

# DRYANDRA STUDY GROUP

NEWSLETTER NO. 30



*Dryandra stricta*

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Special Issue  
Illustrated Key to Dryandra

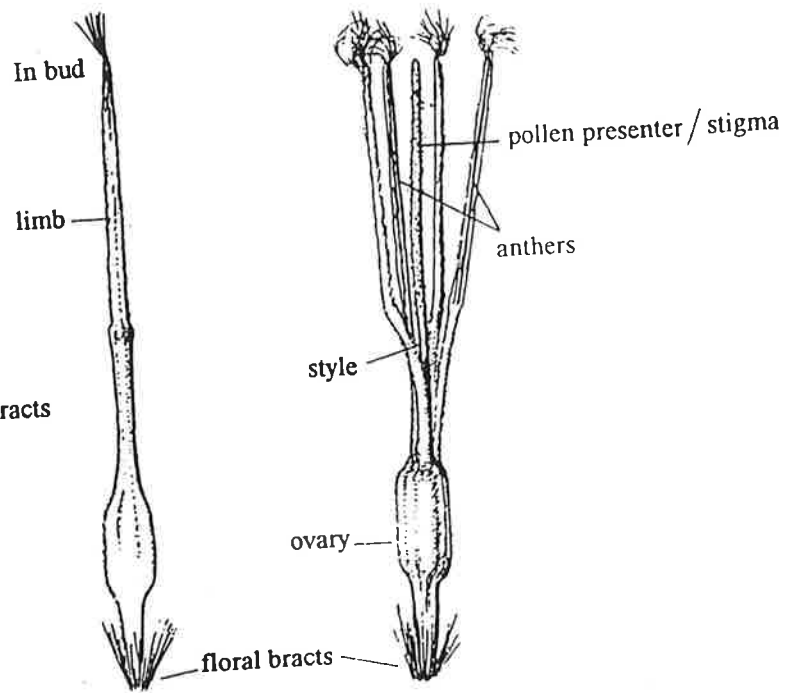
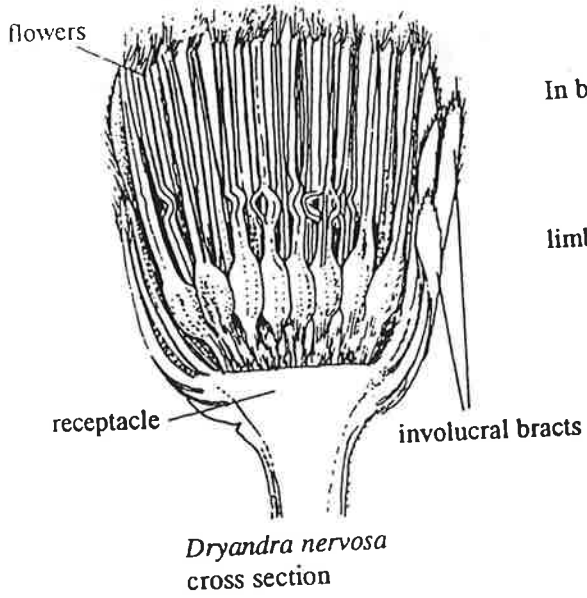
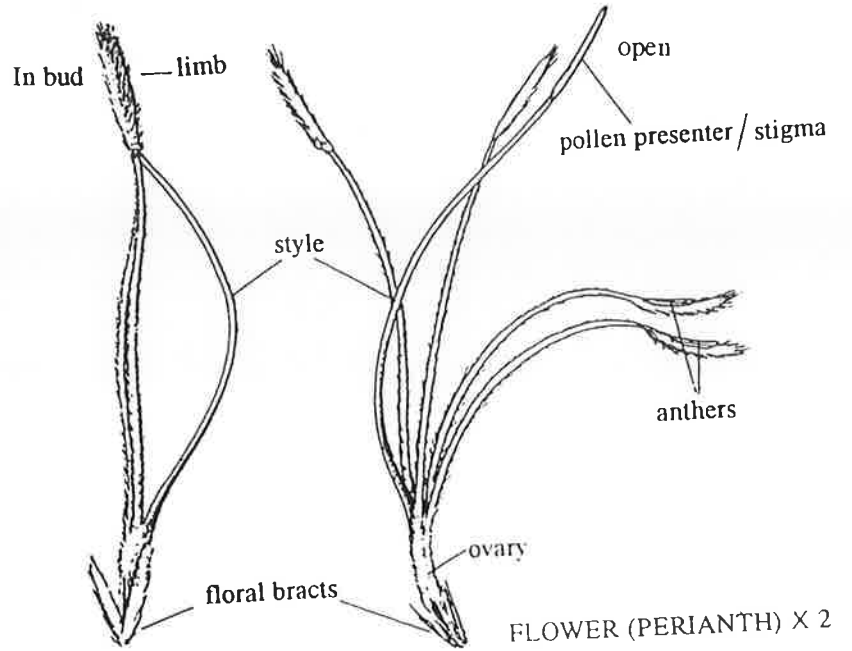
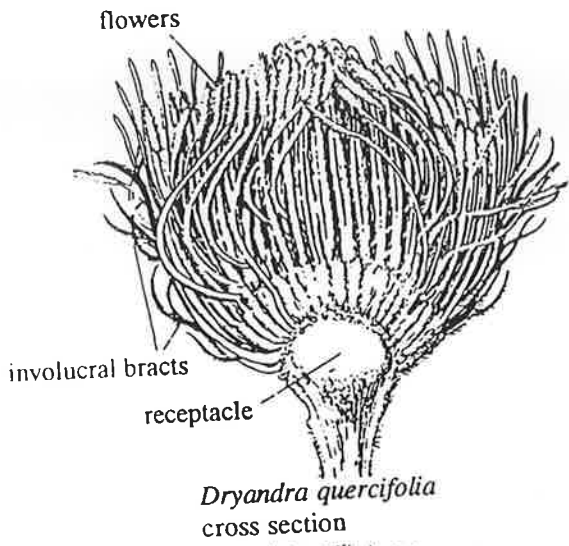
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June, 1996

SOCIETY FOR GROWING AUSTRALIAN PLANTS

*Dryandra stricta* - Drawing by Margaret Pieroni

Known to Study Group Members as Species I or No 15, this plant is widespread in the Bodgingarra-Eneabba area. It sheds its seed annually and so forms pure stands on disturbed sites. It has proved hardy in cultivation and is a quite attractive species.



### The *Dryandra* flower and flower head

The flowers are hermaphrodite and sessile (without a stalk) and attached to the receptacle. They consist of a perianth (combined petals and sepals) and a pistil (ovary, style and pollen presenter which contains the stigma in a stigmatic groove). The ovary at the base of each flower is very small and sessile. The perianth forms a tube, topped when in bud by an oblong or linear limb that may be glabrous, hairy or topped with sparse, thin hairs. The style is usually longer than the perianth, and in bud usually curves outwards through a split in the perianth until the tip is freed at anthesis. Having received pollen from the anthers located inside each of the four sections of the limb, the tip becomes the "pollen presenter". The stigmatic groove within the stigma then becomes receptive to pollen from other flowers after the pollen is removed by a visiting pollinator. The *Dryandra* flower head is most attractive at bud stage when the perianth limbs are first held together in a central cluster, with the wiry styles curving out around the bud; the affect is best seen in the large flowering species such as *D. formosa*, *D. nobilis* and *D. quercifolia*. When the limb breaks, the styles are freed and straighten, while the four perianth parts are also freed and become loose; the flower head is then often less attractive and "shaggy". The above applies to the majority of dryandras and the flower head is sometimes referred to as a Type B head. The Type A head, characterised by *D. nervosa* and six other species of the *D. pteridifolia* complex, as well as species in series **Gymnocephalae**, occurs when the length of the pistil is equal to or slightly shorter than the perianth. The style does not bow out at any stage of flowering and the perianth parts split but separate only slightly from the style. After the flowers have opened, the head remains tightly compact and has a "shaving brush" shape.

only one female doctor available), and cost (virtually no bulk billing – ie d charge to Medicare with no patient co-payment). A lack of confidentiality is a barrier to seeking service access was raised by both rural and urban youth, but a major concern in rural areas. No issues specific to urban areas were raised by urban youth. Male and female rural adolescents were more likely than urban adolescents to express concerns over limited educational, employment and recreational opportunities, which they believed contributed to their risk-taking behaviour. Gender differences were evident for mental health issues, with boys more able to talk with their peers or service providers about stress and depression than girls. These gender differences were evident among adolescents in both rural and urban areas, but the ethos of a self-reliant male who does not ask for help was more evident among rural boys.

**Conclusions:** While Australian rural and urban youth shared many health concerns, rural-urban differences were striking in the almost exclusive reporting of youth suicide and teenage pregnancy by rural adolescents. The findings suggest that structural disadvantage in rural areas (limited educational, employment and recreational opportunities, and recreational facilities) impact adversely on health outcomes, particularly mental health outcomes, and contribute to risk-taking behaviour. These disadvantages should be considered by health-service policy makers and providers to redress the imbalance. Gender differences were also evident and efforts to tailor the specific needs of Australian adolescent boys are warranted.

**Key words:** adolescents, Australia, risk-taking behaviour, rural-urban, youth suicide, teenage pregnancy.

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Welcome to this special newsletter featuring the Illustrated Key to Dryandras.

It is the fruit of many years work by Margaret and Alex George. When we established the Dryandra Study Group in 1974, the only information we had available was the general accounts of the genus in Volume 1, issues 7 and 8 of *Australian Plants* (published in 1961) and, surprisingly, the illustrated key from W.E. Blackall's and B.J. Grieve's *How to know Western Australian Wildflowers*, originally published in 1954. This material was reproduced in the November 1974 *Newsletter*. As Margaret has done with the present key, they used leaf illustrations to assist with identification, but as they gave no scale, many of the drawings were of little use. Margaret has drawn leaves of nearly all species and subspecies to full size and this, coupled with other information from the key, should provide an interim means of identification.

### Some History

Over 20 years ago, Alex George, then a botanist at the Western Australian Herbarium, began work on revising the genus which had last been examined in detail by Bentham in 1870. It was slow work. The genus had been inadequately collected and it is likely that in the 1970s there were more dryandras in the National Herbarium at Melbourne than there were in Perth! Certainly Melbourne had many of the type specimens, a legacy of the herbarium building activities of Ferdinand von Mueller. In these early days, Dryandra was regarded as having 59 species with up to 20 undescribed. Misidentification was rife and seeds and plants sold by both seed suppliers and nurseries often bore incorrect names, a situation which regrettably occurs even today.

Study group members obtained seed by whatever means they could. King's Park and Botanic Gardens was a good source, as was the seed service of the Western Australia Wildflower Society. In 1980, at the instigation of Alf Salkin, we established a Dryandra Arboretum in the research area of the Cranbourne Botanic Gardens outside Melbourne (see Newsletter No. 5, November 1980.) Though suffering from the effects of *Phytophthora* in recent years, this is now the largest collection of dryandras in the world and contains perhaps 70 - 80 species and many of the subspecies and varieties. It is an invaluable resource for anyone wishing to compare various species side by side.

A keen supporter of the group in these early days and indeed up to his death, was Ken Stuckey of Fumer, South Australia. Long before it was fashionable to grow native plants, Ken and Alby Lindner of Horsham (and Dave Gordon of Queensland) were pioneering their cultivation. I well remember visiting both Ken's and Alby's gardens in the early 1970's and was staggered by just how many dryandras they were growing that I knew nothing about. Dulcie Rowley and Neville Bonney of South Australia were also early growers (and in Neville's case a supplier from his nursery) of dryandras.

In 1983, Keith Alcock became leader and made it his major aim to collect both Herbarium specimens and seed from known locations to improve the Cranbourne collection which up until then relied on the donation of plants from unknown provenances. Keith made many trips to the West and made the acquaintance of Margaret Pieroni whom I suspect at the time had more interest in *Verticordias* than Dryandras! Such was Keith's enthusiasm that Margaret soon became a Dryandra Study Group member and began collection throughout the south west.

Margaret and Keith have made a substantial contribution to our knowledge of field locations of dryandras. In Margaret's case, she has probably seen nearly all, if not all, in the field and has been responsible for finding many new populations. Quite a number of their Herbarium specimens are cited as type or representative collections of new species and Keith's major article on germination of dryandras, based on seed he had collected in the west, remains the only detailed study of this important aspect of their cultivation. (See Newsletters 20 and 21). He distributed the plants he raised widely and helped introduce dryandras to many growers of our native plants.

In the mid 1980s, Ted Griffin a botanist at the Western Australian Herbarium examined specimens mainly housed in the WA Herbarium and in conjunction with field observations, was able to produce distribution maps for all the then recognised 56 species and 10 which he designated as species A to J. Most of these last were described as new species by Alex George in 1996. His work also listed for the first time details like flowering time and conservation status.

### The Present

In 1996, Alex George published part of his long awaited revision in the WA Herbarium journal *Nuytsia*. This gave concise descriptions of all new taxa and also provided a new key to all species, subspecies and varieties, 126 in all. The full revision, which will include descriptions of all taxa, will be published in Vol. 17 of the *Flora of Australia* due out later this year.

Using the key as a basis, Margaret has produced the illustrated key which is published in this Newsletter. While it might look simple, it has involved Margaret in an enormous amount of work and all members of the Study Group should be grateful for her painstaking attention to detail in producing what I know will be a most useful guide. This of course is an interim measure and the forthcoming book will have full descriptions, more drawings and colour photographs as well as cultivation notes, history etc. We are looking now at how best to produce it and I would ask for member's patience because pressure of other work has led to delays.

For this newsletter Alex George has written an introduction and provided the definitions used in the glossary. Margaret has drawn the flower head sections and Keith Alcock provided the text for the description of the *Dryandra* flower. I have also included examples of the main leaf shapes and leaf margins to make it easier for users to follow the key. Lastly we have included an index of species and a list of the major references to descriptions of *dryandras*. In preparing the final copy, Margaret received a lot of assistance from Brian Moyle and she and I would like to thank him for his help.

I hope that everyone finds this Illustrated Key as useful as I have. Please let Margaret or myself know if you have any queries or suggestions.

Tony

## DRYANDRA

A genus of 92 species and 34 infraspecific taxa endemic in south-western W.A., mostly within the South West Botanical Province. Distinguished from *Banksia* by the capitate inflorescence with concave, flat or convex receptacle, by the less crowded floral bracts that usually elongate markedly in fruit, and by the thinner follicles that are indurated but not thick and woody. The leaves of *Dryandra* are more pungently lobed than those of most species of *Banksia*, and the involucre consists of larger, usually flat bracts that are almost always longer persistent. In many species the follicles are relatively easily detached.

