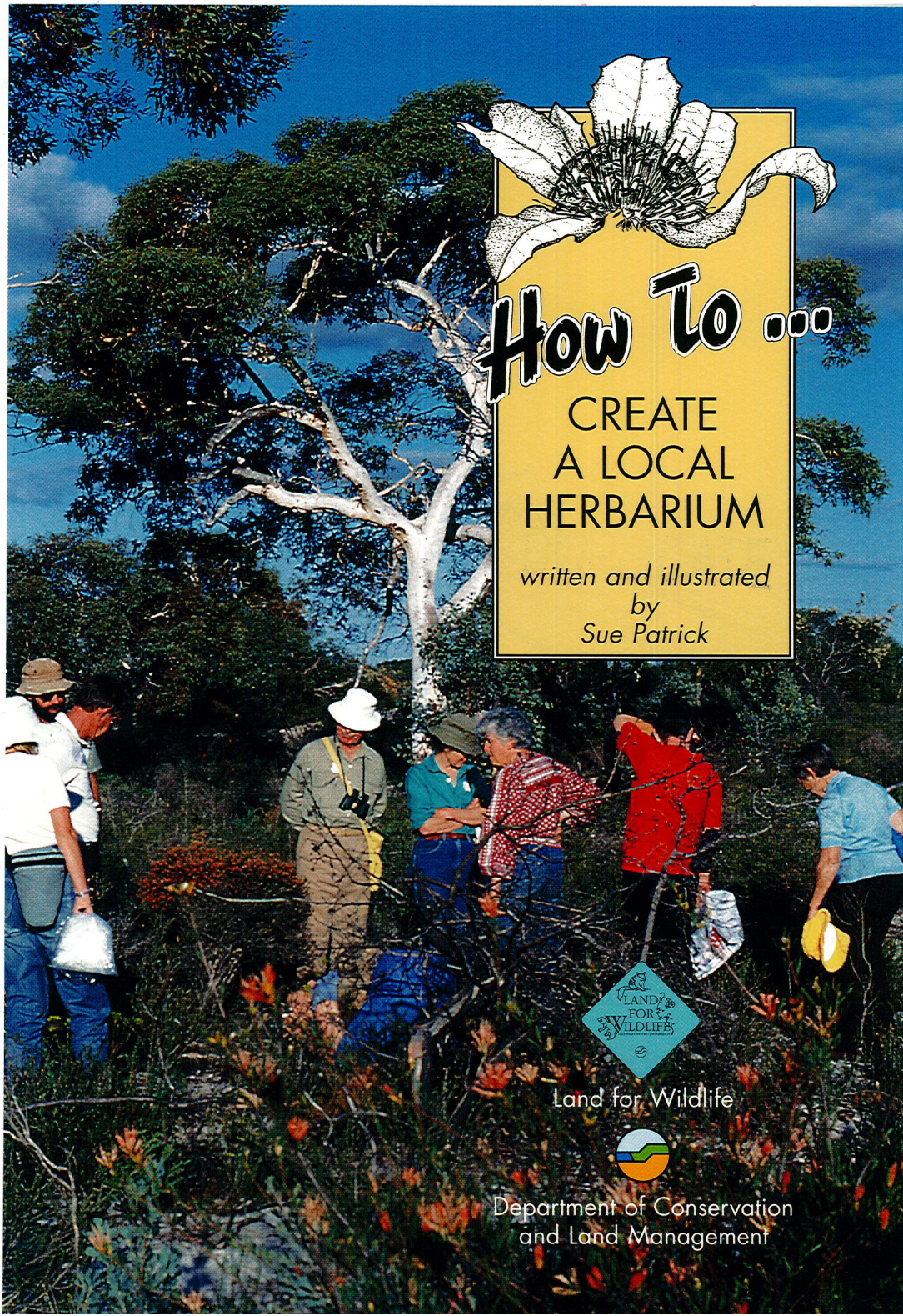

How To ...

CREATE A LOCAL HERBARIUM

written and illustrated by
Sue Patrick

Land for Wildlife

Department of Conservation and Land Management

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by
S. Patrick

Senior Research Scientist
Western Australian Herbarium

Land for Wildlife

Department of Conservation and Land Management

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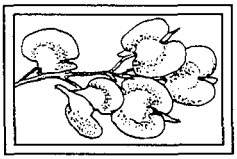

