

# SAMPLE

## Introduction

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### Lesson Aim

Classify the most significant cultivated native plants, to the family level.

### AUSTRALIAN NATIVES WORLDWIDE

**Australian native plants** are increasing in popularity in many countries throughout the world and are grown commercially as cut flowers in Israel and South America. Eucalypts are widely planted trees throughout California and is an increasingly popular specimen tree used in gardens of Southern England. Macadamia nuts and Tea Tree Oil are produced in commercial plantations not only in Australia, and beyond.

Australian climatic conditions range from hot-dry to cold-wet. Australian soils are usually acidic but these also vary according to region and may be anywhere from alkaline to acidic. Consequently the plant life of this large country is abundant and diverse, offering an interesting range of possibilities, whether you live in Australia or elsewhere. Many Australian natives are also well suited as indoor plants.

The first step in this course is to learn to accurately identify natives.

With a proper understanding of how they are named, the learning of plant names will become a far easier task; it becomes quite feasible to make informed and intelligent decisions about how to grow a particular plant in your locality if you can identify what the plant is or which family it most likely belongs to.

One of the biggest mistakes many people make is trying to grow a plant in a location to which it is really not suited. You may be able to change some environmental conditions you won't be able to control all of them.



### PLANT TAXONOMY

#### Botanical/Horticultural nomenclature

Plants are generally given two different types of names:

- **Common names** are English language names usually given to plants by amateur gardeners as a descriptive, easy to remember tag. Many plants have more than one common name, and sometimes the same common name can be given to several quite different plants. This, along with the fact that there is no real control over common names, makes them inaccurate and unreliable for plant identification.

- **Scientific names** are based on the Latin language. These names often seem more complex than common names at first glance; however, they have a system to them, which can make plant identification much easier. The system of scientific naming is strictly controlled and coordinated by botanists throughout the world. Scientific names should always be used in preference to common names. Much of the Latin in scientific plant names will describe certain characteristics about a plant – thus some knowledge of Latin can be of help when studying plant names. This type of knowledge can be gained by researching plant names – over time this will help you to understand many of the Latin terms used in the plant naming system.

### The Binomial system

The scientific plant names, which you see in books or on plant labels in a nursery, will usually consist of two words:

- The first word is the **genus** name of the plant. This word starts with a capital letter.
- The second word is the **species** name of the plant. In general, this word starts with a lower case letter. There are exceptions to this rule – some people capitalize the first letter of a species name where a species has been named after a person or country. Unless you are aware of a case like this, it is normal to start the species name with a lower case letter.

Example of how to write a binomial plant name:  
*Banksia integrifolia*. *Banksia* is the genus and *integrifolia* is the species name. When writing a scientific name of a plant, it is conventional to either italicize or underline both words in the name; e.g. *Banksia integrifolia* or Banksia integrifolia.



*Banksia integrifolia*

### Botanical Classification

In the scientific system, plants are classified by dividing them into groups, which have similar characteristics. These groups are then divided into smaller groups with similar characteristics. These are divided again and so the division of group to sub group and sub group to further sub groups goes on, until you finally have only one type of plant in each group.

There are many different levels of division, although the main ones which we use are at the bottom end of the scale (i.e. family, genus, species and variety).

The main levels of division are as follows:

- All plants are divided into PHYLA
- Phyla is divided into DIVISION
- Division is divided into CLASSES
- Classes are divided into ORDERS
- Orders are divided into FAMILIES
- Families are divided into GENERA (singular: Genus)
- Genera are divided into SPECIES
- Species are sometimes divided into VARIETIES and SUBSPECIES.

The main plant phyla we are concerned with in horticulture are:

- ANTHOPHYTA: (i.e. Angiosperms). This group includes all of the plants that produce flowers, e.g. Eucalypts, roses, lettuce, grasses.

- CONIFEROPHYTA: (i.e. conifers). This includes all plants that produce cones, e.g. pines, cypress etc.
- PTEROPHYTA: (i.e. ferns).

Other phyla include such things as mosses, fungi, bacteria and algae.

Anthophyta is divided into two classes:

1. DICOTYLEDONAE: in these plants the first leaves to appear from a germinating seed are in a pair. (Two leaves appear at once.) In general, the veins in the leaves of dicotyledons are not parallel (e.g. pea, eucalypt). Dicotyledons also tend to have a taproot with lateral branches, as opposed to a fibrous root system.
2. MONOCOTYLEDONAE: in these plants the first leaf to appear when a seed germinates is a single leaf. In general, the veins in the leaves of monocotyledons are parallel to each other (e.g. grasses, irises, orchids). Monocotyledons also tend to have a fibrous root system, as opposed to a tap root with lateral branches.