Two growth forms common in *Dryandra* do not occur in *Banksia*, viz. the dense columnar habit with short lateral branchlets crowded along the main branches, and the low rounded habit with short divaricate branches hidden within dense foliage. The leaves of most species are extremely varied in form and size, between seedling or regrowth leaves, stem leaves, those of short lateral branchlets and those subtending the inflorescence. In the following account, 'typical' leaves of mature stems are described, the length of the lamina being measured from where it ends on the petiole, and the width across the full extent of the widest lobes or teeth. Length of the involucral bracts is that of the longest (usually innermost); indumentum of these bracts is given for the outer surface and margins only. Floral bracts are present in all taxa except *D. sessilis*. At anthesis the flowers are evenly spaced in the head except in ser. *Niveae* and ser. *Acuminatae* in which they form a circle around a central hollow. Perianth length includes the limb, which is then given separately; pistil length includes the pollen presenter, which likewise is then given separately. In all taxa, the base of the perianth where enclosed within the floral bracts is glabrous; in the descriptions, 'above base' refers to the exerted part. Unless otherwise stated, the curvature of the pistil is described just before anthesis. The relative lengths of the perianth and pistil are most easily observed immediately before anthesis; afterwards, the perianth in many species relaxes, making its measurement difficult.

To observe and measure characters such as the floral bracts, whole perianth and pistil it is essential to dissect an inflorescence. This is done relatively easily in the fresh state by cutting an inflorescence from the base upwards with a pair of secateurs. With practice a cut through the middle will result in two halves that, for herbarium purposes, may be pressed more easily than an intact head. A similar technique is useful for cutting fruiting heads.

A. S. George

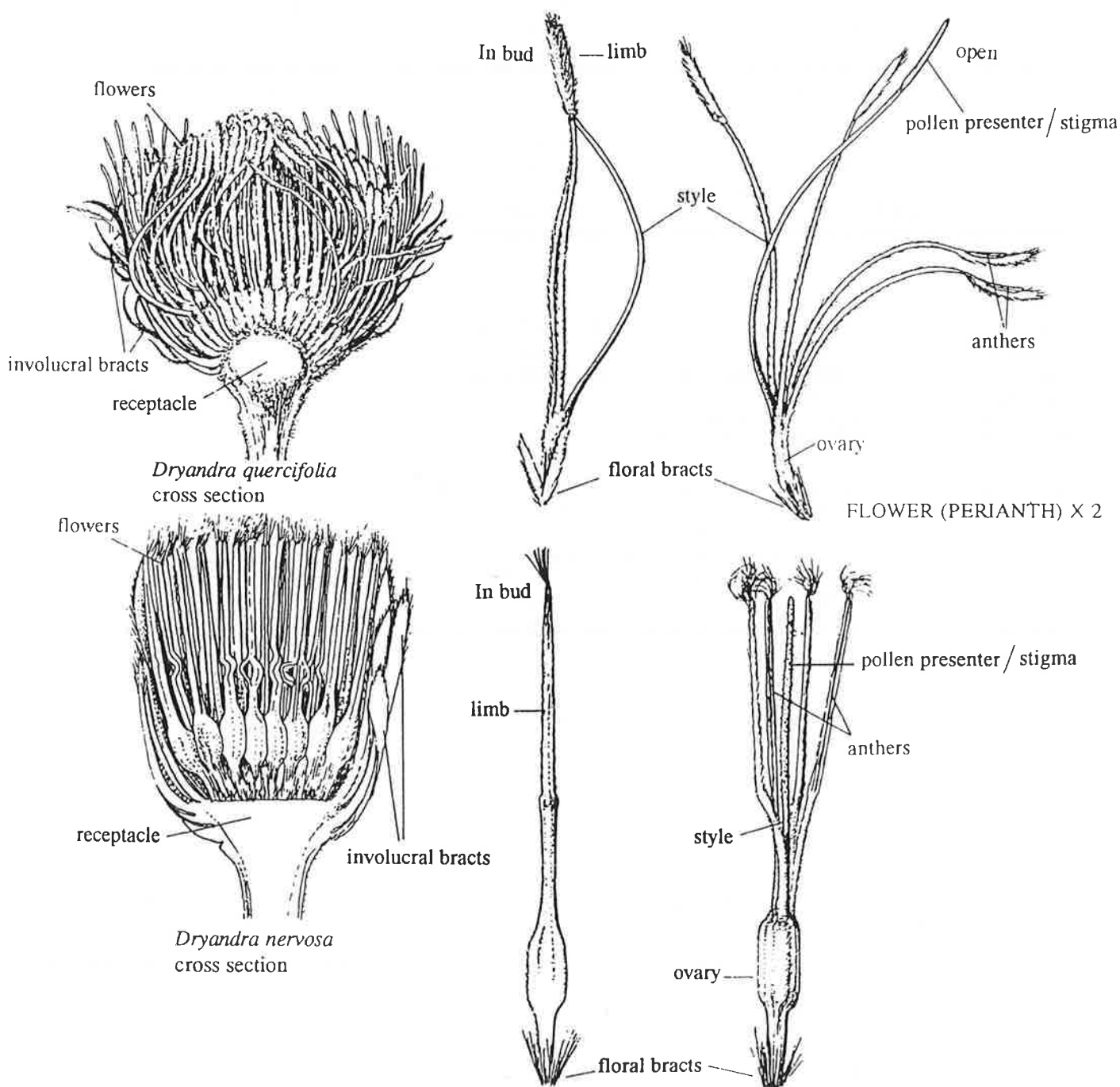
### Glossary:

|               |  |
|---------------|--|
| anther        | that part of a stamen which contains pollen.       |
| axillary      | in axil formed by leaf and branch.                 |
| cuneate       | broadest around middle and tapering to base.       |
| dentate       | toothed.   |
| glabrous      | surface destitute of hairs.                        |
| hermaphrodite | with male and female parts.                        |
| inflorescence | flower cluster.                                    |
| involucre     | whorl of bracts surrounding base of flower.        |
| lanceolate    | lance shaped; long and narrow.                     |
| limb          | swollen end of perianth.                           |
| linear        | long and narrow with parallel edges.               |
| peduncle      | main axis of an inflorescence.                     |
| perianth      | collective term for calyx and corolla.             |
| pinnate       | compound leaf with leaflets either side of midrib. |
| pinnatifid    | leaf lobes cut half-way to midrib.                 |
| pistil        | female part of flower - ovary, style and stigma.   |
| plumose       | hairs with feather like branches.                  |
| prophyll      | bract-like structures on stems of some species.    |
| ovary         | contains ovules - becomes fruit.                   |
| receptacle    | swollen head of flower stalk.                      |
| reticulate    | net-like veins of leaf.                            |
| revolute      | edges of leaf rolled inwards towards midrib.       |
| sinus.        | recess between lobes of leaf.                      |
| stamen        | male part of flower - filament and anther.         |
| stigma        | female flower part which receives pollen.          |
| style         | joins stigma to ovary.                             |
| subulate      | awl-shaped.  |
| terminal      | at the apex.                                       |
| tomentose     | covered with closely matted short hairs.           |
| villous       | covered with long weak hairs.                      |

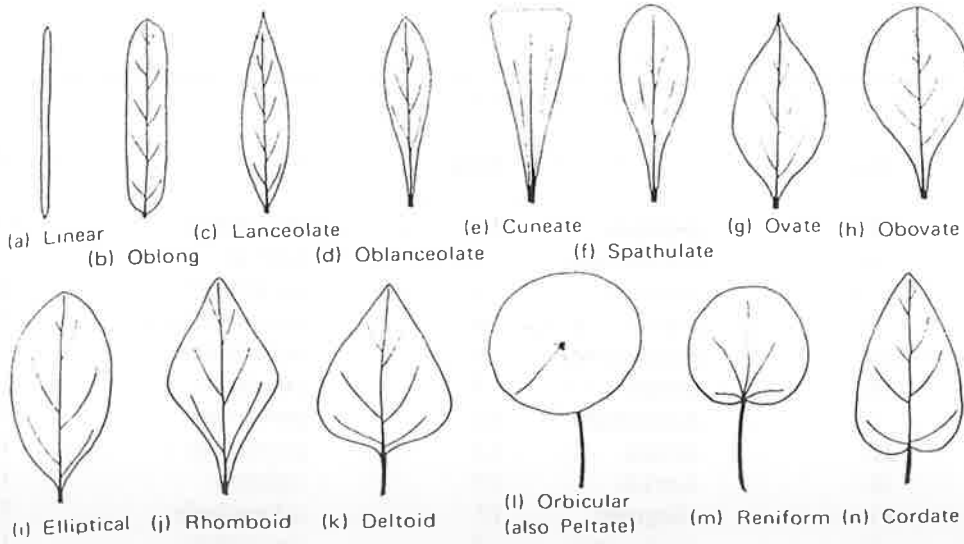


The Dryandra Flower:

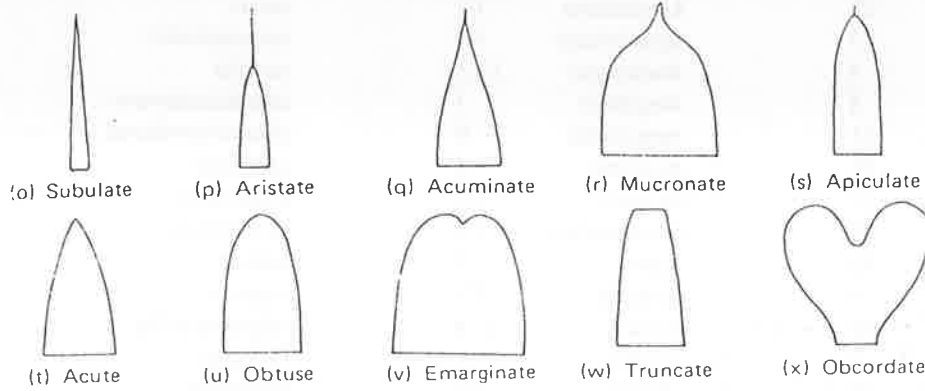
The Flower heads of dryandras are made up of many flowers clustered together. Bentham's description of the inflorescence is as follows; "flowers sessile, in pairs, in dense terminal or lateral heads in a involucre of numerous imbricate scale-like bracts and usually surrounded by a ring of floral leaves similar to the stem leaves". Individual flowers are hermaphrodite and attached to a flat or nearly flat receptacle. The perianth (combined petals and sepals) forms a tube, topped when in bud by an oblong or linear limb (tip of perianth tube). The limb divides into four claws during flowering, splitting the perianth tube to nearly half way, with each claw holding an anther. The ovary at the base of each flower is very small and sessile. The long, thin straight style may not exceed the perianth in length. When, as in most cases, it is longer it will curve outwards through a split in the perianth until the stigma or tip of the style is freed when the limb breaks as described above. The style then straightens. this explains the form of most species in bud, e.g. *D. formosa*, where the perianth limbs are at first held together in a central cluster, while the thin, wiry styles curve out around the bud. As the stigmas are freed, this effect disappears.



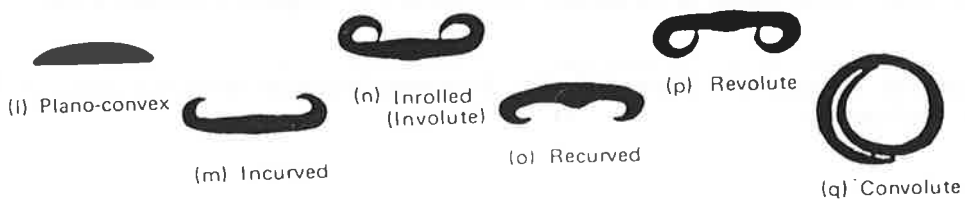
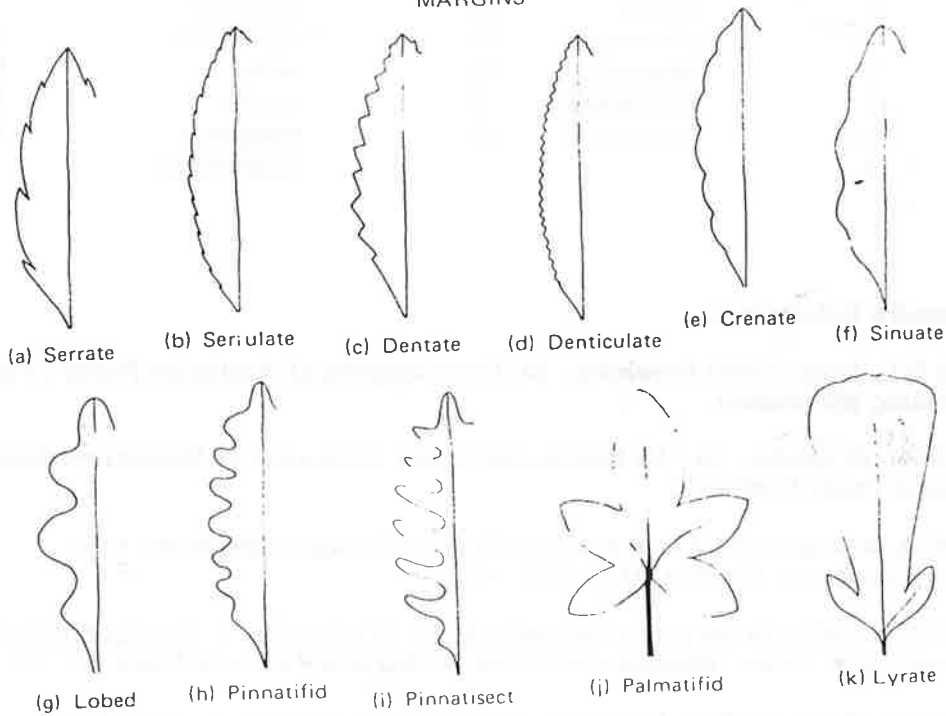
SHAPES



APICES



MARGINS



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### Important *Dryandra* References:

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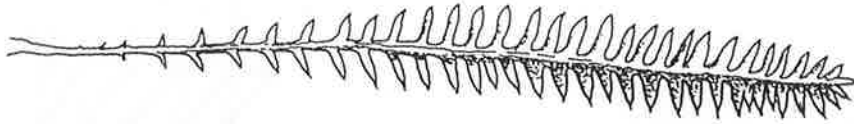
# KEY TO DRYANDRA

^1 Pistil exceeding perianth by 1 mm or more

^^2 Involucral bracts shorter than pistil (of the outer flowers in taxa in which the inner flowers are shorter than the outer)

^^^3 Pistil crook-shaped, 68–79 mm long; pollen presenter prominent, ovoid; tepals flared widely at apex of basal tube; flowers 12–17 per head (Badgingarra district)

81. *D. nana*



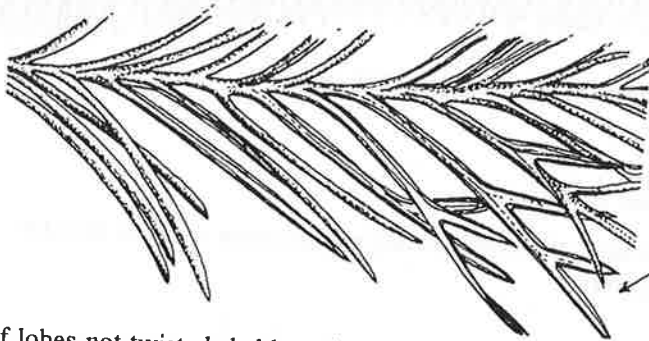
Prostrate plant  
Leaves 4–19 cm long,  
blue-green