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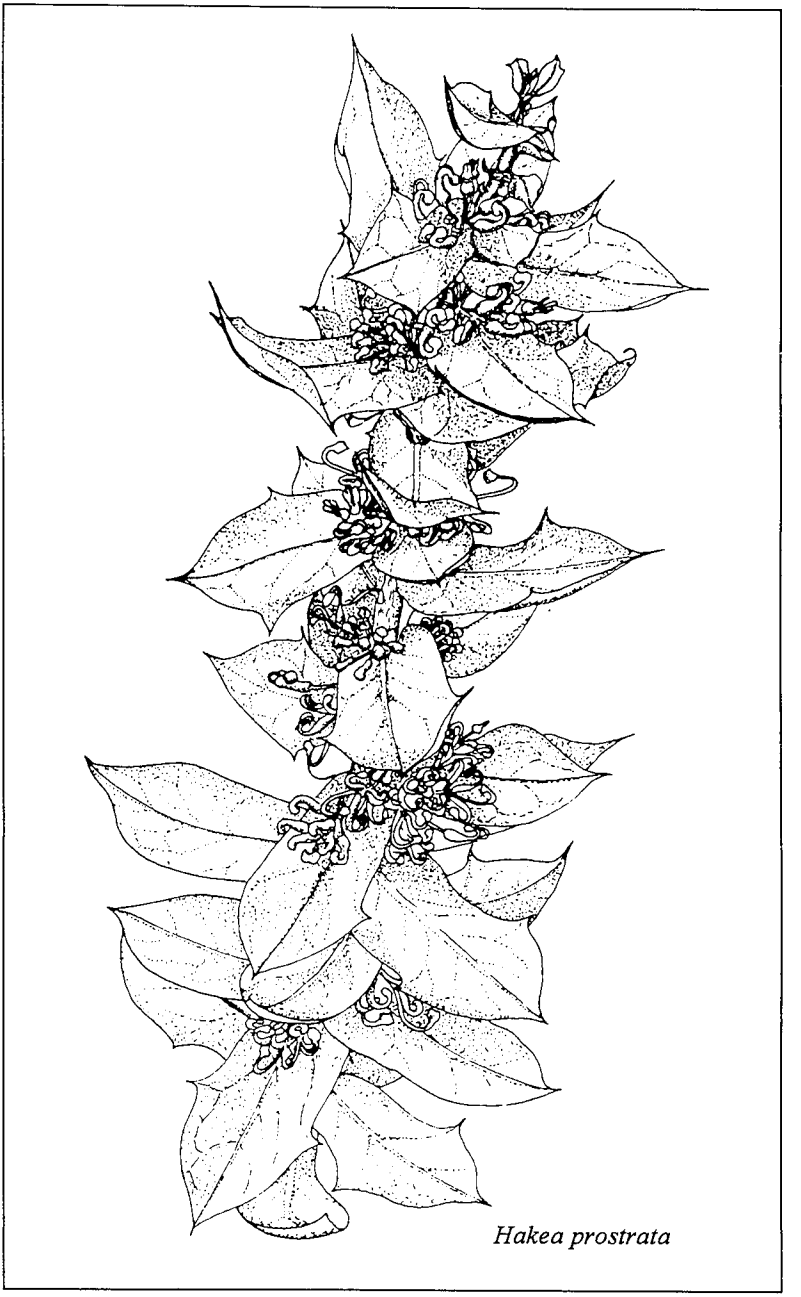
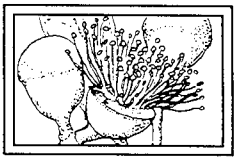


Hakea prostrata



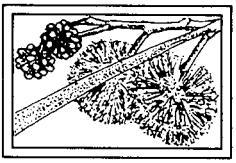
INTRODUCTION

The flora of Western Australia is rich and diverse, with about 9,000 named species and many more as yet undescribed. It would be impossible to recognise all of these! Yet many people are interested in knowing what grows in their area, and this is where a local herbarium can help. By looking through the mounted specimens, the correct name can quickly be found, together with lots of other information to help with revegetation or understanding the local ecology.

The value of a local herbarium will increase over the years, as it becomes a more complete record of the flora in the area it covers. The specimens, and the information on the labels, will be able to answer such questions as:

- what grows where
- which plants to choose for revegetation on different soil types
- which plants to choose for revegetation to provide nectar sources all year round
- what plants are locally rare, or becoming rarer
- when a new weed first was noticed in the area
- what potential pollinators have been recorded as visiting the flowers.

As an educational resource for local schools or tertiary-level researchers; a mine of information for landcare and revegetation; a database for bushland managers or people involved in local nature-based tourism; or just as a source of pride for local residents, the herbarium will be a positive asset to the local community.



PREPARING HERBARIUM SPECIMENS

OBTAIN A SCIENTIFIC COLLECTING LICENCE

A license is required to collect native flora from Crown Land. Contact your local CALM office for the application form, or ring the

Flora Licensing Officer at CALM, Como on (08)9334 0440.

No license is required for private property, (except for declared rare flora, and except where the flora is to be sold) but you must obtain the owner's permission.

