

We are now well into autumn after one of the hottest summers on record in Victoria. Last weekend I took stock of my Dryandras, both in the gardens and in pots. Despite some disappointing losses, especially of seedlings, my plants fared reasonably well even though I tried to avoid watering as much as possible. As seems to be usually the case, a number of the losses were unaccountable, occurring in late February after the worst of the summer was over. I would be interested to hear how others survived this summer, particularly those living in Victoria and South Australia, as we can hopefully learn as much from our failures as from our successes.

Jeanette Closs, the Federal Study Group Coordinator has asked that all Study Groups examine the possibility of producing a technical report in the near future so that information collected can be disseminated to a wider body of people. I certainly believe we should do this and propose to send out with this and the next newsletter in June/July a couple of questionnaires which are based partly on those used by the Eremophila Study Group. To make the surveys meaningful, I will need the cooperation of all members and would ask you to complete what information you can return to me as soon as is practical. However, I don't want the report to contain only my ideas - I welcome thoughts and comments as to what sort of information should be included. The ultimate aim, I suppose, could be the publication of a booklet on Dryandras but at this stage we should perhaps concentrate on establishing a list of what is currently being grown and endeavour to produce by, say, the end of the year a comprehensive guide to the plants themselves and their cultivation. A little later this year, I would like to enlist the aid of people who could prepare certain parts of the report and would be pleased to have any offers of such assistance.

Memberships and Subscriptions:

The membership subscription is normally \$2.00 annually and at present, prior to the publication of this newsletter, there is \$65.93 in the bank. Most expense is incurred with publication and postage of newsletters but as these usually average two per year, there is probably enough in 'kitty' to cover our requirements for 1981. However, depending on progress of the technical report, I may need to request \$2.00 later in the year.

I have had little contact with a number of members now for several years, and some have only paid their initial subscription. While I have sent this Newsletter to everyone on my membership list, this will be the last time I will do this as the Group obviously cannot afford to subsidise people who have not paid subscriptions. I am sure no one begrudges the \$2.00 and we all have good intentions. So if you wish to continue membership and have forgotten your subscriptions, please remit as soon as possible.

If you no longer wish to continue membership, I would appreciate a short note.

The Cranbourne Planting for this Year:

Alf Salkin and I intend to continue the planting of Dryandras at Cranbourne again this year. At last report, most appear to have survived the summer but I will give a fuller report in the next newsletter. I am appealing for plants at this stage and I or Alf would also appreciate hearing from

anyone who can assist with the planting which will probably be on a Saturday, perhaps the 16th or 23rd. A preliminary list of plants available is attached but we need more, particularly of some of the uncommon species. Plants can be forwarded to me, freight collect, c/- Geelong Railway Station (please also include my phone number 551180) by about the end of April, or left with Alf (phone 03-2326213) in early May at 38 Pinewood Drive Mt Waverley. At present, this is one of the very few Dryandra plantations anywhere in Australia so let's aim to make it the best and most comprehensive.

* * * * *

Dryandras From Cuttings:

We have been propagating Dryandras by vegetative means for some years now. The choice of cutting material is probably the most important single factor but it does depend on what is appropriate for the time of year. Wherever possible, active new growth is used. In winter, soft growth is appropriate as it doesn't dry out or wilt so easily. In summer, somewhat harder growth is taken to prevent loss of turgor. However, both these factors are influenced by just what material is available! So usually a compromise is forced upon the propagator by the weather, the cutting material and availability.

Cuttings are taken in the usual way and Seradix B hormone cutting powder is used. The cutting medium is coarse sand which allows excellent and immediate drainage. No fungicide or fertiliser is used but the pots of cuttings are kept scrupulously clean to prevent fungal growth on any dead leaves.

