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)







Hybrid

Callistemon citrinus x glaucus

West Of Denmark
-2014









2014 advances

Federal and state biosecurity listings, methods much improved

Names, taxonomy and alignment of weeds on State and federal lists much improved

 Electronic delivery of data a quantum leap (Florabase, Naturemap, ALA, AVH)

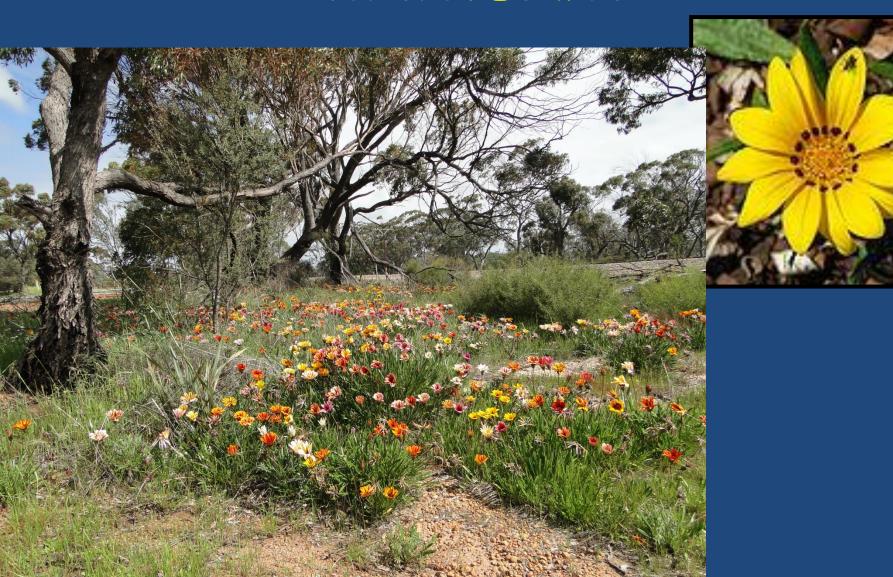
Taxonomic delimitation tools (DNA etc) for weeds much improved

Prioritisation of weeds much improved (DAFWA/DPaW)

Community awareness/action on weeds greatly improved



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







ISSUES 2014

extension

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

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

Public databases

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







Photo of the month

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

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