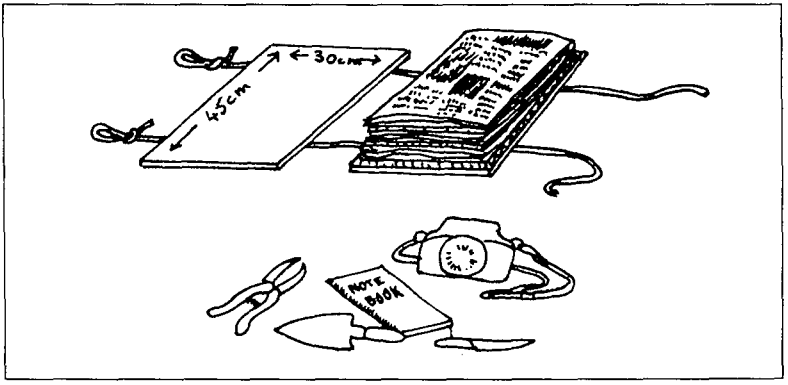
GATHER TOOLS AND SUPPLIES

You will need: -

- field notebook and pencils
- secateurs, knife
- plant press, newspapers and corrugates/dividers (corrugated cardboard with channels running the width of the 30 x 45cm piece) - cut them from large cardboard boxes obtained from the supermarket
- one or two large plastic bags to hold unpressed specimens
- tags
- trowel or other digging tool
- camera (if available), to record plant parts that are difficult to describe, habit of whole plant, delicate flower structure and colour etc.
- maps to record latitude and longitude, and G.P.S. [Global Positioning System] (if available)

ASSEMBLING EQUIPMENT

Prepare the press (see p 8) with folds of newspaper and corrugates, ready to receive the specimens.



SELECT MATERIAL FOR COLLECTION

Survey the plants to be collected and find the most representative specimens, for example, those flowering well and having a range of leaf shapes and sizes. Although specimens for the field herbarium need to be only large enough for a 15 x 20 cm card, remember that herbarium sheets at the Western Australian Herbarium are 42 x 26 cm, so that samples up to 30 cm long are needed.

The sample should be representative of the shape and form of the plant. The larger specimens may provide better information for research purposes, for instance, the leaves on a flowering shrub could be reduced in shape beneath the flower, and may be more typical lower on the branch, so it is important to represent the range of shape. For a local herbarium, smaller samples may be required, but these should include representative parts of the plant.

Collect adequate material both for your own herbarium and for the WA Herbarium, from the same plants if possible, or from nearby plants if the plants are too small.

CUT OR DIG THE SELECTED PLANT PARTS

Specimens should be selected carefully, so as to show as many as possible of the typical features of the plants from which they are taken. The size should be governed by the size of the herbarium sheets which are to be used.

Ensure where possible that each specimen is represented by both flowers (buds for eucalypts) and fruits, as well as a piece of stem bearing typical healthy leaves. In the absence of open flowers, buds should be included if possible. If variation in leaf form is apparent, specimens should be taken from different parts of the plant to represent this variation.

Specimens of eucalypts should include flower-buds as well as fruits, and where available, juvenile leaves from suckers near the base of the trunk. Notes should describe habit, bark type and colour and whether or not rough bark extends over the trunks, main branches and fine twigs.

Fern specimens should include fertile (spore bearing) fronds and sterile fronds, as well as part of the rhizome (if present) or base of the stem (stipe).

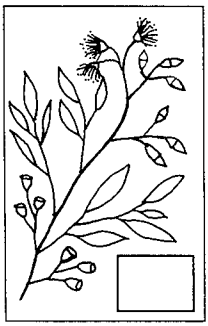
In the case of small herbs, the whole plant should be collected, if a number of plants are present at the site. Herbs with underground storage organs should be dug up complete with these parts, or alternatively, a note on the characteristics of these parts should be made. The latter is preferable, for instance, in the case of rare species in which it is important to leave the basal parts to shoot again the following year.

Grasses and other plants of grasslike habit should be collected whole so as to show the rootstock. Grass clumps may be broken up into small tufts of leaves and flowering stalks, and two or three of these tufts should make a satisfactory specimen. All soil adhering to the roots should be carefully knocked or washed away. Grasses are best collected after the flowers have opened, but before the fruits are ready to drop.

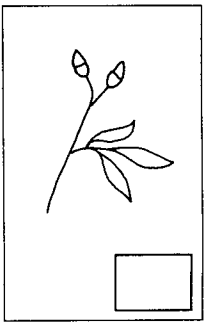
If the grass specimen is longer than the herbarium sheet, it should be bent once or twice when collected so as to form a V or M (according to its length) and pressed in this position. Attempts

to bend it after it is dry would probably cause it to break. In the case of exceptionally tall grasses, the flowering parts and a piece of the basal parts should be collected, and a note made of the height and habit of the plant.

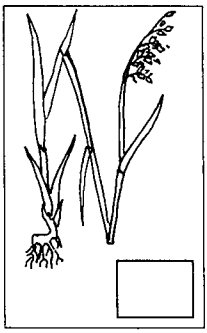
Good specimen, fills sheet with flowers, buds, fruits and large range of leaf shape.



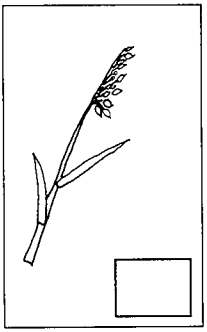
Poor specimen, wastes space and provides little information.