Formation of roots is very variable, depending especially on the particular species and the quality of the cutting material.

| <u>SPECIES:</u> | <u>REMARKS:</u> |
|-----------------|--|
| arctotidis | Slow but good results. |
| armata | About 75%, best with soft material. |
| calophylla | Almost impossible to get material but leaf cuttings should be tried. Has anyone done this - similarly with D.pteridifolia? |
| carduceae | 50% if material good. Only a few tried. |
| cirsioides | Slow - about 30%. |
| falcata | 50% if good material. |
| ferruginea | About 25% - few cuttings tried. |
| foliosissima | 10 cuttings of good material gave 4 plants - rooting excellent. |
| formosa | Easy. |
| fraseri | Softer material gives good results. |
| hewardiana | +80% with new growth. |

| <u>SPECIES:</u> | <u>REMARKS:</u> |
|-----------------|---|
| kippistiana | 40% but results very slow. |
| mucronulata | 20%, good material not tried. |
| nivea | Easy. |
| nobilis | New growth gives 50% - very fine roots. |
| patens | Easy. |
| polycephala | Non-flowering shoots give 40%+. |
| praemorsa | Good results consistently, <80%. |
| seneciifolia | Several cuttings only - 50% |
| sessilis | Slow, but cuttings hard ≈20%. |
| speciosa | Fairly easy, about 60%+ |

Many of the above results are based on only a few attempts. Certainly, propagation of all available Dryandras should be tried when material is available.

Potting-on material is very coarse and allows excellent drainage. I feel that plants should be planted in permanent positions when the roots reach the edge of the pot. It seems to me they have a better chance of penetrating the soil of the garden under these conditions.

ROSS MACDONALD

Other Notes on Cuttings:

My experience with cuttings has been less successful than Ross' - for instance, I have never succeeded with D.praemorsa though the only form I have tried is the large pink one which may be more difficult than the commoner yellow one. I have put in cuttings at different times of the year but with little success apart from those taken in May and June. In fact, apart from D.speciosa which was successful from soft tip growth taken in September while lower, firm growth cuttings died, all my cutting-grown plants have been obtained from material collected and treated in May-June. It appears to me that at this time, the new growth is not yet too hard for satisfactory cuttings though the formation of roots is slow (up to 6 months) and success rate is often less than 20%. The following species have been grown - D.baxteri, D.calophylla, D.formosa (easy), D.fraseri (generally easy), D.nivea (easy), D.plumosa (most satisfactory to grow this), D.querCIFolia (pink form), D.tenuifolia (reasonably easy). I use Seradix B hormone and place the cuttings in sand/peat moss (sieved) in pots in a north facing cold frame which is unheated. I intend to take more cuttings of a range of species in late May this year and try to improve my success rate.

