

NUYTSIA

WESTERN AUSTRALIA'S JOURNAL OF SYSTEMATIC BOTANY

ISSN 0085-4417



Keighery, G.J. New and
noteworthy plant species
recognised as naturalised in
Western Australia

Nuytsia 15(3): 523–527 (2005)

All enquiries and manuscripts should be directed to:

The Editor – *NUYTSIA*
Western Australian Herbarium
Conservation and Land Management
Locked Bag 104 Bentley Delivery Centre
Western Australia 6983
AUSTRALIA

Telephone: +61 8 9334 0500
Facsimile: +61 8 9334 0515
Email: nuytsia@calm.wa.gov.au
Web: science.calm.wa.gov.au/nuytsia/

WESTERN AUSTRALIAN
Herbarium



DEPARTMENT OF
Conservation
AND LAND MANAGEMENT

Conserving the nature of WA

SHORT COMMUNICATION

New and noteworthy plant species recognised as naturalised in Western Australia

The format of this paper follows that of Heenan *et al.* (2002) for New Zealand and Hosking *et al.* (2003) for New South Wales. Species are grouped under Monocotyledons or Dicotyledons, then listed alphabetically by family and scientific name, common name (when available), the location of a taxon description, natural region where the weed has been recorded following the Interim Biogeographic Regionalisation for Australia (Thackway & Cresswell 1995), habitats, first records and area of origin.

MONOCOTYLEDONS

ANTHERICACEAE *Chlorophytum comosum* (Thunb.) Jacques **Spider Plant**

DESCRIPTION: See McCune and Hardin (1993).

DISTRIBUTION: Jarrah Forest and Warren IBRA Regions.

HABITATS: Plants have established from discarded garden refuse spreading by plantlets and seed in this area and subsequently spread into the adjacent burnt and disturbed Karri - Marri Forest.

FIRST RECORD: Heights above Turner's Hut, Augusta, 13 Jan. 2004, *G.J. Keighery* 16627 (PERTH 06737536).

REGION OF ORIGIN: South-eastern Africa.

NOTES: The species is occasionally seen as casual on refuse sites and highly disturbed creeklines, for example at Wellington Mills, SE of Collie.

IRIDACEAE *Dietes grandiflora* N.E. Br. **Wild Iris**

DESCRIPTION: See Goldblatt (1981).

DISTRIBUTION: Jarrah Forest IBRA Region.

HABITATS: Naturalised in an old sandpit. Plants have established in this area and subsequently spread into the adjacent burnt and disturbed Jarrah - Marri Forest.

FIRST RECORD: Kalamunda, *G.J. & B.J. Keighery* 201.

REGION OF ORIGIN: Southern Africa.

NOTES: The genus *Dietes* Salisb. ex Klatt (Iridaceae) contains 5 species in southern and eastern Africa

and the remarkably disjunct *D. robinsoniana* on Lord Howe Island (Goldblatt 1981 and Green 1994). All members are highly floriferous perennial herbs. In Western Australia *Dietes bicolor* (Steud.) Sw. ex Klatt and *D. grandiflora* N.E. Br. are used extensively as bedding plants in new suburban developments and as road verge plantings throughout the city and suburbs, and excess materials (prunings, poor plants and seed heads, the species sets copious amount of seed) are often carelessly disposed of. *Dietes iridioides* (L.) Sweet ex Klatt was once a common garden plant in Perth, but has largely been supplanted by the previous species in the past decade.

There are few records of *Dietes* as naturalised plants in Australia. No species are listed in the Flora of Australia treatment by Cooke (1986), nor in the regional floras of Victoria (Conn 1994) or New South Wales (James and Brown, 1993). Scott and Delfosse (1992) do not list *Dietes* in their review of South African Plants naturalised in Australia. Groves *et al* (2000), however, record *Dietes robinsoniana* (C. Moore & F. Muell.) Klatt as naturalised in New South Wales and *D. iridioides* as naturalised in Queensland. *Dietes* is not mentioned in either the Australian (Csurhes and Edwards 1998) or Western Australian (Keighery 1999) lists of potential environmental weeds.

While it is unlikely that *Dietes* will become established in the older western and central areas of Perth with their deep sandy freely draining soils, it could more readily naturalise from plantings adjacent to bushland in the Forest areas on the eastern margins of Perth and around towns in the higher rainfall areas south of Perth. *Dietes*, as a genus, rates highly as an environmental weed risk in the AQIS Weed Risk Assessment System (Pheloung 1995 and Walton *et al.* 1998) and would be unlikely to be approved for importation for its current use. This species should not be used as a major planting feature in areas noted above, especially adjacent to bushland. Alternatively a seed-sterile form should be selected and grown.

