arranged in elongated racemes. The term "Uninerves-Racemosae" is an often-used and convenient term applied to species having this combination of characters. However, the "Uninerves-Racemosae" comprises disparate groups of taxa (see below) and is probably polyphyletic (see Figure 2 in Chappill & Maslin, 1995); it was not recognized as a natural taxonomic entity in the classifications of Vassal (1972) and Pedley (1978 & 1986).

A number of discrete clusters of closely related taxa have been recognized within the "Uninerves-Racemosae", for example, the "*Acacia bivenosa* Group" (Chapman and Maslin 1992), the "*Acacia victoriae* Group" (Maslin 1992), the "*Acacia myrtifolia* Group" (Maslin 1995) and the "*Acacia microbotrya* Group", "*Acacia prainii* Group" and "*Acacia murrayana* Group" which are discussed below. The phylogenetic relationships between these Groups, and their relationships to other taxa within subgenus *Phyllodineae*, have not been fully resolved. In one case, however, a number of independent lines of evidence have shown that some "Uninerves-Racemosae" species are closely

related to certain bipinnate-leaved species of section *Botrycephalae* (Benth.) Taub. (see Tindale & Roux 1969 & 1974, Anderson *et al.* 1971 & 1984, Anderson 1978, Vassal 1972, Chappill & Maslin 1995, Brain 1987, and Brain & Maslin in prep.).

While phyllode nerve number and inflorescence form are useful characters for recognizing "Uninerves-Racemosae" species these are not completely reliable characters for ascribing taxa to this (artificial) group. For example, *A. difformis* R. Baker has 2 longitudinal nerves on each face of its phyllodes yet its inflorescence and carpological characters suggest its inclusion in the "*Acacia microbotrya* Group"; similarly, *A. binervata* DC. and *A. wardellii* Tind. have prominently 2- or 3-nerved phyllodes but are clearly related to *A. bancroftii* (1-nerved phyllodes) which is placed in the "*Acacia microbotrya* Group" (see notes below under *A. brumalis* sp. nov). There are also a number of taxa, especially from southwest Western Australia, with 2 nerves along the (often thickened) upper margin of the phyllodes, thus making a total of 5 nerves per phyllode (2 along the upper margins, 1 on each face and 1 along the lower margin); these taxa uncommonly have racemose inflorescences (e.g. *A. scleroclada* sp. nov. below). Similarly there are some cases where species with simple inflorescences are closely related to racemose taxa, e.g. *A. synchronicia* Maslin in the "*Acacia victoriae* Group" (Maslin 1992). The length of the raceme varies considerably but within section *Phyllodineae* there seems to be a significant taxonomic discontinuity between those taxa having very reduced racemes (the axes generally not above about 1 mm long and supporting 1 or 2 heads) and those having more elongated racemes with more numerous heads. A recent study by Brain and Maslin (in prep.) using serological data suggests that species with very reduced racemes are most closely related to non-racemose species and that there is little or no relationship between this combined group and the "Uninerves-Racemosae". These relationships based on biochemical data were an unexpected result of the Brain and Maslin study, however, if they are corroborated by other evidence then a major rearrangement of the classification of section *Phyllodineae* will be needed.

This paper is not a revision of the "Uninerves-Racemosae"; the intention here is simply to describe new species and lectotypify names ahead of their inclusion in the forthcoming "Flora of Australia" volumes.

Methods

The taxa included in this paper are arranged alphabetically by species name. Unless otherwise stated all plant measurements are taken from dried herbarium material. Botanical Districts referred to under the Distribution of each new species are defined by Beard (1980). Species distributions are also expressed by 1: 250 000 map number (see Maslin and Pedley 1982 for maps of the Australian *Acacia* flora published in this same format).

My approach to both typification and the application of rank are discussed elsewhere (Maslin & Cowan 1994a and Cowan & Maslin 1995 respectively).

New species and lectotypifications

1. *Acacia anthochaera* Maslin, sp. nov.

Frutex densus, plerumque rotundatus, multicaulis glaber 2-5 m sed interdum 7 m altus. *Cortice* saepe albo in truncos et ramos principalibus fissurato. *Ramulis* ad extremas angulatis vel compressis cuticula alba. *Phyllodia* anguste linearia acuta, 9-15 cm longa, 2-5(6) mm lata, tenuia flexilia, plerumque ascendunt ad erecta, recta ad leviter incurvata et ad apicem saepe leviter recurvata, viridia vel subglauca uninervata, nervis lateralibus obscuris vel nullis. *Racemi* (4)7-15(22) mm longi, 4-9 capitulis, juventute a bracteolis imbricatis inclusi. *Pedunculi* (5)7-12(15) mm longi graciles. *Capitulis* permultis aromaticis globularibus vivide diluto-aureis, 25-35-floribus, sine bracteolis. *Flores* 5-meri sepalis discretis. *Legumina* anguste oblonga usque ad 8.5 cm longa et 5-8 mm lata chartacea diluto-brunnea. *Semina* longitudinalia oblonga ad elliptica vel ovata, 4-5 mm longa, obscura atro-brunnea ad nigra sed centro luteola, exarillata.

Typus: 104.5 km S of Paynes Find on Great Northern Highway, Western Australia, 3 September 1984, B.R. Maslin 5584 (*holo*: PERTH 00137340; *iso*: AD, CANB, G, K, MEL, NSW, NY - all distributed as *A. hemiteles*, long phyllode variant).

Glabrous *shrubs* or *trees* 2-5 m tall, sometimes 7 m, trunks 30-40 cm diam. at base, rounded or obconic with a rounded crown, 2-6 (or more)-branched at ground level, crowns dense. *Bark* grey, longitudinally fissured on trunks and main branches otherwise smooth, smooth and light brown or green on young plants. *Branchlets* angled or flattened at extremities, soon terete, finely ribbed, green, yellow or light brown, cuticle often white. *Stipules* early caducous, present only on very young shoots. *Phyllodes* narrowly linear, (7.5)9-15(20) cm long, 2-5(6) mm wide, length to width ratio 20-60, rather thin and flexible, smooth, mostly ascending to erect, sometimes spreading, straight to shallowly incurved, often shallowly recurved at apices, green or subglauca, cuticle sometimes white; midrib and marginal nerves yellow or light brown, sometimes resinous (but not viscid), lateral nerves obscure or superficially absent; apex acute, not pungent; pulvinus 2-3 mm long, finely transversely wrinkled. *Gland* on upper margin of phyllode 0-6(10) mm above the pulvinus, not prominent, c. 0.5 mm long. *Racemes* 1 or 2 per axil, (4)7-15(22) mm long with 4-9 heads, enclosed when young by conspicuous, brown, scarious, imbricate bracts, bract scars evident at base of raceme axes where bracts have fallen; *raceme axes* straight, slender, sometimes beginning to grow out at anthesis. *Peduncles* (5)7-12(15) mm long, slender; *basal peduncular bracts* caducous, conspicuous in buds where they completely enclose the heads, c. 4 mm long, brown, scarious, concave. *Heads* prolific, fragrant, globular, bright light golden, 25-35-flowered. *Bracteoles* absent. *Flowers* 5-merous. *Sepals* free, c. 1/2 length of petals, linear-spathulate, brown towards apices. *Petals* 2 mm long, nerveless. *Pods* narrowly oblong, to 8.5 cm long, 5-8 mm wide, \pm straight, chartaceous, flat, rounded over seeds, straight-edged or slightly constricted between seeds, light brown, obscurely transversely reticulate. *Seeds* longitudinal in the pod, oblong to elliptic or ovate, 4-5 mm long, 3-3.5 mm wide, dull, dark brown to blackish, yellowish at centre; pleurogram obscure, open at hilar end, shallowly "U"-shaped; areole small; *funicle* filiform, 2 mm long, dark reddish, exarillate.

Selected specimens examined. WESTERN AUSTRALIA: 18 km N of Pindar, A.M. Ashby 5041 (AD, PERTH); Wubin, September 1934, E.M. Barker s.n. (PERTH 00131563); W of Kalannie (intersection of Warren and Dalwallinu North roads), G. Craig 1614 (MEL, PERTH); 14 km SSW of Mount Gibson, R.J. Cranfield 8499 (PERTH); 13.5 km E of road to Burakin at Kalannie towards Kulja, R. Cumming 3663 (PERTH); 24 km N of Murchison River on North West Coastal Highway, B.R. Maslin 3149 (PERTH); 7.5 km from Morawa towards Three Springs, B.R. Maslin 4270 (CBG, MO, NT, PERTH);

2.5 km NW of Carnamah on Midlands Road to Three Springs, *B.R. Maslin* 6583 (MEL, PERTH); Mouroubra Station, 68.5 km S of Paynes Find, *B.R. Maslin* 6666 (PERTH); East Yuna Reserve, A28415, 29231, c. 70 km NE of Geraldton, *B.G. Muir* 158(2.7) (PERTH); 5 km E of Karroun Hill, *P. Roberts* 223 (PERTH); Cowcowing, *F. Stoward* 310 (PERTH).

Distribution. Southwest Western Australia in the Irwin and Avon Botanical Districts with one collection from the extreme northwest of the Coolgardie Botanical District (1:250,000 maps G50-13, H50-1,2,6,7,10,11). Occurs from near Yuna (which is c. 35 km east of Northampton) southeast to Cowcowing (c. 20 km north-northeast of Wyalkatchem), also near Galena (which is c. 35 km northwest of Yuna) and Karroun Hill (c. 75 km northwest of Cowcowing).

Habitat. Grows in flat, low-lying areas on red-brown sand or loam in woodland or shrubland.

Flowering and fruiting periods. Flowering has been recorded from August to December, however, the main flush occurs in September. Pods with mature seeds have been collected from November to January.

Conservation status. Widespread, not known to be threatened.

Etymology. From the Greek, *anthos* - flower, and *chairo* - rejoice. Alluding to the bright golden heads clustered in short terminal racemes. The name is also a very appropriate commemoration of the birth of my daughter, Kimberly Sarah, in March 1991, around the time that the original draft of this description was prepared.

Affinities. *Acacia anthochaera* belongs to the "Acacia prainii Group" (see discussion under *A. dorsenna* sp. nov. below) and until now was regarded as a long phyllode variant of *A. hemiteles* Benth. While these two species have very similar inflorescence and carpological features they are readily distinguished by their growth habit, bark characteristics and phyllode proportions. The principal characters which set *A. hemiteles* apart from the new species are the following: shrub 0.5-2(3) m tall; bark smooth, sometimes grey and fissured at the extreme base of the relatively thin stems; phyllodes narrowly elliptic to \pm narrowly oblong or linear, 4-10 cm long, 4-9(11) mm wide, length to width ratio 5-15, coriaceous and somewhat rigid, straight to recurved, rarely shallowly incurved, mucro commonly coarsely pungent. The distributions of the two species overlap in the region between about Beacon (c. 55 km northeast of Koorda) and Morawa, and the morphology of a few herbarium specimens suggest that hybridization may occur (e.g. c. 15 km NW of Kalannie towards Dalwallinu, *B.R. Maslin* 3977, PERTH; 13 km E of Coorow towards Latham, *B.R. Maslin* 4128 & 4128A, PERTH).

