



# Bound by a love for flora

by Bronwen Keighery,  
Brian Moyle and  
Ann Guinness

A special group of volunteers and professional botanists has spent 20 years surveying the kaleidoscope of flora in Western Australia's south-west.



**T**wenty years ago this year a group of professional botanists, amateur botanists and interested people came together, bound by their love for Western Australia's wildflowers. Together the group, under the lead of the already formed Wildflower Society of Western Australia, started surveying the incredible wealth of plant species found throughout the south-west. Over 20 years they have built up a comprehensive picture of flora biodiversity, discovered new species and found populations of some of our rarest plants. Most people in the group are volunteers who pay their own way and donate their time to better understanding south-west flora—people driven by a thirst to learn more about the area's floral wonders.

### The early years

The Wildflower Society of Western Australia's 20-year bushland plant survey was born through a federally funded project—the Moore River to Jurien Sandplain Survey. While there have been other successful flora-based volunteer projects, two features distinguished this project from others—the emphasis on plant communities as opposed to individual plant species, and the use of botanists to support the volunteer groups. Three botanists, Ted Griffin, Bronwen Keighery and Malcolm Trudgen, led seven groups

formed from the 79 volunteers registered with the survey. This initial project was considered a success and fired the passion of volunteers, who expressed an interest in being involved in future surveys. The groundwork for long-term surveying was set.

In the early 1990s the Wildflower Society of Western Australia received funding to continue the bushland survey work as part of a regional floristic survey of the Swan Coastal Plain. This enabled the program to be established on sound principles in keeping with the approach that was so successful in the first survey. Important features of the program included establishing a confidential register of volunteers, advertising, running a yearly program and developing a vegetation-survey package.

The Wildflower Society used the survey techniques developed and trialled in the early years of the survey to form the basis of a book published in 1994. The book, *Bushland Plant Survey—A Guide to Plant Community Survey for the Community*, was developed from established methods and adapted for community use. Hundreds of copies of the guide have been sold to amateurs and professionals involved in bushland plant surveys. The guide outlines a structured field-survey approach that does not require each participant to have a strong knowledge of botany.

It also forms a base for many of the society's workshops.

### Bushland surveyed

Since its beginnings, the survey program has visited bushland areas from Eurardy Station, north of Kalbarri, east to Bodallin, west of Southern Cross, and south to Denmark. More than 70 bushland areas have been surveyed and these have ranged from a few hectares, like Coolbinia School bushland in Perth, to thousands of hectares, like Eurardy Station.

Surveys have been conducted on private and public lands with the permission and invitation of the land holder or manager. The public lands surveyed have included Yanchep, Walyunga, Yalgorup and Whicher national parks, Bullsbrook, Ellen Brook, Cardup and Capel nature reserves, Blackwood and Boyanup State forest, Dardanup Conservation Park and local government reserves in Victoria Plains, Swan, Merredin, Wickpin, Quairading and Busselton. The survey on private lands focused on farms in the Wheatbelt but has included a farm in the Perth metropolitan region and another in the Margaret River area.

Records for tens of thousands of common and not so common plants have been made during the surveys. Participants are fascinated by the stunning variety of plants discovered, particularly the tiny herbs, grasses and grass-like plants. Exciting discoveries include plants not expected in the area, new rare flora populations, plants new to science and new records for the State.

Reports detailing conservation values have been produced for about



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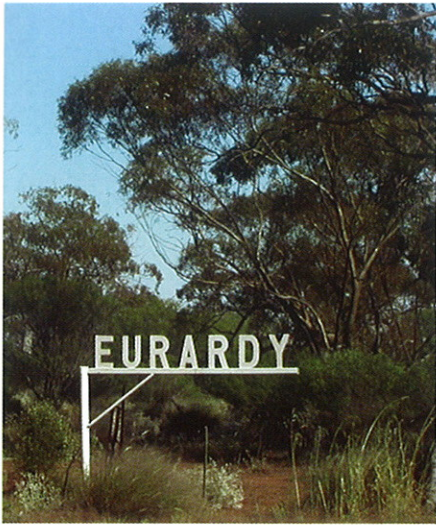
**Main** Cowslip orchids (*Caladenia flava*), one of the beautiful small plants found in many quadrats.

