# JOURNAL of the ADELAIDE BOTANIC GARDENS

AN OPEN ACCESS JOURNAL FOR AUSTRALIAN SYSTEMATIC BOTANY

## flora.sa.gov.au/jabg

Published by the STATE HERBARIUM OF SOUTH AUSTRALIA on behalf of the BOARD OF THE BOTANIC GARDENS AND STATE HERBARIUM

© Board of the Botanic Gardens and State Herbarium, Adelaide, South Australia

© Department of Environment, Water and Natural Resources, Government of South Australia

All rights reserved

State Herbarium of South Australia PO Box 2732 Kent Town SA 5071 Australia



Board *of the* Botanic Gardens *and* State Herbarium



## DESCRIPTIONS OF THREE CULTIVARS IN WATSONIA (IRIDACEAE)

## D.A. Cooke

#### 58 Gardiner Avenue, Warradale, South Australia 5046

#### Abstract

Many named cultivars of *Watsonia* were grown in Australia before 1940, but are now lost due to their neglect in horticulture and the absence of formal descriptions. The *Watsonia* cultivars 'Jessie', 'Leng' and 'SuiLan' are described and the Cronin hybrids discussed.

#### Introduction

The systematic breeding of *Watsonia* for ornamental gardens and the cut-flower trade did not begin until the early 20th century and was carried out mainly in Australia and California. On the other hand, gardeners in South Africa used a much wider range of *Watsonia* species and unnamed natural hybrids but few named cultivars (Eliovson, 1955; 1968).

Between about 1920 and 1940 hybrid *Watsonia* cultivars had a brief period of popularity in Australia; the most famous were produced by John Cronin, who was Director of the Royal Botanic Gardens in Melbourne from 1909–1923. They were known as the Cronin hybrids, or the Commonwealth hybrids because the first ones released were named after Australian capital cities.

No documentation of Cronin's work remains at the Melbourne Botanic Gardens (R. Spencer, pers. comm.), although some of the unlabelled hybrids growing there may be remnants of his stock. According to Pescott (1926), the Cronin hybrids were clones selected from  $F_2$  swarms bred from *Watsonia rosea*, *W. O'Brieni*, *W. altroides* (sic) and *W. meriana*; these may be referred respectively to pink-flowered *W. borbonica* (Pourret)Goldblatt subsp. *ardernei* (Sander)Goldblatt and its albino variants, *W. aletroides* (Burm.f.)Ker Gawler and *W. meriana* (L.)Miller var. *meriana. Watsonia coccinea* Herbert ex Baker is also likely to have contributed, as it has been cultivated in Australia since the mid-19th century and has been confused with both *W. aletroides* (eg. by Montague, 1930) and with *W. meriana* (eg. by Cooke, 1986). The known Cronin hybrids are listed in Appendix A; all were spring-flowering pla!nts with corms dormant through the summer, as were the parent species.

Several other breeders in Melbourne and Sydney were working independently with the same species, which all have a haploid chromosome number of 9 (Goldblatt, 1989) and are interfertile (Horn, 1962). Named cultivars known to have come from this source are listed in Appendix B. However, other cultivars derived from the evergreen summer-flowering *Watsonia* species or from *W. marginata* (L.f.) Ker Gawler have been omitted from the present publication.

Breeders all aimed to produce a wider range of colours, including two-toned or threetoned flowers; increase flower size; produce a denser inflorescence by increasing branching; lengthen the flowering period into the early spring period, and adapt the plants to a wider range of climates including the hot humid spring-summer conditions of the east coast (Cowlishaw, 1928).

Flower shapes were classified (Pescott, 1926) as star-shaped, having a stellate limb with lanceolate, acute lobes, and broad-petal or imbricated in which the lobes were broadened, often resulting in undulate margins and obtuse apices.

D.A. Cooke

Cultivars may differ from each other more subtly than do species of the same genus. Ornamentals are selected for combinations of colour, form and performance that are difficult to describe objectively; if of hybrid origin they usually differ from both parent species in many quantitative characters. Their unambiguous description may therefore require as much detail as a species description. However, the cultivar names in Appendices A and B were published in trade publications with only a few words about flower colour and size of plant.

Watsonia became unfashionable in post-war Australian gardens; Hitchmough (1989) and Macoboy (1991) suggest that most of the old cultivars have been lost, inasmuch as the correct application of their names is now only conjectural. A search of garden literature confirmed that the few Watsonia cultivars now on the market are sold by flower colour or under trade names like 'Tivoli Pink' and 'Fairy White' that were unknown 30 years ago. In the absence of standard specimens, adequate descriptions or plants of known provenance, the old names must be treated as nomina nuda whose correct application cannot be established.