^^^3: Pistil straight to curved but not crook-shaped, usually less than 60 mm long; pollen presenter narrowly cylindrical; tepals not flared; flowers 20–250 per head

^^^4 Receptacle prominently convex; flowers at anthesis forming a circle leaving a central hole

^^^5 Leaves pinnatipartite, usually with at least some lobes also pinnatipartite; involucral bracts acuminate; perianth loosely hirsute with sticky hairs (between Woodanilling, Cranbrook & Collie)

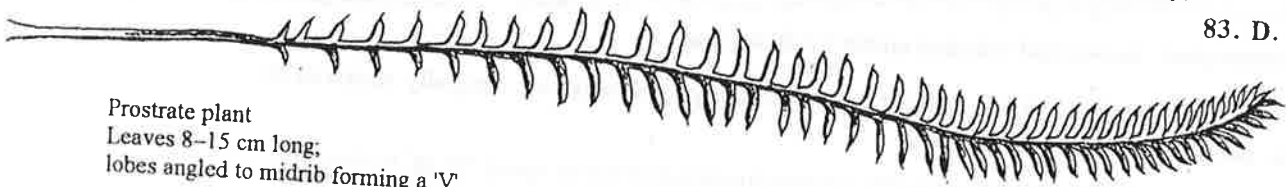
82. *D. preissii*



Prostrate plant  
Leaves 7–15 cm long;  
upper lobes often lobed  
again (bipinnate)

^^^7 Leaf lobes not twisted, held vertically (Kojonup to Ongerup, Stirling Ra. & Albany)

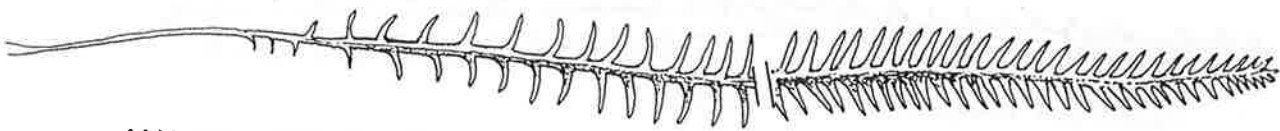
83. *D. arctotidis*



Prostrate plant  
Leaves 8–15 cm long;  
lobes angled to midrib forming a 'V'

^^^7: Leaf lobes twisted so that upper half of lamina is  $\pm$  horizontal (Eneabba to Cataby)

84. *D. tortifolia*



Prostrate  
plant  
Leaves  
10–17 cm long

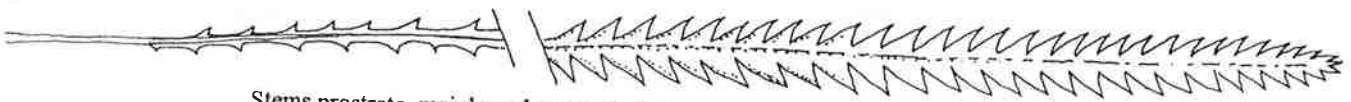
^^^6: Leaf lobes oblong or triangular

^^^8 Leaf lobes oblong or narrowly triangular

^^^9 Plant with underground stems, fire-tolerant; leaf lobes 15–35 each side (Bannister and Wandering to Manjimup)

87. *D. lindleyana*

87a1. *D. lindleyana* subsp. *lindleyana* var. *lindleyana*



Stems prostrate, mainly underground. Leaves 10–20 cm long, 3–8 mm wide.  
Coastal areas, Geraldton to Cape Naturaliste.

**87b. *D. lindleyana* subsp. *pollostata***



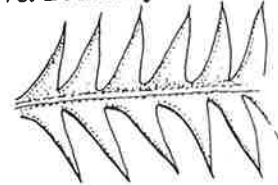
Prostrate plant. Leaves 13–20 cm long.  
Moora to Watheroo.

**87a2. *D. lindleyana* subsp. *lindleyana*  
var *mellicula***



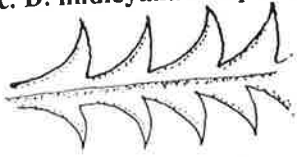
Stems prostrate to erect. Darling Scarp.

**87e. *D. lindleyana* subsp. *sylvestris***



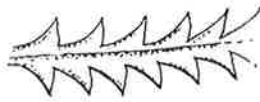
Stems underground. Leaves 6–16 cm long.  
In Jarrah–Marri forest.

**87c. *D. lindleyana* subsp. *media***



Prostrate plant. Leaves rigid, 15–20 cm long.  
Eneabba to Mingenew.

**87d. *D. lindleyana* subsp. *agricola***



Prostrate plant. Rigid, blue-green  
leaves. Corrigin to Traysurin.

.....9: Plant with stems above ground, fire-sensitive; leaf lobes 40–75 each side (Albany to Stirling Ra. & E to Fitzgerald R.)

88. *D. brownii*

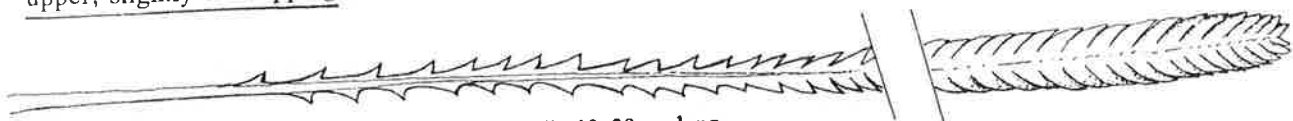
Bushy shrub. Leaves dark blue-green, 15–35 cm long, up to 25 cm wide.

.....8: Leaf lobes broadly triangular

.....10 Plant with underground stems, fire-tolerant

.....11 Leaf lobes 1–3 mm wide at base, the lower (basal) margin more revolute than the upper, slightly overlapping (near Badgingarra)

85. *D. stenoprion*



Prostrate plant. Leaves rigid with thick midrib, 12–20 cm long.

.....11: Leaf lobes 2–8 mm wide at base, both margins shortly and ± equally recurved to revolute, not overlapping; widespread

.....12 Leaf lobes usually markedly convex (recurved towards apex) (W of Arrino to Alexander Morrison Natl Park)

86. *D. cypholoba*

Prostrate plant. Blue-green leaves 12–20 cm long.

.....12: Leaf lobes not or slightly convex (Geraldton to Cape Naturaliste and E to Corrigin and Traysurin)

87. *D. lindleyana*  
see above

.....10: Plant with above-ground stems, fire-sensitive (Lake Indoon to Nyabing & E to Cape Arid, on the Scott R. plain & E of Busselton)

89. *D. nivea*

**89a. *D. nivea* subsp. *nivea***



Mounded shrub to 1 m. Narrow leaves 20–30 cm long.

**89b. *D. nivea* subsp. *uliginosa***



Large mounded shrub to 1 m. Leaves wide and up to 45 cm long. Scott R. plain and E of Busselton.

***D. nivea* 'Morangup'** (Pieroni 94/2)



Mounded shrub to 1 m. Leaves to 35 cm long. Flowers with red styles. SW of Toodyay.

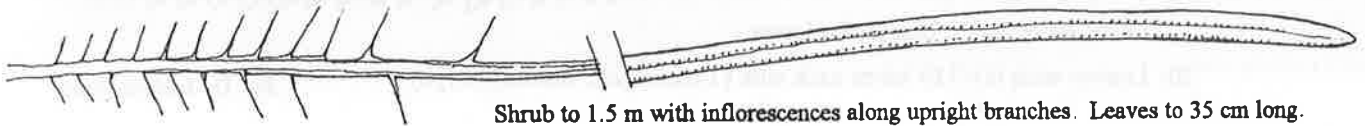
^^^^4: Receptacle gently concave, or flat, or gently convex; flowers ± equally-spaced in head at anthesis

^^^^^13 At least some leaves more than 20 cm long; mostly low shrubs with short stems

^^^^^^14 Leaves pinnatipartite usually only in lowest lowest third to half with subulate lobes, otherwise entire (Pingelly to Tambellup)

**19. *D. subpinnatifida***

**19a. *D. subpinnatifida* var. *subpinnatifida***



Shrub to 1.5 m with inflorescences along upright branches. Leaves to 35 cm long.

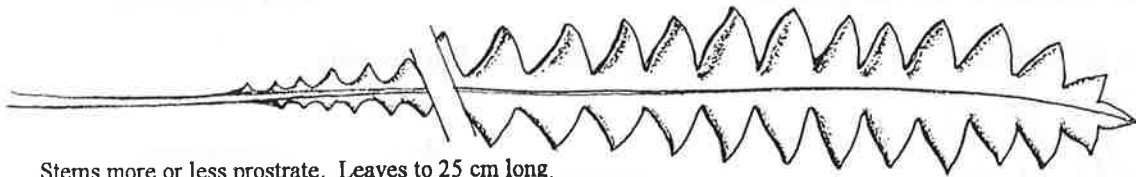
**19b. *D. subpinnatifida* var. *imberbis***

Low mounded plant. Inflorescences in densely packed domes. Leaves usually narrower than var. *subpinnatifida*.

^^^^^^14: Leaves prominently pinnatipartite or pinnatifid throughout

^^^^^^15 Leaves 4–18 mm wide

^^^^^^16 Pistil pilose in lower half (Kamballup)



Stems more or less prostrate. Leaves to 25 cm long.

**58. *D. ionthocarpa***



Capsule and wingless seed

^^^^^^16: Pistil glabrous except hairs on ovary

^^^^^^17 Leaf lobes 6–21 each side (Esperance to Mt Ragged)

**20. *D. longifolia***



**20a. *D. longifolia* subsp. *longifolia***

Upright shrub. Leaves to 30 cm long. Flowers large (perianth 37–40 mm long). Cape le Grand to Cape Arid.

**20b. *D. longifolia* subsp. *calcicola***

Spreading shrub. Leaves to 20 cm long. Smaller flowers. Esperance.

**20c. *D. longifolia* subsp. *archeos***

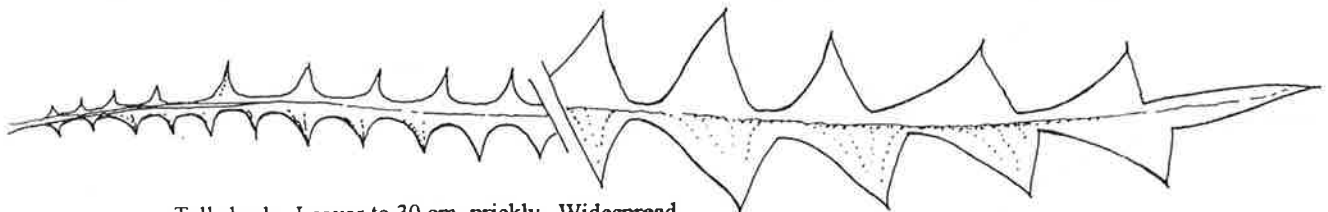
Confined to Mt Ragged. Flowers earlier (April–June).

^^^^^^17: Leaf lobes 25–110 each side

^^^^^^18 Pistil 42–56 mm long (Eneabba to Katanning)

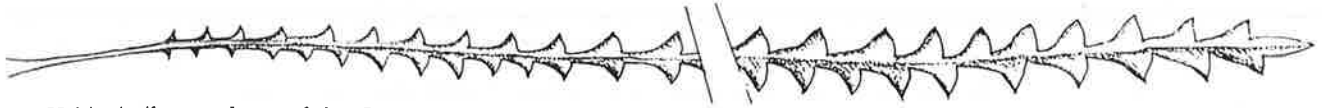
**34. *D. nobilis***

**34a. *D. nobilis* subsp. *nobilis***



Tall shrub. Leaves to 30 cm, prickly. Widespread.

**34b. *D. nobilis* subsp. *fragrans***



Habit similar to subsp. *nobilis*. Leaves not prickly, to 20 cm long. Flowers scented. Badgingarra.

18: Pistil 18–40 mm long

19 Perianth 17–19 mm long; pistil 18–21 mm long (Stirling Ra.)



side view



**71. *D. montana***

Leaf—cross-section ×2

Leaves 20 cm long. Confined to Bluff Knoll, Stirling Range.

19: Perianth 25–30 mm long; pistil 28–40 mm long

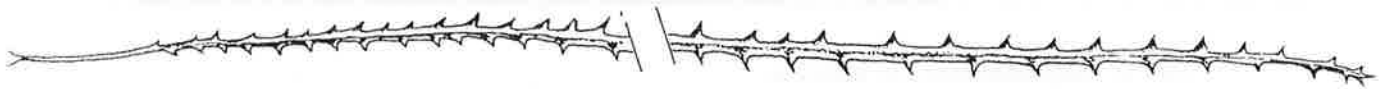
20 Leaves with 25–45 lobes each side (near Busselton, Stirling Ra. to Albany) **37. *D. baxteri***



Dense, bushy shrub. Non-prickly leaves.

20: Leaves with 60–110 lobes each side (Tarin Rock, Ravensthorpe)

**38. *D. foliosissima***



Dense, bushy shrub. Leaves to 25 cm long. Large, 18–21 mm long, hairy follicles.

15: Most leaves more than 20 mm wide

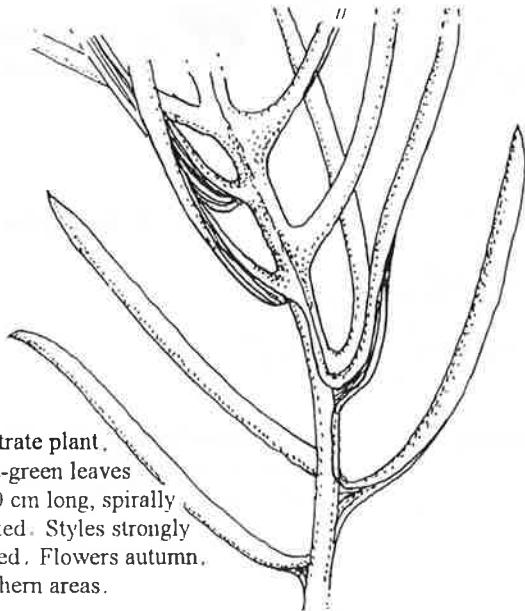
21 Leaf lobes linear

22 Prostrate shrub with lignotuber; involucral bracts to 2 cm long; pistil 38–53 mm long (Badgingarra to Moore R.; Gairdner R. to Cape le Grand)

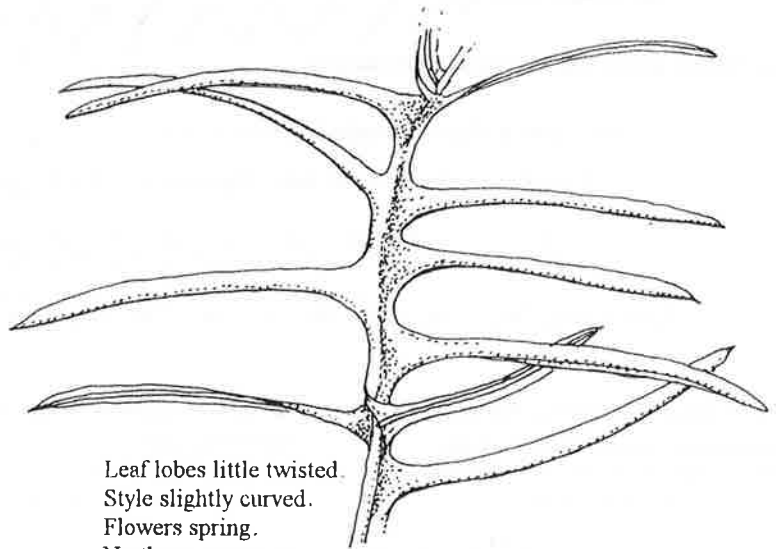
**49. *D. pteridifolia***

**49a. *D. pteridifolia* subsp. *pteridifolia***

**49b. *D. pteridifolia* subsp. *vernalis***



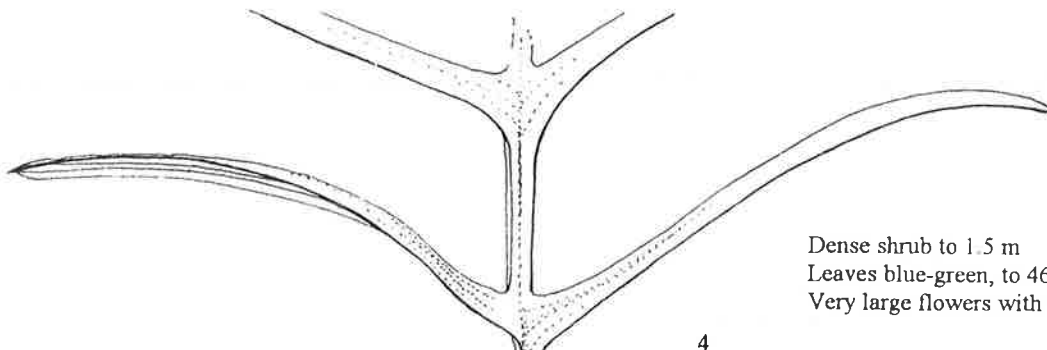
Prostrate plant. Blue-green leaves to 40 cm long, spirally twisted. Styles strongly curved. Flowers autumn. Southern areas.