*Photo - Sallyanne Cousins*

**Insert** Volunteers and a botanist working on a quadrat in wandoo woodland in Mogumber Public Reserve on the Moore River.

**Left** Argyle platytheca, a new species of *Platytheca* located on the Whicher Scarp near Capel.

*Photos - Mark Brundrett*



**Above** The most northern survey was on Eurardy Station in spring 2003.  
*Photo - Nina McLaren*

**Above right** Working on the 1988 Moore River to Jurien Sandplain Survey.  
*Photo - Greg Keighery*

**Right** Summer flowering morrison (*Verticordia nitens*) in Moore River National Park.  
*Photo - Sallyanne Cousans*



### Wildflower Society of Western Australia celebrates 50 years

The Wildflower Society of Western Australia celebrates its fiftieth anniversary this year. Inspired by the formation of the Society for Growing Australian Plants in Melbourne in 1957 and a visit to WA by the founder AJ Swaby, a south-west regional council of the 'Society for Growing Australian Natives' was formed on 18 March 1958. Now called the Wildflower Society of WA, this group of more than 1,000 members is a key conservation group in WA. The society aims to understand our native plants, to share information on how to recognise them, to protect the bushland in which they grow and to propagate and grow them. For more information visit the website [www.members.ozemail.com.au/~wildflowers/](http://www.members.ozemail.com.au/~wildflowers/).

50 of the surveys. A list of reports is provided on the society's website and reports are available from the society or from the Department of Environment and Conservation's (DEC's) Science Library. Field herbaria have been compiled for many projects. These are presented to the landholder or community group and are also kept by the society. Quadrat information collected is incorporated in the DEC plant community database and more than 3,000 specimens have been lodged at the Western Australian Herbarium.

#### Keeping the plot

Fieldwork conducted for the surveys revolves around establishing and recording vegetation and flora information for 10-metre by 10-metre plots or quadrats. Focusing on quadrats is essential as it establishes a systematic procedure for the collection of information. This technique focuses on sampling all plant species in the quadrat area and therefore helps to avoid concentration on only the common and conspicuous species. Although



time consuming, this method ensures information is collected carefully and systematically in a repeatable way. After analysing a quadrat, volunteers often leave amazed at the diversity of plants discovered in a single 100 square metres.

The field surveys yield a collection of specimens for identification, including some of importance for pressing and labelling at the Western Australian Herbarium and for compiling of field herbaria. At least one identification workshop is held at the herbarium following each survey, led by the survey

botanist. A band of dedicated volunteers meets regularly at the herbarium to help carry out this work and initiate and complete further survey projects.

#### The volunteers

Hundreds of people have registered as volunteers with the survey. A core of seven volunteers—Mary Bremner, Anne Bellman, Margaret Lark, Diane and Gary Matthews, Dorothy Perret and Margaret Pieroni—have been involved since 1988. Many other volunteers have been involved for more than 10 years.



**Above** Identifying specimens during a spring 1995 weekend in Bunbury.

**Above right** A small daisy *Waitzia suaveolens* from Bullsbrook Nature Reserve.

**Right** A rattlepod (*Daviesia physodes*) from bushland surveyed near Busselton. Photos - Bronwen Keighery



Many volunteers are botanists including botanists from DEC's Science, Nature Conservation and Strategic Policy divisions. Interestingly, all of the 15 botanists employed on the surveys have worked in the program as volunteers at some time.

Volunteers from the Wildflower Society manage the program and form most of the ongoing participants. Survey participants range from interested public with no previous experience to experienced botanists. Volunteers participate in the survey completely at their own cost.