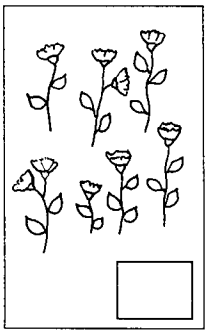
Long specimen, eg. grasses and sedges folded so whole plant is represented.



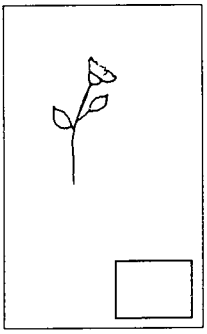
Poor specimen, no rootstock,- required for identification.



Several specimens of small plants provide more information.



A single small plant wastes space, provides little information for identification and taxonomic research.

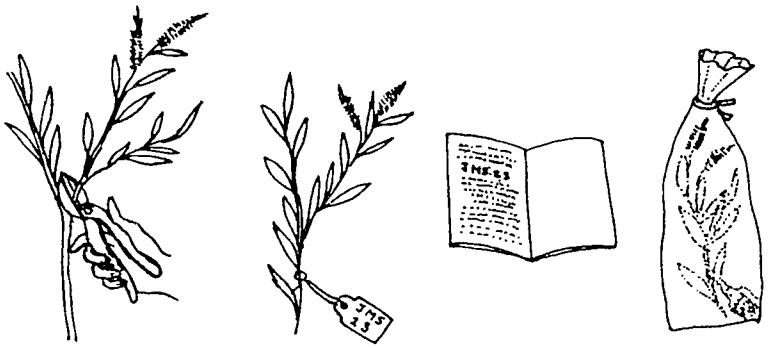


LABELLING

Ensure that all material is properly labelled.

Small cardboard tags (jewellers' tags) which may be numbered and tied to the specimens, are available from many stationery shops. Attach a tag, or similar tie-on label, to each specimen with your initials, collection number and the date collected clearly written in pencil or waterproof ink. Any associated material should also be numbered. The collection number may be written directly onto wood samples with a felt-tipped pen.

The collection number must be a unique number that will enable you to re-find the collection in your notes, and that will not be confused with other collectors' specimens. Use your initials and the specimen number eg. J.R.S./12. The number may be one of a single series that continues through from year to year eg. J.R.S./ 2051 or may start afresh each year, in which case the year should be included, eg. J.R.S./ 15/ 97.



Place the specimens in a plastic bag for transport or directly into the press. If notes are made and separate parts collected, give the same identifying number to all portions so that they can be associated later. Use the same collection number for:

- your own herbarium specimen and its duplicate for the W.A. Herbarium

- other parts of the same plant which will preserved separately eg. large, woody fruits of banksia or eucalypts
- this specimen in your collecting book
- any photographs of the same plant.

RECORDING THE DATA

It is important to make detailed notes at the time of collection, as it is easy to forget or confuse details if written observations are left until a later time. Use a field notebook and assign a number to each collection, recording the corresponding field notes in the notebook. This avoids confusion between specimens collected at that time, and also other collections later. Remember that it may be several months before you retrieve your specimens from the press.

Observations should include collector's name, date, the locality and number and notes on the habitat (or conditions in which the plant was growing), the shape and size of the plant, and the colour of the flowers and flower parts (as these often fade or change colour during drying).

▶ **Locality** If the locality is not a well-known one, the distance and direction from a better-known landmark or town should be given, as well as the latitude and longitude of the collection site, which is recorded more accurately if a global positioning system is available.

▶ **Habitat Notes** should also indicate whether the plants were cultivated or occurred in natural vegetation, disturbed sites or pasture areas. Except for cultivated plants, it is desirable to note the position in landscape, rock or soil type if known, and to describe briefly the habitat (e.g. in eucalypt woodland on dry sandstone ridge; moist grassy site near riverbank; rooted in gravel, in water 30 cm deep, in fast flowing stream).

▶ **Shape and size of the plant** For large plants, where the specimen cannot include all features, notes should describe the height and form of the plant. Bark of trees should be described. Height or distance measurements should be in metric units.

▶ **Flower colours** should be mentioned as these commonly fade or change on drying.

▶ **Photographs** of the whole plant in its habitat or a close-up of the flowers to record colour may be useful to supplement the information included in the notes.

In summary:-

- ✦ Complete data sheets in duplicate for each specimen. The original copy accompanies the voucher specimen which you send to the W.A. Herbarium. The duplicate can be folded and inserted into your own herbarium wallet. (see p 13)
- ✦ Ensure that you complete all documentation and map references.
- ✦ Write notes beside number in notebook, describing the area, habit of plant, colours that may change, odours and any other special details.
- ✦ Number each separate sheet in the top right hand corner.
- ✦ Ensure that you record at the top of the data sheet the acronym (standardised three-letter code) of your local herbarium.
- ✦ Complete "Determined Name" and "Field Identification" in pencil only, and on receipt of name confirmation from the W.A. Herbarium alter all records where necessary.

(NOTE: A sample sheet from CALM's Herbarium Field Notebook, together with the detailed explanation of how to fill it in, is given in the Appendix.)