This paper is the first in a series intended to name and describe some *Watsonia* cultivars worth perpetuating in horticulture. It is likely that some of these were distributed under other names in the period 1920-1940.

Each description is based on a clone propagated from a single corm and grown under open garden conditions at sea-level near Adelaide. Measurements of the flowers are based on fresh specimens; in dried material the perianth shrinks and often changes in proportion. The basal part of the perianth tube is the narrow section from the top of the ovary to the insertion of the stamens; the distal part is measured from the stamen insertion to the bases of the perianth lobes.

Colour photographs of the three cultivars may be found at:

http://www.ozemail.com.au/~davcooke/watsonia.htm Flower colours were matched to the Royal Horticultural Society Colour Chart, 3rd edn (1995).

#### Descriptions

#### Watsonia 'Leng' D.A.Cooke, cult.nov.

Standard specimen: Cultivated at Warradale, South Australia, October 1997, D.A. Cooke 931 AD, MEL.

Herb 120–150 cm tall. Leaves 5–7, 17–30 mm wide, to 70 cm long, pale glaucous green; midvein obscure, margins unthickened. Axillary cormils absent. Spike with 16-22 flowers (about 5-6 open at once) loosely spaced; 3-5 side branches, sometimes secondarily branched; axis glaucous green at first but becoming flushed purple. Outer bract 14-21 mm long, acute, slightly shorter than the internode, herbaceous but purplish-tinted below, scarious distally. Inner bract longer or slightly shorter, bifid. Perianth a cool lilac-mauve (RHS 80B) on edges of lobes shading gradually to pale mauve (RHS 80D) on tube; midline of lobes with a diffuse cream line on outside. Tube 36-42 mm long, the basal part pale 10-13 mm long, to 2 mm wide, the distal part funnel-shaped, at first horizontal but becoming decurved, 24-30 mm long, 8-10 mm wide at mouth. Lobes oblanceolate, flared at right angles to tube or slightly recurved; inner lobes 37-41 mm long, 17-20 mm wide, lanceolate, subacute with !undulate margins; outer lobes 33-38 mm long, 13-17 mm wide, obtuse, apiculate with flat margins. Stamens unilateral, arcuate; anthers deflexed below style, anthers 12-13 mm long, dark purple. Pollen dark purple. Style branches not exceeding the anthers, once-dichotomous. Capsule clavate, acute, 27-30 mm long. Seeds brown with two unequal stramineous wings, 14-18 mm long overall. Flowers in mid-September to October.

J. Adelaide Bot. Gard. 18(2) (1998)

Provenance: Corm collected from a population of garden escapes along a roadside at Longwood, Adelaide Hills, 1995.

This cultivar is likely to have been derived by selection from *W. borbonica* subsp. *ardernei*, with no characters suggesting contribution from other species. It is differentiated from other accessions of subsp. *ardernei* by the loose spike of pale lilac-mauve flowers with larger overlapping oblanceolate perianth lobes whose weight causes the tube to bend downwards. It is self-sterile, but produces fertile seed when pollinated by *W. borbonica* subsp. *ardernei* or *W.* 'Jessie'.

#### Watsonia 'SuiLan' D.A.Cooke, cult.nov.

Standard specimen: Cultivated at Warradale, South Australia, October 1997, D.A. Cooke 932 AD, MEL.

Herb 100–130 cm tall. Leaves 5–7, 18–34 mm wide, to 67 cm long; slightly glaucous green; midvein obscure, margins unthickened. Axillary cormils absent. Spike with 17-24 flowers (about 6-7 open at once) overlapping and congested, plus 3-4 side branches; axis green. Bracts herbaceous at base, distal two-thirds maroon-scarious. Outer bract 16-20 mm long, barely longer than the internode. Inner bract subequal to outer, emarginate to deeply bifid. Perianth magenta in bud, opening magenta-pink RHS 67C, shading into a darker warm pink RHS 57C on outside of tube but a paler warm pink RHS 55B inside; small darker magenta mark at base of each lobe. Tube 37-41 mm long, the distal part funnelshaped, ascending to horizontal, 20-25 mm long, 10-12 mm wide at mouth. Lobes flared at right angles to tube or slightly recurved, the outer oblanceolate, 32-40 mm long, 14-18 mm wide, obtuse to apiculate, with flat margins; the inner obovate, 36-43 mm long, 18-23 mm wide, obtuse to subacute, wi!th undulate margins. Stamens unilateral, arcuate; anthers deflexed below style, 11-13 mm long, purple. Pollen dark purple. Style branches not exceeding anthers, once-dichotomous. Capsules obovoid, obtuse, 25-28 mm long. Seeds brown with two short unequal stramineous wings, 7-11 mm long overall. Flowers mid-October to November.