Like *A. prainii* Maiden, *A. anthochaera* grows to a beautiful, shapely tree with a dense canopy and masses of fragrant, bright golden heads. Occasionally the two are sympatric, for example, on Mouroubra Station, c. 70 km south of Paynes Find: *B.R. Maslin* 6666 (*A. anthochaera*) and *B.R. Maslin* 6667 (*A. prainii*). At this locality the general facies of the two species was similar, however, *A. anthochaera* occurred as a tree 7 m tall (which seems to represent the maximum height attained by the species) whereas *A. prainii* reached only 4 m; *A. prainii* was further distinguished by its shorter (to c. 5 cm long), pungent phyllodes.

In phyllodes and sometimes in habit *A. anthochaera* may resemble *A. aestivalis* E. Pritz. which has light-golden, appressed-puberulous raceme axes, united sepals and has seeds with a long, red-brown (brittle) funicle and a thick aril.

2. *Acacia brumalis* Maslin, sp. nov.

Frutex vel *arbor* 2-3 m alta ramulis glabris, interdum rubris. *Phyllodia* magnitudine et forma variabilia, plerumque oblanceolata ad anguste elliptica vel oblongo-elliptica sed interdum late linearia et versus basem angustata, (3.5)5-13 cm longa, (3)4-20 mm lata, aliquantum firma et coriacea patentia ad adscendentia glabra, in utraque superficie uninervata nervis lateralibus obscuris; glans non prominens, plerumque 1 vel 2, infima plerumque supra pulvinam 2-30 mm disposita. *Racemorum axes* (3)6-25(40) mm longi appresso-puberuli pilis aureis vel albis, in fructo interdum glabri. *Pedunculi* plerumque 3-5 mm longi appresso-puberuli cum pilis aureis vel albis. *Capitula* globularia ad oblongoidea, sub anthesi 5-8 mm diametro, aurea 17-45-floribus. *Flores* 5-meri. *Calyce* gamosepalo. *Legumina* linearia, plerumque marginibus rectis ad inter semina leviter constrictis, ad 10 cm longa et 5-6 mm lata, tenuiter coriacea ad firme chartacea glabra fusca. *Seminibus* longitudinalibus oblongis ad elliptica 4-5 mm longis, obscuris atris, funiculo semen cingente uniplicato dilute rubello-brunneo sed vivo luteo, arillo crasso.

Typus: Mortlock River, about 12 km S of Goomalling towards Toodyay, Western Australia, 27 August 1976, B.R. Maslin 4198 (*holo*: PERTH 00743089; *iso*: CANB, K, MEL, NY).

[*A. leiophylla auct. non* Benth.: C.F.Meissn. in J.G.C.Lehmann, Pl. Preiss. 2: 203 (1848)]

Shrubs or *trees* 2-3 m tall, bushy or somewhat openly branched, sometimes infundibular. *Bark* smooth or (at least at base of main trunks) finely fissured, grey, red or sometimes (? new bark) bronze-green. *Branchlets* terete but angled at extremities, finely ribbed, glabrous, yellow-brown or red, rarely moderately pruinose. *Stipules* caducous. *Phyllodes* variable in shape and size, oblanceolate to narrowly oblanceolate, elliptic to narrowly elliptic or narrowly oblong-elliptic, sometimes broadly linear, narrowed at base, rather abruptly or somewhat gradually narrowed at the uncinat or sub-uncinat apex, (3.5)5-13 cm long, (3)4-20 mm wide, length to width ratio 5-27, rather firm and coriaceous, mostly patent to ascending, never pendulous; straight or very shallowly incurved or recurved, glabrous, light green to glaucous; midrib rather prominent, central or slightly towards upper margin, marginal nerves narrow but evident, lateral nerves very obscure; pulvinus 1-2 mm long, transversely wrinkled. *Glands* not prominent, 1 or 2, rarely 3, the lowermost situated 2-30(50) mm above pulvinus, occasionally at distal end of pulvinus. *Racemes* (3)6-25(40) mm long with (1-2)4-12(17) heads; *raceme axes* ebracteate at base, the indumentum of appressed pale yellow or silvery white hairs, sometimes glabrous in fruit. *Peduncles* (2)3-5(7) mm long, 0.4-0.7 mm diam. (dry), 0.6-1 mm diam. (reconstituted), indumentum as on raceme axes. *Heads* showy and prolific, globular to oblongoid, 5-8 mm diam. at anthesis (reconstituted), bright mid-golden to deep golden, 17-45-flowered. *Bracteoles* spatulate to sub-peltate, c. 1 mm long, claws linear; laminae more or less circular to transversely elliptic, 0.4-0.5 mm wide, pale yellow- or white-fimbriolate, otherwise glabrous, brown and observable between flowers in unexpanded heads. *Flowers* 5-merous. *Calyx* gamosepalous, 1/2-3/4 length of corolla, divided for c. 1/6 its length, lobes often pale golden puberulous, tube drying brown. *Petals* 1.5-1.8 mm long, glabrous to moderately appressed-hairy, hairs pale yellow to white. *Pods* linear, to 10 cm long, 5-6 mm wide, slightly to obviously rounded over seeds, slightly or sometimes moderately constricted between the seeds, usually straight-edged to slightly (rarely moderately, see note under Variant 1 below) constricted between seeds with a few random deep constrictions sometimes occurring, pendulous, thinly coriaceous to firmly chartaceous, more or less straight, not reticulate, glabrous, dark purplish brown to blackish. *Seeds* longitudinal, oblong to elliptic, 4-5 mm long, 2-3 mm wide, dull but sometimes sub-shiny bordering the pleurogram,

black; pleurogram continuous or with a narrow opening at hilar end; areole 2.5-3 mm long, c. 1 mm wide; *funicle* filiform, yellow when fresh but drying light brown to light reddish brown, sometimes with a fold near attachment to pod then encircling the seed in a single fold and terminating in a thick, dull yellow-brown (dry) aril.

Distribution. Southwest Western Australia, principally in the Avon Botanical District but extending to peripheries of the adjoining Roe and Darling and Irwin Botanical Districts (1:250,000 maps H50-1,2,6,10,11,14,15,16 and I50-4). Most common in the region from Regans Ford (on the Moore River north of Perth) and Wubin (c. 20 km north of Dalwallinu) south to near Hyden, but also extending north to near Morawa and near Northampton.

Flowering and fruiting periods. Flowers from late May to September. Pods with mature seeds have been collected from late November to early January.

Conservation status. Not considered rare or endangered.

Etymology. The epithet *brumalis* (Latin for wintry) refers to the predominantly winter flowering phenology of the species.

Affinities. *Acacia brumalis* is a member of a large Australia-wide group of species within section *Phyllodineae* which is informally referred to here as the "*Acacia microbotrya* Group". The following characters are found in species of the Group but not all characters are present in all species. Phyllodes 1-nerved per face (occasionally 2-nerved, e.g. *A. difformis*), glabrous; inflorescences normally racemose; heads globular, sometimes shortly oblongoid; bracteoles peltate or sub-peltate, commonly golden-fimbriolate; pods normally firmly chartaceous to thinly coriaceous; seeds normally black; pleurogram commonly continuous; *funicle* filiform, normally partially or completely encircling the seed in a single or double fold, usually dark red-brown to light brown, occasionally pale yellow (e.g. *A. jennerae*, *A. steedmanii* and *A. validinervia*). A provisional list of species referred to the Group includes the following: *A. aestivalis* E. Pritz. (W.A.), *A. alcockii* Maslin & Whibley (S.A.), *A. amblyophylla* F. Muell. (W.A., perhaps better treated as an infraspecific taxon under *A. microbotrya*), *A. amoena* H.L. Wendl. (N.S.W.), *A. angusta* Maiden & Blakely (Qld), *A. araneosa* Whibley (S.A.), *A. anceps* DC. (W.A., S.A.), *A. attenuata* Maiden & Blakely (Qld), *A. bancroftii* Maiden (Qld), *A. brumalis* Maslin (W.A.), *A. calamifolia* Sweet ex Lindley (S.A., Vic., N.S.W.), *A. chamaeleon* Maslin (W.A., see below), *A. chalkeri* Maiden (N.S.W.), *A. chrysellae* Maiden & Blakely (W.A.), *A. confluens* Maiden & Blakely (S.A.), *A. cretacea* Maslin & Whibley (S.A.), *A. deuteroneura* Pedley (Qld), *A. difformis* R. Baker (N.S.W., Vic.), *A. falcata* Willd. (Qld, N.S.W.), *A. flocktoniae* Maiden (N.S.W.), *A. forsythii* Maiden & Blakely (N.S.W.), *A. gillii* Maiden & Blakely (S.A.), *A. gladiiformis* Cunn. ex Benth. (N.S.W.), *A. x grayana* J.H. Willis (S.A., Vic., a hybrid involving *A. brachybotrya* and *A. calamifolia*), *A. harveyi* Benth. (W.A.), *A. jennerae* Maiden (W.A., S.A., N.T., N.S.W.), *A. kydrensis* Tind. (N.S.W.), *A. leichhardtii* Benth. (Qld, precise affinities unknown but the *funicle* encircling the seeds suggests inclusion in the "*A. microbotrya* Group"), *A. leiophylla* Benth. (S.A.), *A. leptopetala* Benth. (W.A.), *A. mabellae* Maiden (N.S.W.), *A. meisneri* Lehm. ex Meissn. (W.A.), *A. merrickiae* Maiden & Blakely (W.A.), *A. microbotrya* Benth. (W.A.), *A. nematophylla* F. Muell. ex Benth. (S.A.), *A. notabilis* F. Muell. (S.A., N.S.W., Vic.), *A. quornensis* J. Black (S.A.), *A. retinodes* Schldl. (S.A., Vic.), *A. rivalis* J. Black (S.A., also recorded for N.S.W. but possibly not native in this State), *A. rubida* Cunn. (Qld, N.S.W., Vic.), *A. steedmanii* Maiden & Blakely (W.A.), *A. subulata* Bonpl. (N.S.W.), *A. validinervia* Maiden & Blakely (W.A., N.T., S.A.) and *A. wattiana* F. Muell. ex Benth. (S.A.). *Acacia binervata* DC. (N.S.W., Qld) and *A. wardellii* Tind. (Qld) appear to be closely related to certain members of this Group (e.g. *A. bancroftii*) on account of their seeds having encircling funicles, however, they are readily distinguished by their 2-3-nerved

phyllodes. Further studies are needed to ascertain whether the “*A. microbotrya* Group” is monophyletic (I have been strongly influenced by the character of the funicle in ascribing species to this Group). In particular, its relationship to species (primarily from eastern Australia) having seeds with non-encircling funicles needs critical examination, for example, *A. hakeoides* Cunn. ex Benth. (related to *A. difformis*), *A. penninervis* Sieb. ex DC. and *A. falciformis* DC. (perhaps close to *A. falcata*).

