

20 Years of Real and Virtual Change in WA's Weeds (from paper lists to Online Databases and Beyond)

(Invasive weeds and Regenerating Ecosystems in Western Australia)

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Status in 1994

1. Poorly documented list of naturalised taxa for Western Australia.
-Little data on status of many records, many old vague records.
2. No separation of environmental/agricultural/amenity weeds.
3. Little known on degree of invasion of native ecosystems, impacts.
4. No listing of native species as weeds, but unpalatable native plants listed as weeds for rangelands.

Keighery 1994

6 Ferns; 7 Conifers; 318 Monocotyledons; 701 Dicotyledons

TOTAL: 1032

41 listed as doubtful naturalised.

Garden escapes not listed.

Keighery 1999

6 Ferns; 12 Conifers; 342 Monocotyledons; 795 Dicotyledons

TOTAL: 1155

41 listed as doubtful naturalised.

81 “Garden escapes”.

Keighery & Longman 2004

12 Ferns; 15 Conifers; 345 Monocotyledons; 862 Dicotyledons

TOTAL: 1234

47 deleted (13 no longer naturalised; 34 no evidence).

94 “Garden escapes”

Weeds in WA

- **1,239 naturalized vascular plant taxa - 12 Ferns, 15 Gymnosperms, 347 Monocotyledons & 865 Dicotyledon**
- **677 taxa (55%) are environmental weeds, from natural bushland areas**
- **94 taxa are listed as semi-naturalised garden escapes**
- **Largest groups being the Grasses (196), Daisies (115), Peas (106) and Iridaceae (53).**

Naturalised Weeds

- **Worldwide:** 18,146 naturalised (c. 250,000 species of flowering plants).
- **Australia:** c. 30,000 native species, 36,630 species cultivated, 5,900 of these species have a weed history recorded
- **Australia:** 2,739 naturalised (includes 606 native species naturalised outside native ranges).
- **Western Australia:** 1,239 naturalised (12 Ferns, 15 Conifers, 347 Monocotyledons and 865 Dicotyledons).

Changes 1994-2004

- Weeds listed increased from 1073 to 1234 (Ferns up 100%, Conifers 114%, Dicots 18.7%)
- Survey added 105
- Literature review/taxonomic study added 95
- 47 deleted
- New: tropics 27, Desert 5, SWWA 73

TRENDS

Emerging Weeds and Issues

Roadside plantings causing invasion of
remnants

Increased hybridization with weedy
natives ?Genetic Pollution

Rapid spread

Tropical Bulbs (?Climate Change)

Weedy or Native? (Resources)

Succulents a growing issue

Malephora crocea





Native species – *Banksia victoriae*
invading high quality bushland: Hartfield Park



Corymbia calophylla X *C. ficifolia*
Kings Park-1929

Hybrid
Callistemon citrinus x *glaucus*
West Of Denmark
-2014





Hippeastrum puniceum

Koolan Island

Weed
**Oxalis corniculata*



Native
Oxalis exilis

2014 advances

-
- Federal and state biosecurity listings, methods much improved
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- Names, taxonomy and alignment of weeds on State and federal lists much improved
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- Electronic delivery of data a quantum leap (Florabase, Naturemap, ALA, AVH)
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- Taxonomic delimitation tools (DNA etc) for weeds much improved
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- Prioritisation of weeds much improved (DAFWA/DPaW)
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- Community awareness/action on weeds greatly improved
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Bananas – Sunday Island



Gazania species complex -
expanding, High Wheatbelt & Goldfields, Asset
Protection Elsewhere



ISSUES 2014

research

- Loss of federal activities and funding for weeds (no CRC, no WONS funding, NRM funding limited to WONS, Alerts)
- Loss of weed research capacity in many agencies both state and federal
- Many widespread annual weeds (grasses , herbs and geophytes) remain on too hard list for control

control

- Biocontrol measures against environmental weeds still very minor
- Very few examples of successful eradication
- Weeds with high local impacts still not being resourced
- New weeds continue to be recorded at an alarming rate, but no intervention because not resourced

THE QUOBBA CACTUS (*Cylindropuntia fulgida*): A THREAT TO THE KARST OF THE CAPE RANGE- CARNARVON AREA
Greg Keighery October 2005

Funded removal
2006/7



October 2014



Cytisus scoparius
WONS





Passiflora foetida



CROFTON WEED
NEDLANDS
2014

ISSUES 2014

extension

- Media and others biodiversity impact of habitat fragmentation, fire and **weeds** still too complex and losing out to feral mammals that impact on few species for attention and resourcing

Public databases

- Resourcing issues for electronic databases, taxonomy and control becoming significant with alignment issues for status of many weeds becoming apparent

All animals are equal but **ALL mammals** are more equal than plants



Photo of the month

Glowing bead of water on the foreshore in Nedlands, WA | Mariah Lumley

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