# Community Led Understanding of Flora and Vegetation Survey



## Flora and Vegetation community and government action

1924 WA Naturalists' Club: To encourage the study and protection of the natural environment.

1958 WA Wildflower Society: To know, grow and conserve wildflowers.

- 1963 Australian Academy Science Committee on National Parks
- 1965 Vegetation Mapping

1967 Conservation Council (WA Nats, Society, Tree Society, Swan River Preservation)

1972 EPA established, State Biological Survey Program, EPA Conservation through Reserves Committee (System reports)

1977 WA Naturalists' study Wongan Hills published

1982 State rare flora survey

- 1985 Roadside Conservation Committee
- 1988 Wildflower Society Survey Program
- 1991 Society Flora Conservation Principles
- 1993 Threatened Ecological Communities

Need to know the variety of plant communities and flora to understand and conserve – evolved to become biodiversity, conserve community, species and genes.



Published by the WESTERN AUSTRALIAN NATURALISTS' CLUB, PERTH

## Flora and Vegetation Protection

1959 lobbied Forest Dept 'llegal to pick wildflowers'

1960s Reserved land: Esperance sandplain, Kulin, Wubin, Burma Road, Clackline, Bald Hill: mining not in flora and fauna reserves

1970 delegation to Commonwealth hearing for protection of native flora and fauna

1980s Fitzgerald River, bauxite mining, woodchipping

1985 Roadside Conservation Committee

1990s Supported conservation plan for Perth (implementation System 6 to Bush Forever, Darling Range Regional Park), Yarloop sand mining; Lesueur

1995 Bushland Conservation Fund: lobbying for 'moratorium on land clearing'

1997 Conservation group supported by an employed officer

2000s Mineral sandmining: Eneabba/Cooljarloo, Keysbrook, Coburn, Shark Bay. Whicher Scarp; revegetation issues; exploration Beekeepers NR; drainage wheatbelt; tree removal agriculture; land clearing legislation; Banded ironstones

2010s State barrier fence; Banded ironstones - Helena & Aurora Range campaign; roadside vegetation protection

# Society's input: reliable science based information, in a measured and respectful manner.



## Wildflower Society 'ethos'

Magda and Ernie Wittwer Claire Welsh Honor Venning Sybil Speak Margaret Pieroni Dorothy Perret Neville and Denise Marchant Elizabeth George Eileen Croxford Marion Blackwell Bob and Barbara Backhouse

Many others I was not privileged to meet.





Wildflowers are our heritage

- 1 HERITAGE
- 2 ECOLOGY
- 3 **RESPONSIBILIT**
- **4 INTRINSIC VALUE**
- 5 BOTANY
- 6 PRESERVATION
- 7 RARE AND ENDANGERED
- 8 HUMAN IMPACT
- 9 EDUCATION
- 10 CULTIVATION

Photo Brian Moyle



#### 1. HERITAGE

Wildflowers are our natural heritage held in trust for our future generations.

2. ECOLOGY

Natural bushland is quintessential to this heritage. ... cannot reproduce the complexity and diversity of species and their ecology that have evolved over millions of years.

3. RESPONSIBILITY

.... <u>lies with all levels of society: individual, community,</u> government and corporate.

#### 4. INTRINSIC VALUE

All bushland has intrinsic value. The value of the life of any species cannot be measured in dollars.

#### 5. BOTANY

The systematic botanical surveying of our flora and vegetation is essential. The undescribed flora requires urgent but rigorous scientific attention.

#### 6. PRESERVATION

.....**of the ecology of vegetation types**. ....ecological integrity of reserves is inviolate.

7. RARE AND ENDANGERED SPECIES AND COMMUNITIES Rare communities and natural habitats of rare and endangered species must be preserved.

#### 8. HUMAN IMPACT

.... greatest potential for survival in the face of these human impacts lies with the **most genetically diverse and healthy natural populations of flora**.