In Western Australia all members of the “*A. microbotrya* Group”, except the following, have glabrous raceme axes and peduncles at anthesis: *A. aestivalis*, *A. amblyphylla*, *A. brumalis*, *A. chamaeleon*, *A. chrysellia*, *A. harveyi* and *A. microbotrya*. In these eight species the racemes and/or peduncles are invested with minute, appressed, golden to white hairs which are frequently shed by the time the pods are formed.

The species with which *A. brumalis* is most likely to be confused is *A. microbotrya* which is distinguished in the following ways: pods wider (6-8 mm) and more obviously moniliform; seeds larger (5.5-8 mm long, 4-5 mm wide); heads usually paler coloured (cream to pale yellow, rarely mid-golden) and reaching anthesis earlier in the season (March-June); glands often fewer (usually 1 per phyllode, very rarely a second gland occurs on a few phyllodes). Although the phyllodes of *A. microbotrya* are somewhat variable they differ from those of *A. brumalis* in being more thinly textured, frequently pendulous and usually falcately recurved. As discussed below Variant 2 of *A. brumalis* may resemble *A. chamaeleon* and Variant 3 may resemble *A. chrysellia*.

Variation. As circumscribed here *A. brumalis* is a very polymorphic species and almost certainly comprises more than one taxon. As a basis for future studies much of the observed variation is here accommodated in three informal variants, however, not all specimens of this species can be satisfactorily accounted for by these variants.

Variant 1 (the typical variant)

Phyllodes variable, oblanceolate to narrowly oblanceolate or narrowly elliptic to narrowly oblong-elliptic, usually 5-9 cm long and 5-10 mm wide with length to width ratio 6-17, straight or sometimes very shallowly incurved or (especially near apices) very shallowly recurved, subglaucous to glaucous. *Gland* 10-30(40) mm above pulvinus. *Heads* mid-golden, 5-7 mm diam. at anthesis, 17-25-flowered.

Distribution. Occurs from the Regans Ford, Goomalling and Pithara areas east to the Koordawalkatchem area, also near Northampton and southeast of Hyden.

Habitat. Usually grows on clay or loam in low-lying saline flats or creeklines with saltbush; sometimes occurs on sand or loam in low woodland or scrubland. Like many species of this genus this variant grows well on disturbed sites, particularly gravelly road verges.

Selected specimens examined. WESTERN AUSTRALIA: 2 miles [3.2 km] N of Wyalkatchem, T.E.H. Aplin 508 (CANB, K, MEL, PERTH); 1 mile [1.6 km] N of Dowerin towards Cadoux, R. Cumming 1844 (PERTH); 16.3 miles [26.2 km] W of Mogumber towards Regans Ford, R. Cumming 2092 (CANB, PERTH); Swan River, J. Drummond 2:142 (BM, K, LUND, OXF, P, W) and 291 (BM, G, K, MEL, OXF, P, W); Dragon Rocks Reserve, S.D.Hopper 5244 (PERTH); 8.8 km SW of Goomalling towards Toodyay, B.R. Maslin 2017 (CANB, K, MEL, NY, PERTH); c. 8 km S of Pithara on the road to Wongan Hills, B.R. Maslin 4972 (G, PERTH); c. 25 km W of Northampton, P.C.Ryan 101 (PERTH); 130 mile peg on Great Northern Highway, 8 km N of Miling, R.A. Saffrey 871 (K, MEL, MO, NY, PERTH).

Variation. Specimens from near Northampton have pods which are a little more constricted between the seeds than normal but otherwise they seem typical of this variant.

Variant 2

Bark dark red throughout or only on upper branches. *Branchlets* sometimes pruinose. *Phyllodes* narrowly oblanceolate, 5-10 cm long, 6-20 mm wide, length to width ratio 5-15, straight or sometimes very shallowly recurved, glaucous to subglaucous. *Gland* usually 2-10 mm above pulvinus, occasionally to 20 mm or at distal end of pulvinus. *Heads* globular or oblongoid, 6-8 mm diam. at anthesis, (26)30-45-flowered.

Distribution. Most common from Cowcowing (c. 20 km north-northeast of Wyalkatchem) southeast to near Merredin, but also occurring further southeast to the Hyden area.

Habitat. Loam, sand or clay, sometimes with laterite in low woodland or open shrubland.

Selected specimens examined. WESTERN AUSTRALIA: 11.6 km E of Merredin on Great Eastern Highway to Kalgoorlie, *N. Hall* H76/41 (PERTH); 8.5 miles [13.6 km] E of Hyden on the Lake Varley road, *B.R. Maslin* 535 (AD, PERTH); 4.5 miles [c. 7 km] W of Rabbit Proof Fence No. 1 on the Narembeen to Southern Cross Road, *B.R. Maslin* 573 (PERTH, NSW, NT); 10 km N of Wyalkatchem towards Koorda, *B.R. Maslin* 4103 (CANB, K, MEL, PERTH); Cowcowing, *E. Wittwer* 1211 (PERTH).

Affinities. This variant resembles Variant 2 of *A. chamaeleon* (see below for discussion). It may also resemble *A. jennerae* which is distinguished by its broader pods (6-8 mm wide), glabrous to subglabrous raceme axes and peduncles, frequently obviously acuminate phyllodes and smaller seeds.

Variant 3

Phyllodes broadly linear to narrowly oblanceolate, 8-13 cm long, 4-8 mm wide, length to width ratio 12-27, usually shallowly and uniformly incurved, green to \pm subglaucous. *Gland* 10-30(50) mm above pulvinus. *Heads* globular, deep golden, 5-6 mm diam. at anthesis, 18-30-flowered. *Pods* and *seeds* not seen.

Distribution. Occurs mainly in the Wubin-Pithara-Kalannie area (near Dalwallinu), but also north to near Morawa.

Habitat. Usually in loam, sometimes sand or clay in shrubland.

Selected specimens examined. WESTERN AUSTRALIA: along rabbit-proof fence, 15 miles [24 km] NNW of Kalannie, *T.E.H. Aplin* 543 (MO, NSW, PERTH); 6 km N of Wubin towards Latham, *B.R. Maslin* 4131 (CANB, K, MEL, PERTH); 10.5 km SW of Pithara on the road to Miling, *B.R. Maslin* 6128 (PERTH); Gutha, *K.W. McLean*, 5 April 1934 (PERTH 00861693); 35 km E of Perenjori, *A.A. Mitchell* 1532 (PERTH); Buntine Reserve, 10.5 km N of Wubin, *B.G. Muir* 188 (PERTH).

Affinities. This variant is closely related to *A. chrysellae*, especially the form that occurs between Wyalkatchem and Holt Rock (c. 60 km southeast of Hyden), which is distinguished by its shorter, narrower phyllodes (5-7 cm long and 1.5-3 mm wide).

3. *Acacia chamaeleon* Maslin, sp. nov.

Frutex effusus glaber 2-3 m altus *Phyllodia* magnitudine et forma variabilia, anguste linearia ad filiformia vel oblanceolata, subteretia ad quadrangularia ubi filiformia, uncinata ad subuncinata vel (in phyllodiis latis) excentrice rostellata, 6-21 cm longa et 1-12 mm lata, subdistantia recta vel interdum leviter curvata, costa plus minusve prominenti sed nervis ceteris obscuris. *Glans* supra pulvinam (1)3-10(15) mm disposita. *Racemi* plerumque 10-42 mm longi et 4-7 capitulis, axibus glabris ad subglabris; *pedunculi* 4-6(9) mm longi, plus minusve appresso-puberuli pilis diluto-luteis vel albis; *capitula* globularia, plus minusve aurea 23-37-floribus. *Flores* 5-meri; *calyce* gamosepalo. *Legumina* linearia usque ad 10 cm longa et 4-5 mm lata, inter semina vix constricta firme chartacea ad tenuiter coriacea. *Semina* longitudinalia oblongo-elliptica, 4-5 mm longa, funiculo filiformi rubro-brunneo, semen cingente vel 3/4-cingente uniplicato, arillo crasso.

Typus: about 8 km N of Ongerup towards Pingrup, Western Australia, 21 December 1971, B.R. Maslin 2585 (*holo*: PERTH 00690503; *iso*: K, MEL, NY).

?*A. leiophylla* var. *microcephala* Meissn. in J.G.C. Lehmann, Pl. Preiss. 1: 15 (1844). *Lectotype* (*fide* Maslin & Cowan, 1994): interior of southwest Western Australia, October 1840, L. Preiss 921 (NY; *isolecto*: G-DC, LD, MEL, NAP, PERTH 02484684-fragment ex MEL, W).

A. stowardii S. Moore, J. Linn. Soc. Bot. 45: 173 (1920), non J.H. Maiden (1917: 269). *Type citation*: "East of Katanning, Western Australia, F. Stoward 177". *Lectotype* (here selected): E of Katanning, Western Australia, 1916, F. Stoward 177 (BM - right hand, flowering specimen on sheet; *iso*: BM, PERTH 00772690). *Paralectotype*: BM - fruiting specimen mounted on sheet with *lectotype* (BM, PERTH 03626091-fragment ex BM).

Shrubs 2-3 m tall, canopy not dense, single-stemmed or sparingly branched near ground level, main trunks and branches rather straight. *Bark* smooth, grey at base of trunks on mature shrub, often red-brown to light brown higher up, dark (purplish) red towards ends of branches. *Branchlets* terete but somewhat angular towards extremities, very finely ribbed, very slightly flexuose, glabrous, leaf bases raised and rather evident especially at base of branchlets where phyllodes have fallen. *Stipules* insignificant, deltate, 0.5 mm long. *Phyllodes* variable in shape and size, narrowly linear (but narrowed at base) to filiform or oblanceolate to narrowly oblanceolate, flat or (filiform phyllodes) subterete to quadrangular, 6-21 cm long, frequently 2-5 mm wide but ranging from 1 mm (filiform phyllodes) to 12 mm (narrowly oblanceolate phyllodes), length to width ratio usually 20-50 but 6-14 on oblanceolate phyllodes or to 130 on filiform phyllodes, not rigid, when narrow often finely longitudinally wrinkled when dry, sub-distant (internodes c. 10-20 mm long), patent to ascending or erect, straight or sometimes shallowly incurved or recurved, glabrous, dull, dark green; midrib central, usually rather prominent, yellowish to light brown when dry; lateral nerves absent or few and scarcely evident; marginal nerves not thickened, yellowish to light brown when dry; apices uncinata to subuncinate or (broad phyllodes) with a short laterally positioned, innocuous, brown apical point; *pulvinus* rather coarsely transversely wrinkled, 1.5-2.5 mm long, dark brown when dry. *Gland* on upper margin of phyllode usually 3-10 mm above the pulvinus, rarely 1 mm or to 15 mm, occasionally a few phyllodes with 2 glands, laminae often very slightly swollen about the gland, circular or oblong, 0.3-0.6 mm long. *Racemes* 1 per axil, occasionally a few paniculate, variable in length even on a single specimen, usually 10-42 mm long but occasionally interspersed with longer (to 60 mm) or shorter (to 5 mm) ones, with (2)4-7 heads the lowermost inserted 5-15 mm above the base; *raceme axes* straight to slightly or moderately flexuose, somewhat angular especially towards the apex, frequently finely longitudinally sulcate when dry, glabrous or appressed-hairy, hairs white or pale yellow, minute,