*Brachychiton acerifolius* Dicotyledon



*Themeda trianda* (Kangaroo Grass) Monocotyledon

### Plant Families and Species

It can be seen above that you can distinguish between dicotyledons and monocotyledons by a couple of very simple characteristics. In the same way, we can usually distinguish which family a plant belongs to by a few basic characteristics. For example:

- Lamiaceae family: foliage is perfumed, stalks are 4-sided (i.e. square-shaped) and flowers have two distinct lips.
- Araceae family: leaves are usually heart shaped (e.g. Philodendron) and plants are commonly tropical/indoor plants.
- Asteraceae: have daisy-type flowers.
- Myrtaceae: Oil glands in leaves; Numerous stamens; Most (not all) Australia species have dry woody seed capsules.



*Eucalyptus macrocarpa*  
Myrtaceae



*Astartea heteranthera*  
Myrtaceae



*Callistemon violaceus*  
Myrtaceae

You should be able to tell a family name from other types of names by the fact that it will end with "aceae". Genus names do not end in aceae.

Example: *Eucalyptus ficifolia*

*Eucalyptus* is the genus, *ficifolia* is the species

The family this plant belongs to is the Myrtaceae family

Sometimes a third word (and perhaps a fourth) is added to follow the species. These words would refer to the variety of that particular species.

Example: *Billardiera drummondiana* var. *collina*

*Billardiera* is the genus

*drummondiana* is the species

*collina* is a cultivated variety of the above species.

### Hybrids, Varieties and Cultivars

You may occasionally be confused by the difference between hybrids, varieties and cultivars.

- A hybrid plant is one which has resulted from two different species cross breeding. The hybrid is a combination of characteristics from two different species; something bred or selected out of nature by man. Example: *Eucalyptus* 'Torwood'. This is a cross between *Eucalyptus torquata* and *Eucalyptus woodwardii*. Sometimes the two plants which have been cross bred are both mentioned and an "x" is placed between them, e.g. *Eucalyptus torquata* x *woodwardii*
- A variety is just a particular type of plant in one species. A variety does not have parents from two different species, but a hybrid does.
- The word *cultivar* is derived from the words *cultivated variety*. The accepted meaning of the word cultivar varies somewhat. In general, a cultivar is a group of cultivated plants that are clearly distinguishable from others by a certain characteristic (for example, variegated leaves). This characteristic must be passed on to the offspring (whether produced sexually or asexually) of the plant for it to be a true cultivar. In some countries, the word cultivar means the same thing as a variety.

## COMMON AUSTRALIAN PLANT FAMILIES

### Myrtaceae

The Myrtaceae family contains some of the most significant Australian native plant genera, including *Eucalyptus*, *Corymbia*, *Callistemon*, *Melaleuca*, *Lophostemon*, *Thryptomene*, *Angophora*, *Agonis*, *Baeckea*, *Leptospermum*, *Eugenia*, *Astartea* and *Micromyrtus*. Non-native genera in this family include *Myrtus* (Myrtle) and *Feijoa*. Members of this family are generally hardy and adaptable to a wide range of conditions. Most can be readily propagated from seed, and many of the smaller shrub types are often also propagated by cuttings.

## Mimosaceae

Flowers appear like a fluffy ball or cylinder (stamens are large and much more obvious than petals), and seeds develop in pods. Mimosaceae includes the genera *Acacia*, *Albizzia* and *Nepuntia*.

## Caesalpinaceae

These plants have five petals, all obvious and free (not joined). Flowers are asymmetrical, and leaves are normally compound. This family includes the native *Cassia* and non-Australian plants such as *Bauhinia* and *Gleditsia*.

## Proteaceae

A diverse family with around 800 species and 38 genera in Australia. They are commonly known for the large, showy flowers which are borne on many species. Examples of Australian native genera in this family include *Grevillea*, *Banksia*, *Hakea*, *Stenocarpus*, *Isopogon*, *Telopea*, and *Dryandra*. Flowers are variable, although the petals tend to be insignificant. Leaves are often thick and dry in texture, and often with sharp tips. Seeds are large and woody.

Generally, plants in this family require well-drained soils and commonly suffer from iron deficiency and phosphorus toxicity in cultivation. Some rainforest genera, including *Macadamia*, are an exception. They require more phosphorus than other genera in the family. Root rot is also a common problem. Propagation is commonly from seed for most species, with the notable exception of grevilleas, which are grown from cuttings. Many species from other genera have, however, been successfully grown by cuttings or grafting.