PRESSING

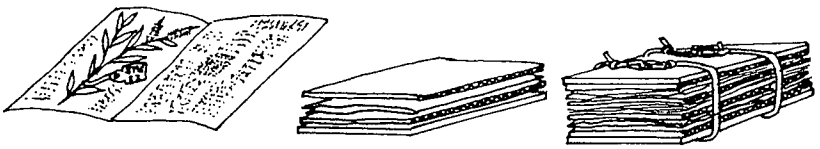
As soon as possible after collection, and before shrivelling can take place, the specimens should be pressed and dried between sheets of semi-absorbent paper. Material of some species

may be kept in plastic bags for a few hours without deterioration if it is inconvenient to press it immediately (add a teaspoon of water to the bag in hot weather, or where delays are expected, to prevent wilting). Other species (eg. Thysanotus or Hibbertia) show such rapid wilting, particularly of the flowers, that such delays must be avoided. Folded newspapers make suitable drying papers and the print does not mark the specimens. Blotting paper tends to hold the moisture too long and is an unnecessary expense. Paper with any sort of glossy surface should be avoided.

The plants should be carefully laid out between the sheets, as their form at this stage will largely determine their ultimate appearance. Wilted leaves should be straightened and unnecessary shoots of excessively twiggy shrubs can be cut away to reduce thickness. Moderate pressure is then applied. This can be done for small numbers of delicate specimens by placing books or other weights on the pile of specimens, but it is preferable to have some arrangement which will permit as free a circulation of air as possible. This can be achieved by strapping the pile together in a press. Sheets of cardboard, preferably smooth-sided corrugated cardboard, placed between the drying folders, assist air circulation through the press. The press frames should be the same size or a little larger than the drying papers.

The press can be made from:-

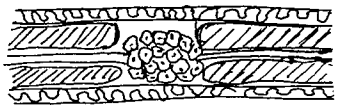
- two sheets of plywood, or pegboard, or a lattice of wood or strips or wire mesh with two rope ties, velcro, or bolts and wing nuts to hold it together.
- Telephone books are good for immediate pressing of small, delicate specimens, such as orchids.



In summary: -

- ✦ place specimen in a fold of newspaper with its number written on the outside
- ✦ cut away excess parts, arrange leaves and flowers
- ✦ place fold of newspaper between cardboard or heavy pads of newspaper
- ✦ press the specimen with its newspaper and corrugates tightly between press boards or weight heavily beneath board or books.

Where plants are of uneven thickness, such as when flowers are borne on thick twigs or arise from a thick, bulbous base, sheets of plastic foam (about 1cm thick) or corrugated cardboard, placed between the newspaper folders help to distribute pressure evenly. If foam sheets are not available, several thicknesses of folded newspaper placed over delicate structures will help prevent them shrivelling as they dry.



Some species or conditions require special treatment.

- ✦ Some plants (e.g. many species of Ficus, Fig and Amyema, Mistletoe) drop their leaves entirely upon drying, or remain alive for an excessively long period in the press. This is overcome by killing the plant before pressing, by freezing the specimen for a few hours.

- Aquatic plants, if very soft or filamentous, may be arranged on the mounting sheet while in a shallow dish of water. The mounting sheet is placed first into the dish and the specimen is arranged on the sheet, which is then gently slid from the water. Commonly such specimens would adhere to the drying papers and are best pressed between a mounting sheet (to which it may remain permanently attached) and a sheet of cellophane or muslin which prevents it adhering to the drying paper.
- Very bulky objects (e.g. Banksia spikes, thistle heads) may be split lengthwise before pressing.
- Dissections of flowers may sometimes be desirable to show the floral structures more clearly.
- There are several alternative ways to dry succulents. This has always been difficult because they do not respond to normal drying methods and in some cases, even continue to grow in the press.

Several methods have been applied over the years, such as scalding, or slashing the fleshy parts and salting the cuts to withdraw the moisture. These techniques create unsatisfactory herbarium specimens. Modern technology provides us with a new effective method, by use of freezing chambers.

Microwaving specimens is not recommended. The W.A. Herbarium prefers freezing, which although slower, produces a better specimen without the risk of damage by overheating. Also, it does not destroy the plant cells, which would prevent use of the specimen for genetic study in the future and would kill seeds. The freezing method involves placing the specimen in a press which is frozen overnight. The press is then dried in the normal way or by regular changes of paper as described above. If the specimen is very succulent, more changes of paper are necessary for the first few days.

DRYING

The press of specimens and papers should be placed in a warm dry place for drying.

- Change newspaper and corrugates in 24 hours if necessary, and thereafter as they become moist. Do not disturb the specimens in the newspaper folds.
- When the specimens are dry to the touch, test for incompletely dried specimens. (Incompletely dried specimens will feel cooler and their ends will droop when they are lifted from the newspaper).

When in the field, drying can be aided by placing the presses securely onto the roof rack of the vehicle during dry daytime conditions.