TONY CAVANAGH

DRYANDRA PLANTING -- CRANBOURNE 1981

| NAME: | CRANBOURNE NO: | Number Promised | Number Required. | NAME: | CRANBOURNE NO: | Number Promised. | Number Required. |
|-----------------------------|----------------|-----------------|------------------|------------------------------|----------------|------------------|------------------|
| arborea C.A. Gardn. | 1 | 4. | 5. | | | | |
| arctotidis R.Br. | 2 | - | - | | | | |
| armata R.Br | 3 | 2-3. | 5 | | | | |
| ashbyi B.L. Burttt | 4 | - | 9. | obtusa R.Br. | 34 | 2. | 5. |
| baxteri R.Br. | 5 | 3. | 1. | patens (see D.hewardiana) | | | |
| bipinnatifida R.Br | 6 | 2. | 8. | plumosa R.Br. | 35 | - | 9. |
| calophylla R.Br | 7 | - | 5. | polycephala Benth. | 36 | 4. | 2. |
| carduaceae Lindl. | 8 | 2. | - | praemorsa Meisn. | 37 | - | 3. |
| carlinoides Meissn. | 9 | 1. | 7. | preissii Meisn | 38 | 3-4. | 5. |
| cirsiioides Meissn. | 10 | 2. | 5. | proteoides Lindl. | 39 | - | 6. |
| comosa Meisn. | 11 | - | 9. | pteridifolia R.Br. | 40 | - | - |
| concinna R.Br. | 12 | - | 9. | pulchella Meisn. | 41 | - | 9. |
| conferta Benth. | 13 | - | 9. | purdieana Diels | 42 | - | 9. |
| cuneata R.Br. | 14 | 1. | - | quercifolia Meisn | 43 | 2. | 1. |
| cynaroides C.A. Gardn. | 15 | - | 9. | runcinata (see D.ferruginea) | | | |
| dorrieni Domin. | 16 | - | 9. | sclerophylla Meisn | 44 | - | 9. |
| drummondii Meisn | 17 | - | 9. | seneciifolia R.Br. | 45 | - | 7. |
| erythrocephala C.A. Gardn. | 18 | - | 9. | serra R.Br. | 46 | 8. | - |
| | | | | serratuloides Meisn. | 47 | 2-3. | 7. |
| | | | | sessiles (Knight) Domin. | 48 | 3. | 2. |
| | | | | shuttleworthiana Meisn. | 49 | ?2. | 7. |
| falcata R.Br. | 19 | - | 6. | speciosa Meisn. | 50 | 4. | 3. |
| favosa Lindl. | 20 | - | 9. | squarrosa R.Br. | 51 | 8 | - |
| ferruginea Kipp. | 21 | - | 9 | stuposa Lindl. | 52 | 1. | 8. |
| floribunda (see D.sessilis) | | | | subpinnatifida C.A. Gardn. | 53 | - | 9. |
| foliolata R.Br. | 22 | - | 9. | subulata C.A. Gardn. | 54 | - | 9. |
| foliosissima C.A. Gardn. | 23 | - | 9. | tenuifolia R.Br. | 55 | 3. | 2. |
| formosa R.Br. | 24 | 3. | - | tridentata Meisn. | 56 | 2. | 2. |
| fraseri R.Br. | 25 | - | - | vestita Meisn. | 57 | - | 9. |
| hewardiana Meisn. | 26 | 1. | 2. | | | | |
| horrida Meisn. | 27 | - | 9. | | | | |
| kippistiana Meissn. | 28 | - | 7. | | | | |
| longifolia R.Br. | 29 | - | 5. | | | | |
| mucronulata R.Br. | 30 | 2. | 3. | | | | |
| nana Meisn. | 31 | - | 8. | | | | |
| nivea R.Br. | 32 | 2. | - | | | | |
| nobilis Lindl. | 33 | 1 | - | | | | |

Protection of Rare Species

On 14th November, 1980, one hundred plant species were gazetted in the Western Australian Government Gazette as being rare. The list included two Eremophilas, namely E. denticulata and E. virens, and no doubt these are the first of a number of Eremophilas which will be so gazetted.

Under Section 23F of the Western Australian Wildlife Conservation Act 1950-1979 a 'rare' plant is defined by the Minister as any class or description of protected flora (all Western Australian plants are protected), which is likely to become extinct or is otherwise in need of special protection.

Under Section 23F

4. A person shall not whether or not he is -

- (a) the holder of a licence issued under the Act to take protected flora;
- (b) The owner or occupier of private land on which rare flora exists; or
- (c) authorized by the owner or occupier of land on which rare flora exists

take any rare flora unless

- (d) where he is not the holder of a licence issued under the Act he first obtains the consent thereto in writing of the Minister;
- (e) where he is the holder of a licence issued under the Act, he first obtains the further consent thereto in writing of the Minister.

A person taking rare flora is liable to a fine of up to \$1,000.

Thus, a rare species, as defined under the Act cannot be "gathered, plucked, cut, pulled up, destroyed, removed or injured" even if you have a permit to collect in Western Australia as this does not include rare flora.

I should point out that the Legislation is not one-sided but also takes into consideration inconvenience and/or hardship, which might arise to the landowner/occupier.

7. Where an owner/occupier of private land who has been refused consent to take rare flora on that land satisfies the Minister that he will suffer loss of use or enjoyment of the land by reason of that refusal, the Minister shall inform the Treasurer in writing and the owner or occupier shall be paid compensation for that loss at such rate or rates per annum as -

- (a) is agreed between the owner or occupier and the Treasurer;
or
- (b) in default of agreement is determined by a valuer appointed by agreement between the Treasurer and the owner or occupier or in default of agreement on such an appointment, by a valuer appointed by the Minister,

for such period, not exceeding five years as the loss continues.