## Rutaceae

This family has twenty genera in Australia including *Asterolasia*, *Boronia*, *Correa*, *Crowea*, *Diplolaena*, *Eriostemon*, *Flindersia*, *Geijera*, *Microcitrus*, *Murraya*, *Phelbalium* and *Zieria*. Leaves of species from this family are covered with small dots (oil glands) and flowers have either four or five petals. This family includes many small shrubs with attractive flowers.

## Pittosporaceae

Most of the plants in this family are native to Australia. Notable genera include *Pittosporum*, *Hymenosporum*, *Bursaria*, *Billardiera* and *Marianthus*. Their flowers have five petals, leaves are simple (undivided) and arranged alternatively on the stem, and fruits are either a berry or capsule which is often attractive. Many varieties may be propagated from both seed and cuttings.

## Asteraceae (Compositae)

The daisy family has a worldwide distribution of about 800 genera and 12,000 species. Australian genera include *Helichrysum*, *Bracteantha*, *Olearia*, *Rhodanthe* and *Brachyscome*. The flowers are actually a composite of many small flowers fused together to appear as one single flower. If the flower is pulled apart it can be seen that it is made up of many individual units, each one having its own set of floral parts (e.g. petal, stamen, stigma and ovary). Some *Asteraceae* flowers are incomplete and have only some of the floral parts. Flowers in this family are generally fast growing, flower prolifically, and prefer well drained soils. Many are excellent as cut flowers or used for dried floral arrangements.

## BOTANICAL KEYS

Botanical keys are a tool used for the systematic identification of plants. They are an essential tool for the positive identification of a plant species. The horticulturist might not need to use a botanical key very often, but when faced with an unidentified species, this might be the only convenient method of accurately identifying the plant. When using a botanical key it is important to remember that:

- You may find a plant specimen, such as a weed or ornamental plant, which has not been included in the key, but which seems to 'key out' successfully to an incorrect answer. Always check the plant description to confirm your identification.

- Some plant groups are very variable (e.g. leaf shape may be highly variable in one particular species). It is difficult for a key to describe all specimens found in nature that vary widely so, again, read the plant description. Try to think of an “average” specimen of your plant when keying it out.
- You need to carefully read both (or all) choices at each step in the 'keying out' process. This will help you to determine the correct choice.
- It is a good idea to write down the choices as you go in case you need to re-trace your steps.

### How to use a botanical key

Most keys are dichotomous – i.e. they list two choices at each step. There are some exceptions, but the basic way to use the key remains the same:

- Start at the beginning of the key. This will usually be numbered 1 or A. Read the description of the plant. If your plant fits this description, then continue on to the next description directly below the first – do not worry if the next number or letter is not consecutive. If your plant does NOT fit the first description, you need to go to the alternative description which will usually be marked 1\* or A\*.
- Read the description you have now arrived at. If your plant fits the description, then continue on to the next description located directly below. If your plant does not fit the description, then proceed to the alternative (usually marked with an \* or something similar).
- At some point in the key, you will arrive at a group name for the plant – this will be listed after a description. It may be a family, genus, species, or even a group that the writer of the key has determined. This is the group that your plant belongs to.

### An easy key to plant groups

1. No vascular tissue present

2. Plant body not specialised into stems and leaves, and the reproductive cells not surrounded by a protective layer.

3. Chlorophyll is present

4. Plant usually lives in water.....Algae

4\*Plant usually lives on rocks or in trees.....Lichens (also some algae)

3\* Chlorophyll is not usually present.....Fungi

2\* Plant body is often specialised into stems and leaves, and the reproductive cells are surrounded by a protective layer.

5 Plant body dorsiventral, thalloid or leafy.....Liverworts

5\* Plant body radial, leafy.....Mosses

1\*Vascular tissue present

6. Sexual reproduction by spores.....Ferns

6\* Sexual reproduction by seed

7. Seeds not enclosed in an ovary but often on scales in cones... Gymnosperms

7\* Seeds enclosed in an ovary, flowers present.....Angiosperms

8. Parallel venation in leaves, flower parts in multiples of 3, has a fibrous root system.....Monocotyledons

8\* Reticulate venation in leaves, flower parts in multiples of 4 or 5, has a taproot.....Dicotyledons

Using the Easy Key to Plant Groups, we could key out a mushroom as follows:

1. No vascular tissue present – this correctly describes a mushroom. Therefore, we proceed on to the next description located directly below:
2. Plant body not specialised into stems and leaves, and the reproductive cells not surrounded by a protective layer - this correctly describes a mushroom. Therefore, we proceed on to the next description located directly below:
3. Chlorophyll is present - this is NOT correct for a mushroom. Therefore, we proceed to the alternative description:
- 3\* Chlorophyll is not usually present.....Fungi

And Fungi is of course the “plant” group which a mushroom belongs to. Note that fungi are no longer considered part of the plant kingdom – this grouping is used for the purposes of illustration only.