Dietes grandiflora is an example of a garden escape in the early stages of naturalisation. Care now in the use of this genus in landscape planting and the correct disposal of material from these plantings should prevent it becoming an environmental weed of the future. At least, this species should be considered and listed as a potential environmental weed.

IRIDACEAE

Iris laevigata Fisch.

Water Iris

DESCRIPTION: See Matthews (1989).

DISTRIBUTION: Jarrah Forest IBRA Region.

HABITATS: in fringing *Baumea articulata* sedgeland in Lake Nature Reserve west of Albany.

FIRST RECORD: Lake Powell Nature Reserve, near Elleker, 24 Oct. 2002, G.J. & B.J. Keighery 175 (PERTH 06330096).

REGION OF ORIGIN: Southern Africa.

NOTES: The genus *Iris* is a large genus of northern hemisphere perennial herbs, many species of which are commonly cultivated in Australia. There are few records of *Iris* as naturalised plants in Australia. Three species are listed in the Flora of Australia treatment by Cooke (1986), *Iris germanica*, L., *I. foetidissima* L. and *I. unguicularis* Poret. In southern Western Australia *Iris germanica* is a scattered

garden escape, where it is largely represented by a clonal white flowered form that does not set seed. *Iris unguicularis* is known from scattered plants on disturbed granite slopes on Mount Melville in Albany. Both of these species are very minor environmental weeds.

The naturalised populations of *Iris laevigata* were spreading via rampant rhizomes but were also setting copious fertile seed. The species probably entered the lake via material being disposed of, or in floods along the Elleker Drain. This species and the other related Water Irises are becoming popular feature plants and have the capacity to invade freshwater lakes and rivers in southern Western Australia.

MUSACEAE***Musa acuminata* Cholla****Banana**

DESCRIPTION: See Ross (1987).

DISTRIBUTION: Swan Coastal Plain IBRA Region.

HABITATS: Naturalised along a fresh water seep alongside the Canning River.

FIRST RECORD: Yagan Wetland Reserve, Bull Creek, City of Canning, 6 Dec. 2003, G.J. & B.J. Keighery 245 (PERTH06748872).

REGION OF ORIGIN: South-east Asia.

NOTES: *Musa acuminata* has persisted in a series of freshwater seeps along the Swan River at Bayswater and around an artesian bore on Garden Island. As far as I am aware, these populations have either been removed for rehabilitation purposes (Bayswater), or died when the water overflow was turned off (Garden Island).

The population in Yagan Reserve spread via rhizome expansion along a freshwater seepage line under a tall *Melauca raphiophylla* woodland forming a dense monospecific understorey. During 1996–7 C.R.R.E.P.A. (Canning River Residents Environmental Protection Association) members removed large numbers of plants which were supplied to Perth Zoo as feed for Elephants. All plants have now been removed. Although this activity was documented in the Association's newsletter, its presence as a naturalised species and its removal is worthy of record.

DICOTYLEDONS**AIZOACEAE*****Delosperma ?vinaceum* L. Bolus**

DESCRIPTION: See Herre (1971).

DISTRIBUTION: Geraldton Sandplains IBRA Region.

HABITATS: Low *Nitraria* shrubland on shallow soils over limestone.

FIRST RECORD: Rat Island, Abrolhos Islands, 5 Dec. 2000, *G.J. Keighery* 16023 (PERTH06226442).

REGION OF ORIGIN: Southern Africa.

NOTES: Material of this species was collected when sterile and grown on in Perth, flowering in summer. The collection was referable to the large Southern African genus *Delosperma*, however, it did not fruit in Perth and it can only be provisionally placed into a species at present. Two unidentified species of *Delosperma* are listed as naturalised in New Zealand (Webb *et al.* 1988). This species is able to spread rapidly and establish large populations because it roots at the nodes and easily fragments. It should be eradicated from its known occurrence before it is spread elsewhere in the Abrolhos.

CARYOPHYLLACEAE *Cerastium comatum* Desv. **Levantine Mouse-ear Chickweed**

DESCRIPTION: See Adams (1996).

DISTRIBUTION: Jarrah Forest and Avon-Wheatbelt IBRA Regions.

HABITATS: Firebreaks, grazed paddocks and Wandoo woodland.

FIRST RECORD: Hillman Nature Reserve (near Darkan), 4 Oct. 1999, *G.J. Keighery* & *N. Gibson* 4952 (PERTH6847587).

REGION OF ORIGIN: Europe.

NOTES: This species has previously only been recorded in Australia from six localities in Victoria (Adams 1996), but is obviously well established in the central wheatbelt of Western Australia.

CARYOPHYLLACEAE *Silene longicaulis* Pourr. Ex Lag. **Portuguese Catchfly**

DESCRIPTION: See Adams (1996).

DISTRIBUTION: Mallee and Esperance Sandplain IBRA Regions.