The drying papers should be changed every day for a few days, unless forced air circulation is used, the used papers being discarded or thoroughly dried again before re-use. As the number of changes required will vary with the original succulence of the plants and with the weather conditions, no exact guide can be given, but most plants should dry in less than a fortnight and the last one or two changes need only be given at intervals of three or four days.

Rapid drying should always be the aim, to preserve a good colour as far as possible. A few species regularly turn black on drying, but, in general, brownish or blackish colours in the completed specimens, or the growth of mould, indicate that drying was too slow.

MOUNTING THE SPECIMENS

Mount the specimen on the card, retaining the original tag, and recording on the card the name, (when correctly identified), date of collection, location and other details, eg. flower colour, for easy reference if necessary. Fold the duplicate data sheet with all other information and store in the plastic wallet behind the card. (Plastic wallets are purpose made to hold a 15 x 20 cm index

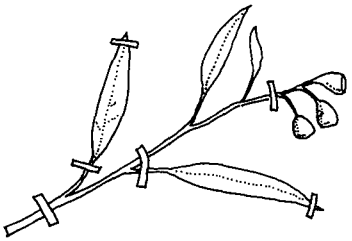
card, see Supplies p 24) Photographs can also be added, to provide extra information. Mount on A4 sheet if a larger format is required.

Photograph/map can be glued to the back

Place the card in the plastic wallet

or mount on A4 card and place in plastic sleeve

Use Selleys "Aquadhere" or similar wood glue for fixing large specimens to your own cards and/or narrow strips of mounting quality adhesive tape (contact the Herbarium for details). Try to avoid damage to flowers and do not use too much glue, so that the specimen may be removed for taxonomic study if required. Fix the plant to the card at strategic points only. Do not mount the duplicate to be sent to the W.A. Herbarium.



Self-adhesive cellulose tapes are most unsuitable as the adhesive becomes dry after a few years and the strips may become detached. In the case of large or heavy specimens, fusewire may be used to attach them to the card. Small herbs can be placed in cellophane bags or folded envelopes which are attached to the card.

Seed pods and/or seeds, if available, should be mounted separately, or placed in cellophane bags/envelopes, identified by the same collection number.

FORWARDING FOR IDENTIFICATION.

Specimens of most plants can be preserved indefinitely by careful drying, followed by storage under insect-free conditions, and can be used as permanent reference material. Although lacking the freshness and colour of live material, a dry specimen which has been satisfactorily prepared, and which is accompanied by suitable notes, usually provides most of the features required for the identification and systematic study of the plant.

If specimens cannot be identified by the use of handbooks, floras, keys of field guides, duplicates may be forwarded to the W.A. Herbarium for determination of the correct name. Send adequate material. Each specimen should be accompanied by a completed data sheet, and must be correctly labelled with a jewellers tag. Each should be placed in a separate dry newspaper folder. Enclose the specimens between two rigid pieces of cardboard. Do not mount the material, as this will be done by the W.A. Herbarium.

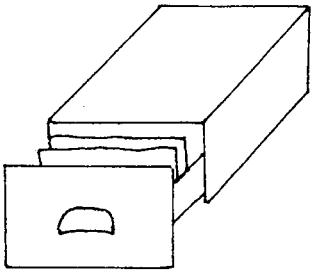
VOUCHERING

As work proceeds on the naming of the Western Australian flora, changes are sometimes made to the names of particular species, and a collection of plant specimens, although correctly named when originally collected, may become outdated if not revised as changes are made. For this reason, it is important to send good duplicate voucher specimens to the WA Herbarium to be identified and incorporated into the collections there. This information will then be entered on the computer database and an updated list of your specimens can be produced when required, which will provide you with a revised list of names. You can contact the Reference Herbarium Co-ordinator at CALM's Herbarium for more information on how to obtain updates.

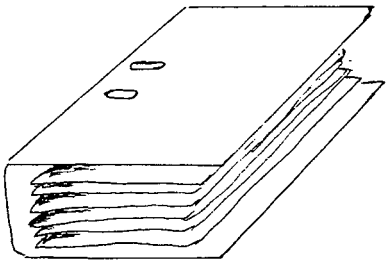
STORAGE AND PRESERVATION.

Assemble the prepared cards in file boxes or folders. The folders / cards can be arranged in several ways. One method is to

arrange the families in taxonomic order (particularly if there is a local flora to follow) with the genera arranged alphabetically within the families. Alternatively, the families can also be arranged alphabetically (this would be easier for non-specialists to use).



Arrange the completed cards in a file drawer



or in A4 lever arch files

Dry plant specimens can be kept indefinitely as long as they are protected from insect attack and stored away from heat and moisture. Specimens collected by Linnaeus in the eighteenth century and by Banks and Solander on the Endeavour voyage are still excellently preserved.

If insect damage is a problem, specimens can be treated before mounting on cards, and if necessary the field herbarium itself should be treated twice a year to prevent further damage. The two insects which are most likely to cause trouble are: -

- Museum Beetle, small brown beetles about 3mm long
- Book-lice, very small and more or less colourless.