Leaf lobes little twisted. Style slightly curved. Flowers spring. Northern areas.

22: Bushy shrub without lignotuber; involucral bracts 4.5–5.5 cm long; pistil 58–74 mm long (Cadoux to Hyden)

**51. *D. shanklandiorum***



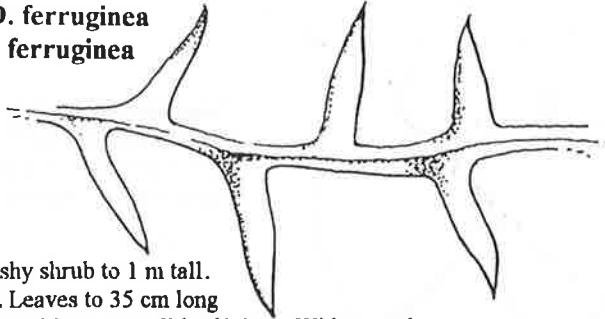
Dense shrub to 1.5 m. Leaves blue-green, to 46 cm long. Very large flowers with curved style

~~~~~21: Leaf lobes triangular, usually broadly so

~~~~~23 Involucral bracts 30–40 mm long (Newdegate to Ravensthorpe)

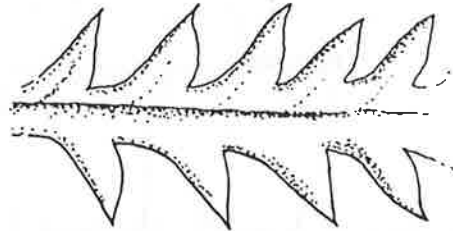
42. *D. ferruginea*

42a. *D. ferruginea*  
subsp. *ferruginea*



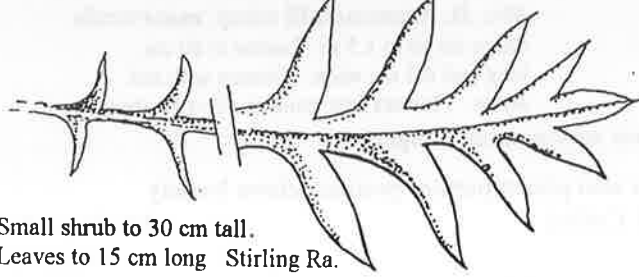
Erect, bushy shrub to 1 m tall. Variable. Leaves to 35 cm long sometimes with very small leaf lobes. Widespread.

42b. *D. ferruginea* subsp. *tutanningensis*



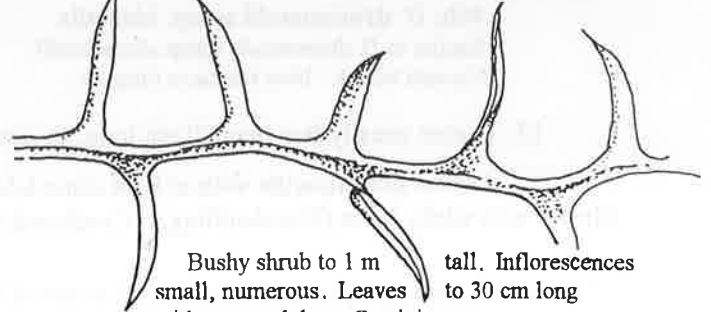
Bushy shrub to 1 m tall. Leaves to 35 cm long, variable in width. Lobes not close to midrib. Tutanning.

42c. *D. ferruginea* subsp. *pumila*



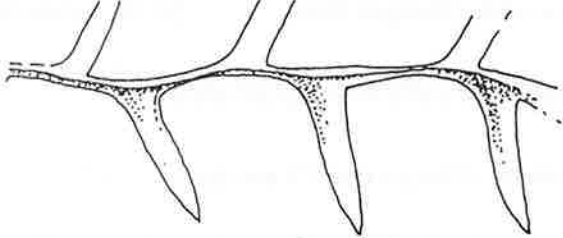
Small shrub to 30 cm tall. Leaves to 15 cm long Stirling Ra.

42d. *D. ferruginea* subsp. *obliquiloba*



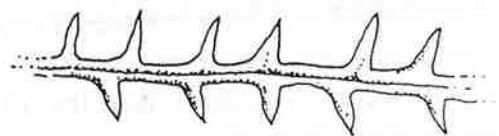
Bushy shrub to 1 m tall. Inflorescences small, numerous. Leaves to 30 cm long with narrow lobes. Corrigin area.

42e. *D. ferruginea* subsp. *chelomacarpa*



Prostrate plant Leaves to 20 cm long Newdegate area

42f. *D. ferruginea* subsp. *flavescens*



Prostrate plant Leaves to 30 cm long E of Lake King, N of Hyden

~~~~~23: Involucral bracts 25 mm or less long

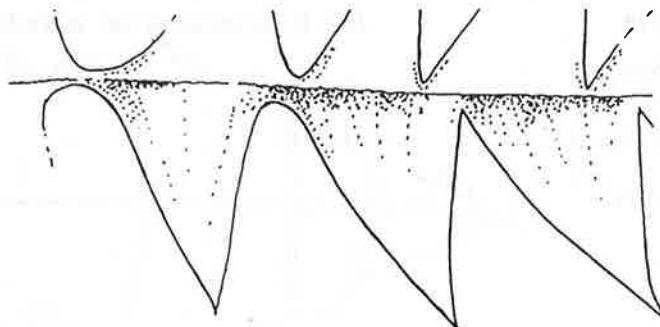
~~~~~24 Leaves less than 25 mm wide (Eneabba to Katanning)

34. *D. nobilis*  
see pages 3–4

~~~~~24: Leaves 25–75 mm wide

~~~~~25 Stems with recurved, ovate-oblong tomentose prophylls (near Badgingarra)

48. *D. catoglypta*

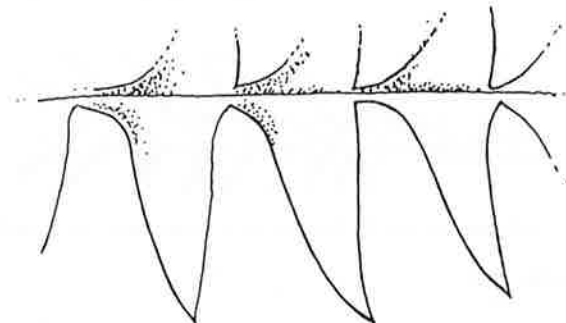


Upright shrub with flowers on erect stems Leaves blue-green, to 30 cm long Flowers winter–spring. Badgingarra area.

~~~~~25: Stems with appressed, lanceolate, villous prophylls

~~~~~26 Leaf lobes acute, the margins straight to gently curved; perianth limb 8–11 mm long; flowers 50–85 per head (Nyabing to Hyden)

47. *D. octotriginta*



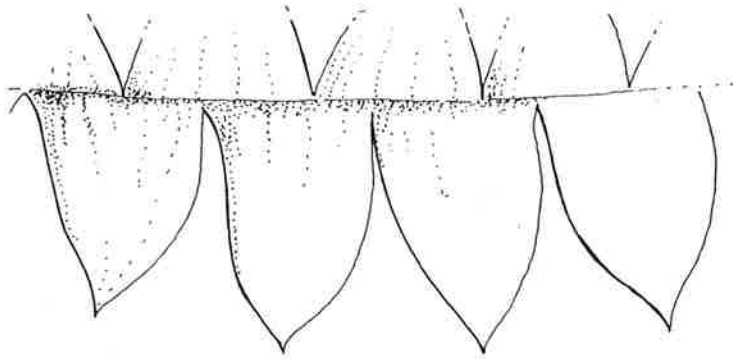
Upright shrub with flowers on erect stems Blue-green leaves to 25 cm long Flowers winter–spring. Widespread



~~~~~26: Leaf lobes obtuse, the margins prominently curved in to apex; perianth limb 11–14 mm long (Mogumber to Bremer Bay)

46. *D. drummondii*

46a. *D. drummondii* subsp. *drummondii*



Mounded plant to 1 m  
Dark blue-green leaves  
to 40 cm long. Flowers  
early summer. Stirling Range.

46b. *D. drummondii* subsp. *hiemalis*

Similar to *D. drummondii* subsp. *drummondii*.  
Flowers winter. New Norcia to Pingelly.

46c. *D. drummondii* subsp. *macrorufa*

Large shrub to 1.5 m Leaves to 80 cm  
long and 8.5 cm wide. Flowers with red  
styles. Flowers late summer. E of Nyabing.

~~~~~13: Leaves usually less than 20 cm long, in several species some longer

~~~~~27 Leaves pinnatipartite with at least some lobes also pinnatipartite; perianth claws loosely  
hirsute with sticky hairs (Woodanilling to Cranbrook & Collie)

82. *D. preissii*  
see page 1

~~~~~27: Leaves simply divided or lobed; perianth hairs not sticky

~~~~~28 Pistil c. 15 mm longer than perianth; leaves 3–4 mm wide (Wongan Hills)

22. *D. pulchella*



Bushy shrub Blue-green leaves to 20 cm long

~~~~~28: Pistil usually no more than 10 mm longer than perianth, if longer than 15 mm then  
leaves at least 6 mm wide

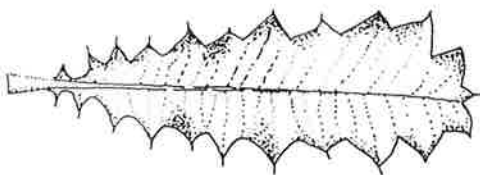
~~~~~29 Leaf lamina excluding lobes cuneate to obovate, commonly with more than 5 teeth each  
side

~~~~~30 Leaves white-tomentose below

~~~~~31 Leaves sessile or almost so, commonly more than 25 mm wide; involucre bracts to  
12–15 mm long; floral bracts 2 mm long (Clackline to Dwellingup)

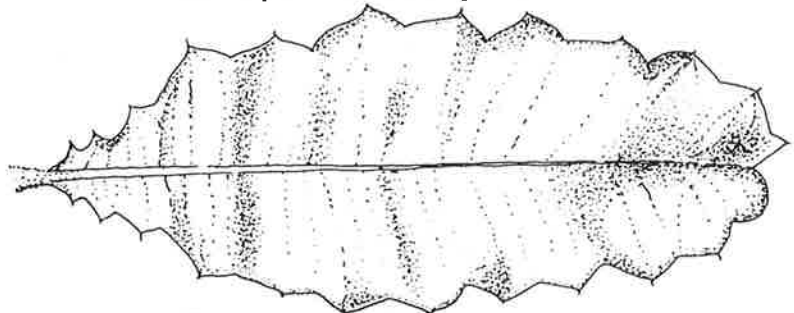
30. *D. praemorsa*

30a. *D. praemorsa* var. *praemorsa*



Leaves and flowers small

30b. *D. praemorsa* var. *splendens*



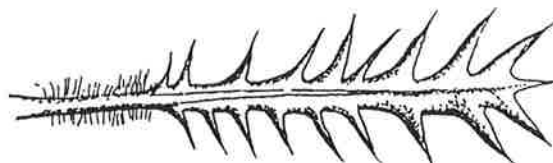
Leaves and flowers large. Flowers sometimes pink.

~~~~~31: Leaves petiolate, 12–22 mm wide; involucre bracts to 20–25 mm long; floral  
bracts 15–17 mm long (Stirling Ra.)

