Department of
Environment and Conservation

Our environment, our future

Flora Conservation Course

The Western Australian Herbarium

Prepared by:

Nicholas Lander, WA Herbarium, Kensington
Ryonen Butcher, WA Herbarium, Kensington

Prepared for:

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1 The Western Australian Herbarium

The Western Australian Herbarium (PERTH) is part of the Flora Conservation and Herbarium Programme of DEC's Science Division. The herbarium's current operating staff includes 12 Scientists, 20 Technical Officers, four Administration staff and 52 Volunteers. Additionally, one Scientist and one Technical Officer are based in Manjimup. The herbarium also houses staff from the Threatened Flora Seed Centre and supports a number of DEC staff from other programmes, as well as externally managed personnel e.g. from the Perth Urban Bushland Fungi (PUBF) project, the Flora of Australia project and mining industry funded projects.

DEC is legislated under the CALM Act 1984 *"to be responsible for the permanent preservation of the plant collections of the Western Australian Herbarium and to care for and extend these collections"*, and these collections are used to describe and document Western Australia's botanical species diversity. With >680,000 specimens the herbarium is currently overflowing and will be housed in a new building—the Biodiversity Science Centre, in Kensington—in 2009. Other roles of the herbarium staff include identifying plant specimens, maintaining and developing the databases and interactive keys accessible through the herbarium's website FloraBase, maintaining and evolving FloraBase itself, coordinating a Regional Herbaria Network and running an extensive volunteer programme.

2 Herbarium Staff

The unique team of staff is located throughout the State. They gather, manage, research and communicate information about Western Australia's unique and precious flora. They have a vital place in a national and international network of herbaria and allied biodiversity conservation agencies.

Herbarium staff work closely with the Threatened Flora Seed Centre on studies of critically endangered (CR) species and also work in conjunction with Science Division's molecular genetics facility to help resolve the taxonomic boundaries of conservation-listed species. Many users consult the herbarium for baseline data.

Biodiversity data is managed using information technology, which allows for the communication of scientific results to a wide range of users involved in conservation. These information systems include the Census of Western Australian Plants, a Specimen database, a Plant descriptions database, a botanical library and database of reference materials, a plant images database, and a database of biological attributes of plants, much of which is linked to spatial data.

3 Herbarium Volunteers

The volunteer programme of the herbarium involves a wide range of people from the community. Their diverse work includes specimen processing, image capture and storage, plant identification, provision of plant information to the tourism industry and invaluable participation in regional herbaria. Volunteers also contribute to expanding the website FloraBase, and collecting, identifying and documenting invasive species. Some volunteers also have the expertise to curate and identify specialist plant groups, such as slime moulds and other non-vascular plants.

Why collect & what are they used for!

- They are a permanent record a plants name and its presences (sturts pea 1699)
- Taxonomic value
- Phenology, flower, fruiting etc
- Permanent record of surveys and other data e.g. ethno botany
- Spatial data observation from a particular point in time e.g. vegetation condition, track weed movements
- Specimens are used by entomologists etc

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Pressing specimen

- plant press typically comprises 2 pieces of plywood 45cm x 30cm.
- Alternating piece of cardboard and two interfolded sheets of newspaper.
- Well pressed and dried specimens are essential.
- Change sheets if needed, particularly with succulents.
- Allow roughly 2 weeks drying

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How to collect herbarium specimens

In general a good specimen should:

- be of an adequate size, small scraps or twigs make poor specimens
- have a good range of parts to allow identification and study
- be well-collected, carefully pressed and well dried
- be accompanied by adequate and accurate notes and other information

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Collecting and trimming the specimen

- They need to be roughly of A4 size.
- If bulky trim to a one dimensional shape.
- When collecting grasses, sedges and similar tufted plants (detach whole clump, bases).

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Choosing a specimen to collect

- Where possible a specimen should have flowers, fruits and a range of leaf size.
- If taken from several individuals (please note, population sample).
- Sterile specimens are of little value to the herbarium.
- Herbs require several specimens to be collected.

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Collecting duplicate specimens

- Duplicates are required for type material.
- Loans and exchanges for other herbaria.
- Useful as field guides when collecting.
- Regional herbaria.

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Recording information

- Habit, height, width, flower colour etc (note floral parts).
- Habitat, vegetation type, where in the landscape associated species.
- Locality, GPS reading, kilometres along road and bearing form landmark.

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Tagging the specimen

- Always tag each specimen as it goes into a plastic bag or press.
- cross-match it with the entry in your field collecting book.
- Try to collect information as you are going (not after a couple of beers in the pub).
- Jeweller's tags, (newsagents).