usually sparse and confined to extremity of rachides, base ebracteate; *peduncles* 4-6 (rarely 9) mm long, solitary or occasionally twinned, sparsely to densely \pm appressed puberulous with pale yellow to white hairs which are sometimes confined to the upper half of the peduncle; *basal peduncular bracts* 2, triangular, c. 0.5 mm long, brown, glabrous or ciliate; *heads* globular, 4-5 mm diam. just prior to anthesis, 7-8 mm diam. at anthesis (fresh), 5.5-7 mm diam. (dry), light to medium golden, 23-37-flowered but mostly 25-35, the flowers not very densely arranged; *bracteoles* spatulate to subpeltate, 1-1.5 mm long; claws linear but dilated at apex, glabrous to glabrescent; laminae broadly ovate, 0.4-0.6 mm diam., minutely fimbriolate (hairs golden or white) otherwise glabrous, light brown when dry. *Flowers* 5-merous; *calyx* 1/2-2/3 length of corolla, gamosepalous, divided for 1/6-1/4 its length into broadly triangular, not or very slightly thickened, sparsely hairy, slightly inflexed lobes; calyx tube glabrous and not obviously nerved; *petals* 1.5-2 mm long, joined for 1/2-2/3 their length but readily splitting to the base upon dissection, narrowly elliptic with acute, very slightly thickened apices, glabrous to glabrescent (hairs white or light golden, antrorsely appressed); *ovary* glabrous to minutely and densely white-villous, minutely stipitate. *Pods* linear, obviously raised over but normally only slightly constricted between the seeds although a few random rather deep constrictions can occur, to 10 cm long, 4-5 mm wide, with up to 12 seeds per pod, pendulous, firmly chartaceous to thinly coriaceous, more or less straight, glabrous, not reticulate, very dark brown (almost black), not pruinose, interior of valve red-brown, basal stipe c. 5 mm long, apex acute; *margins* not thickened, light brown. *Seed* longitudinal in pod, oblong-elliptic but obliquely truncate along margin adjacent to aril, 4-5 mm long, c. 2.5 mm wide, slightly compressed (c. 2 mm thick), dull, black; *pleurogram* obscure, continuous or more commonly with a narrow opening at hilar end, often bordered by a diffuse and obscure band of slightly shiny tissue; *areole* c. 2 x 1 mm; *funicle* flattened-filiform, c. 20 mm long (expanded), 0.5-0.6 mm wide, very brittle when dry, red brown, 3/4 to wholly encircling the seed in a single fold and terminating in a brownish yellow, clavate aril 3-4 mm long which extends nearly 1/2-way down one side of the seed.

Distribution. Southwest Western Australia, confined to the southwest part of the Roe Botanical District and the southern extremity of the adjacent Avon Botanical District (1:250,000 maps 150-7,8,11). Restricted to a small area bounded by Broomehill, Nyabing (c. 60 km northeast of Broomehill) and Jerramungup.

Habitat. Grey-brown, (gravelly) clay or loam over clay in eucalypt shrubland.

Biology. A fast-growing pioneer species which regenerates well from seed following fire and also along disturbed road verges. It has a life-span of 10-15 years (K. Newbey, pers. comm.).

Flowering and fruiting periods. Flowering specimens collected throughout the year with a predominance in May and December. Pods with mature seeds collected in December.

Conservation status. Not considered rare or endangered.

Etymology. The epithet is derived from the Greek word - *chamaileon* (a lizard that is changeable with respect to its colours) and alludes to the phyllodes which are very variable in shape and size.

Typification. The type collection of *A. stowardii* at BM consists of both flowering and fruiting specimens. Although these undoubtedly represent the same taxon it seems probable that they were gathered from different plants. The lectotype is one of the two flowering specimens.

Affinities. *Acacia chamaeleon* is a member of the “*Acacia microbotrya* Group” (see discussion under *A. brumalis* above) and appears to be most closely related to *A. harveyi* and *A. brumalis*. The distinguishing features between these taxa are discussed below under the variants.

Variation. The phyllodes of *A. chamaeleon* are extremely variable in shape and size. The range of variation is accommodated by the three variants which are discussed below and further studies may show that some or all of these may warrant formal status.

Variant 1 (typical variant)

Phyllodes linear (but narrowed at base), 2-5 mm wide, flat.

Distribution. Confined to the Ongerup area.

Selected specimens examined. WESTERN AUSTRALIA: near 94 mile peg on Borden-Pingrup road [c. 32 km N of Borden], *A.M. Ashby* 4315 (PERTH) and 4719 (PERTH 00163678 and 00163716); 83.5 miles from Albany on Borden-Pingrup road [c. 16 km N of Borden], *A.M. Ashby* 4725 (CANB, K, PERTH); about 11 km due NW of Ongerup on Foster Road, *B.R. Maslin* 3489 (PERTH); 22.5 km W of Jerramungup on the road to Ongerup, *B.R. Maslin* 5556 (PERTH); 6 miles [9.7 km] NW of Ongerup, *K. Newbey* 19D (AD, BM, BRI, CANB, G, K, MEL, MO, NSW, PERTH); 12 miles [19.2 km] E of Ongerup, *K. R. Newbey* 3022 (PERTH); 6 miles [9.6 km] NW of Ongerup, *K. Newbey s.n.* (PERTH 00163201); 26 km NE of Ongerup, *N. Stevens* for *K.R. Newbey* 9524-1 (MELU, PERTH); 5 km S of Broomehill along main road to Borden, *A. Strid* 22487 (B, C, CANB, K, MEL, NY, PERTH); Forster Road, c. 10.4 km NNW of Ongerup, *M. Tindale* 3891 (PERTH).

Affinities. This variant often closely resembles the more southerly distributed *A. harveyi* but is distinguished by its sub-distant phyllodes (internodes 10-20 mm long), light- to mid-golden, subdensely flowered heads measuring 7-8 mm diam. at anthesis (when fresh), and its normally open pleurogram. (*Acacia harveyi*: phyllodes rather crowded with internodes 0.5-1 cm apart, heads cream or sometimes lemon yellow, densely flowered and c. 4.5 mm diam. at anthesis, and pleurogram usually continuous).

Variant 2

Phyllodes oblanceolate to narrowly oblanceolate, to 12 mm wide.

Distribution. Occurs in the Broomehill-Borden area (Borden is c. 65 km east-southeast of Broomehill).

Selected specimens examined. WESTERN AUSTRALIA: Laurier [siding] near Gnowangerup, *W.B. Alexander* B.1529 (PERTH); 81 mile peg on Gnowangerup-Ongerup road, *F.W. Humphreys* 4 (PERTH); 0.5 miles [0.8 km] E of Broomehill, *K. Newbey* 3665 (CANB, PERTH).

Affinities. Resembling the more northerly distributed Variant 2 of *A. brumalis* (see above) but is distinguished by its presumably green phyllodes (colour judged from dry specimens), pruinose branchlets, usually white-haired peduncles and globular heads which reach anthesis in summer (December-February). Variant 2 of *A. brumalis* has glaucous to subglaucous phyllodes, sometimes pruinose branchlets, golden or pale yellow hairs on its peduncles and globular or oblongoid heads that reach anthesis in the winter/spring period (late May-August).

Note. The type of *A. leiophylla* var. *microcephala* Meissner seems referable to this entity.

Variant 3

Phyllodes filiform, 1-2 mm wide, drying sub-terete to \pm quadrangular.

Distribution. Found mostly around Nyabing.

Selected specimens examined. WESTERN AUSTRALIA: 3.3 miles [5.3 km] N of Nyabing Hotel towards Kukerin, R.J. Cumming 2697 (CANB, K, PERTH); 11 miles [17.6 km] SE of Nyabing, K.R. Newbey 744 and 744D (both PERTH); 12 miles [19.2 km] E of Ongerup, K.R. Newbey 3003 (PERTH); 24 miles [38.5 km] NE of Ongerup, K. Newbey 3663 (CANB, K, PERTH); 5 km S of Broomehill along main road, A. Strid 21858 (AD, BM, C, MEL, NY, PERTH).

Note. This variant includes the type of *A. stowardii* S.Moore.

4. *Acacia dorsenna* Maslin, sp. nov.

Frutex densus tholiformis glaber usque ad circa 1.5 m altum. *Phyllodia* inaequilateraliter elliptica ad obovatos, margine superno valde convexo, rotundato et mucronulato cum mucrone plus minusve laterali, 10-15 mm longa et 5-9 mm lata, subcarnosa laevia subglaucous demum hebeti-viridia, costa et nervis lateralibus nullis vel obscuris, nervis marginalibus brunneolis. *Glans* parva, supra pulvinam 0.5-2 mm. *Racemi* 1-2.5 cm longi, capitulis 7-10 juventute a bracteolis imbricatis parvis inclusi sed saepe ultra crescentibus cum pedunculis ultimis a phyllodiis secundariis subtentis; *pedunculi* 4-16 mm longi graciles; *capitula* globularia vivide medio-aurea, 15-21-floribus, bracteolis nullis. *Flores* 5-meri; *sepalis* discretis. *Legumina* (immatura) anguste oblonga, supra semina secus medio-lineam conspicue rotundata alternatim in uterque lato, usque 6 cm longa et 11 mm lata, firme chartacea brunnea. *Semina* (immatura) transversalia oblongo-elliptica, usque ad 4 mm longa, vix arillata.

Typus: north of Norseman [precise locality withheld for conservation reasons], 31 August 1986, B.R. Maslin 6112 (*holo:* PERTH 00769096; *iso:* CANB, K, MEL, NY).

Dense, domed, glabrous *shrubs* to c. 1.5 m tall and to 3 m diam. *Bark* smooth, light grey. *Branchlets* terete, slightly angled at extremities, finely ribbed, ribs not resinous, light brownish to yellowish green at extremities, cuticle often grey-white. *Stipules* early caducous, linear, to 2 mm long, scarious. *Phyllodes* inaequilaterally elliptic to obovate, abaxial margin more or less straight, upper margin convex and abruptly rounded at apices with a \pm lateral, minute (0.3-0.4 mm long), innocuous, brown mucro, 10-15 mm long, 5-9 mm wide, length to width ratio 1.5-2, sub-fleshy, smooth but sometimes very finely wrinkled when dry, somewhat crowded, subglaucous and slightly pruinose at ends of branchlets, ageing dull green; midrib very obscure and situated near abaxial margin, sometimes a less prominent second nerve diverging from near the pulvinus, lateral nerves absent or few and obscure, marginal nerves light brown to yellow-brown and \pm shiny; pulvinus 0.5 mm long, finely wrinkled when dry. *Gland* not prominent, situated on upper margin of phyllode 0.5-2 mm above pulvinus, c. 0.5 mm long. *Racemes* confined to upper axils, 1-2.5 cm long with 7-10 heads, enclosed when very young by small, scarious, commonly caducous, brown bracts, often growing out at anthesis with secondary phyllodes subtending the peduncles; *raceme axes* slender and straight; *peduncles* 4-16 mm long, slender; *basal peduncular bracts* absent (normally replaced by minute resin hairs); *heads* globular, 9 mm diam. at anthesis (fresh), 5-6 mm diam. (dry), bright mid-golden, 15-21-flowered;

bracteoles absent. *Flowers* 5-merous; *flower buds* dull reddish brown when young; *sepals* c. 1/2 length of petals, free, linear or linear-spathulate, membranous, glabrous or sparsely hairy; *petals* 1.8 mm long, nerveless. *Pods* (slightly immature) narrowly oblong, conspicuously rounded over seeds alternately on each side along the midline, to 6 cm long, 11 mm wide, firmly chartaceous, brown, slightly shiny, finely and somewhat sparingly transversely reticulate, stipitate, marginal nerve narrow. *Seeds* (slightly immature) transverse, oblong-elliptic, to 4 mm long and 2.3 mm wide, funicle filiform and scarcely arillate.