32. *D. anaton*



Juvenile leaf



Tall, narrow shrub. Seed capsules very large, hairy and woody.

~~~~~30: Leaves glabrous below except pits

^^^^^^^^^^32 Follicles 6–7 mm long, not indurated; perianth limb glabrous or sparsely hairy

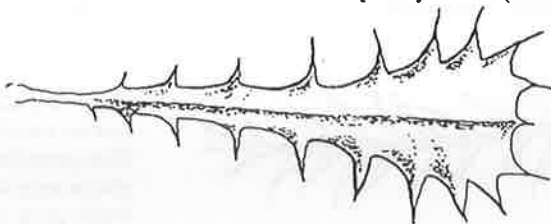
^^^^^^^^^^33 Leaves bright green; flowers ± bright yellow (Stirling Ra. to Israelite Bay) 90. *D. falcata*



Very small hairy capsule with one wingless seed

^^^^^^^^^^33: Leaves glaucous; flowers pale yellow (Eneabba to Mogumber)

91. *D. glauca*

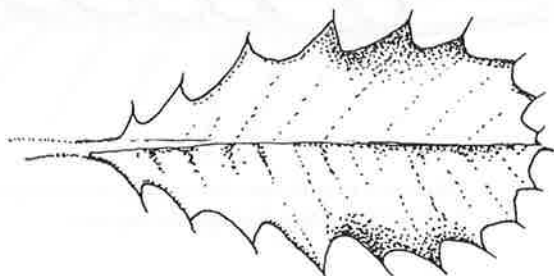


Capsules and seeds similar to *D. falcata*

^^^^^^^^^^32: Follicles 9–14 mm long, indurated; perianth limb hairy

^^^^^^^^^^34 Involucral bracts pale; pistil 24–40 mm long; pollen presenter 1–1.3 mm long, pale red; flowers 35–100 per head (Narrogen to Albany & Israelite Bay)

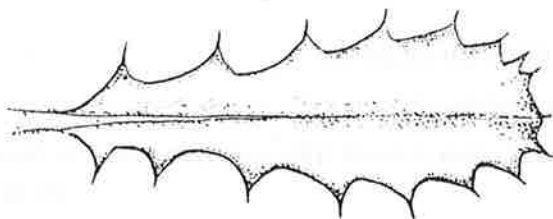
2. *D. cuneata*



Leaves and size of shrub variable Perianth pale to bright yellow Pollen presenter sometimes purple-red. Widespread.

^^^^^^^^^^34: Involucral bracts dark brown; pistil 22–26 mm long; pollen presenter 1 mm long, dark brown; flowers 180–190 per head (Gillingarra)

3. *D. fuscobracteata*



Similar to *D. cuneata*  
Perianth very pale yellow

^^^^^^^^^^29: Leaf lamina excluding lobes linear, oblong, lanceolate, elliptic, or narrowly obovate to narrowly cuneate and then with fewer than 5 teeth each side, or pinnatifid to pinnatisect with large triangular lobes

^^^^^^^^^^35 Leaf lamina narrowly obovate to narrowly cuneate with no or 1–4 teeth each side

^^^^^^^^^^36 Heads terminal, conspicuous; pistil 16–23 mm long; perianth creamy-white, often pink-tinged; shrub without lignotuber (Geraldton to Gingin)

26. *D. carlinoides*



^^^^^^^^^^36: Heads on short branchlet near base of stem, inconspicuous; pistil 30–40 mm long; perianth yellow; many-stemmed shrub with lignotuber (Arrowsmith to Hill R.)

27. *D. tridentata*



^^^^^^^^^^35: Leaf lamina linear, oblong, lanceolate or elliptic, sometimes narrowly cuneate or narrowly obovate, usually with more than 5 teeth or lobes each side, or pinnatifid to pinnatisect with large triangular lobes

^^^^^^^^^^37 Pistils within head straight or incurved or outcurved

^^^^^^^^^^38 Leaves 2.5–7 cm wide; perianth limb 8–14 mm long

^^^^^^^^^^39 Stems with ± straight lanceolate villous prophylls; perianth limb 8–11 mm long; flowers 50–85 per head (Nyabing to Hyden)

47. *D. octotriginta*  
see page 5

.....39: Stems with recurved, ovate-oblong tomentose prophylls; perianth limb 12–15 mm long; flowers 85–110 per head (rare, near Badgingarra)

**48. *D. catoglypta***

See page 5

.....38: Leaves commonly less than 2.5 cm wide; perianth limb less than 7 mm long

.....40 Leaves pinnatisect

.....41 Pistil 16–19 mm long (New Norcia to Bindoon)

**18. *D. polycephala***



.....41: Pistil 28–42 mm long (Kalbarri to Cranbrook)

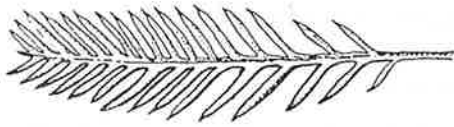
**23. *D. fraseri***

**23a. *D. fraseri* var. *fraseri***



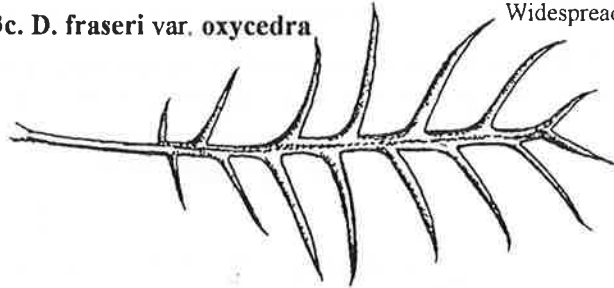
Sprawling shrub to 1 m tall  
Leaves variable  
Blue-green-leaved  
plants occur among  
bright green ones  
Widespread

**23b. *D. fraseri* var. *ashbyi***



Usually a more or less procumbent shrub.  
Leaves blue-green. Kalbarri to Dongara

**23c. *D. fraseri* var. *oxycedra***



Shrub to 6 m with branches from near base of trunk.  
Restricted to Three Springs–Arrino area.



Unnamed variety from near Mt Lesueur. Flowers  
with straight style. Small sprawling shrub  
Leaves blue-green.

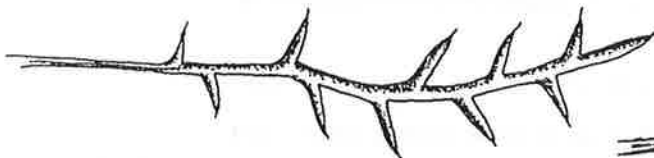
.....40: Leaves serrate, pinnatifid or pinnatipartite

.....42 Leaf lobes linear or lanceolate

.....43 Flowers 15–26 per head; stem covered with prophylls (Kulin to Nyabing & E to Forrestania)

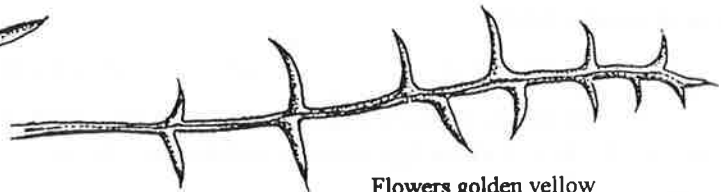
**62. *D. erythrocephala***

**62a. *D. erythrocephala* var. *erythrocephala***



Shrub to 1.5 m tall. Flowers dark red.  
Eastern areas.

**62b. *D. erythrocephala* var. *inopinata***



Flowers golden yellow  
Western areas

.....43: Flowers 80–120 per head; prophylls few or none on mature stem

.....44 Perianth 29–34 mm long; pistil 32–42 mm long; shrub without lignotuber (Gnowangerup to Munglinup)

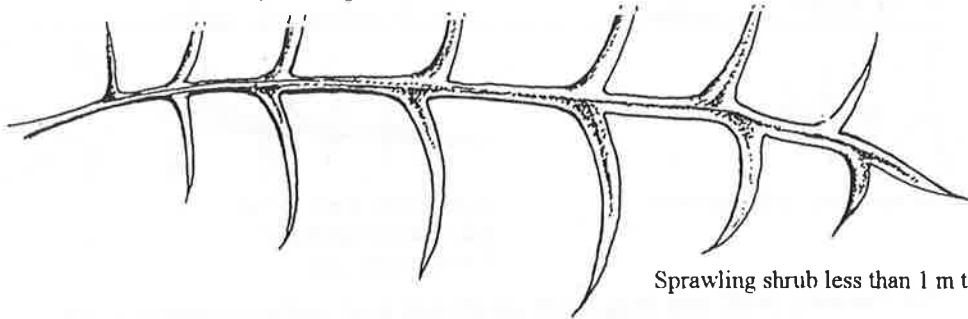
**10. *D. cirsioides***



Shrub to 1.5 m tall, often column-like

.....44: Perianth 20–27 mm long; pistil 22–33 mm long; shrub with lignotuber

.....45 Flowers c. 80–100 per head; shrub commonly suckering; leaves 40–55 mm wide; sinuses 10–25 mm across (Newdegate to Hyden and Frank Hann Natl Park) 9. *D. xylothemelia*



Sprawling shrub less than 1 m tall

.....45: Flowers c. 35 per head; leaves 10–25 mm wide; sinuses 3–7 mm across (Kulin to Nyabing) 29. *D. meganotia*

Population W of Nyabing has densely leaved columnar habit to 1 m tall



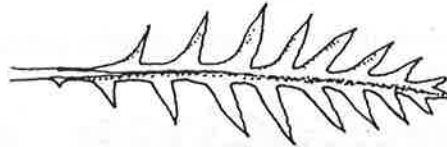
Small, suckering shrub. Small, hairy follicles.

.....42: Leaf lobes or teeth triangular

.....46 Flowers orange or pink

.....47 Perianth 19–23 mm long; shrub to 50 cm (Badgingarra, Mogumber) 28. *D. serratuloides*

**28a. *D. serratuloides* subsp. *serratuloides***



Involucral bracts very short. Mogumber.

**28b. *D. serratuloides* subsp. *perissa***



Involucral bracts longer than flowers. Badgingarra.

.....47: Perianth 25–42 mm long; shrub to 3 or 4 m

.....48 Leaves soft; floral bracts glabrous (Busselton to Two Peoples Bay & Stirling Ra.) 33. *D. formosa*



.....48: Leaves rather leathery; floral bracts hirsute or villous

.....49 Leaves divided more than half way to midrib, usually dark green above; at least some leaf laminae 15–20 cm long; follicles 16–19 mm long (Eneabba to Katanning) 34. *D. nobilis*  
see pages 3-4

.....49: Leaves divided less than half way to midrib, usually bluish green above; leaves never more than 15 cm long; follicles 9–11 mm long (York to Broomehill) 35. *D. stuposa*



.....46: Flowers yellow, commonly with deep yellow or golden limb

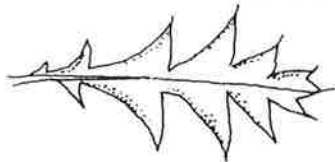
.....50 Leaves 3–9 mm wide

.....51 Pistil loosely hirsute, at least in lower quarter

.....52 Pollen presenter 3–5 mm long

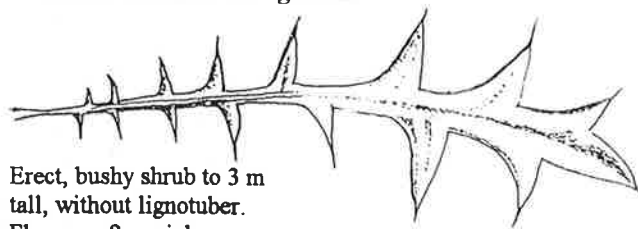
.....53 Perianth 25–39 mm long; pistil 28–42 mm long; pollen presenter 4–5 mm long; flowers yellow (widespread, Mt Lesueur to Albany & E to Israelite Bay) 4. *D. armata*  
see over

4a. *D. armata* var. *armata*



Shrub to 1.5 m tall, often sprawling, with lignotuber

4b. *D. armata* var. *ignicida*



Erect, bushy shrub to 3 m tall, without lignotuber. Flowers often pink.

4. *D. armata*