Using the Easy Key to Plant Groups, we could key out a Hibiscus plant as follows:

1. No vascular tissue present – this does NOT correctly describe a hibiscus plant. Therefore, we proceed to the alternative description:
- 1\*Vascular tissue present – which is correct. Therefore we proceed on to the description located directly below:
6. Sexual reproduction by spores – this is incorrect, so we proceed on to the alternative description:
- 6\* Sexual reproduction by seed – this is correct, so we proceed on to the description located directly below:
7. Seeds not enclosed in an ovary, but often on scales in a cone – this is incorrect, so we proceed on to the alternative description:
- 7\* Seeds enclosed in an ovary, flowers present – this is correct, so we proceed on to the description located directly below:
8. Parallel venation in leaves, flower parts in multiples of 3, has a fibrous root system – this is incorrect, so we proceed on to the alternative description:
- 8\* Reticulate venation in leaves, flower parts in multiples of 4 or 5, has a taproot... Dicotyledons

This tells us that our Hibiscus plant is a dicotyledon, which indeed it is.

### Key to plant phyla

Plant Keys vary in appearance and it is a good idea to become familiar with a couple. A second plant key is provided below:

- |   |             |
|---|-------------|
| A. Plants without roots, stems or leaves,<br>and no protective jacket of vegetative cells<br>around the reproductive cells. | PHYLA       |
| B. Plants lacking chlorophyll   |             |
| C. Vegetative stage of naked cytoplasm  | Mxyxomycota |
| C. Vegetative stage with no cell wall,<br>mostly filamentous.   | Eumycota    |
| B. Plants with Chlorophyll  |             |
| D. Chlorophyll "a" alone  |             |

E. Prokaryotes	Cyanophyta
E. Eukaryotes	
F. With water soluble blue and red pigments.	Rhodophyta
F. With Plastid pigment, xanthophyll	Xanthophyta
D. Chlorophyll "a" and "c"	
G. Large sea weeds with a cell wall	Phaeophyta
G. Small, mostly unicells with a cell wall	Chrysophyta
G. Small unicells generally lacking a cell wall.	Pyrrophyta
D. Chlorophyll "a" and "b".	
H. Unicells without a cell wall	Euglenophyta
H. Greatly diversified forms with cell walls	Chlorophyta
A. Plants with protective jacket of vegetative cells around reproductive cells (often have roots, stems or leaves)	
I. Plants lacking vascular tissue	Bryophyta
I. Plants with vascular tissue	
J. Plants without seeds	
K. Roots absent	Psilophyta
K. Roots present	
L. Small leaves, no gap at union with stem leaves do not unroll as they open	
M. Stems not jointed	Lycophyta
M. Stems jointed	Sphenophyta
L. Leaves well developed, gap at union with stem, leaves unroll as they open	Pterophyta
J. Plants with seeds	
N. Seeds not covered	
O. Seeds on short stems	Ginkgophyta
O. Seeds in cones	
P. Trees palm like	Cycadophyta
P. Trees conical	Coniferophyta
N. Seeds covered	Anthophyta



## ORIGINS OF AUSTRALIAN PLANTS

Much of the flora of Australia is unique in the world; around 80 percent of plants growing naturally in Australia are not found in any other part of the world. This is easily the highest figure for any continent. This unique situation indicates that Australian plants have been isolated from the rest of the botanical world for a very long time. While plants from other continents have been able to inter-breed, Australian plants have been isolated and developing independently.

Despite this independent evolution, two of the three main aspects of Australian flora have long been considered to have originated outside of Australia. These are the Indo-Malesian flora and the Antarctic flora.

There are three types of flora which exist in Australia:

### 1. Indo-Malesian flora

Species that originated from South East Asia: typified by plants of the northern tropical rainforests.

### 2. Antarctic flora

Species that originated in Antarctica; represented by broad leafed deciduous and evergreen species (e.g. Beeches, Sassafras, Conifers and other plants of the southern rainforests)

### 3. Australian Sclerophyll flora

Typified by eucalypt forests and woodland; these plants clearly evolved inside Australia. While sclerophyll flora is only one of three groups they are essentially the most significant; dominating the vast majority of land space in Australia.