HABITATS: During the Biological Survey of the Agricultural Zone this species has been occasionally recorded in disturbed wetlands and at the edges of salt-affected wetlands.

FIRST RECORD: Southern margin of Truslove Nature Reserve, *G.J. Keighery* 16351.

REGION OF ORIGIN: Southern Africa.

NOTES: This species has previously been recorded in Australia from Victoria and South Australia (Adams 1996), but is also well established in the central wheatbelt of Western Australia.

Acknowledgments

Barbara Rowley and Jeanette Mackintosh of the Wildflower Society of Western Australia alerted the author to the naturalising population of *Dietes grandiflora*.

References

- Adams, L.G. (1996). Caryophyllaceae. In: Walsh, N.G. and Entwisle, T.J. (Eds). *Flora of Victoria, Vol. 3: Winteraceae to Myrtaceae*, Inkata Press, Melbourne, pp. 228–272.
- Conn, B.J. (1994). Iridaceae. In: Walsh, N.G. and Entwisle, T.J. (Eds). *Flora of Victoria, Vol. 2: Ferns and Allied Plants, Conifers and Monocotyledons*, Inkata Press, Melbourne, pp. 687–716.
- Cooke, D.A. (1986). Iridaceae. In: *Flora of Australia* 46: 1–66. Australian Government Publishing Service, Canberra.
- Csurhes, S. and Edwards, R. (1998). *Potential Environmental Weeds in Australia: Candidate Species for Preventative Control. National Weeds Program*, Environment Australia, Canberra.
- Goldblatt, P. (1981). Systematics, Phylogeny and Evolution of *Dietes* (Iridaceae). *Ann. Missouri Bot. Gard.* 68: 132–153.
- Green, P.S. (1994). *Flora of Australia* 49, Oceanic Islands 1. Australian Government Publishing Service, Canberra.
- Groves, R.H. (Convenor), Hosking, J.R., Batianoff, G.N., Cooke, D.A., Cowie, I.D., Keighery, G.J., Lepschi, B.J., Rozefelds, A.C. and Walsh, N.G. (2000). *The naturalised non-native flora of Australia: its categorisation and threat to native plant biodiversity*. Report to Environment Australia.
- Heenan, P.B., de Lange, P.J., Cameron, E.K. and Champion, P.D. (2002). Checklist of dicotyledons, gymnosperms and pteridophytes naturalised or casual in New Zealand: additional records 1999–2000. *New Zealand Journal of Botany* 40: 155–174.
- Herre, H. (1971). *The Genera of Mesembryanthaceae*. Tafelberg, Cape Town.
- Hosking, J.R., Conn, B.J. and Lepschi, B.J. (2003). Plant species first recognised as naturalised for New South Wales over the period 2000–2001. *Cunninghamia* 8(2): 175–187.
- James, T.A. and Brown, E.A., (1993). Iridaceae. In: Harden, G. (Ed.) *Flora of New South Wales, Vol. IV*, pp. 114–131. University of New South Wales Press, Sydney.
- Keighery, G.J. (1999). Predicting and Preventing the West's Environmental Weeds of the next Century. *Proceedings 12th Australian Weeds Conference*, pp. 571–575. Bishop, A.C., Boersma, M. and Barnes, C.D (Eds), Hobart.
- Mathews, B. (1989). *The Iris*. Batsford Books, London.
- McCune, S. and Hardin, D.W. (1993). Anthericaceae. In: Harden, G. (Ed.) *Flora of New South Wales, Vol. IV*, pp. 86–98. University of New South Wales Press, Sydney.
- Pheloung, P.C. (1995). *Determining the weed potential of new plant introductions to Australia*. Report to Standing Committee on Agriculture and Resource Management, Australia.
- Scott, J.K. and Delfosse, E.S. (1992). Southern African plants naturalised in Australia: a review of weed status and biological control potential. *Plant Protection Quarterly* 7:70–80.
- Thackway, R. & Cresswell, I.D. (1995). (eds) An interim biogeographic regionalisation for Australia: a framework for establishing the national system of reserves, version 4.0. Published Report of the Australian Nature Conservation Agency: Canberra.
- Walton, C.W., Ellis, N. and Pheloung, P.C. (1998). *A manual for using the Weed Risk Assessment system to assess new plants*. Australian Quarantine and Inspection Service.
- Webb, C.J., Sykes, W.R. and Garnock-Jones, P.J. (1988). *Flora of New Zealand, Vol. IV; Naturalised Pteridophytes, Gymnosperms, Dicotyledons*. Botany Division, D.S.I.R., Christchurch, New Zealand.

Greg J. Keighery

Wildlife Research Centre, Department of Conservation and Land Management,
P.O. Box 51, Wanneroo, W.A., 6065