53: Perianth 19–23 mm long; pistil 22–29 mm long; pollen presenter 3–3.8 mm long; involucre bracts glabrous outside except silky-hirsute apex and margins, shining brown; flowers pink and green (rare, Badgingarra, Mogumber)

28. *D. serratulooides*  
see page 9

52: Pollen presenter 0.9–1.3 mm long

54: Pollen presenter noticeably thicker than apex of style; perianth 12–20 mm long; pistil markedly looped before anthesis (Eneabba to Armadale)

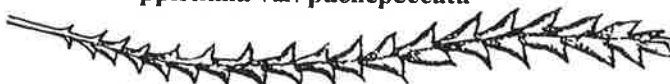
25. *D. kippistiana*

25a. *D. kippistiana* var. *kippistiana*



Upright shrub to 1.5 m tall. Follicle small, rounded.

25b. *D. kippistiana* var. *paenepeccata*



Small shrub, possibly a stable hybrid of *D. kippistiana* and *D. sclerophylla*. Leaves and follicles appear intermediate between the two

54: Pollen presenter scarcely thicker than apex of style; perianth 19–22 mm long; pistil gently bowed before anthesis (Eneabba to Badgingarra)

24. *D. sclerophylla*



Sprawling shrub to 60 cm tall, with lignotuber. Follicles woody, hairy.

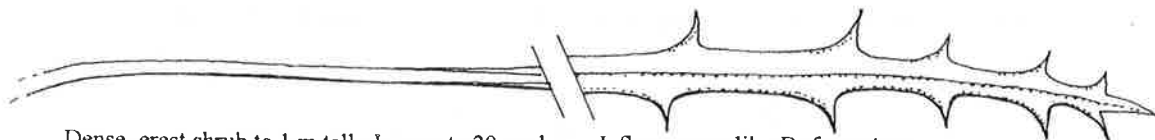


51: Pistil glabrous except a few hairs on ovary

55: Pistil 37–49 mm long

56: Involucre bracts appressed-pubescent, shining brown; leaves with 10–25 teeth each side (Ravensthorpe)

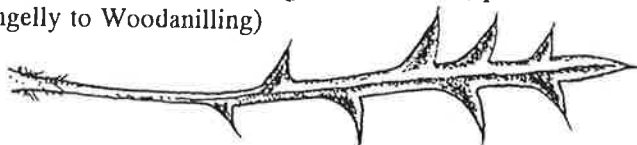
43. *D. corvijuga*



Dense, erect shrub to 1 m tall. Leaves to 20 cm long. Inflorescence like *D. ferruginea*.

56: Involucre bracts glabrous at base, plumose above, pale; leaves with 3–8 teeth each side (Pingelly to Woodanilling)

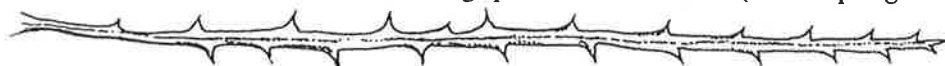
61. *D. cynaroides*



Upright shrub to 1.75 m tall

55: Pistil 22–31 mm long

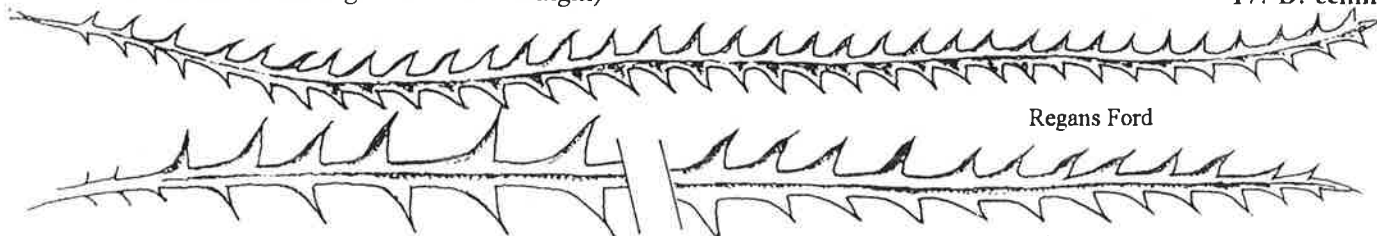
57: Pistil 27–31 mm long; perianth limb hirsute (Three Springs to Badgingarra) 16. *D. stricta*



Bushy shrub to 2 m tall. Dark green leaves to 20 cm with small teeth.

57: Pistil 22–26 mm long; perianth limb glabrous or with a few hairs near base (New Norcia to Regans Ford and Gingin)

17. *D. echinata*



Possibly a stable hybrid of *D. polycephala* and *D. hewardiana*. Leaves variable within populations and across range of distribution.

.....50: Leaves 10–35 mm wide

.....58 At least some leaves 15 cm or more long

.....59 Involucral bracts 40–50 mm long (Ravensthorpe)

43. *D. corvijuga*  
see page 10

.....59: Involucral bracts up to 30 mm long

.....60 Flowers 150–250 per head; involucral bracts 14–30 mm long; perianth limb hairy at least in lower half (Esperance to Mt Ragged)

20. *D. longifolia*  
see page 3

.....60: Flowers 35–65 per head; involucral bracts to 12 mm long; perianth limb glabrous

.....61 Pistil 29–33 mm long (Wongan Hills)

14. *D. wonganensis*

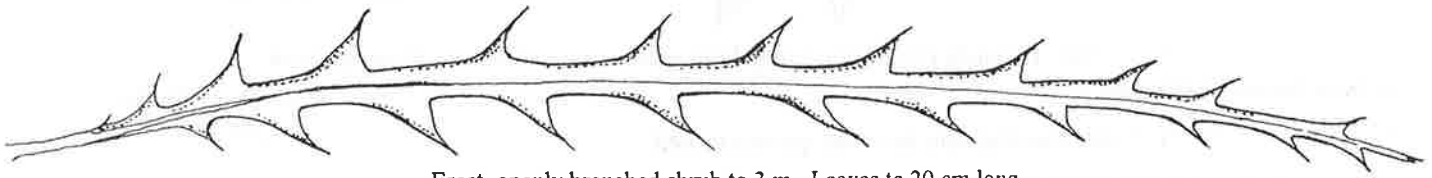


Sprawling or erect shrub to 3 m tall. Leaves to 16 cm long.

.....61: Pistil 23–27 mm long

.....62 Perianth limb c. 2.5 mm long; involucral bracts pubescent with densely ciliate margins; pollen presenter 1–1.5 mm long (Moora to New Norcia and Cataby)

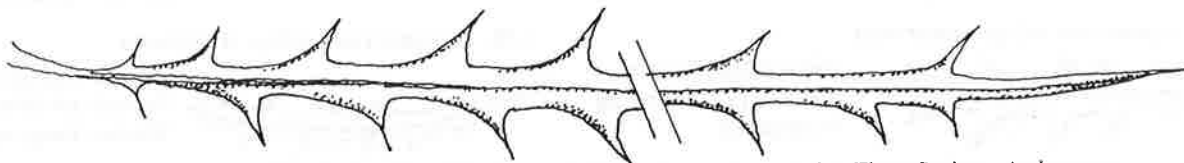
13. *D. hewardiana*



Erect, openly branched shrub to 3 m. Leaves to 20 cm long.

.....62: Perianth limb 3–4 mm long; involucral bracts glabrous or with shortly ciliate margins; pollen presenter 1.8–2 mm long (Three Springs)

15. *D. trifontinalis*



Sprawling or upright shrub to 3 m tall. Leaves to 20 cm long. Restricted to Three Springs–Arrino area

.....58: Leaves less than 13.5 cm long (juvenile leaves may be longer)

.....63 Leaves with subulate teeth on petiole and base (Woodanilling to Katanning)

11. *D. acanthopoda*



Openly branched shrub to 2 m tall. Rare.

.....63: Leaves without teeth on petiole and base

.....64 Perianth limb 10–11 mm long; flowers 15–20 per head (Pingelly to Woodanilling)

61. *D. cynaroides*  
see page 10

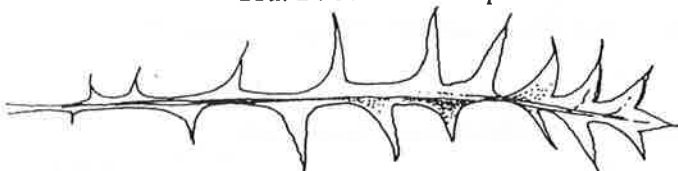
.....64: Perianth limb less than 9 mm long; flowers more than 40 per head

.....65 Perianth limb 7–8.5 mm long; involucral bracts 30–35 mm long, obtuse (Kalbarri to Three Springs)

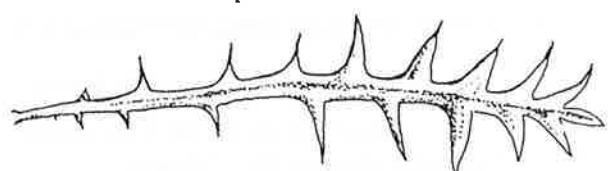
21. *D. borealis*

21a. *D. borealis* subsp. *borealis*

21b. *D. borealis* subsp. *elatior*



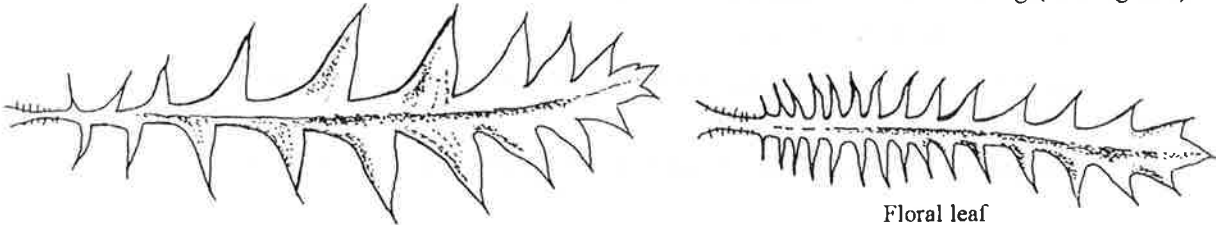
Sprawling shrub to 1 m tall. Involucral bracts 30–35 mm long, rust-coloured inside. Leaves twisted. Kalbarri area.



Bushy shrub to 2.5 m tall. Involucral bracts greenish-yellow inside. Three Springs–Arrino area.

.....65: Perianth limb 2–6.5 mm long; involucre bracts commonly less than 20 mm long, if longer then tomentose

.....66 Pistil 45–48 mm long; involucre bracts 22–32 mm long (Stirling Ra.) 6. *D. hirsuta*



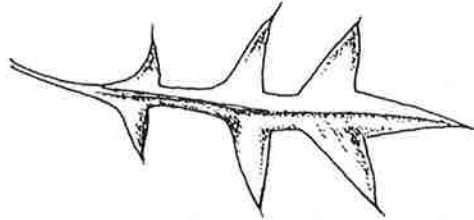
Bushy shrub to 2 m tall Flowers often pink

.....66: Pistil 20–42 mm long; involucre bracts less than 20 mm long

.....67 Pistil glabrous

.....68 Perianth 25–27 mm long; limb hirsute (Kulin to Nyabing & Frank Hann Natl Park)

7. *D. pallida*



Erect shrub to 2 m tall  
Leaves and flowers pale

.....68: Perianth 17–23 mm long; limb glabrous or almost so (Regans Ford to New Norcia & Gingin)

17. *D. echinata*  
see page 10

.....67: Pistil hirsute in lower quarter to half

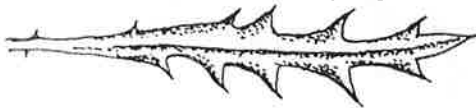
.....69 Pollen presenter 0.8–1.5 mm long

.....70 Pistil 20–26 mm long; involucre bracts usually recurved; leaf lobes up to 10 each side (Bindoon to Albany; Whicher Ra.)

12. *D. squarrosa*

12a. *D. squarrosa* subsp. *squarrosa*

12b. *D. squarrosa* subsp. *argillacea*



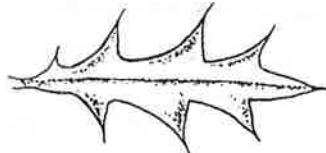
Perianth limb hirsute  
Perianth 19–24 mm long  
Widespread



Perianth limb glabrous  
Perianth 18–19 mm long  
Whicher Range area

.....70: Pistil 28–32 mm long; involucre bracts all erect; leaf lobes 1–6 each side (N of Southern Cross)

5. *D. arborea*



Tree to 6 m tall

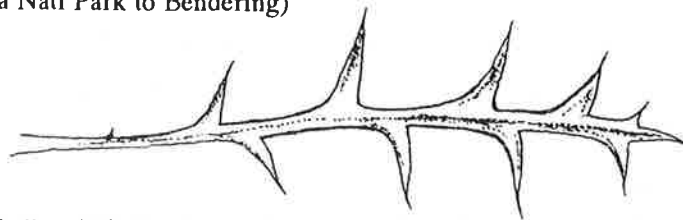
.....69: Pollen presenter 2.5–6 mm long

.....71 Perianth 25–39 mm long; limb 4–4.5 mm long; floral bracts glabrous (Mt Lesueur to Albany & E to Israelite Bay)

4. *D. armata*  
see pages 9-10

.....71: Perianth 22–24 mm long; limb 4.5–6.5 mm long; floral bracts hirsute at base (Tathra Natl Park to Bendering)

8. *D. purdieana*



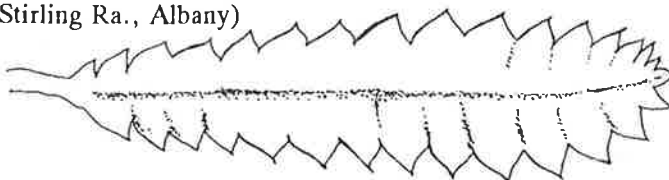
Bushy or column-like shrub,  
variable. Widespread.  
Involucre bracts with  
very dark brown hairs.

.....37: All pistils within head curved downwards or downwards and with the apex upturned

.....72 Pistil curved downwards then up

.....73 Leaf lamina except lobes elliptic; involucre bracts silky-villous; floral bracts hirsute both sides (Stirling Ra., Albany)

72. *D. concinna*