## Continental Drift

This theory states that over 100 million years ago, Australia was joined to Antarctica, Asia, Africa and South America. All of these continents began to break apart, drifting away from each other, and the oceans between them became increasingly larger. As this happened, the plants and animals on each land mass became isolated from each other, and began to evolve differently to each other.

Detailed studies of rainforests in recent decades have provided new clues to their origins. The following conclusions have been made by some researchers:

- The Indo Malesian flora is the most ancient of all Australian species.
- Rather than being a place that received plants which developed elsewhere, Australia was probably the place where many of its plants originally came from, and that those plants then moved out from Australia.
- Australia's rainforests have spread, rather than contracted in recent times (ie. thousands of years).
- Clearing of land in the last two hundred years has destroyed most of the large refuge areas of coastal lowland and tableland species.
- Sclerophyll plants do have rainforest relatives, and very likely evolved originally from rainforest plants – both Antarctic and Indo-Malesian (eg. Antarctic flora probably provided most of the Proteaceae plants).

## RESOURCES

The following contact points and references are only meant as a start to help you find information about the group of plants you are studying:

1. **Reference books.** Books are undoubtedly a great resource, but they are not necessarily always accurate. Check the background and experience of the writer; and use some discretion in what you accept as being true and correct. Books also go in and out of print. Just because someone recommends a book, does not mean it is available. Books written by reputable bodies such as: Botanic Gardens, Universities or reputable societies (eg. Royal Horticultural Society) are generally valuable. Other titles from reputable and professionally trained

horticulturists with years of experience behind them should also be very reliable – although this is not always guaranteed. Sometimes the book you want may be out of print.

2. **Organizations.** Contact various organizations to see what sort of resources they offer. Many organizations will run seminars, hand out free information, etc.

- **Herbariums.** A Herbarium is a place where collections of pressed plants are kept. Most botanic gardens in capital cities maintain herbariums and libraries (within the herbarium building). These collections of plants and books, along with the people who work at the herbarium, are an invaluable source of detailed information on most types of plants.
- **Government departments.** Some state and national government departments specialize in certain groups of plants. Departments of Agriculture have information on crop plants such as fruit, vegetables, nuts, berries, grain, cut flowers and sometimes nursery plants.
- Departments of Conservation have information on native plants. Departments of Forestry have information on forest plants, etc.
- **Garden clubs.** There are many different garden clubs throughout the world. Generally local garden clubs existing in most suburbs and towns have contact with other groups (including specialist clubs). Your local council should be able to tell you about any local gardening clubs in your area. Contact them and ask if they can put you in touch with any people or specialist clubs dealing with the group of plants you are studying.
- **Australian Plants Society** (also called: Society for Growing Australian Plants). An Australia wide organization conducting meetings, shows, research activities etc. into Australian Native plants. The SGAP magazine, websites and other publications through this group are particularly valuable resources. They may be found on the internet, or if you are in Australia, in the telephone book.

3. **Magazines and journals.** There are many magazines and journals sold in Australia and overseas that may be of interest to you and your course. Some may be sold through news vendors while others require subscriptions in order to obtain them.

4. **Nurseries.** There are specialist nurseries in all different types of plants. You may find nurseries specializing in Australian plants by looking in:

- Magazine Advertisements (see magazines listed above)
- Telephone book (look under both nurseries-wholesale, and nurseries-retail, under 'N' in the yellow pages).
- The Internet

5. **Gardens.** There are many magnificent gardens that specialise in Australian plants – even in cooler locations. Some countries have excellent botanic gardens, and even have open days in private and specialist gardens.

6. **Seed suppliers.** When looking for seed suppliers, two good starting points are:

- Ask for recommendations from horticulturalists, specialist nurseries or others in the industry
- Look in magazines and the phone book (yellow pages)

7. **Internet.**

- The internet can be a terrific resource for this or any other courses. Check out <http://www.acs.edu.au/links/linkcat.asp?cat=9>
- The ACS garden ezine is another great source of all sorts of horticultural information and contacts. Check out <http://www.acsgarden.com>

## LIST OF SEED SUPPLIERS

The following are listed to provide you with a starting point for obtaining a wide variety of different seeds. There are many more seed suppliers (large and small) in Australia worth contacting.

Please note that the following is not a definitive list; merchant's details may also change from time to time.

#### Alliance Seeds Pty Ltd

101 Basin Olinda Road, The Basin, Vic.

Ph: (03) 9761 0906

#### Anco Seed and Turf

Lawn seed suppliers.

Dandenong-Hastings Road, Lyndhurst, Vic. 3975

Ph: (03) 9799 1370

#### Arthur Yates and Co

Wide range of varieties, including flowers, perennials and cut flowers.