The two eremophilas listed in the schedule are very good examples of 'rare flora'. Last December I did a trip with Dr Steve Hopper of the Wildlife Research Unit, who is directly involved in the study of rare species. I wanted to show him rare eremophilas in the south-western parts of the state.

For many years Eremophila denticulata has been in cultivation in Adelaide. It is a very vigorous species which is easily propagated and yet in the wild it is extremely rare and in danger of extinction. To give you some idea - there has only been two herbarium specimens collected other than the original one upon which Ferdinand Mueller based the species. The origin of the Adelaide plants other than they were grown from seed is unknown.

Steve Hopper and I had details of one of the localities on the Phillips River where E. denticulata had been collected 15 years ago. After considerable searching one plant was found growing amongst rocks above the river and a second one was located in the dry river bed. Although we spent considerable time looking along the river no further plants were located. With permission, a small amount of cutting material was taken from each plant and now plants of the two are now well established. It would seem desirable to replant rooted cutting at the locality and rebuild the population to a safe level. It is probable that this species will be located elsewhere but until then it is essential to monitor the known population.

The second species E. virens is perhaps in a more critical state than E. denticulata. The species has been in cultivation at Kings Park for a number of years and I brought back field collected cuttings of it in 1976 from which we established plants. This species is known only from near Campion and although there are a number of herbarium collections I believe that they probably all represent the same population which was on the roadside. In 1977 when I revisited the locality the biggest plant (2.5m) had been pushed over leaving only 2 or 3 smaller plants in 1980 when Steve and I returned we found no plants. The road had obviously been widened. Whether E. virens will be located elsewhere remains to be seen.

As a study group I believe there are two important ways in which we can contribute to the preservation of rare species. Firstly, we can propagate and disseminate plants of the endangered species so as to make material readily available for both scientific and horticultural purposes. Secondly, we must respect the laws provided to protect such species and under no circumstances collect material unless for some reason a special licence has been granted by the Minister. Instead, we should record particulars of the population, locate it as precisely as possible, count the number of plants, and note the vegetation they are growing in.

Forward the information to Dr S. Hopper, Western Australian Wildlife Research Centre, P.O. Box 51, WANNEROO, 6065.

Bob Chinnock.

I was particularly interested in the above article which appeared in the Eremophila Study Group Newsletter of March this year. We should all take note of the second last paragraph above and endangered to ensure that endangered species are propagated and disseminated so that plants will be available for study. For genuine purposes, it appears from Bob Chinnock's comments on Eremophila denticulata that permission can be obtained to collect propagation material with a view to growing plants for horticultural and scientific study purposes. - I have no records of the species listed below and asterisked as being currently grown in cultivation - if anyone knows of plants could you please let me know so that cuttings or seeds may be obtained, if possible, particularly for the Cranbourne Annexe.

For information, I have attached a copy of the list of 100 rare species. Though only two Dryandras are listed, D.comosa and D.pulchella, Hartley and Leigh (Plants at Risk in Australia) name 24, while Leigh and Boden (Australian Flora in the Endangered Species Convention - CITES) specify only two (D.formosa and D.polycephala) which may become endangered due to heavy commercial trading. A recent compilation by the Western Australian Herbarium (Poorly Collected and Presumedly Rare Vascular Plants in Western Australia, N.G. Marchant and G.J. Keighery) makes interesting reading. It is based on Herbarium specimens where collections are less than 20, and sometimes as low as 1, and has 27 Dryandras included. The authors acknowledge that small collections do not necessarily mean the plant is rare but it may indicate a restricted locality, or distribution. For instance, it is surprising to see D.mucronulata, D.hewardiana, D.polycephala and D.praemorsa listed as seed for these and a number of other species has been commercially available for several years now.