Bushy shrub to 4 m tall

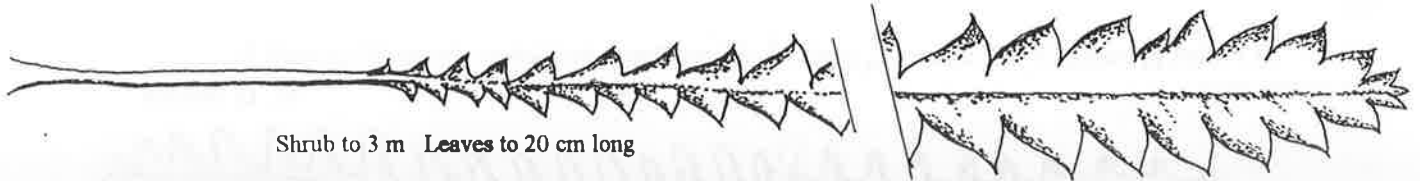
^^^^^^^^^^^^73: Leaf lamina except lobes linear; involucre bracts appressed-pubescent; floral bracts hirsute one side, glabrous the other (Bow R. to Mt Manypeak) 73. *D. serra*



Tall, slender shrub to 4 m tall

^^^^^^^^^^^^72: Pistil curved  $\pm$  evenly downwards, in *D. columnaris* curved up but then downwards in upper half

^^^^^^^^^^^^74 Leaves except lobes oblong; lobes obliquely ovate; involucre bracts ovate to lanceolate (Stirling Ra.) 74. *D. foliolata*



Shrub to 3 m Leaves to 20 cm long

^^^^^^^^^^^^74: Leaves except lobes linear; lobes linear to narrowly triangular; involucre bracts linear to subulate

^^^^^^^^^^^^75 Leaf lobes strongly twisted (Stirling Ra.) 71. *D. montana*

see page 4

^^^^^^^^^^^^75: Leaf lobes not twisted

^^^^^^^^^^^^76 Involucre bracts with glandular as well as non-glandular hairs (Brookton to Narrogin) 77. *D. columnaris*



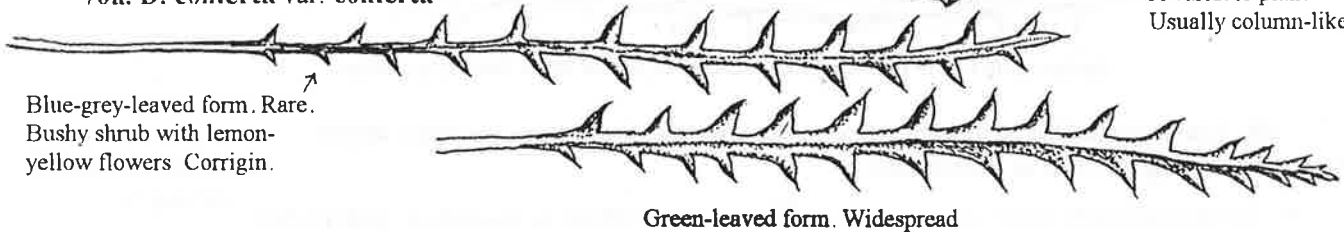
Follicle similar to *D. fasciculata*

Tall, column-like shrub to 2 m Inflorescence similar to *D. seneciifolia*

^^^^^^^^^^^^76: Involucre bracts without glandular hairs

^^^^^^^^^^^^77 Floral bracts 5–6 mm long; pollen presenter 1.5–1.8 mm long (Miling to South Stirling) 76. *D. conferta*

76a. *D. conferta* var. *conferta*

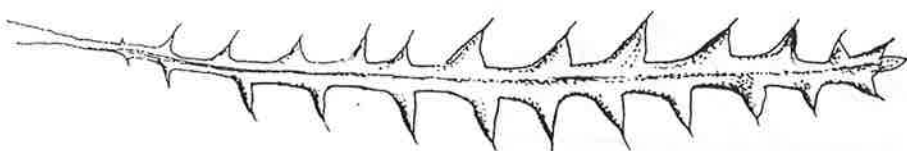


Blue-grey-leaved form. Rare.  
Bushy shrub with lemon-yellow flowers Corrigin.

Green-leaved form. Widespread

A variable plant  
Usually column-like

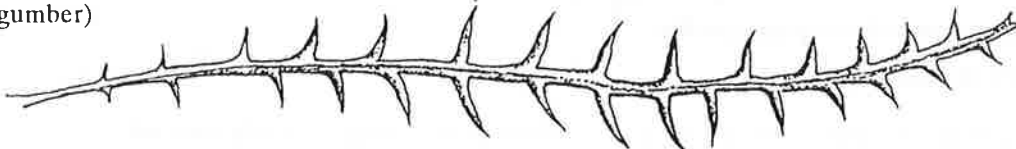
76b. *D. conferta* var. *parva*



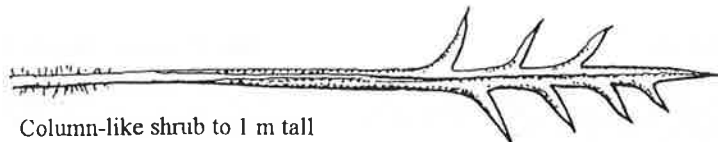
Flowers smaller, golden-yellow with more-or-less straight styles  
Nyabing-Stirling Ra.-Ongerup

^^^^^^^^^^^^77: Floral bracts 3.5–4 mm long; pollen presenter 1 mm long

^^^^^^^^^^^^78 Leaf lobes 10–25 each side; follicles transversely ovate (Eneabba to Mogumber) 78. *D. platycarpa*



^^^^^^^^^^^^78: Leaf lobes 2–5 each side; follicles narrowly ovate (Stirling Ra.) 79. *D. seneciifolia*



Column-like shrub to 1 m tall

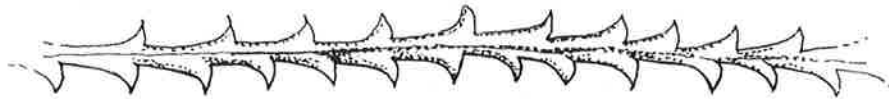
^^2: Involucre bracts as long as or exceeding pistil

^^79 Pistil straight or gently curved outwards or inwards



^^^^80 Involucral bracts 80–90 mm long (near Kulin)

44. *D. epimicta*



Flowers unpleasantly scented

Prostrate plant. Leaves to 30 cm long. Involucral bracts longer than flowers, opening very slightly.

^^^^80: Involucral bracts 30–75 mm long

^^^^^81 Involucral bracts broad, obtuse or acute, dark red-brown, often shining

^^^^^^82 Perianth not swollen at apex of basal tube; limb usually 5–7 mm long, occasionally to 7.5 mm

^^^^^^^83 Pollen presenter 5–5.5 mm long; pistil 35–38 mm long; leaf lobes obtuse (Fitzgerald R. to Israelite Bay)

41. *D. obtusa*



^^^^^^^83: Pollen presenter 2.8–3.5 mm long; pistil 23–31 mm long; leaf lobes acute, pungent (Wongan Hills)

39. *D. comosa*



Leaves to 35 cm long

^^^^^^82: Perianth swollen and succulent at apex of basal tube; limb 7–9 mm long

^^^^^^^84 Leaves serrate; erect shrubs

^^^^^^^85 Longest involucral bracts 40–50 mm long (Ravensthorpe)

43. *D. corvijuga*  
see page 10

^^^^^^^85: Longest involucral bracts 50–75 mm long (Toodyay to Narrogin)

45. *D. proteoides*



Bushy shrub to 2 m tall. Large inflorescences, on old wood, hidden by foliage.

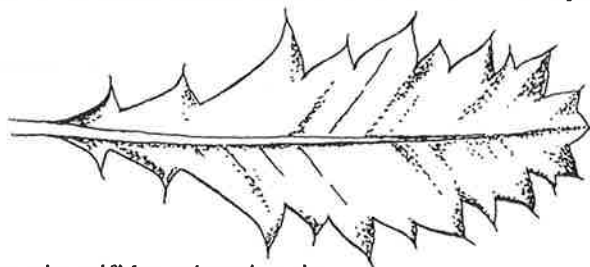
^^^^^^^84: Leaves pinnatifid or pinnatipartite, rarely almost entire; low or prostrate shrubs (Pingelly to Stirling Ra. & E to Forrestania)

42. *D. ferruginea*  
see page 5

^^^^^81: Involucral bracts acute or acuminate, plumose, silky, villous or tomentose, pale to dark brown

^^^^^86 Leaves cuneate or obovate, serrate (Gairdner R. to Ravensthorpe)

31. *D. quercifolia*



^^^^^86: Leaves linear, pinnatifid or pinnatipartite

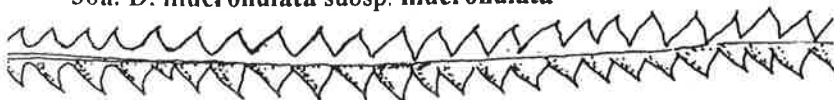
^^^^^^87 Perianth 15–20 mm long

^^^^^^^88 Involucral bracts abruptly narrowed but acute, villous or tomentose; leaf lobes 40–60 each side (Stirling Ra. area)

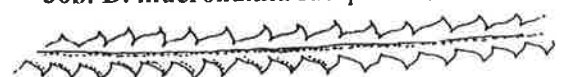
36. *D. mucronulata*

36a. *D. mucronulata* subsp. *mucronulata*

36b. *D. mucronulata* subsp. *retrorsa*



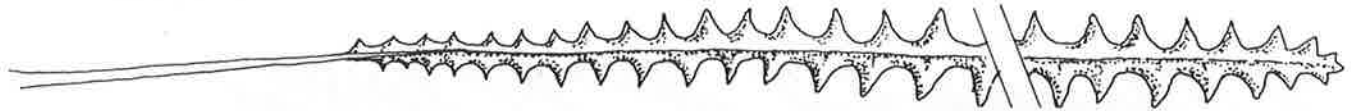
Bushy shrub to 2 m tall Leaves to 35 cm long



Flowers larger, more numerous than subsp. *mucronulata*  
Leaves smaller, many with backward-pointing lobes

88: Involucral bracts tapering, long-villous; leaf lobes 15-31 each side (Stirling Ra. area)

70. *D. pseudoplumosa*



Tall, columnar shrub to 2 m tall. Styles curved around head, not all down-turned as in *D. plumosa*

87: Perianth 25-30 mm long (Tarin Rock, Ravensthorpe)

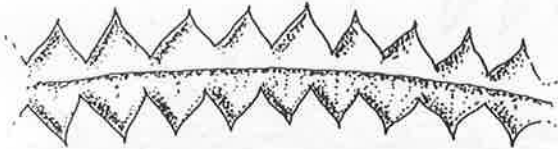
38. *D. foliosissima*  
see page 4

79: Pistil curved down at least in upper half

89 Involucral bracts softly plumose, villous or woolly, the longest hairs 3-5 mm long (Stirling Ra. to West Mt Barren)

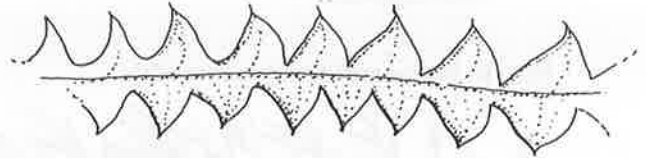
69. *D. plumosa*

69a. *D. plumosa* subsp. *plumosa*



Bushy shrub. Leaves rather thick and stiff, to 30 cm long. Cape Riche to West Mt Barren.

69b. *D. plumosa* subsp. *denticulata*



Bushy shrub. Leaves thinner, softer. Stirling Ra. area

89: Involucral bracts pubescent, tomentose, hirsute or silky-villous, the longest hairs less than 2 mm long

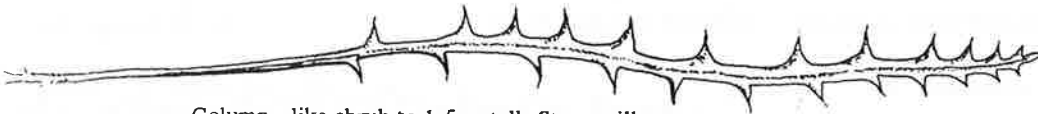
90 Leaves pinnatifid; involucral bracts with glandular hairs (Pingelly)

77. *D. columnaris*  
see page 13

90: Leaves serrate or dentate; involucral bracts without glandular hairs silky-villous

91 Style yellow with red pollen presenter; pistil 23-31 mm long (Corrigin to Kukerin)

75. *D. fasciculata*



Column-like shrub to 1.5 m tall. Stems villous



Follicle flat

91: Style red with green pollen presenter; pistil 18-22 mm long (Woodanilling to Nyabing & Tarin Rock)

80. *D. rufistyllis*



Column-like shrub to 1.5 m tall. Follicle similar to *D. seneciifolia*

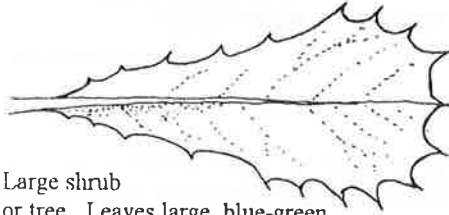


1: Pistil as long as or slightly shorter than perianth

92 Leaves cuneate to flabelliform, sometimes almost oblong, dentate

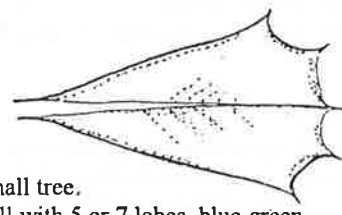
1. *D. sessilis*

1a. *D. sessilis* var. *sessilis*



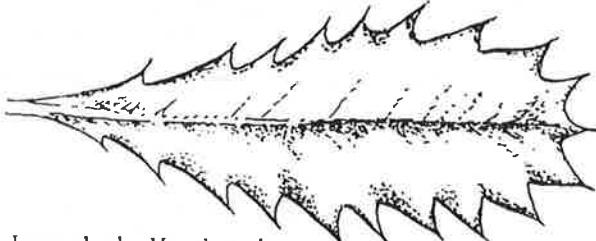
Large shrub or tree. Leaves large, blue-green, many-lobed. Widespread.

1b. *D. sessilis* var. *flabellifolia*



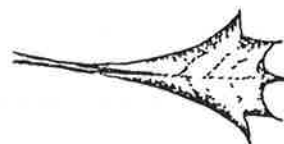
Shrub or small tree. Leaves small with 5 or 7 lobes, blue-green. Mostly coastal, Eneabba to Northampton.

1c. *D. sessilis* var. *cordata*



Large shrub. Very large leaves. Cape Naturaliste to Cape Leeuwin.