PO Box 6672 Silverwater BC, NSW, 181

Ph: (02) 9763 9200; Fax: (02) 9763 9300

#### Atlantic Seeds

PO Box 205, Seaford, Vic, 3198

Ph: (03) 9786 0337.

Giant pumpkin, watermelon and squash seeds.

#### Australian Bush Products

PO Box 131, STRATHALBYN, South Australia, 5255. Phone or Fax (08) 8534 4124 Seed of South Australia, in particular, that of the Murray Mallee, Lakes and Plains districts, and some species from interstate. Available in small (e.g. home gardeners, schools) and large amounts.

#### AustraHort Pty Ltd

PO Box 1046, BOMADERRY, NSW, 2541

<http://www.farrar.com.au>

Phone (02) 4421 7966; Fax (02) 4421 0051; Email: [farrar@farrar.com.au](mailto:farrar@farrar.com.au).

Australian plant species including seeds and seedlings of trees, shrubs, palms and pasture seeds in small to large amounts. Seed can be ordered on-line (see web address above).

#### Australian Seed Company

P.O. Box 67, Hazelwood, NSW, 2779

Ph: (02) 4758 6132; Fax: (02) 4758 7022

Native tree and shrub seeds for landcare, revegetation.

#### Bushland Flora

17 Trotman Cres, Yanchep, WA, 6035. Ph: (08) 9561 1636. West Australian native seeds

Around 750 species available in small (home gardener size) to large amounts.

#### CIC Suppliers

14-16 Ballieu Court, Mitchell ACT, 2911

Phone: (02) 6241 7477

Email: [sales@cicsuppliers.com.au](mailto:sales@cicsuppliers.com.au)

#### Colgrave Seeds

P.O. Box 303, Cranbourne, Vic. 3977

Phone (03) 5998 1777

Email: [seeds@colegraveseeds.com.au](mailto:seeds@colegraveseeds.com.au)

**D. Oriell**

45 Frape Ave, Mt Yokine, Perth, WA, 6060

Phone: (08) 9344 2290

Email: [dorriell@inet.net.au](mailto:dorriell@inet.net.au)

**Diggers Seeds (Clive Blazey)**

105 Latrobe Parade, Dromana, Vic, 3936.

Ph: (059) 87 1519.

Wide range of vegetable, flower and perennial seeds. Many rare and heritage seeds.

**Ellinson Horticultural**

P.O. Box 365, Nowra, NSW, 2541

Phone: (02) 4421 4255

Email: [seeds@ellinsonhort.com.au](mailto:seeds@ellinsonhort.com.au)

**Fairbank's Selected Seed Company**

542 Footscray Road, Footscray, Vic, 3011

Ph: (03) 9689 4500, Fax; (03) 9687 7089

**Germinox**

404 Upper Heidelberg Road, Heidelberg, Vic. 3084

Ph: (03) 9457 6782

**Goozeff Seeds**

PO Box 3022, North Nowra, NSW, 2541. Ph: (02) 4421 0731. Fax: (02) 4421 0731,

Email: [admin@goozeffseeds.com](mailto:admin@goozeffseeds.com)

Wholesale supplier of Australian and exotic trees, shrubs and grass seeds

**Harvest Seeds**

325 McCarrs Creek Road, TERREY HILLS, NSW, 2084.

Phone (02) 9450 2699; Fax (02) 9450 2750; Email: [harvest@ozemail.com.au](mailto:harvest@ozemail.com.au)

A large range of native and exotic tree, shrub and wildflower seeds and. Species endemic to the Sydney area are a specialty.

**Henderson Seed Group**

165 Templestowe Road, Lower Templestowe, Vic. 3107

Ph: (03) 9850 2266

**Heritage Seeds**

7 McDonalds Lane, Mulgrave, Vic. 3170

Ph: (03) 9561 9222

**Heritage Seed Curators Assoc.**

PO Box 1450, Bairnsdale, Vic, 3875

Ph: (03) 5153 1034.

#### [HG Kershaw Seeds](#)

325 Mc Carrs Creek Rd, Terrey Hills, NSW, 2084.

Ph: (02) 9450 2444.

Wide range of native and exotic trees, shrubs and flowers.

#### [Kings Herb Seeds \(N.Z. Company\)](#)

PO Box 975, Penrith, NSW, 2751.

Ph. (047) 761 493.

Wide variety of herb, vegetable and flower varieties.

#### [H.G. Kershaw Australian Native Seeds](#)

Flower, tree, shrub and palm trees.

The Pde, Dee Why, N.S.W. 2099

Ph: (02) 9984 7226

#### [Kings Herb Seeds \(N.Z. Company\)](#)

PO Box 975, Penrith, NSW, 2751.