The list below is of plants not known by me to be currently in cultivation:

| | | |
|---------------|--------------|-------------------|
| D.ashbyi | D.dorrienii* | D.purdieana* |
| D.comosa* | D.favosa* | D.sclerophylla* |
| D.concinna* | D.horrida* | D.subpinnatifida* |
| D.conferta* | D.nana | D.subulata* |
| D.cynaroides* | D.pulchella* | |

14th November 1980.

From the Government Gazette, W.A.

WILDLIFE CONSERVATION ACT, 1950-1979

(Section 23F.)

Notice

F. & W. 616/80

I, GORDON EDGAR MASTERS, Minister for Fisheries and Wildlife, acting under the provisions of subsection (2) of section 23F of the Wildlife Conservation Act, 1950-1979, hereby declare that protected flora of the taxa listed in the schedule to this Notice growing in its original state and not in its domesticated or cultivated state are rare flora throughout the whole of the State.

GORDON EDGAR MASTERS
Minister for Fisheries and Wildlife

Schedule

| | |
|-------------------------|-----------------------|
| Acacia anomala | Coopermookia georgei |
| aphylla | Darwinia acerosa |
| argutifolia | carnea |
| depressa | collina |
| guinetti | macrostegia |
| simulans | masonii |
| Adenanthos cunninghamii | meeboldii |
| detmoldii | squarrosa |
| dobagii | Dodonaea hackettiana |
| ellipticus | Drosera occidentalis |
| eyrei | Drummondita hassellii |
| ileticus | var. longifolia |
| pungens | Dryandra comosa |
| velutinus | pulchella |

| | |
|-------------------------|----------------------------|
| Aponogeton hexatpalus | Eremophila denticulata |
| Asplenium obtusatum | virens |
| Banksia brownii | Eucalyptus aquilina |
| goodii | burdettiana |
| tricuspis | caesia |
| Caladenia lavandulacea | calcicola |
| Casuarina fibrosa | carnabyi |
| Conostylis misera | coronata |
| Eucalyptus desmondensis | Lambertia echinata |
| exilis | orbifolia |
| insularis | rariflora |
| johnsoniana | Lasiopetalum bracteatum |
| kruseana | Lichenaultia pulvinaris |
| pendens | superba |
| rhodantha | Leucopogon obtectus |
| steedmanii | Melaleuca baxteri |
| Franklandia triaristata | Pentapeltis silvatica |
| Gastrolobium appressum | Pityrodia augustensis |
| glaucum | Pomaderris bilocularis |
| Grevillea baxteri | grandis |
| cirsiifolia | Ptychosema pusillum |
| drummondii | Rhizanthella gardneri |
| dryandroides | Ricinocarpus trichophorus |
| inconspicua | Roycea pycnophylloides |
| infundibularis | Spirogardnera rubescens |
| involutrata | Stachystemon axillaris |
| prostrata | Stawellia dimorphantha |
| ripicola | Stylidium coroniforme |
| saccata | expeditionis |
| Hakea aculeata | galioides |
| megalosperma | Synaphea pinnata |
| Hibbertia bracteosa | Tegicornia uniflora |
| miniata | Urocarpus pheballoides |
| Hydrocotyle lemnoides | Verticordia helichrysantha |
| Kennedia beckxiana | staminosa |
| glabrata | Villarsia calthifolia |
| macrophylla | |

.....

DRYANDRA STUDY GROUP QUESTIONNAIRE: P13.

It is important for our report that I have an accurate listing of Dryandras currently in cultivation. While I am more interested in plants that are 2 years or older, I would also like information about younger ones which are in your garden (not in pots). I would also like to know if the plant is healthy (perhaps indicate by a tick against the species name), and any other comments you may care to make.

If you have given me a list of your current plants within the last 12 months there is no need for you to complete this questionnaire unless the listings have changed significantly. However, I would stress that it is important that I obtain as complete a listing as possible and ask for your cooperation in returning the questionnaire promptly.