The Museum Beetle in particular, is a serious problem because it can go undetected for several years if a regular control program is not in effect.

There are basically two methods of insect control, freezing or microwaving.

Freezing is the recommended method. The whole collection should be frozen twice a year at -20 C or lower, for one week. The freezer should not be opened during this time. This is most important, so, whilst this is taking place, no other items required more frequently should be stored in the freezer.

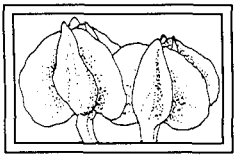
Microwaving is not recommended as it causes cell damage, killing seeds and preventing future use or the specimen for genetic study. Older specimens may also be damaged by overheating.

FIELD IDENTIFICATION

It will often be necessary to use the herbarium specimens for identification, for example on a seed-collecting 'busy bee' with a community group, to ensure that the desired plants are obtained and the seed accurately labelled. If the mounted specimens are securely sealed within a plastic wallet, they may be taken out into the field to use for this purpose. However, to avoid accidental damage, it is probably better to leave the originals in their safe storage, and take duplicates or photocopies on field trips.

A well-prepared specimen photocopies clearly enough to use for field identification. Colour photocopies would be excellent, but are expensive. Black and white is probably sufficient, and duplicate copies could be made so that every volunteer seed collector has a set.

Dryandra sessilis



RARE FLORA

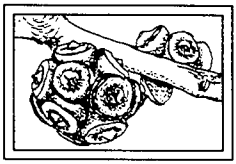
All naturally-occurring native flora is protected under the Wildlife Conservation Act, which is administered by CALM. Licences for 'taking' plants - such as the Scientific or Other Prescribed Purposes Licence that all local herbarium collectors will have - are issued under this Act.

Plants considered to be rare or threatened are placed on a list of Declared Rare Flora (DRF) and are specially protected under the Wildlife Conservation Act. The approval of the Minister for the Environment is required for the collection of DRF, and anyone requiring a permit to take specimens must make application for this to Wildlife Branch, CALM, Como. If you suspect that you may have found DRF, take photographs rather than specimens, record the location and contact CALM.

CALM also maintains a second list, called the Priority Flora List. It lists those species of flora which are poorly known. They may be known from only one or a few populations, be geographically restricted, or occur only on areas at risk from disturbance. Copies of these lists should be held in the local herbarium's library, and may be obtained from CALM's Wildlife Branch.

Many species on the Priority Flora List are under consideration for declaration as 'rare flora' but, because they are poorly known, more information about their occurrance is needed. If specimens have been made of any of these Priority Taxa, they should be marked in some way to show their importance. This will highlight further new populations which are found and identified by means of the local herbarium.

Contact the Administrative Officer, Flora, at CALM, Como on (08) 9334 0422 for further details about DRF or Priority Taxa in your area.



APPENDIX
GUIDE TO CALM HERBARIUM FIELD NOTEBOOK

SPECIES IDENTIFICATION

Local Herbarium Acronym: the standardised three letter code of your local herbarium

PERTH Number: the W.A. Herbarium (acronym PERTH) unique barcode number, added during databasing, after the specimen has been mounted

Determined Name: the currently recognised scientific name recorded in the WACENSUS database

Field Identification: tentative, convenient "name" used by the collector for reference only; not recorded on the WAHERB database

PLANT DESCRIPTION: **details of the plant(s) selected as a specimen**

Habit: (adjectives describing the growth form of the plant): eg: climbing; compact; erect; grass-like; open; prostrate; rhizomatous; sprawling; spreading; tufted; etc.

Form: (describes the type of plant): eg: *tree* (woody, single-stemmed, >5m); *tree like* (without true wood eg: Kingia); *mallee* (woody, multi-stemmed eucalypt); *shrub*: (woody, up to 5m); *herb* (non woody, annual or perennial); etc.

Height, Width: always estimate the height and width of the plant sampled, in millimetres or metres

APPENDIX

Plant Notes: flower colour (calyx and corolla) and any other striking features which may not be seen on the processed specimen eg: new or old leaves; add notes on any striking features which will not be seen on the specimen such as root structures, bark type, latex, sap, etc., juvenile leaf characters, insect, disease and other damage; add ethnobotanical information and conservation status etc.

SITE DESCRIPTION: **describes the topography, soil, underlying rocks etc. of the immediate area surrounding the plant(s) collected**

Landform: the nature of the topography,; eg: breakaway; dune; gully; hill; hillside; lake; outcrop; plain; ridge; river bank; rock hole; slope (steep or gentle); valley; watercourse; wetland, etc.

Soil Surface: wet; dry; organic litter cover; stony (laterite or other); crusted; cracked; bare; covered with a moss, algal or lichen mat

Soil Colour: record subsurface character, noting any distinct horizons; use colour standards of red, brown, yellow or grey with qualifiers such as dark and light, or combine colours giving the most dominant last, eg: red-yellow

Soil Type:

sand:	no coherence when moist or dry. Individual sand grains seen and felt
sandy clay:	(loam) moderately plastic when moist, bonded when dry, sand grains felt, not seen
clayey sand:	slightly plastic when moist, crumbly when dry, sand grains seen and felt
clay:	smooth and plastic when moist, cracking when dry, no sand grains

Underlying Geology: if known, eg: granitic; limestone; laterite; sandstone etc.