Ph. (047) 761 493.

Wide variety of herb, vegetable and flower varieties.

#### [Kimseed Environmental](#)

Native seed suppliers.

Osborne Park, W.A. 6916

Ph: (08) 9446 4377

#### [Mr Fothergills](#)

15B Walker St, South Windsor, NSW, 2756

Phone: (02) 4577 5457

Email: [fothergills@comcen.com.au](mailto:fothergills@comcen.com.au)

#### [New Gippsland Seed Farm](#)

P.O. Box 1, Silvan, Vic, 3795

Phone: (03) 9737 9560

Email: [newgipps@bigpond.com](mailto:newgipps@bigpond.com)

Web: [www.possumpages.com.au/newgipps.index.htm](http://www.possumpages.com.au/newgipps.index.htm)

#### [Nindethana Seed Service](#)

PO Box 2121, Albany, WA, 6330. Ph: (08) 9844 3533, Fax: (08) 9844 3573.

Largest selection of native seed in Australia, with more than 2500 species including many rare and unusual lines. Suppliers of bulk seeds for rehabilitation work, and small, economically priced packets for the home gardener.

#### [Rijk Zwaan Australia P/L](#)

P.O. Box 284, Daylesford, Vic, 3460

Phone: (03) 5348 5528

Web: [www.rijkszwaan.com](http://www.rijkszwaan.com)

#### [R and K Horner](#)

1 Grundy Street, ALICE SPRINGS, Northern Territory, 0870.

Phone or Fax (08) 8952 8583.

Seeds of central Australian plants.

#### [Royston Petrie Seeds P/L](#)

P.O. Box 77, Kenthurst, NSW, 2156

Phone: (02) 9654 1186

Email: [roseed@bigpond.com](mailto:roseed@bigpond.com)

#### [Seeds for Tomorrows Trees](#)

P.O.Box 11, LOWANNA, NSW, 2450. Phone (02) 6654 5423; Fax (02) 6654 5423.

Bulk or provenance collections of individual trees. Eucalyptus species from the east coast of Australia, mainly E. grandis, E. saligna, E. pilularis, E. maculata, E. dunnii, E. microcorys.

#### [Seedworld Australia Pty. Ltd.](#)

6 Peppermint Drive, EAST NOWRA, NSW, 2541. Phone (02) 4423 0894; Fax (02) 4423 5200.

Wide range of Australian native seed, including Eucalyptus seed to Kentia palm seed

#### [Stephen Pasture Seeds:](#)

Pasture and lawn seed.

27 Wiltshire Lane, Ballarat, Vic, 3350

Ph: (03) 5335 8055

#### [South Pacific Seeds](#)

PO Box 934, Griffith, NSW, 2680.

Ph: (069) 62 7333; Fax: (069) 64 1311

Melbourne: Ph: (03) 9562 8908; Fax: (03) 9543 4270.

Brisbane: Ph: (07) 3393 3766; Fax (07) 3893 1522.

#### [Vaughans Wildflower Seeds](#)

C/- PO Gingin, WA, 6503.

Ph: (095) 75 7551.

Wide range of Australian native species, in particular West Australian. Catalogue available on request.

#### [Western Natives](#)

PO BOX 104, BEECHBORO, Western Australia, 6063.

Website: <http://www.omen.net.au/~wnatives/>

Email: [wnatives@omen.net.au](mailto:wnatives@omen.net.au)

Online supplier of seeds, plants, accessories, books, gifts and souvenirs. Over 2000 seed species listed on the website. From small retail packs to larger specialist orders.

#### [W and G Plants and Palm Seeds](#)

216 Outlook Drive, Dandenong North, Vic.

Ph: (03) 9795 7505

#### [Wrightson Seeds \(Aust\) P\L](#)

PO Box 357, Seven Hills, NSW, 2147.

Ph: (02) 9674 6666; Fax: (02) 9674 6257.

Wright Stevenson

117 Silverwater Rd, Silverwater, NSW, 2141.

Ph: (02) 64 8744.

438 Torrens Rd, Kilkenny, SA.

Ph: (08) 268 9855.

## **OTHER SOURCES OF SEED AND INFORMATION**

The Australian Correspondence School's garden ezine is one of your best resources. It can be found at <http://www.acsgarden.com> Click on "Organisations" then search for seeds. If you find a company not listed here, help other students out by "clicking on add a listing". You can then add that seed company to our list for free.

Do a search on the Internet elsewhere for "Seeds" or a particular type of seed (e.g. native seeds). If you also type in your country name you can narrow the list to suppliers in your country.