1d. *D. sessilis* var. *cygnorum*



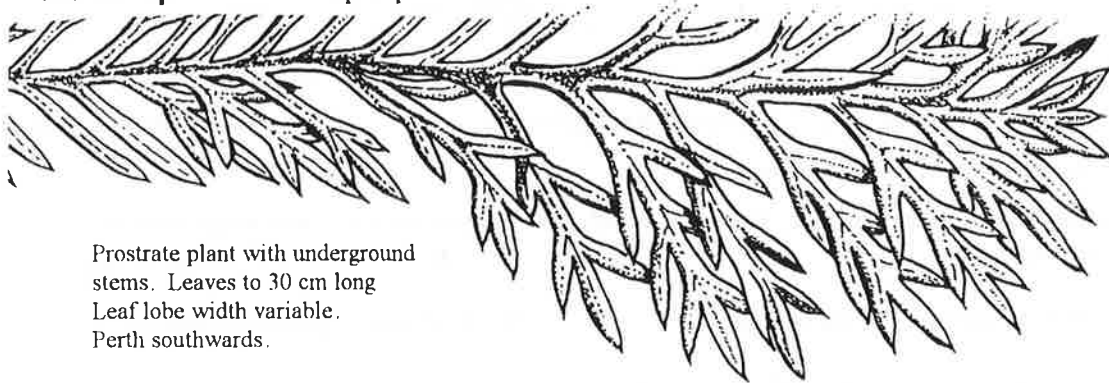
Large shrub. Leaves small with c. 5 lobes, dark green. Coastal, Kwinana to Dongara.

^^92: Leaves linear or narrowly cuneate, or deeply divided

^^93 Leaves bipinnatipartite (Eneabba to Manjimup)

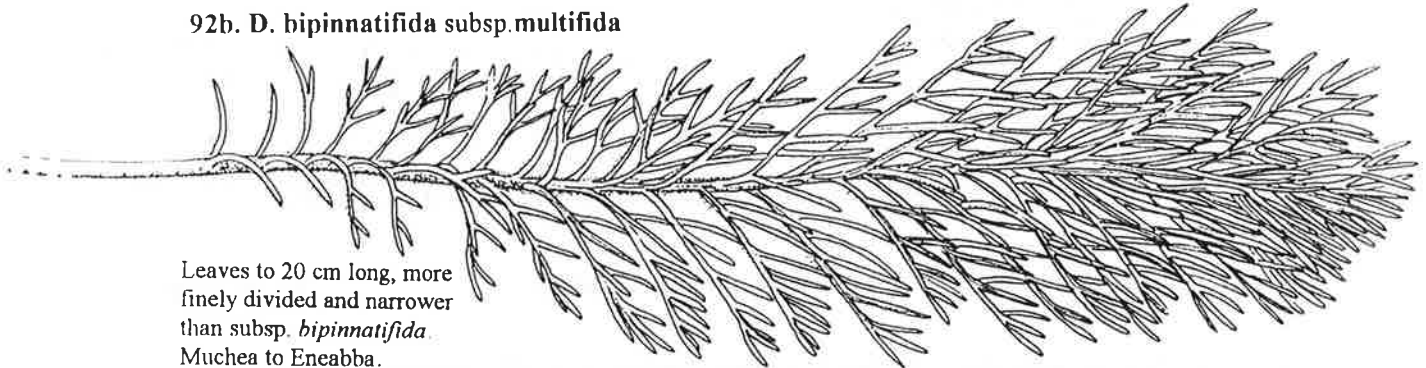
92. *D. bipinnatifida*

92a. *D. bipinnatifida* subsp. *bipinnatifida*



Prostrate plant with underground stems. Leaves to 30 cm long  
Leaf lobe width variable.  
Perth southwards.

92b. *D. bipinnatifida* subsp. *multifida*



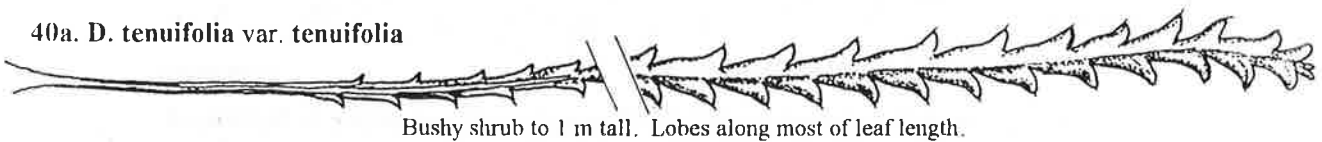
Leaves to 20 cm long, more finely divided and narrower than subsp. *bipinnatifida*.  
Mueha to Eneabba.

^^93: Leaves serrate, pinnatifid or pinnatipartite, sometimes entire

^^94 Involucral bracts glabrous or almost so (Darkan to Cape Arid)

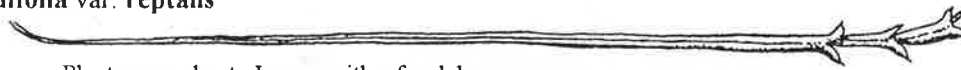
40. *D. tenuifolia*

40a. *D. tenuifolia* var. *tenuifolia*



Bushy shrub to 1 m tall. Lobes along most of leaf length.

40b. *D. tenuifolia* var. *reptans*



Plant procumbent. Leaves with a few lobes near apex.  
Plants intermediate between the two occur ('Cascading form').

^^94: Involucral bracts hairy at least in part

^^95 Leaves entire

^^96 Leaves subtending inflorescence not or little reduced, pliable; involucral bracts 40–50 mm long, spreading-hirsute; leaves 5–10 cm long; perianth 24–30 mm long; erect, bushy shrub with flowers on upper branches (Tathra Natl Park to Badgingarra; Tammin)

67. *D. speciosa*



67a. *D. speciosa* subsp. *speciosa*

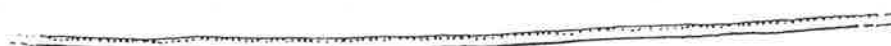
Flowers usually apricot-yellow, larger than subsp. *macrocarpa*. Follicles 20 mm long. Tammin.

67b. *D. speciosa* subsp. *macrocarpa*

Flowers usually red, smaller than subsp. *speciosa*. Follicles 25 mm long. Badgingarra to Tathra.

^^96: Leaves subtending inflorescence short, rigid, pungent; involucral bracts 10–12 mm long, appressed-hirsute; leaves 15–35 cm long; perianth 22–24 mm long; low shrub with flowers almost at ground level (Eneabba to Badgingarra)

60. *D. subulata*

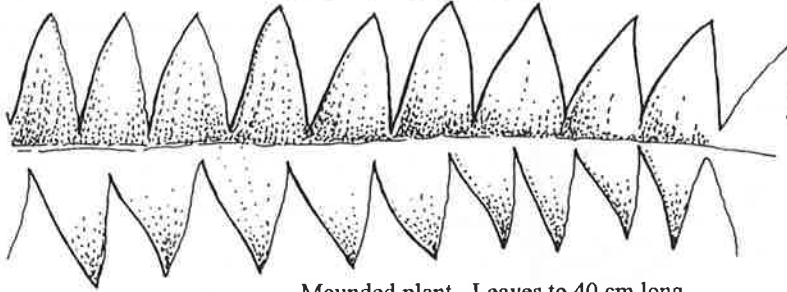


Grass-like, clumped plant

^^95: Leaves dentate, serrate, pinnatifid or pinnatipartite

^^97 All or most leaves more than 15 mm wide

^^^^^^98 Involucral bracts papery, the outer almost glabrous, inner rusty-pubescent along midrib with the upper margins cobwebby; flowers red and white (Newdegate) 59. *D. idiogenes*



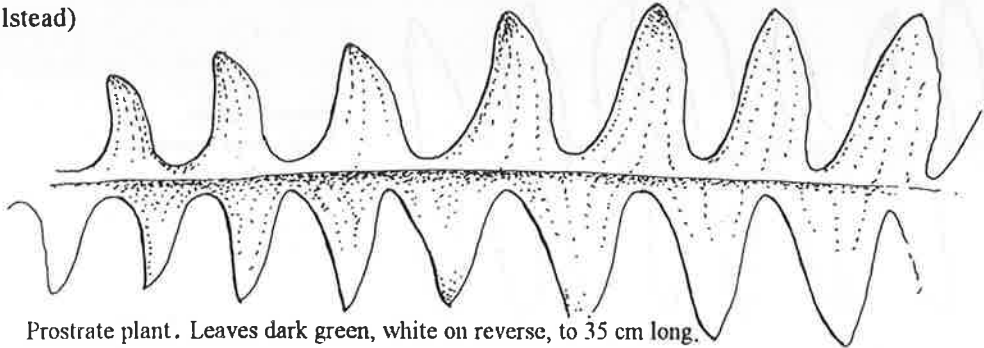
Mounded plant. Leaves to 40 cm long.

^^^^^^98: Involucral bracts firm, tomentose, silky-villous or villous; flowers various shades of yellow, pink, brown or orange

^^^^^^99 Pistil 31–45 mm long

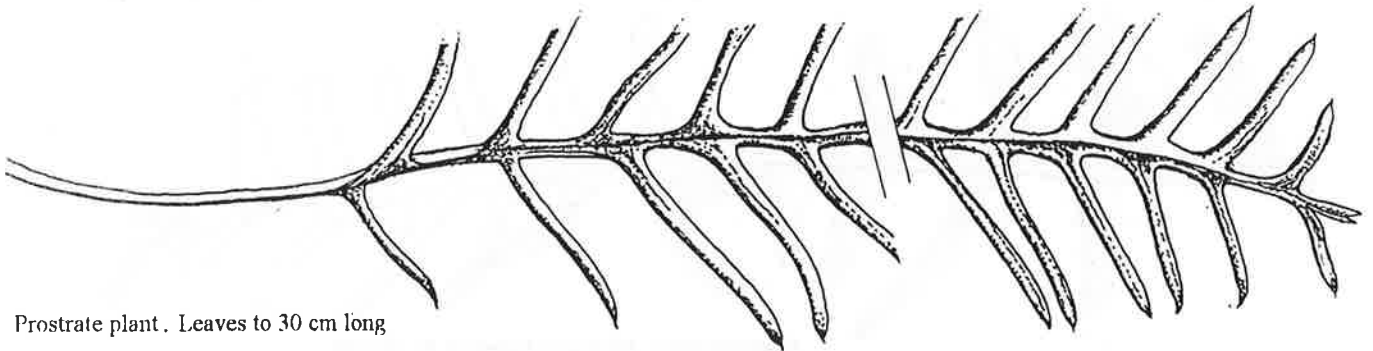
^^^^^^100 Longest involucral bracts 9–15 mm long

^^^^^^101 Leaf lobes triangular; stems with scattered prophylls (Tenterden to Albany and Wellstead) 56. *D. calophylla*



Prostrate plant. Leaves dark green, white on reverse, to 35 cm long.

^^^^^^101: Leaf lobes linear; stems covered with prophylls (Woodanilling) 57. *D. lepidorhiza*

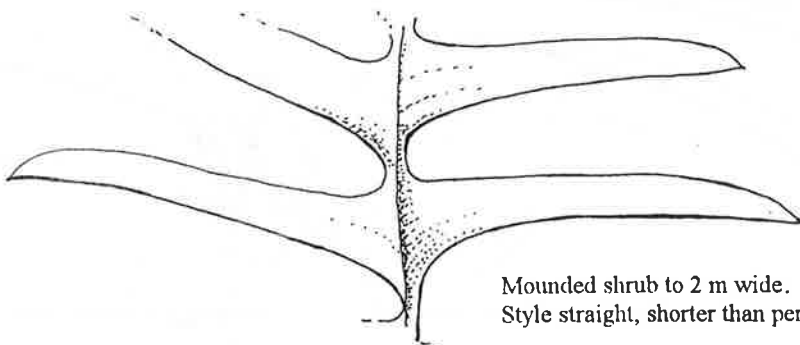


Prostrate plant. Leaves to 30 cm long

^^^^^^100: Longest involucral bracts 20–42 mm long

^^^^^^102 Bushy shrub with erect stems; perianth limb 13–15 mm long (Stirling Ra. to Lort R.)

52. *D. nervosa*

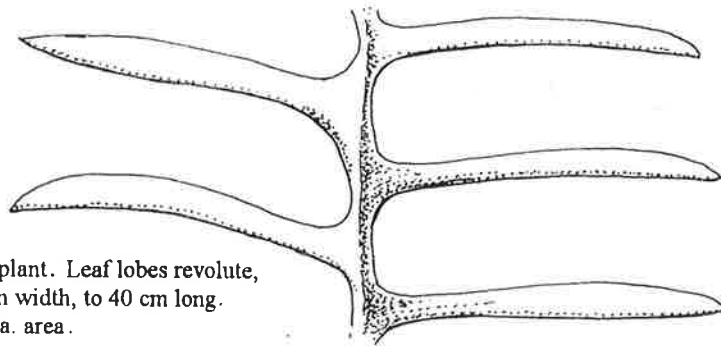


Mounded shrub to 2 m wide. Leaves green; lobes flat. Style straight, shorter than perianth.

^^^^^^102: Shrub with prostrate, usually underground stems; perianth limb 8–13 mm long

103 Leaves 50–120 mm wide (Stirling Ra.)

53. *D. blechnifolia*

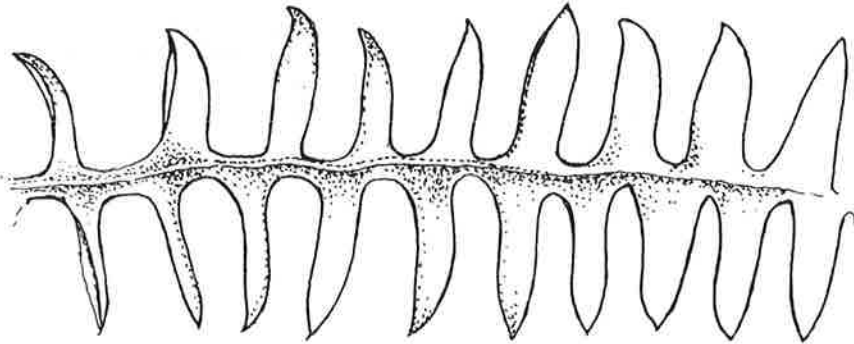


Prostrate plant. Leaf lobes revolute, variable in width, to 40 cm long. Stirling Ra. area.

103: Leaves 20–45 mm wide

104 Flowers 20–30 per head; perianth tomentose above base, golden; pistil 37–40 mm long; leaf lobes 30–40 each side (Woodanilling to Ongerup & Mount Barker)

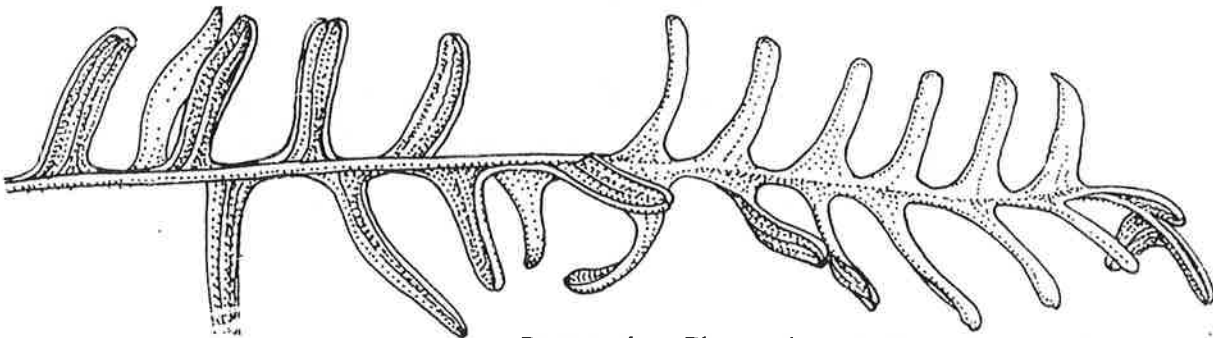
54. *D. porrecta*



Prostrate plant. Dark green leaves to 30 cm long.

104: Flowers c. 80 per head; perianth villous above base, orange-pink; pistil 34–36 mm long; leaf lobes 18–28 each side (E of Mundaring Weir)

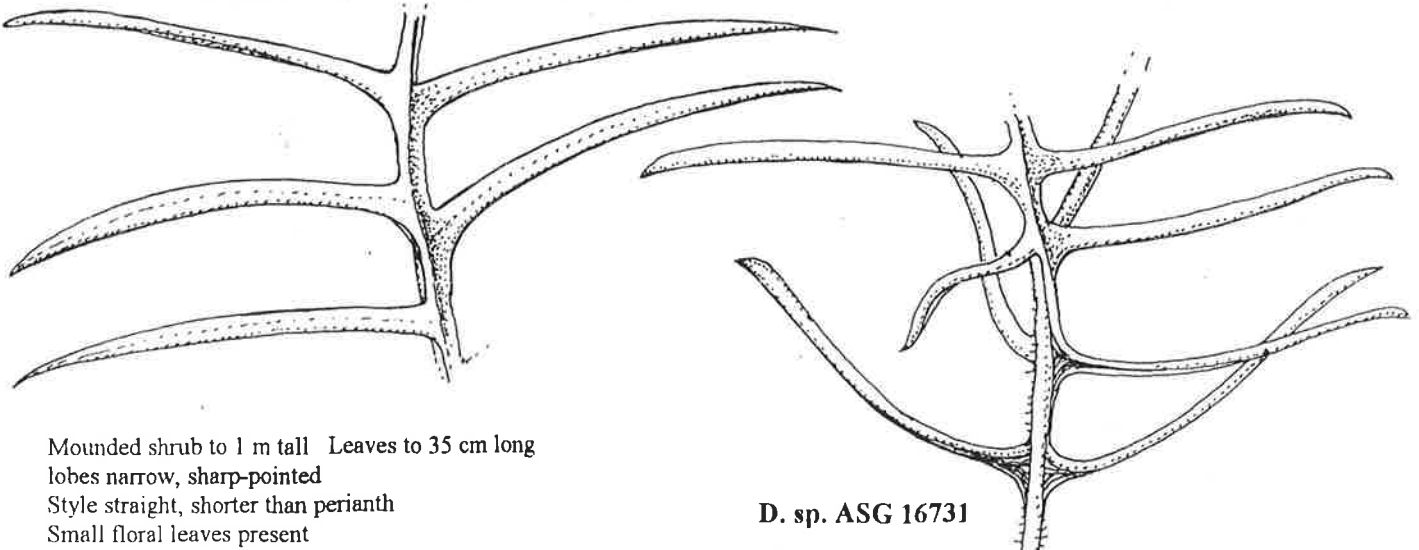
55. *D. aurantia*



Prostrate plant. Blue-grey leaves to 30 cm long

99: Pistil 49–52 mm long (Dumbleyung to Lake Grace & Harrismith)

50. *D. fililoba*



Mounded shrub to 1 m tall Leaves to 35 cm long lobes narrow, sharp-pointed Style straight, shorter than perianth Small floral leaves present

*D. sp.* ASG 16731

Low or prostrate shrub Blue-grey leaves to 35 cm long Similar to *D. fililoba* but leaf lobes more twisted Petiole and midrib hairy Newdegate area

^^^^^^97: All or most leaves less than 15 mm wide

^^^^^^105 Leaves with 15-75 teeth each side (usually more than 20)

^^^^^^106: Involucral bracts to 60 mm long, viscid; pistil 54-55 mm long (Ironcaps) **65. *D. viscida***



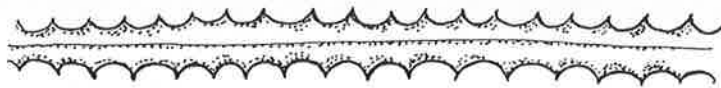
Mounded plant to 1 m tall. Leaves to 30 m long. Flowers deep golden-yellow.

^^^^^^106: Involucral bracts 15-40 mm long, not viscid; pistil 24-35 mm long

^^^^^^107 Shrub with above-ground stems to 70 cm tall; involucral bracts 30-40 mm long; perianth cream and dull purple (Geraldton to Gingin) **68. *D. shuttleworthiana***



^^^^^^107: Shrub with underground stems; involucral bracts to 22 mm long; perianth yellow (Mogumber, Perth, Whicher Ra.) **66. *D. mimica***



Prostrate plant. Leaves to 30 cm long.

^^^^^^105: Leaves with 2-12 teeth each side

^^^^^^108 Pistil 37-49 mm long; pollen presenter 6-7 mm long (Pingelly to Woodanilling) **61. *D. cynaroides***  
see page 10

^^^^^^108: Pistil 23-36 mm long; pollen presenter 3-4 mm long

^^^^^^109 Flowers 15-26 per head (Kulin to Nyabing & E to Forrestania) **62. *D. erythrocephala***  
see page 8

^^^^^^109: Flowers 30-60 per head

^^^^^^110 Leaves narrowly linear with revolute margins; branchlets hirsute (Tammin to Corrigin & Narembeen) **63. *D. horrida***



Bushy shrub to 2 m tall Flowers orange Hairy bracts rusty brown

^^^^^^110: Leaves broadly linear with recurved margins; branchlets tomentose (Eneabba to Lake Grace) **64. *D. vestita***



Shrub to 1.5 m Flowers golden yellow

Many thanks to Alex George for providing the Dryandra Key and printing my additional notes (small type) and to the members of the Study Group who helped with collections and information.

We would be very pleased to receive any comments on this publication and hope it will be a worthwhile and helpful guide to identifying Dryandras. Margaret Pieroni.