During the life of the project, all sessions have been filled to capacity. The initial program in 1988 was broadly advertised within the Wildflower Society and to kindred community groups. However, once a base register of volunteers was established, the initial yearly post-out to registered volunteers became the key recruiting tool. A steady number of enquiries is generated by word of mouth and the survey training workshops. These have become the chief source of new participants. When a survey is focused on a specific locality, local land care and conservation groups

are informed of the planned survey and invited to take part.

Based on feedback from volunteers, landholders and community participants, the program has been well received. Key to its success is the passion of volunteers and the use of a dedicated volunteer coordinator to communicate with volunteers and organise the program. Four coordinators have worked on the program: Bronwen Keighery, Ann Gunness, Karen Clarke and Vanda Longman, who currently holds the position. The timing of field and workshop sessions on weekends and on evenings has also been acknowledged as part of the program's success, as has the opportunity to be involved in 'hands on' activities, often on land that these people would not otherwise be able to access.

Participants have also expressed appreciation for the opportunity to get out among like-minded people, to meet people, to make good friends and to be part of improved communication and a

link between scientists, landholders and the community. They have also given positive feedback on the scientific nature of the program and the commitment of professional botanists who share their knowledge and expertise with volunteers both in a paid and volunteer capacity.

### Support

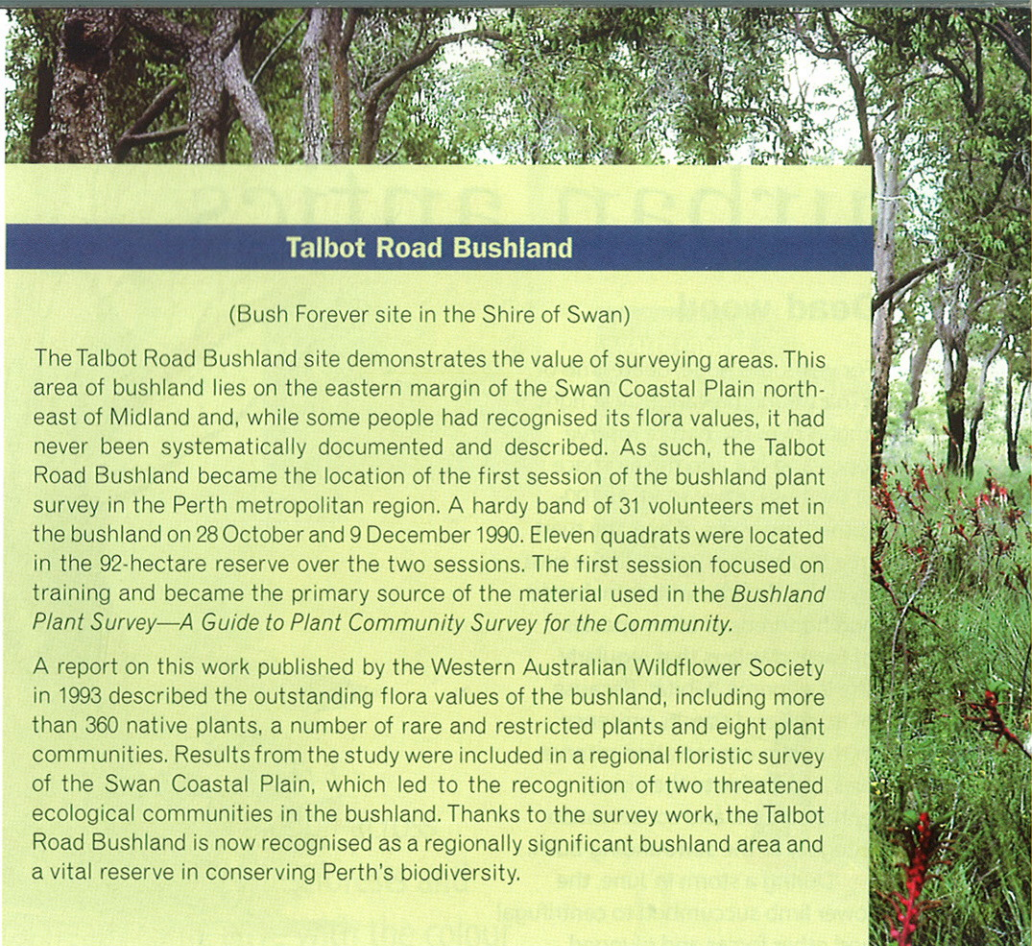
The integration of a substantive number of surveys with research projects has been a strength of the project. Volunteers appreciate that their work contributes to the conservation and management of bushland. Government departments have supported the survey by supplying equipment and transport, access to the Western Australian Herbarium and direct research staff involvement.