NOTES ON THE DISCOVERY AND CULTIVATION OF DRYANDRAS IN THE NINETEENTH
CENTURY

PART 1:

I was recently doing some research into the cultivation of Sturts Desert Pea (Clianthus formosus) in Europe last century and was rather staggered to find out just how much was known about growing Australian plants in this period. I was even more surprised when reading David Hocking's paper at the First SGAP Federal Conference ("Culture of Australian Plants - What's New") to learn that by the 1880's, some 1200 species of Australian plants had been cultivated in England alone. Obviously, some Dryandras were included but how many, and when and where were they grown? At this stage, the search is still far from complete but according to records I have been able to examine at least 24 species of Dryandra have been recorded in plant lists of Botanic Gardens or in Botanical and Horticultural magazines over the period 1805-1899. The 'golden era' for Australian Proteaceae was the early nineteenth century, perhaps prior to 1840, and the writer George Nicholson in his "Illustrated Dictionary of Gardening" of 1888 comments on Dryandras - "They are rarely seen in cultivation notwithstanding their great beauty". A few years later (1898) Curtis' Botanical Magazine conceded that none of the nine species listed in the 1810 edition of Aiton's "Hortus Kewensis" now existed at Kew; indeed, they had last figured a Dryandra (D. nobilis) in 1852 "...an example of the decline of interest once taken in the cultivation of Australian plants" Yet by 1845, the Cambridge Botanic Gardens had successfully grown over 24 Dryandras (and some 40 Banksias), all established in glasshouses and usually in pots. Growing Dryandras to flowering stage in pots is rarely done today and for some of the problem species may well be worthwhile. Certainly, if my losses this summer are any indication, we still have a long way to go before we can say we have tamed Dryandra.

Early Collections:

The original plants on which the genus Dryandra was founded were collected by Robert Brown, botanist on the Investigator, around King George Sound in December 1801. There were 12 species in all and Brown was later to describe them as a new genus, Dryandra, after Jonas Dryander, botanist and librarian to Sir Joseph Banks, in the Transactions of the Linnean Society of 1810 and later in his book "Prodromus Florae Novae Hollandiae" of the same year. Another member of the Investigator crew was Peter Good, foreman gardener from the Kew Botanic Gardens, who was apparently sent to collect seeds and plants. The material he gathered was transmitted to Kew in 1802-1803 (Good himself died in Sydney in 1803) and eight species of Dryandra were introduced in 1803 to Kew Gardens. These were D.armata, D.cuneata, D.formosus, D.nivea, D.obtusa, D.pilumosa, D.sessilis (then called D.floribunda) and D.tenuifolia. Dryandra longifolia was grown a little later in 1805 but the origin of the seed is obscure. By 1810, when the revised and enlarged second edition of Aiton's "Hortus Kewensis" was published, 5 had flowered and it is interesting to note that these 5 also tend to flower relatively early in conventional garden cultivation today - D.cuneata, D.formosus, D.nivea, D.sessilis and D.tenuifolia. Dryandra sessilis was the first Dryandra to be figured in horticultural magazines of the period, a flowering specimen from Kew Gardens being described in article number 1581 of Curtis' Botanical Magazine of 1813. All told, the Botanical Magazine was to feature some 10 species of Dryandra in 11 articles, the last being D.calophylla in 1899. None has been described this century and apart from isolated references, it appears that the cultivation of Dryandras is very nearly a forgotten art in England today.