Vegetation: use this table to identify the vegetation community

LIFE FORM	CANOPY COVER	
	DENSE (more than 30% canopy cover)	SPARSE (less than 30% canopy cover)
Trees - taller than 5 m	Forest	Woodland
Trees - shorter than 5 m	Low Forest	Low Woodland
Mallees	Mallee	Open Mallee
Shrubs - taller than 2 m	Thicket (shrubland)	Scrub (shrubland)
Shrubs - shorter than 2 m	Heath (shrubland)	Open Heath (shrubland)
Grasses	Grassland	Open Grassland
Sedges and Reeds	Sedgeland	Open Sedgeland
Other ground layer plants	Herbland	Open Herbland

Characteristic Species: list a few of the most common species which grow at the collecting site

Abundance: the commoness of the species in relation to others at the collection site, eg: common, frequent, occasional or rare

Other Notes: add unusual site features eg: erosion or other disturbance; weed invasions; fire history

APPENDIX

LOCATION

Locality: indicate road distance in km and direction from nearest named feature, or note direct distance as due W (est) etc. of a named feature

Latitude and Longitude: calculate degrees and minutes from a map, check with the coordinates of the nearest named feature from a gazetteer

GPS: indicate (Y)es if a Global Positioning System unit was used or (N)o if latitude and longitude was calculated from a map etc.

Collector(s): enter initials first then surname(s) in full

No: use a sequential numbering system

DATA RECORDS

Voucher for: note if collection is a voucher for a photograph; particular area survey; special project etc.

Record Basis: indicate by circling the appropriate word to indicate type of sample collected

Phenology: indicate by circling the appropriate word if there are no reproductive organs (sterile) or if buds, flowers or fruits are present

APPENDIX

Local Herbarium Acronym: MIL PERTH No.
Determined Name: Hakea prostrata

Field Identification: Hakea 'prickly'

Habit: Sprawling
Form: shrub Height: 1·5m Width: 2m
Plant Notes:
creamy white flowers

Landform: creek bank

Soil Surface: damp
Soil Colour: yellow grey
Soil Type: sandy clay Underlying Geology: lateritic gravel
Other Horizons:
clay

Vegetation: low wood land and scrub over open heath

Characteristic Species: Corymbia calophylla, Xanthorhoea preissii,

Abundance: frequent
Other Notes:
burnt c. 4 yrs previously, Watsonia invading from creek

Locality: Railway Crescent, Millendon, east side, 200m S of intersection with Haddrill Road

Latitude: 31° 53' S Longitude: 116° 03' E
GPS: Y (N)

Collector(s): S. Patrick No. 305 Date: 8.9.1983

Voucher for: Illustration for 'Leaf & Branch'

Record Basis (Specimen) / Fruit / Wood / Seed / Wet / Photo / other /
Phenology Sterile / Fertile / Bud / (Flowering) / (Fruiting)

APPENDIX

Local Herbarium Acronym: PERTH No.
Determined Name:

Field Identification:

Habit:
Form: Height: Width:
Plant Notes:

Landform:

Soil Surface:
Soil Colour:
Soil Type: Underlying Geology:
Other Horizons:

.....

Vegetation:

Characteristic Species:

Abundance:
Other Notes:

Locality:

Latitude: S Longitude: E
GPS: Y N

Collector(s): No. Date:

Voucher for:

Record Basis Specimen / Fruit / Wood / Seed / Wet / Photo / other /
Phenology Sterile / Fertile / Bud / Flowering / Fruiting

SUPPLIES

Clear plastic wallets, 205 x 170 mm (PVC pockets with thumb hole)	Candor Stationery Manufacturers Pty Ltd 211, Barrington St, Bibra Lake, W.A.
Index cards- white, faint blue lined approx. 202 mm x 152 mm (8″ x 6″)	as above
Glue or tape Selleys Aquadhere 250 ml etc.	Hardware stores
Metal card index boxes 2 drawer cabinet 2A5	Metalux Industries Osborne Park, W.A.
Corrugated cardboard 450 mm x 300 mm	Westcare Industries Carrington Street, Nedlands W.A.
Felco Secateurs	Hardware stores
Seed envelopes no.6	Stationers
Tie-on Jewellers Tags no.23H 30 mm x 21 mm	Stationers
Field Notebook Collins Series 3880	Stationers
Plastic bags 100 micron 600 mm x 300 mm	Seismic Supply International Pty Ltd Abernethy Road, Kewdale W.A.
Mothballs (fumigation)	Hardware/ Chemists

For further information contact the Reference Herbarium Co-ordinator at CALM's Herbarium on (08) 9334 0500.

4319-0797-500