In 1993 the survey was registered jointly with the Wildflower Society and with what was then the Department of Conservation and Land Management's (now DEC's) Community Involvement



**Above** Banksia woodland in the Talbot Road Bushland becomes bright with the white common smoke bush (*Conospermum stoechadis*) in spring.

**Above right background** Marri woodland in the Talbot Road Bushland.  
Photos – Greg Keighery



## Talbot Road Bushland

(Bush Forever site in the Shire of Swan)

The Talbot Road Bushland site demonstrates the value of surveying areas. This area of bushland lies on the eastern margin of the Swan Coastal Plain north-east of Midland and, while some people had recognised its flora values, it had never been systematically documented and described. As such, the Talbot Road Bushland became the location of the first session of the bushland plant survey in the Perth metropolitan region. A hardy band of 31 volunteers met in the bushland on 28 October and 9 December 1990. Eleven quadrats were located in the 92-hectare reserve over the two sessions. The first session focused on training and became the primary source of the material used in the *Bushland Plant Survey—A Guide to Plant Community Survey for the Community*.

A report on this work published by the Western Australian Wildflower Society in 1993 described the outstanding flora values of the bushland, including more than 360 native plants, a number of rare and restricted plants and eight plant communities. Results from the study were included in a regional floristic survey of the Swan Coastal Plain, which led to the recognition of two threatened ecological communities in the bushland. Thanks to the survey work, the Talbot Road Bushland is now recognised as a regionally significant bushland area and a vital reserve in conserving Perth's biodiversity.

Program. Registration with the program gives the volunteers insurance cover during their participation and a degree of formal recognition.

The program has been funded from various sources and to variable degrees since its inception. The fundamental reason for funding is to provide support for the coordination of the program and to have survey projects led by botanists.

The Department of Conservation and Land Management started supporting the project in 1988, and the Department of Environment came on board in 1994. These agencies merged to become DEC in 2006 and the new agency has continued to support to the project. The project has also been bolstered by grants of various amounts from the Australian Heritage Commission under the National Estate Grants Program (1991–92), the National Landcare Program, Save the Bush and the Natural Heritage Trust (1995–2002).

In addition, some projects have been funded by the Wildflower Society as well as by local groups such as conservation and land care groups. In some years projects have proceeded without funding, relying on volunteers to run all aspects of the project.

### A happy outcome

All participants in the program have gained a richer understanding of the values of the bushland. There is always a wonderful sense of surprise when people are made aware of the wealth of plants in any piece of bushland—a recurring reaction from new volunteers, landholders and

community participants alike. This sense of wonder is heightened by the enthusiasm and passion of volunteers involved.

The camaraderie of the group is a very significant part of the program. Volunteers, botanists, coordinators and landholders alike have enjoyed the opportunities presented over two decades of surveys. They have been drawn back time and time again by the opportunity to work in the beautiful, wild places of the south-west as part of a motivated and supportive group while contributing positively to the conservation of WA's bushland.



Department of Environment and Conservation botanist Bronwen Keighery works on botanical survey and conservation planning on the Swan Coastal Plain. She has been involved with the bushland plant survey since it began in 1988 and has participated through the program's 20 years.

Brian Moyle is a past president and an honorary life member of the the Wildflower Society of Western Australia. He has been involved in the bushland plant survey since 1991, attending most field survey sessions and serving on the program's management committee.

Ann Guinness has been involved with the Wildflower Society bushland plant survey since 1997. This included time as the program coordinator for projects in the Wheatbelt. She now lives in Geraldton and continues to pursue botanical interests.

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