Other specimens examined (all PERTH). WESTERN AUSTRALIA: between Norseman and Coolgardie [precise localities withheld for conservation reasons], *E.M. Canning* WA/68 2652 and 2662 (both ex CBG), *G.F. Craig* 2477, *B. Maloney* 1/69 (ex NSW), *D.J.E. Whibley* 5455 (ex AD).

Distribution and habitat. Southwest Western Australia in the Coolgardie Botanical District (1:250, 000 map I51-02). Known only from two populations located between Norseman and Coolgardie where it grows on red-brown, rocky, sandy loam or clayey loam.

Flowering and fruiting periods. The paucity of collections makes it difficult to accurately assess the phenology of this new species. However, flowering specimens have been collected from late August to late September and a specimen with partially mature seeds has been collected in mid-November.

Conservation status. A Priority 1 taxon on the Department of Conservation and Land Management's Declared Rare and Priority Flora List. See end of this issue.

Etymology. From the Latin *dorsennus* - humpbacked, alluding to the prominently rounded upper margin of the phyllodes.

Affinities. *Acacia dorsenna* belongs to a group of closely related taxa which is informally referred to here as the "*Acacia prainii* Group". Members of the Group include *A. anthochaera* Maslin (see above), *A. camptoclada* C.R.P. Andrews, *A. hemiteles* Benth. and *A. prainii* Maiden. The more important characters shared by these glabrous species include the following: inflorescences in short racemes which are enclosed, when young, by scarious brown bracts, sepals free, bracteoles absent, pods thinly textured (usually chartaceous) and funicles exarillate. *Acacia suaveolens* (Smith) Willd. and its allies, *A. iteaphylla* F. Muell. and *A. subcaerulea* Lindley, have similar inflorescences but the funicles are clearly arillate. Superficially *A. dorsenna* might be mistaken for a large phyllode form of *A. camptoclada* which grows in the general region of the new species but it is not known whether the two are ever sympatric. *Acacia camptoclada* is readily distinguished from *A. dorsenna* in the following ways: branchlets often slightly viscid or vernicose, phyllodes smaller (7-17 mm long, 2-5 mm wide, length to width ratio 2-4), mucro \pm pungent, gland near or above the middle of the phyllode, racemes <1-4 mm long with 2-5 heads, pods once- or twice-coiled and 4-5 mm wide, and seeds longitudinal in the pod.

In phyllode shape and size *A. dorsenna* resembles some forms of *A. merrallii* F. Muell. which occurs within the geographical range of the new species but which is distinguished by its small, curved or coiled pods, conspicuous yellow or orange arils, extremely reduced, 1-3-headed racemes, and phyllodes with a \pm pungent mucro. Some forms of the eastern Australian species, *A. cultriformis* A. Cunn. ex Benth. and *A. furfuracea* Don also resemble *A. dorsenna* in phyllode shape and size but are not especially closely related to the new species.

5. *Acacia gelasina* Maslin sp. nov.

Frutex glaber 1-2.5 m altus. *Phyllodia* oblanceolata ad lineari-oblanceolata versus basem angustata obtusa mucronata, 4-10 cm longa et (3)5-8(10) mm lata, coriacea subrigida erecta glauca ad subglauca, costa et nervis marginalibus luteis, nervis lateralibus obscuris. *Glans* obscura sed plerumque supra pulvinam 1-3 mm et etiam mucronis ad basem ornata. *Racemi* (1)2-20 mm longi; *pedunculis* 1-2 cm longis; *capitula* globularia dense 35-50-floribus. *Flores* 5-meri; *sepalis* plus minusve discretis, aliquando 2 ve 3 connatis. *Legumina* anguste oblonga plana, supra semina rotundata et inter semina leviter constricta, usque 15 cm longa et 12-14 mm lata, firme chartacea ad tenuiter coriacea, plerumque luteo-brunnea. *Semina* longitudinalia circularia ad late elliptica vel late ovata, 7-8 mm longa, aliquantum compressa leviter lucida atro-brunnea ad nigra sed in centro leviter depressa pallida, exarillata.

Typus: 46.5 km north of Murchison River, North West Coastal Highway, Western Australia, 23 July 1972, A.M. Ashby 4638 (*holo*: PERTH 00992844; *iso*: CANB, PERTH 00167975).

Dense, spreading, *shrubs* 1-2.5 m tall, much-branched at ground level. *Bark* smooth or finely fissured, grey. *Branchlets* terete, angled at extremities, finely ribbed, glabrous, reddish or light brown, yellow on new growth. *Stipules* insignificant, <0.5 mm long, early caducous. *Phyllodes* oblanceolate to linear-oblanceolate, narrowed at base, obtuse, mucronate, 4-10 cm long, (3)5-8(10) mm wide, l:w = (6)8-15(25), thickly coriaceous, sub-rigid, erect, straight, glabrous, glaucous to subglauous, midrib and marginal nerves yellow, lateral nerves not prominent, two nerves on upper margin coalescing just above the gland; pulvinus 0.5-1 mm long, dilated at base, smooth or with a few coarse wrinkles. *Glands* not prominent, situated on upper margin of phyllode normally 1-3 mm above pulvinus, usually a second gland at base of mucro. *Racemes* 1 or 2 per axil, (1)2-20 mm long with (1)2-6 heads, rarely growing out; raceme axes glabrous, lightly pruinose, base ebracteate but occasionally a solitary supra-basal bract is present; *peduncles* 1-2 cm long, rarely a few twinned, glabrous, lightly pruinose when young; *basal peduncular bract* persistent or deciduous, 0.5-1 mm long, brown, thickened at base, solitary, occasionally on uppermost peduncles replaced by a pair of stipules with prophyll arising between them, the prophyll presumably expands with age; *heads* globular, densely 35-50 flowered; *bracteoles* 0.5-1 mm long, claws linear and ciliolate, abruptly expanded into a dark brown, commonly inflexed, sparsely ciliolate lamina which is thickened in its lower half. *Flowers* 5-merous; *sepals* usually variable within a single flower, free or sometimes 2 or 3 united, spatulate to oblong, 1/3-1/2 length of petals; *petals* 2.5-3 mm long, free, glabrous, nerveless. *Pods* narrowly oblong, flat but obviously rounded over seeds, convexities rugulose and not extending to the margins, shallowly constricted between seeds, occasionally deeply constricted, to 15 cm long, to 12-14 mm wide, up to 10 seeds per pod, pendulous, firmly chartaceous to thinly coriaceous, straight to slightly curved, sometimes sparingly and obscurely transversely nerved, glabrous, yellow-brown, sometimes mid-brown, commonly lightly pruinose, marginal nerves c. 1 mm wide. *Seeds* longitudinal in the pod, circular to widely elliptic or widely ovate, 7-8 mm long, 6-7 mm wide, somewhat flattened (c. 3 mm thick), slightly shiny, dark brown to blackish except for the shallow, circular depression in centre of seed which is usually yellow or light brown; *pleurogram* obscure, open at hilar end; areole widely to transversely elliptic, 1-1.5 mm wide; *funicle* filiform, c. 5 mm long, exarillate.

Other specimens examined. WESTERN AUSTRALIA: type locality, A.M. Ashby 3874 (K, MEL, PERTH) and 19 November 1972, *s.n.* (PERTH 00993298, CANB: fruiting collection from the type plant); 15 km N of Murchison River on North West Coastal Highway, H. Demarz 10490 (PERTH); 48.5 km N of Murchison River on North West Coastal Highway, B.R. Maslin 2786 (NSW, PERTH); 48 km S of Billabong Roadhouse, B.R. Maslin 4330 (PERTH); 45 km N of Murchison River on North West Coastal Highway, B.R. Maslin 3346 (BRI, G, NY, PERTH).

Distribution. Western Australia in the Irwin Botanical District (1:250 000 map G50-13). Restricted to a small area along the North West Coastal Highway north of the Murchison River (east of Kalbarri). It is possible that future collecting from the extensive sand plains north of the Murchison River will extend the range of this species.

Habitat. Grows on yellow sand in closed scrub.

Flowering and fruiting periods. Flowers from early June to September. Mature pods have been collected from mid-November to January.

Conservation status. A Priority 2 taxon on the Department of Conservation and Land Management's Declared Rare and Priority Flora List. See end of this issue.

Etymology. The specific epithet is derived from the Latin - *gelasinus*, a dimple, referring to the shallow, circular depression on the lateral faces of the seeds.

Affinities. *Acacia gelasina* is a member of the "Acacia murrayana Group" (see discussion under *A. subrigida* below) and appears to be most closely related to *A. murrayana* F. Muell. ex Benth. which is a widespread and common species of the Australian Arid Zone. Characters shared by the two species include the following. Plants mostly glabrous, phyllodes long and 1-nerved on each face, gland situated near the pulvinus and also adjacent to the mucro, inflorescences short racemes, heads globular and densely many-flowered (up to 50), sepals \pm free, pods broad, flat but obviously rounded over seeds, thin-textured, seeds with shallow central depression on both faces, and funicle filiform and not arillate. *Acacia murrayana* is most readily distinguished from *A. gelasina* by its thin, pliable phyllodes and its transverse to oblique, smaller seeds (4-5.5 mm long, 3-4 mm wide). Other characters useful in recognizing *A. murrayana* include its commonly arborescent habit (to 5 m tall), often pruinose branchlets, phyllodes with the gland situated at the distal end of the pulvinus, generally shorter peduncles (4-10 mm long, infrequently 15 mm) and chartaceous pods to 9 cm long and 8-12 mm wide.

6. *Acacia harveyi* Benth., Fl. Austral. 2: 368 (1864)

Lectotype (here selected): between King George's Sound and Cape Riche, Western Australia, March 1854, *W.H. Harvey s.n.* (K; iso: K, MEL, PERTH 01941046-fragment ex K).