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Collectors details

- Collector (name in full)
- Collector's number (put your initials and number on tag)
- Date
- Voucher for
- Photo (y/n and exp number)

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Forwarding the specimen to the Herbarium

- the reason the specimens were collected e.g. survey of a particular area
- from which organisation
- list of the contents (name of specimen, collector and collectors number)
- the scientific collecting licence number per collector
- what is to occur to the specimens if other than lodging (do they require identification)
- and if they are to be invoiced (to whom the invoice is to be made out to).

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"Surveying" Contact the Herbarium

- We can help with advice from the areas you intend collecting
- We can supply species collected within an area (longs & lats)
- Reserves species list etc
- Better use of time and resources

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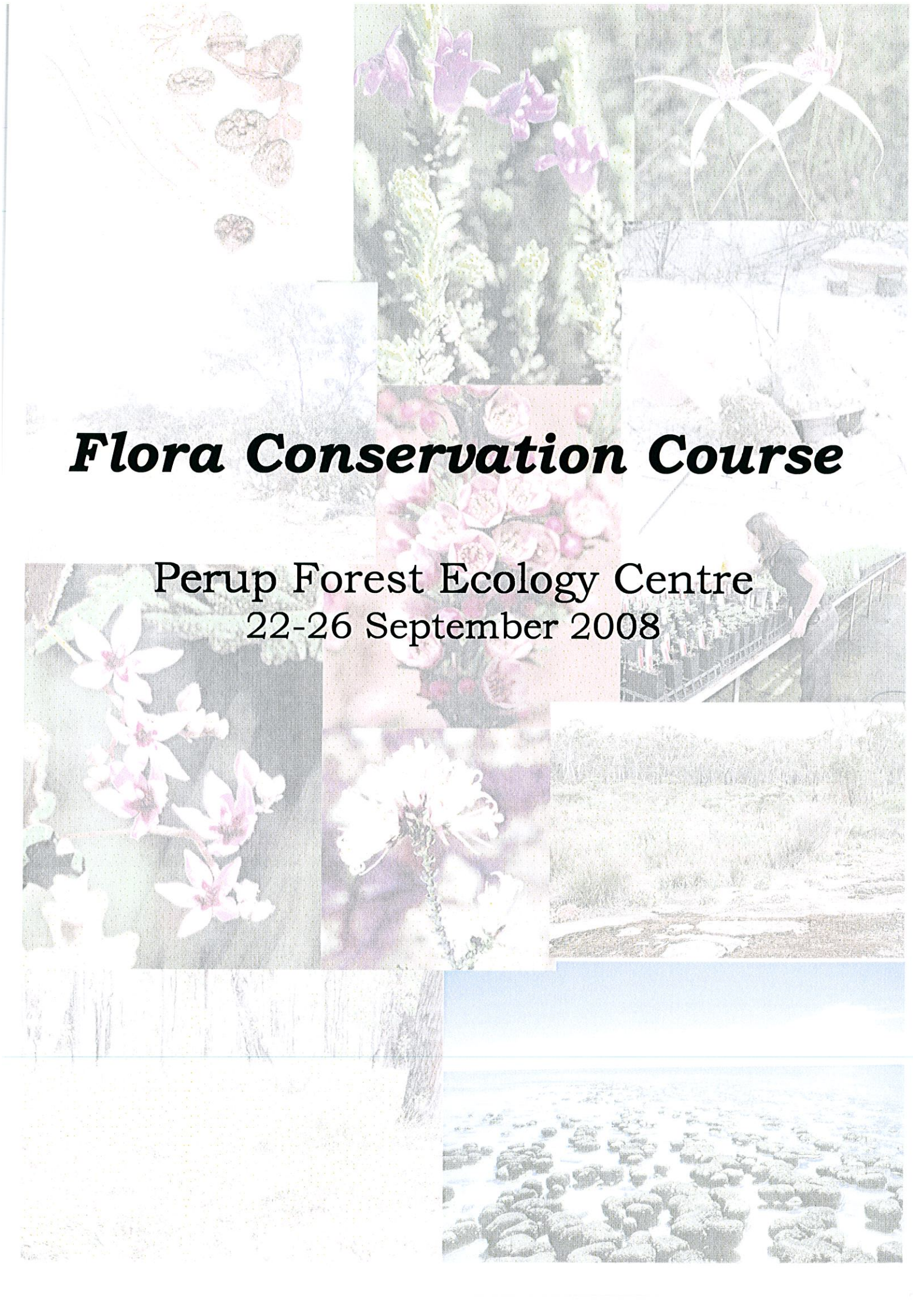

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Perup Forest Ecology Centre
22-26 September 2008