# **Bushland Plant Survey 1988** - systematic botanical surveying of our flora and vegetation (Principle 5 Botany)

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- public involvement survey = 'Citizen Science'
- contribute to knowledge of plant communities
- understand survey through practice
  - demonstrate best practice
  - botanists supporting the groups
  - outcomes published

Funding: Australian Heritage Commission

## Red Hill bushland

#### Malcolm Trudgen

#### Ted Griffin

2008 20<sup>th</sup> Anniversary celebration

Bronwen Keighery

#### Plant communities are the focus

both the common and rare communities

Yanchep National Park Bush Forever Site

## Study Sites 10m X 10m (quadrat) in the Jarrah forest and Swan Coastal Plain.

Avondale 2014, photo V Longman

#### The survey book

BUSHLAND PLANT SURVEY A Guide to Plant Community Survey for the Community survey techniques developed and trialed between 1888 and 1993, book published in 1994 by the Wildflower Society.

DBCA Standard operating procedures.

Funding: Australian Heritage Commission to the Conservation Council, CALM and Wildflower Society. BUSHLAND PLANT SURVEY

A Guide to Plant Community Survey for the Community

by Bronwen Keighery

A Wildflower Society of WA (Inc.) Publication September 1994

BUSHLA	ND PLANT SURVEY	ECORDING SHEET 1	(2005 update) - use pencil only				
BUSHLAND ARE	A	SITE NUMBER					
DATE TRIP	BOTANIST	RECORDERS					
DATE TRIP	BOTANIST	RECORDERS					
DATE TRIP	BOTANIST	RECORDERS					
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Information on each study site is recorded on standardised recording sheets. Updated periodically, more than 10 versions.

#### SHEET 1 Location, Landform - upland/wetland, soils

From 'Berbland Plant Servey' writen by B. Keighery

(1994) and published by the Wildflower Society of WA (Inc.), PD Box 64 Nadlands WA 6008.

HERBS (conf.)

SEDGES



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3 VERY GOOD	>	]										
4 GOOD												
5 DEGRADED												

#### SHEET 2 Vegetation, appearance and condition



# Volunteer Project with CALM/DEC/DPaW/DBCA from early 1990s

**Botanists** 

Greg Keighery more than 28 years, Neil Gibson 10 years and Margaret Langley 10 years

**Information for Plant Databases** FloraBase Nature Map

Maintenance of data/botanists



#### Some of the volunteer coordinators and botanists. The botanists are responsible for writing the reports and presenting results.

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# Developing identification skills



- field Boronia Gully survey 2002
- WA Herbarium, regular weekly sessions



# VEGETATION CONDITION



# **Completely Degraded**





# Survey regional, subregional and specific area



# Whicher Scarp

Funding: Minister Environment to EPA

#### Outcomes .....and lessons

- botanists, trained and employed
- community understanding of work/standards involved in survey
- concepts of plant communities, vegetation condition, identification
- contribute regional datasets
- good quality data stands the test of time
- empowers individuals to have input in process of protection

#### Outcome.....and lessons

- botanical support field, identifications and analysis data
- good quality base regional datasets
- cumulative databases, grow the data, maintain the data
- revegetation to original not done
- experienced botanists review EIA
- experienced botanists role in monitoring and evaluation

# Ongoing use of data

#### Threatened Ecological Communities (TEC'S)



Proceedings from WSWA Workshop March 1998

Pertir Branch-Wildflower, Society of Western Adstralia (Inc.)

Banksia Woodlands of the Swan Coastal Plain now federally listed as endangered.

Critically

Tuart Woodlands currently being assessed. Likely to be listed as endangered as well.

The Wildflower Society and Urban Bushland Council have been actively involved in the process.

Wheatbelt Woodlands also listed.



Thank you to the community of botanists and volunteers working to know and protect our flora and vegetation.

Dedicated to Sandra Dunn (nee Santich)