Typification. Bentham's (1864) original description of *A. harveyi* was based on two collections, one in flower (*W.H. Harvey s.n.*) and one in fruit (*J. Drummond* 4: 130). These gatherings represent different taxa and the lectotype has been selected from among the flowering specimens. The fruiting paralectotype is *A. aestivalis* E. Pritzel, a closely related species recognized by its golden heads (cream to lemon yellow in *A. harveyi*) and broader pods (12-22 mm wide compared with 5-6 mm in *A. harveyi*). *Acacia aestivalis* occurs from near Mingenew southeast to Corrigin and east to Bullfinch (c. 35 km northwest of Southern Cross); *A. harveyi* has a more southerly distribution, occurring principally in the Fitzgerald River National Park (southwest of Ravensthorpe) but extending west to near the Stirling Range (east of Cranbrook) and east to Munglinup (c. 75 km east-southeast of Ravensthorpe).

In his discussion under *A. harveyi* Bentham (*loc. cit.*) referred to a specimen of *Priess* 941 of whose identity he was unsure. I have examined a specimen of *Priess* 941 at herb. G and it is *A. cupularis* Domin, a species which is sometimes sympatric with *A. harveyi* and which resembles it in having

linear, 1-nerved phyllodes and racemose inflorescences. *Acacia cupularis*, however, is readily distinguished from *A. harveyi* by its glabrous (not appressed puberulous) raceme axes, golden heads and its crustaceous, \pm erect pods containing seeds with short funicles and scarlet arils (pods coriaceous and pendulous in *A. harveyi*, the long funicle 1/2-3/4 encircles the seed in a single fold and ends in a cream-white aril). *Acacia cupularis* is described and illustrated in Chapman & Maslin (1992).

7. *Acacia leptopetala* Benth., *Linnaea* 26: 619 (1855)

Lectotype (here selected): south-western Australia, *J. Drummond* 52 (K, upper right-hand specimen on herb. Hooker sheet; *islecto*: BM, K - other specimens on lectotype sheet, MEL, OXF, P, PERTH 00763144 and 01941070-fragment ex MEL and 01941089-fragment ex K).

Typification. There are four specimens mounted on the lectotype sheet of *A. leptopetala* at Kew, all representing the species and apparently part of the same collection. The sheet is labelled "52 *J. Drummond*. S.W. Australia 1850" [this date presumably being when the specimen was received at Kew], stamped "Herbarium Hookerianum 1867" and annotated "*Acacia leptopetala*", in pencil, by Benth. Another sheet at K is labelled "Swan River (Suppl. to 5th coll.) Drummond", is stamped "Herbarium Benthonianum 1854" and supports a single specimen of *A. leptopetala* which Benth. has annotated "cf. *leptopetala*". As the phyllode dimensions on this specimen slightly exceed those given in the protologue, I do not regard it as a type of *A. leptopetala*.

The type of *A. leptopetala* was presumably collected on Drummond's 1847 expedition to Mounts Caroline and Stirling which are situated about 15 km south of the present-day township of Kellerberrin. The specimens collected on this trip were sent to Hooker and subscribers as "Supp. to 5th Coll." (see Erickson 1969). During the journey from Toodyay (where Drummond lived) he would most probably have crossed the quite limited geographic range of the conspicuously pruinose element of *A. leptopetala* which accords well with the type (i.e. the Bungalla-Kellerberrin area).

Nomenclature. The "Murchison river, *Oldfield*" specimen cited by Benth. (1864: 370) under *A. leptopetala* is *A. murrayana*. This error led Benth. (1875: 472) and Mueller (1887) to misapply the name *A. leptopetala* to *A. murrayana* and Maiden (1916: 495) to regard the two names as synonymous.

8. *Acacia scleroclada* Maslin, sp. nov.

Frutex aliquantum effusus et diffusus 0.5-1 m altus, ramulis +/- rectis et ascendentibus striatocostatis glabris subglaucis, interdum grosse spinosis. *Phyllodia* distantia anguste linearia ad lineari-elliptica, ad basem et apicem angustata, pungentia, 2-7 cm longa et plerumque 1-3 mm lata, subrigida ascendentia ad erecta recta vel incurvata glabra subglauca 5-nervata, costa paulo prominenti et plus minusve excentrica, margine supero binervato et leviter incrassato. *Racemi* 1-20(30) mm longi capitulis 1-4, praecoci juventute a bracteolis imbricatis inclusi sed aliquando ultra crescentibus, axibus glabris; *pedunculis* 7-12 mm longis glabris; *capitula* globularia vivide aurea 25-40-floribus; *bracteolis* nullis. *Flores* plerumque 5-meri; *sepalis* plus minusve discretis. *Legumina* supra semina rotundata et inter semina leviter ad profunde constricta, usque 11.5 cm longa et 4-6 mm lata, coriacea glabra brunnea. *Semina* longitudinalia elliptica, 5-6 mm longa, turgida lucida atro-brunnea arillo longitudine 1/2-2/3 seminum partes aequantia.

Typus: 9.6 km E of Edah towards Mount Magnet, Western Australia, 1 August 1974, B.R. Maslin 3618 (*holo*: PERTH 00168939; *iso*: CANB, G, K, MEL, NSW, NY).

Spreading, somewhat straggly *shrubs* 0.5-1 m tall, dividing at ground level into few to many spreading to erect, rather rigid branches with sparse foliage. *Bark* smooth, light grey on main branches. New shoots dull, maroon, drying blackish. *Branchlets* rather rigid, sometimes entangled, more or less straight and ascending, sometimes coarsely pungent, glabrous, terete, finely yet evidently striate-ribbed, the ribs yellowish and 0.3-0.5 mm apart, intercostal region subglaucous. *Stipules* caducous, present on very young new shoots, narrowly oblong to triangular, to 5 mm long, shallowly concave, striate, fimbriolate otherwise glabrous, bright green but drying yellowish or light brown. *Phyllodes* narrowly linear to linear-elliptic but gradually narrowed to a slender, straight, brown cusp c. 1 mm long, 2-7 cm long, 1-3(4) mm wide with length to width ratio 15-30, sub-rigid, distant (nodes c. 15-25 mm apart), ascending to erect, straight to shallowly (moderately) incurved, flat, glabrous, subglaucous; 5-nerved in all, nerves yellow, the upper 2 forming a slightly thickened adaxial margin, midrib rather prominent on each face and somewhat excentric (situated towards the solitary abaxial marginal nerve), lateral nerves absent or scarcely visible; pulvinus not prominent, c. 0.5 mm long, slightly dilated at base. *Glands* not prominent, 1-3 on upper margin, the lowermost 2-5 mm above phyllode base, circular or oblong, 0.2-0.5 mm long. *Racemes* 1(2) per axil, 1-20(30) mm long with 1-4 heads; *raceme axes* variably flexuose, sometimes striate and resembling branchlets, glabrous, sometimes growing out and/or becoming leafy (i.e. a phyllode developed at base of peduncles) so peduncles appear simple, enclosed when very young by scarious, brown, imbricate, caducous bracts, bract scars visible below lowermost peduncle at anthesis; *peduncles* 7-12 mm long, glabrous, basal bract absent at anthesis (? present in buds); *heads* globular, bright golden, 25-40-flowered; *bracteoles* absent. *Flowers* mostly 5-merous (but sepals occasionally 6-7); *sepals* c. 2/5 length of petals, free or shortly united at base, linear or linear-spathulate, often slightly unequal in length, usually sparsely ciliolate at apex; *petals* 2.5-2.8 mm long, joined for 2/3-3/4 their length, glabrous, nerveless, slightly thickened at apices; ovary sessile, glabrous. *Pods* to 11.5 cm long, 4-6 mm wide, rounded over seeds and slightly to deeply constricted between them, coriaceous to slightly crustaceous, more or less straight, finely reticulate, glabrous, brown, marginal nerve narrow and yellow to light brown. *Seeds* longitudinal in the pod, elliptic but obliquely truncate on margin adjacent to aril, 5-6 mm long, 3-3.5 mm wide, turgid (3 mm thick), glossy, dark brown; *pleurogram* very obscure, open at hilar end; areole c. 0.5 mm long and 0.3 mm wide; *funicle* c. 1 mm long, reflexed below and gradually expanded into the large aril which extends 1/2-2/3 down one side of seed and thickened near the hilum.

Other specimens examined. WESTERN AUSTRALIA: 100 yards W of 172 mile peg from Geraldton on Mount Magnet road, A.M. Ashby 4780 (AD, BRI, CBG, MO, PERTH); Weiragoo Range, A.M. Ashby 5058 (PERTH, also AD but *n.v.*); 30 miles [48 km] W of Yalgoo, W.E. Blackall 501 (PERTH); 20 km NE of Mount Hope, Wooleen Station, R.J. Cranfield 5135 (CANB, PERTH); 3 km NE of Anzac Bore, Koonmarra Homestead, R.J. Cranfield 5930 (PERTH); 12 km S of Jingemarra Homestead, R.J. Cranfield 6047 (PERTH); 25 miles [40.2 km] N of Yalgoo, C.A. Gardner 2519 (PERTH); 8 miles [12.8 km] from Paynes Find on Yalgoo road, A.R. Main 2 (PERTH); 9.6 km E of Edah on road to Mount Magnet, B.R. Maslin 4508 (MO, PERTH); Meka Station, A.A. Mitchell 838 (PERTH); Geraldton district, A. Williams 670 (PERTH).

Distribution. Western Australia in the Austin Botanical District (1:250,000 maps G50-10,11,14,15; H50-2,3,7). Occurs from Weiragoo Range (c. 170 km west of Meekatharra) and Koonmarra Station (c. 80 km northwest of Meekatharra) south to near Paynes Find.

Habitat. Grows in shallow sand or clayey sand, normally on low granite outcrops, in open scrub. The type plant grew in association with *Acacia acuminata*, *A. quadrimarginea*, *A. ramulosa* and *A. tetragonophylla*.

Flowering and fruiting periods. Flowers from mid-June to early September. The single fruiting specimen was collected in December.

Conservation status. Not known to be under threat.

Etymology. The name is derived from the Greek - *skleros*, tough or hard, and *klados* - branch.

Affinities. *Acacia scleroclada* is perhaps most closely allied to *A. wiseana* C. Gardner on account of the following characters which are shared by the two species: foliage rather sparse; branchlets glabrous and striate; phyllodes distant, 5-nerved with the upper two close together and forming a slightly thickened upper margin; racemes short and sometimes resembling the branchlets; peduncle bases ebracteate (at least at anthesis); heads globular; sepals \pm free; bracteoles absent; pods long; seeds longitudinal. *Acacia wiseana* is more widely distributed than the new species (see Maslin & Pedley 1982) and is clearly distinguished in the following ways: it is a larger, intricate shrub to 4 m tall and has divaricate, light green branchlets; phyllodes 5-20 mm long, 1-1.5 mm wide and patent to deflexed; pods 6-12 mm wide; seeds globose, 5-9 mm diam.