Other botanical collectors were active in Western Australia in the first half of the 19th Century and were responsible for the transmission of seeds to various nurserymen and Botanic Gardens. Notable among these was William Baxter, collector for the Sydney Botanic Gardens and Mr Henschman and the Clapton Nursery who made two major excursions to Western Australia in 1823-1825 and 1828-1829. Many of the new species of *Dryandra* he collected were described by Robert Brown in the 1830 supplement to "Prodromus Florae" and included the following: *D.arctotidis*, *D.Baxteri*, *D.concinna*, *D.foliolata*, *D.seneciifolia*, *D.serra*, *D.squarrosa* and *D.nervosa* (now known as *D.pteridifolia*). Mr Charles Fraser who laid out both the Sydney and Brisbane Botanic Gardens, and is commemorated in *D.Fraseri*, collected this species and *D.bipinnatifida* in 1827 but we know little of his seed gathering activities. Probably the most indefatigable of all was James Drummond who supplied numerous sets of pressed specimens, live plants and seeds to various nurserymen and English botanists. He is commemorated in *D.Drummondii* and James Lindley relied heavily on Drummond's work for the specimens on which he based his descriptions of some 283 new species in "A Sketch of the Vegetation of the Swan River Colony" in 1839. All told in his 6 major collections, Drummond has specimens of no less than 45 *Dryandras*, including *D.carduaceae*, *D.favosa* (now ? *D.armata*), *D.nobilis*, *D.proteoides* and *D.stuposa* of which his specimens are the type. The German botanist Ludwig Preiss visited Western Australia from 1838 to 1842 and made many collecting trips, sometimes operating with James Drummond. It is believed he gathered between 2500 and 2700 plant species in his relatively short time there and the massive "Plantae Preissianae", edited by Lehmann between 1844 and 1848, is based very largely on his collections. *Dryandra Preissei* was named after him by Dr C.F. Meisner who all told was to describe 17 new species of *Dryandra*, most of which were probably collected by Preiss. Fraser, Baxter, Preiss and Drummond in particular were probably largely responsible for supplying seed to European gardeners and at least to the 1850's a continuing interest existed in growing Australian Proteaceae. The interest later waned though the reasons are far from obvious; however, it is conceivable that the Western Proteaceae proved too troublesome to maintain without careful and knowledgeable management and were discarded in favour of other showy but hardier shrubs.

For convenience I have tabulated all species of which I have cultivation details. The list is probably far from complete and I would be interested in any additional information - especially records of other species being grown. The main material missing is the lifetime of individual plants. Records from Kew Gardens indicate some glasshouse-grown Proteaceae lived more than 50 years though no specific details exist for *Dryandra*. I will discuss cultivation more fully in the next Newsletter but it should be pointed out that the gardeners who were most successful in growing Proteaceae were those who had experience with the South African heath plants and hence were familiar with their need for very well-drained, low fertility soils.

By the time I had completed the plant lists I was intrigued to see just what had been grown. As I do not have records of some of these species in cultivation today, where possible Alf Salkin and I have taken colour slides of plant illustrations which appeared in many of the early horticultural magazines. I hope to put these together for an audio-visual presentation at a later stage. The illustrations themselves are magnificent, usually near life size and faithfully hand coloured in some cases. Those in Curtis' Botanical Magazine and Sweet's "Flora Australasica" are especially good and are also most useful for identification purposes as each illustration is accompanied by a brief description and taxonomic treatment of the species. It is still hard to accept that even today, we know so relatively little about our native plants as compared with those early European gardeners.