Most Australian state Departments of Conservation, Land Management, or Forestry will supply large orders of some native seeds, in particular timber species. Their phone numbers can be obtained from the Government listings near the front of your white pages phone book. (A few of these can be found on the accompanying photocopied list of tree seed suppliers).

In addition these departments generally have a range of books, reports, and information leaflets available on a range of topics to do with re-vegetation and land rehabilitation, timber crops, and seed collection and germination.

Greening Australia is a nation-wide organisation with the aim of re-greening Australia. It has a wealth of information available on various tree planting groups, tree planting and rehabilitation techniques, and seed collection and germination. The various state branches are listed in the white pages of the telephone directories for the state capital cities. They have two publications, in particular, that are worth obtaining. These are:

- How to collect native tree seed easily, and
- How to germinate native tree and shrub seed enjoyably.

The Royal Horticultural Society in the U.K. operates a Seed Distribution Scheme for members. This is a great way to get different seeds. Joining the RHS is a really worthwhile thing to do; both in respect to this and other benefits (no matter where you live in the world). For details on joining, or making contact with, the RHS, contact the school.

There are a large number of land-care and tree planting groups in both rural and metropolitan areas. These will often have seed available of plants indigenous to their area. Their addresses or phone numbers can usually be obtained through such organisations as the state or national Farmers Federation, State Departments of Agriculture or Conservation, and Greening Australia.

The Society for Growing Australian Plants is an Australia-wide organisation that aims to promote the preservation and cultivation of Australian native plants. Each state branch maintains an extensive seed bank that includes many rare or uncommon native species. Seed is readily available to SGAP members. In addition there are a large number of study groups within the SGAP that specialise or concentrate their study and interest onto specific groups of plants. These study groups are often the best source of rare or uncommon species. Examples include the Banksia, Rainforest, Daisy, Eucalypt, Native Ferns and Grevillea study groups. For information, either search for the Society on the Internet or ask the school and we can supply up to date contact details.

## **BOOKS ON SEEDS AND SEEDS GERMINATION**

The following books are worth reading if you are interested in Australian seeds.

- (1) Boland, D.J. and others (1980), Eucalyptus seed. CSIRO, Melbourne.
- (2) Doran, J.C. and others (1983), Handbook on seeds of dry-zone Acacias. FAO, Rome.
- (3) Langkamp, P.J. (Editor) (1987), Germination of Australian native plant seed. Inkata Press, Melbourne.

Other books on plants, their uses and propagation are available from such bodies as:

- The Australian Government Publishing Service. They have bookshops in the major cities.
- CSIRO Publications C/- Po Box 89, East Melbourne, Victoria, 3002. Ph: (03) 418 7217 Fax: (03) 419 0459.
- The Rural Book Club C/- Agmedia, PO Box 258, East Melbourne, Vic, 3002.
- Buchanan, R.A., (1989), Bush Regeneration - Recovering Australian Landscapes, NSW Tafe Student Learning Publications.
- Hartmann. T. et al (1997), Plant Propagation: Principles and Practices (6th ed.), Prentice Hall.
- Handreck, K.A. and Black. N. D., (1994), Growing Media For Ornamental Plants and Turf, University of NSW Press.
- Langkamp, P.J., (1987), Germination Of Australian Native Plant Seed, Inkata Press.
- Mason. J., (1994), Nursery Management, Kangaroo Press.
- Society For Growing Australian Plants Maroondah Inc. (1993), Flora Of Melbourne - A Guide To The Indigenous Plants Of The Greater Melbourne Region, Research Publications.

## **OTHER BODIES/ASSOCIATIONS**

- Seed Savers Network
- Box 975G Byron Bay, NSW, 2481.
- Heritage Seed Curators Association
- W-tree via Buchan, Vic, 3385. Ph: (051) 55 0227.
- A non-profit organisation comprising groups, and individuals committed to maintaining rare varieties of fruit, vegetables, tubers and flowers.
- West Australian Nut and Tree Crop Association (Inc)
- P.O. Box 565 Subiaco, W.A., 6008. Interested in the development, use and conservation of all types of useful perennial plants.

## **SET TASK**

Using the leads given on the last pages, contact as many resources as you can and begin to get a feel for what is available. Make up a list of resources which you might use for information later on.

Arrange this list into organized groupings in a file (e.g. seed companies in one group, nurseries in another, clubs or societies in another). Collect any catalogues/leaflets etc. from nurseries, seed companies, organizations etc. which might be useful in learning more about Australian wildflowers.

If you need help or further leads, write to the tutor requesting help when you submit this lesson's assignment.