The general facies of *A. scleroclada* often resembles that of the typical variant of *A. inaequiloba* W. Fitzg. which grows on sand in "spinifex" country between Queen Victoria Spring and Streich Mound (well to the southeast of the range of the new species, c. 200 km east-northeast of Kalgoorlie). This variant of *A. inaequiloba* is most readily distinguished from the new species in the following ways: branchlets less prominently ribbed and \pm pruinose; upper margin of the phyllodes 2-nerved below the gland and 1-nerved above it (2-nerved throughout in *A. scleroclada*); inflorescences comprising very short, 1-headed, racemes subtended by conspicuous, more or less persistent bracts; heads 12-21-flowered with caducous bracteoles that are conspicuous in the buds; calyx irregularly dissected; pods undulate; seeds c. 3 mm long and mottled black and brown.

9. *Acacia subrigida* Maslin, sp. nov.

Frutex usque ad 2.5 m altum, ramulis glabris. *Phyllodia* saepe sectione rhombica subsessilia mucrone indurato atro-brunneo recto et erecto, 8-15 cm longa et 1-1.5 mm lata, plana subrigida erecta plus minusve recta ad leviter incurvata glabra viridia ad subglauca 4-nervata sed nervo adaxiali prope glandem basalem bifurcato, nervis aureis. *Glans* supra pulvinam perdiminutam 3-17 mm et etiam ad basem mucronis glans obscura. *Racemi* plerumque 2-10 mm longi capitulis 2-4, axibus glabris; *pedunculi* 1-2 cm longi glabres; *capitula* globularia aurea 15-30-floribus. *Flores* 5-meri; *sepalis* discretis et lineari-spathulatis. *Legumina* anguste oblonga, supra semina elevata, 6-11 cm longa et 7-10 mm lata, chartacea glabra diluto-brunnea. *Semina* longitudinalia usque ad longitudinaliter obliqua ovata, aliquando oblonga vel elliptica, 5.5-7 mm longa, in centro vadose depressa, paulo lucida nigra exarillata.

Typus: 20.5 km E of Mukinbudin towards Bullfinch, Western Australia, 13 October 1975, B.R. Maslin 3965 (*holo:* PERTH 00167444; *iso:* CANB, G, K, MEL, NSW, NY).

Erect *shrubs* to 2.5 m tall, single-stemmed or with 2-4 main stems from ground level. *Bark* grey, fissured on main stems, smooth on branches. *Branchlets* glabrous, not pruinose, terete but often slightly angled at the usually brown to red-brown extremities, penultimate branchlets usually invested with a light grey cuticle which becomes longitudinally fissured and flaking with age; ribs often yellow, fine, scarcely evident on penultimate branchlets. *Stipules* caducous. *Phyllodes* rhombic in section, rarely flat, 8-15 cm long but interspersed with a few shorter ones (to c. 5 cm long), 1-1.5 mm wide,

smooth, sub-rigid, erect, more or less straight to shallowly incurved, glabrous, green to subglaucous, with 4 yellow longitudinal nerves (one at the apex of each angle), nerve on adaxial angle bifurcating at or near the gland, lateral nerves absent; mucro somewhat thick and indurate, minute (0.5-0.8 mm long), straight and erect or almost so, dark brown, acute; pulvinus very reduced (0.2-0.5 mm long), slightly dilated at base, transversely rugose, yellowish. *Gland* situated on upper angle of phyllode 3-17 mm above the pulvinus, not prominent, circular or sometimes oblong, 0.2-0.4 mm long, a second less prominent gland situated at base of the mucro. *Racemes* 1 per axil, (1)2-10(15) mm long with (1)2-4(5) heads, the lowermost peduncle inserted 0.5-2 mm above the base; *raceme axes* glabrous, faintly pruinose at least near the ebracteate base; *peduncles* 10-20 mm long, glabrous; *basal peduncular bract* solitary, *c.* 1 mm long, frequently early caducous but sometimes persisting to anthesis on lowermost peduncle; *heads* globular, mid-golden, 15-30-flowered, 7 mm diam. at anthesis (reconstituted heads); *bracteoles* sub-peltate, claws linear, 0.6-0.8 mm long; the laminae \pm normal to claws, widely ovate to almost circular, *c.* 0.5 mm wide, slightly thickened and sparsely ciliolate near attachment to claw otherwise glabrous. *Flowers* 5-merous; *sepals* 2/5-3/5 length of petals, free, linear-spathulate, claws puberulous abaxially, laminae more or less glabrous and slightly incurved; *petals* 2.3-2.5 mm long, glabrous, midrib very obscure. *Pods* narrowly oblong, 6-11 cm long, 7-10 mm wide, flat but raised over seeds and scarcely to moderately constricted between them but random deep constrictions do occur especially where seeds fail to develop, chartaceous, more or less straight, glabrous, light brown, slightly shiny, with a few obscure transverse nerves. *Seeds* longitudinal to longitudinally oblique, ovate or sometimes oblong or elliptic, 5.5-7 mm long, 3.2-4.8 mm wide, black, slightly shiny except centre of seed surrounding and including the areole which is more shiny, centre of seed shallowly depressed; *pleurogram* widely "U"-shaped with the broad opening at hilar end; *areole* 0.2-0.5 mm long, 0.4-1 mm wide; *funicle* filiform, 4 mm long, reddish brown, exarillate.

Other specimens examined. WESTERN AUSTRALIA: 20 km E of Mukinbudin towards Bullfinch, B.R. Maslin 4470 (CANB, K, PERTH); 99.5 km SE of Sandstone on the road to Menzies, B.R. Maslin 5032 (PERTH); 1.5 km NE of Walyahmoning Rock, *c.* 60 km NW of Bullfinch, K. Newbey 9552 (PERTH).

Distribution. Southwest Western Australia in the Avon and Austin Botanical Districts (1:250,000 maps H50-4, 11, 12). Occurs in the Mukinbudin-Bonnie Rock (*c.* 45 km north-northeast of Mukinbudin) area and near Maynard Hills (*c.* 100 km southeast of Sandstone and *c.* 320 km northeast of Mukinbudin). A variant from Shark Bay with flat phyllodes is discussed below.

Habitat. From the few collections at hand, the species has only been recorded from deep yellow sand on plains in *Acacia coolgardiensis* tall shrubland.

Flowering and fruiting periods. Flowers in September and October. Pods with mature seeds have been collected in January.

Affinities. *Acacia subrigida* is most closely allied to *A. murrayana* F. Muell. ex Benth. and *A. pachyacra* Maiden & Blakely on account of the following characters. Plants essentially glabrous; phyllodes with a total of 4 longitudinal main nerves (i.e. one at apex of angles when phyllodes rhombic, one on each face and along each margin when phyllodes flat); glands present at base and apex of phyllodes; heads globular and arranged in short axillary racemes; sepals free or almost so; pods flat and chartaceous; funicles exarillate. The principal distinguishing features between these three species are given in Table 1 where it is seen that *A. subrigida* is most readily recognized by its phyllodes which possess a \pm erect apical mucro and a basal gland which is well removed from the pulvinus; additionally, its peduncles are usually longer and its seeds are differently orientated within the pod. *Acacia subrigida* is further readily distinguished from *A. murrayana* by its phyllodes which are

rhombic in section. Although the phyllodes of *A. pachyacra* are normally \pm rhombic they are narrower and less rigid than those of *A. subrigida*. Also, upon drying the phyllodes of *A. pachyacra* are slightly longitudinally wrinkled or grooved whereas in *A. subrigida* they are perfectly smooth. *Acacia subrigida* is more southerly distributed than either *A. murrayana* or *A. pachyacra* except for the Shark Bay variant referred to below which occurs in the same general region as *A. murrayana*. *Acacia gelasina* Maslin (see above) and *A. praelongata* F. Muell. from Northern Territory are also closely related to the above taxa and together these five species comprise the informal "Acacia murrayana Group". This Group is related to the "A. victoriae Group" (see Maslin 1992) but most readily distinguished by non-spinose stipules and peduncles which lack a supra-basal bract.

Conservation status. A Priority 2 taxon on the Department of Conservation and Land Management's Declared Rare and Priority Flora List. See end of this issue.

Etymology. The epithet is derived from the Latin *subrigidus* and refers to the texture of the phyllodes which is one of the characters distinguishing the new species from its close relatives, *A. pachyacra* and *A. murrayana*.

Variation. A variant from Shark Bay and known only from the three collections cited below has not been included in the above description. These specimens were in late flower and one (*B.R. Maslin* 3682) possessed old pods and seeds collected from the ground under the plant. Better material and additional field studies are required in order to ascertain the status of this variant. It differs from typical *A. subrigida* in the following ways. *Phyllodes* 11-21 cm long, 2 mm wide, \pm flat but the midrib prominently raised (and sometimes rendering the phyllodes transversely rhombic in section), occasionally with a few, obscure, longitudinally trending lateral nerves (observe when dry). *Racemes* (4-7)9-30(35-40) mm long with (2)3-6(9) pedunculate heads, sometimes the peduncle fails to develop within axil of lowermost bract on raceme axes; *peduncles* sometimes subtended by a minute phyllode at anthesis; *heads* 24-39-flowered, 10 mm diam. at anthesis (reconstituted); *claws of bracteoles* and *sepals* sparsely puberulous. *Pods* c. 13 mm wide. *Seeds* widely oblong-elliptic, 8 mm long, 7 mm wide; *pleurogram* almost continuous.

Specimens examined. WESTERN AUSTRALIA: c. 6 km W of Overlander-Denham road towards Tamala, Shark Bay area, *B.R. Maslin* 3682 (CANB, K, MEL, PERTH); c. 9 km from Denham-Overlander road towards Tamala, *B.R. Maslin* 3714 (BRI, CANB, K, MEL, NSW, PERTH); 7 km W of Denham-Overlander road on road to Tamala Station, *B.R. Maslin* 6296 (PERTH).

Distribution and habitat. Western Australia in the northern extremity of the Irwin Botanical District (1:250,000 map G49-12). Known only from the Shark Bay area (south of Carnarvon) from the collections cited above. Occurs on red-brown sandy loam in tall shrubland.

10. *Acacia wilcoxii* Maslin, sp. nov.

Frutex glaber per ramosus 2-4 m altus, habito *Templetoniae egenae* simili, ramulis ascendentibus ad erectos teretibus, obscure nervatis, juventute diluto-viridibus sed aetate cinereis, saepe spinosis. *Phyllodia* ramulosa simulans teretia acuta grosse pungentia, plerumque 5-14 cm longa et 1.5-2 mm diametro, crassa erecta, juventute diluto viridibus sed aetate cinereis, per obscure 4-nervatis. *Pedunculi* 5-25 mm longi, plerumque geminati, alteruter in racemis vel phyllodiorum in axillis in surculis novis; *capitula* globularia 24-27-floribus. *Flores* 5-meri; *calyce* gamosepalo et plus minusve truncato. *Legumina* linearia, usque ad 10.5 cm longa et 5 mm lata, tenuiter coriacea atro-brunnea. *Semina* (leviter immatura) longitudinalia late elliptica usque late ovata, circa 4 mm longa, arillo diluto-luteo.