DRYANDRAS CULTIVATED IN ENGLAND IN THE NINETEENTH CENTURY

| SPECIES: | YEAR INTRODUCED | SEED SUPPLIER | YEAR DESCRIBED IN CULTIVATION | LATEST RECORD IN CULTIVATION | GROWER | FLOWERING TIME |
|----------------------------|-----------------|------------------|-------------------------------|------------------------------|---------------------------------------|----------------|
| stotidis | 1830 | W Baxter | 1842 | ?>1842 | Kew Bot G | May |
| stotidis | 1830 | W Baxter | - | ?>1845 | Camb B G | - |
| nata | 1803 | P Good | - | ?>1810 | Kew Bot G | - |
| nata | 1827 | C Fraser | 1833 | ?>1833 | Glasgow B G | May |
| nata | 1803 | P Good | - | ?>1845 | Camb B G | Nov-Feb |
| xteri | 1824 | W Baxter | - | ?>1845 | Camb B G | - |
| pinnatifida | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| lophylla | 1830 | ?W Baxter | - | ?>1845 | Camb B G | - |
| lophylla | 1893 | Messrs Veitch | 1898 | ?>1898 | Kew Bot G | May |
| rduaceae | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| rduaceae rangustifolium | 1840 | J Drummond | 1847 | ?>1847 | Kew Bot G | Spring |
| neata | 1803 | P Good | - | ?>1845 | Kew Bot G | Nov-Feb |
| neata | 1803 | P Good | - | ?>1845 | Camb B G | Nov-Feb |
| lcata | 1824 | W Baxter | - | ?>1845 | Camb B G | - |
| vosa(?armata) | 1840 | J Drummond | - | ?>1845 | Camb B G | All year |
| liolata | 1830 | W Baxter | - | ?>1845 | Camb B G | - |
| rmosa | 1803 | P Good | - | ?>1845 | Camb B G | Most of year |
| rmosa | 1803 | P Good | 1842 | ?>1842 | Kew Bot G | Most of year |
| rmosa | 1824 | W Baxter | 1827 | ?>1827 | A.Boring esq ex Clapton Nursery | May |
| aseri | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| ngifolia | 1805 | ? | 1813 | ?>1813 | Kew Bot G | February |
| ngifolia | 1805 | ? | 1827 | ?>1827 | Brist Nurs | Wint/Spr |
| ngifolia | 1805 | ? | 1837 | ?>1837 | Manch B G | Winter |

| | | | | | | |
|---------------------|-----------|----------------------|------|--------|-----------------------------------|--------------|
| <i>longifolia</i> | 1805 | ? | - | ?>1845 | Camb B G | All year |
| <i>mucronulata</i> | 1824 | W Baxter | - | ?>1845 | Camb B G | - |
| <i>nivea</i> | 1803 | P Good | - | ?>1810 | Kew Bot G | July-Sept |
| <i>nivea</i> | 1803 | P Good | - | ?>1845 | Camb B G | July-Sept |
| <i>nobilis</i> | 1840 | J Drummond | 1852 | ?>1852 | Kew Bot G | May |
| <i>nobilis</i> | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| <i>obtusa</i> | 1803 | P Good | - | ?>1810 | Kew Bot G | - |
| <i>obtusa</i> | 1803 | P Good | - | ?>1845 | Camb B G | - |
| <i>plumosa</i> | 1803 | P Good | - | ?>1810 | Kew Bot G | - |
| <i>plumosa</i> | 1803 | P Good | - | ?>1845 | Camb B G | Jan-Aug |
| <i>proteoides</i> | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| <i>pteridifolia</i> | 1823 | W Baxter | 1836 | ?>1836 | Kew Bot G | Spring |
| <i>pteridifolia</i> | 1823 | W Baxter | - | ?>1845 | Camb B G | March-Dec |
| ' <i>nervosa</i> ' | 1823 | W Baxter | 1827 | ?>1827 | Clapton Nursery | September |
| ' <i>nervosa</i> ' | 1823 | W Baxter | 1830 | ?>1830 | Liverpool B G and Clapton Nursery | September |
| <i>serra</i> | ? | ? | - | ?>1835 | Kew Bot G | - |
| <i>sessilis</i> | 1803 | P Good | 1813 | ?>1813 | Malcolm & Sweet Nursery | Most of year |
| <i>sessilis</i> | 1803 | P Good | - | ?>1810 | Kew Bot G | Most of year |
| <i>sessilis</i> | 1803 | P Good | - | ?>1845 | Camb B G | Most of year |
| <i>stuposa</i> | 1840 | J Drummond | - | ?>1845 | Camb B G | - |
| <i>tenuifolia</i> | 1803 | P Good | 1836 | ?>1836 | Kew Bot G | March-May |
| <i>tenuifolia</i> | 1803&1840 | P Good J Drummond | - | ?>1845 | Camb B G | March-Aug |
| <i>praemorsa</i> | 1848 | ?J. Drummond | - | ?>1848 | - | - |
| <i>seneciifolia</i> | 1840 | J. Drummond | - | ?>1840 | - | - |

B G = Botanical Gardens
 Camb = Cambridge
 Brist = Bristol
 Manch = Manchester