Table 1. Principal morphological features distinguishing *A. subrigida* (excluding the Shark Bay variant), *A. pachyacra* and *A. murrayana*

	<i>A. subrigida</i>	<i>A. pachyacra</i>	<i>A. murrayana</i>
Branchlets	Not pruinose	Sometimes faintly (rarely markedly) pruinose	Often markedly pruinose
Phyllodes			
- length	Mostly 8-15 cm	8-20 cm	5-15 cm
- width	1-1.5 mm	0.5-1 mm	1.5-8(12) mm
- shape in T.S.	Rhombic (flat in Shark Bay variant)	Rhombic to subterete, rarely flat	Flat
- texture	Sub-rigid	Not rigid	Not rigid
- surface when dry	Smooth	Sparingly and shallowly longitudinally grooved or wrinkled	Finely longitudinally wrinkled
- apical mucro	± erect	Recurved	Recurved
Basal gland	3-17 mm above pulvinus	At distal end of pulvinus	At distal end of pulvinus, rarely absent
No. heads per raceme	(1)2-4(5)	Usually 5-10	2-10
Peduncle length	10-20 mm	4-7 mm	4-10(15) mm
Seed orientation in pods	Longitudinal to longitudinally oblique	Transverse to oblique	Transverse to oblique

Typus: Landor Station, Western Australia, August 1970, *D.G. Wilcox* 168 (*holo*: PERTH 00168440; *iso*: PERTH 168459).

Much-branched, more or less rounded *shrubs* 2-4 m tall, habit resembling *Templetonia egena*. *Bark* grey and slightly roughened on trunks and main branches, becoming smooth and brownish on upper branches. *Branchlets* ascending to erect, straight to very slightly flexuose, somewhat rigid, often terminating in very coarsely pungent points, terete, very obscurely nerved, glabrous, pale green when young but ageing greyish (due to a whitish, often flaking cuticle). *Stipules* very early caducous, c. 1.5 mm long, fused for most of their length, scarious, brown. *Phyllodes* resembling the branchlets, terete, narrowed at base, length variable, (3)5-14 cm long, 1.5-2 mm diam., smooth, rigid, thick, brittle when dry, erect, more or less straight, glabrous (except mucro), colour as on branchlets except the apical region brown but turning whitish as cells deteriorate, very obscurely 4-nerved (nerves yellowish

and not or barely raised); *pulvinus* c. 2 mm long, slightly dilated at base, usually orange-brown; *apices* on young phyllodes variably hooked and possessing a glabrous or sparsely hairy mucro c. 1 mm long with a gland-like structure at its base on the upper surface, mucro lost with age resulting in straight, coarsely pungent apices (the gland-like structure rarely observable on mature phyllodes). *Gland* on upper surface of phyllode to 3 mm above pulvinus, circular to oblong, c. 0.5 mm long, a minute gland-like structure at base of mucro (see above). *Peduncles* 5-25 mm long, commonly twinned, either 2-5 pairs in determinate racemes 1-3 cm long or axillary and arising synchronously with young phyllodes on new shoots, glabrous, base ebracteate; *raceme axes* with 4-5 minute caducous bracts at its base, sometimes growing out at apex; *heads* globular, 24-27-flowered; *receptacle* papillose; *bracteoles* widely spatulate, c. 1 mm long, concave, sub-sessile. *Flowers* 5-merous, glabrous; *calyx* 2/5 length of corolla, gamosepalous, very shallowly divided (for c. 1/6 or less its length), into broadly triangular, non-thickened lobes); *petals* c. 2 mm long, nerveless. *Pods* linear, to 10.5 cm long, 5 mm wide, with up to 9 seeds per pod, rounded over seeds and slightly to moderately constricted between them, thinly coriaceous, more or less straight, nerveless, glabrous, dark brown, margins narrow and yellowish. *Seeds* (slightly immature) longitudinal with aril facing apex of pod, widely elliptic to widely ovate, c. 4 mm long and 3.5 mm wide, brown; *pleurogram* open at hilar end; *areole* c. 0.7 mm long and 0.5 mm wide; *funicle* straight to shallowly curved, pale-yellow, reflexed above a somewhat thickened aril of the same colour.

Other specimens examined. WESTERN AUSTRALIA (precise localities withheld for conservation reasons): Erong Springs Station, R.J. Cranfield 5347 (PERTH); Tangadee Station, B.R. Maslin 5287 (CBG, BRI, K, PERTH) and B.R. Maslin 5288 (CANB, G, MEL, NSW, PERTH), A.A. Mitchell 268 (PERTH); Dalgety Downs Station, A.A. Mitchell 1552 (CANB, PERTH).

Distribution. Western Australia in the Ashburton Botanical District (1:250,000 maps G50-4, 6). Known only from Tangadee, Landor, Erong Springs and Dalgety Downs Stations, c. 250 km north to northwest of Meekatharra.

Habitat. Grows along watercourses and adjacent stony plains and low stony hills, in open or closed scrub.

Flowering and fruiting periods. The few specimens to hand have been collected August and September. Slightly immature pods have been collected in early October.

Conservation status. A Priority 1 taxon on the Department of Conservation and Land Management's Declared Rare and Priority Flora List. See end of this issue.

Etymology. Named in honour of David G. Wilcox, formerly of the Western Australian Department of Agriculture, who has collected extensively since 1952 in the pastoral shrubland zone of W.A. between the Ashburton River and the Nullarbor Plain.

Affinities. *Acacia wilcoxii* is very distinctive by its thick, terete, relatively long, erect phyllodes which closely resemble the branchlets and is not likely to be confused with any other *Acacia* within its known geographic range. It does, however, resemble both *A. exocarpoides* W. Fitzg. and *A. microcalyx* Maslin in habit and in having coarsely pungent, ascending to erect branchlets which are frequently invested with a whitish flaking cuticle. These two related species occur south and west of *A. wilcoxii* (see Maslin and Pedley 1982). Although *A. exocarpoides* has terete phyllodes they are much shorter than those of *A. wilcoxii*, i.e. 8-18 mm long, and unlike the new species are frequently shed upon

collection. Additionally, the racemes on *A. exocarpoides* are usually 1-headed and extremely reduced (the raceme axes to *c.* 1 mm long) and its calyx is dissected for at least half its length. Pods on the two species are rather similar. Although *A. microcalyx* has racemose inflorescences similar to the new species it is readily distinguished by its shorter (20-40 mm long), flat phyllodes which (like *A. exocarpoides*) are often shed upon collection, its fewer flowers per head (i.e. 14-16) and its much larger pods (to 20 cm long and *c.* 10 mm wide).

References

- Anderson, D.M.W. (1978). Chemotaxonomic aspects of the chemistry of *Acacia* gum exudates. *Kew Bull.* 32: 529-536.
- Anderson, D.M.W., Bell, P.C. & McNab, C.G.A. (1971). An analytical study of some *Acacia* gum exudates of the series *Botrycephalae*. *Carbohydr. Res.* 20: 269-274.
- Anderson, D.M.W., Farquhar, J.G.K. & McNab, C.G.A. (1984). The gum exudates from some *Acacia* subspecies of the series *Botrycephalae*. *Phytochemistry* 23: 579-580.
- Beard, J.S. (1980). A new phytogeographic map of Western Australia. *W. Austral. Herb. Res. Notes* 3: 37-58, plus map.
- Bentham, G. (1864). "Flora Australiensis". Vol. 2. (Lovell Reeve: London.)
- Bentham, G. (1875). Revision of the Suborder Mimoseae. *Trans. Linn. Soc. London* 30: 335-664.
- Brain, P. (1987). Immunology and phylogeny: a preliminary study of *Acacia*. *S. Afr. J. Science* 83: 422-427.
- Brain, P. & Maslin, B.R. (in prep.). A serological investigation of the classification of *Acacia* subgenus *Phyllodineae* (Leguminosae: Mimosoideae).
- Chapman, A.R. & Maslin, B.R. (1992). *Acacia* Miscellany 5. A review of the *A. bivenosa* group (Leguminosae: Mimosoideae: section *Phyllodineae*). *Nuytsia* 8: 249-283.
- Chappill, J.A. & Maslin, B.R. (1995). A phylogenetic assessment of tribe Acaciae. In: Crisp, M. and Doyle, J.J. (eds). "Advances in Legume Systematics 7: Phylogeny", pp. 77-99. (Royal Botanic Gardens, Kew: London.)
- Cowan, R.S. & Maslin, B.R. (1995). *Acacia* Miscellany 10. New taxa and notes on previously described taxa of *Acacia*, mostly section *Juliflorae* (Leguminosae: Mimosoideae), in Western Australia. *Nuytsia* 10: 15-62.
- Erickson, R. (1969). "The Drummonds of Hawthornden". (Lamb Paterson: Osborne Park, Western Australia.)
- Maiden, J.H. (1916). Notes on *Acacia*, (with descriptions of new species), No. I. *J. and Proc. Roy. Soc. New South Wales* 49: 465-513.
- Maiden, J.H. (1917). Notes on *Acacia*, No. III. - Extra-tropical Western Australia. (With descriptions of new species.) *J. and Proc. Roy. Soc. New South Wales* 51: 238-274.
- Maslin, B.R. (1992). *Acacia* Miscellany 6. A review of *Acacia victoriae* and related species (Leguminosae: Mimosoideae: section *Phyllodineae*). *Nuytsia* 8: 285-309.
- Maslin, B.R. (1995). *Acacia* miscellany 12. *Acacia myrtifolia* and its allies in Western Australia (Leguminosae: Mimosoideae: section *Phyllodineae*). *Nuytsia* 10: 85-101.
- Maslin, B.R. & Cowan, R.S. (1994). C.F. Meissner's species of *Acacia* (Leguminosae: Mimosoideae): typification of the names. *Nuytsia* 9: 399-414
- Maslin, B.R. & Cowan, R.S. (1994a). What type of type? *Austral. Syst. Bot. Soc. Newsletter* 81: 2-7.
- Maslin, B.R. & Pedley, L. (1982). The distribution of *Acacia* (Leguminosae: Mimosoideae) in Australia. Part 1. Species distribution maps. *W. Austral. Herb. Research Notes* 6: 1-128.
- Mueller, F. (1887). "Iconography of Australian species of *Acacia* and cognate genera, fifth decade". (Govt. Printer: Melbourne.)
- Pedley, L. (1978). A revision of *Acacia* Mill. in Queensland. *Austrobaileya* 1: 75-234.
- Pedley, L. (1986). Derivation and dispersal of *Acacia* (Leguminosae), with particular reference to Australia, and the recognition of *Senegalia* and *Racosperma*. *Bot. J. Linn. Soc.* 92: 219-254.
- Tindale, M.D. & Roux, D.G. (1969). A phytochemical survey of the Australian species of *Acacia*. *Phytochemistry* 8: 1713-1727.
- Tindale, M.D. & Roux, D.G. (1974). An extended phytochemical survey of Australian species of *Acacia*: chemotaxonomic and phylogenetic aspects. *Phytochem.* 13: 829-839.
- Vassal, J. (1972). Apport des recherches ontogéniques et seminologiques à l'étude morphologique, taxonomique et phylogénique du genre *Acacia*. *Bull. Soc. Hist. Nat. Toulouse* 108: 105-247.