Provenance: Corm collected from a population of garden escapes along a roadside at Longwood, Adelaide Hills, 1995.

Watsonia 'SuiLan' is recognisable by its congested spike of magenta-pink flowers, opening from darker magenta buds, with a warmer tone in the centre. It appears to be a sophisticated garden hybrid resembling W. borbonica subsp. ardernei in the general form of the flowers and bracts but with the addition of a yellow floral pigment from a species such as W. meriana to produce the warm pink tones. It is self-sterile, but produces fertile seed when pollinated by W. borbonica subsp. ardernei.

### Watsonia 'Jessie' D.A.Cooke, cult.nov.

Standard specimen: Cultivated at Warradale, South Australia, October 1997, D.A. Cooke 933 AD, MEL.

Herb 90–120 cm tall. Leaves 30–70 cm long, 1–3 cm wide, pale green; midveins obscure, margins unthickened. Solitary cormils often produced in lower leaf axils. Spike with 12–20 flowers on main axis (5–6 open at once), overlapping, plus 3–5 side branches, the lower ones sometimes secondarily branched; axis flushed purple. Outer bract 20–26 mm long, acute, subequal to the internode, at anthesis wholly herbaceous but pink near the apex, soon becoming half scarious. Inner bract subequal, subacute, emarginate to entire. Perianth tube 35-39 mm long, a deep warm pink (RHS 50B) externally, the distal part funnel-shaped, almost horizontal, 20–23 mm long, 8–10 mm wide at mouth. Perianth lobes elliptic, flared at right angles to tube or the dorsal lobe slightly hooded; uniformly pale flesh pink (RHS 52D) with a deeper warm pink streak from near the centre extending down inside the tube;

margins flat, apices acute. Outer lobes 30-33 mm long, 11-13 mm wide; inner 32-36 mm long, 13!-16 mm wide. Stamens unilateral, arcuate; anthers deflexed below style, 9-10 mm long, purple. Pollen light mauve. Style branches exserted far beyond the anthers, once- or twice-dichotomous. Capsule clavate, acute, 30-36 mm long. Seeds red-brown with two unequal stramineous wings, 12-16 mm long overall. Flowers mid September to October.

Watsonia 'Jessie' is recognisable by its dense spike, star-shaped perianth in two tones of warm pink and the long style extending beyond the anthers. It appears to be derived from W. borbonica (acute floral bracts, perianth lobes widely flared and almost as long as tube) and W. meriana (acute perianth lobes, flower colour, exserted style). The axillary cormils often occur in the latter species (Cooke, 1998). It is self-sterile, but produces fertile seed when pollinated by W. borbonica subsp. ardernei.

Superficially similar plants are widely grown in Australian gardens, and may all be one clone. Such plants have been illustrated as W. pillansii by Cheers (1997) and as W. beatricis by Macoboy (1991). W. pillansii L.Bolus is readily distinguished from this cultivar by its evergreen habit, unbranched flower spikes produced in summer, and orange to vermilion perianth with a cylindrical tube longer than the limb. W. beatricis J.Mathews & L.Bolus is a synonym (Goldblatt, 1989).

W. 'Jessie' may be one of the original Cronin hybrids, but there is insufficient information to refer it to any of them. W. 'Melbourne' and W. 'Australia' approached it in colour (Warner, 1926) but the former was described as dwarf and the latter had flowers of the 'imbricated' type (Montague, 1930).

Another clone seen in cultivation differs from  $W_{.}$  'Jessie' only in having an erect perianth tube no more than 30 mm long with the limb of the perianth consequently crowded against the stem; this plant is excluded from the above description.

#### APPENDIX A

#### JOHN CRONIN'S COMMONWEALTH HYBRIDS

Watsonia 'Adelaide' Dwarf, early flowering. Spike with few side-branches. Flowers salmon scarlet (Brunning, 1924), orange-red (Warner, 1924); also described as orange-scarlet with a lighter throat (Anon, 1930), or orange (Brunning, 1934). Released circa 1923 by Warner & Son, Victoria.

Watsonia 'Albury' Flowers buff with red throat (Anon, 1930). Released by Ormond Plant Farm, Victoria in 1930.

Watsonia 'Australia' Flowers large, with imbricated lobes, vieux rose and soft pink (Warner, 1926; Montague, 1930). Released by Warner & Son circa 1924.

Watsonia 'Ballarat' Flowers pale blush pink (Warner, 1926; Montague, 1930). Free-flowering. Released circa 1924 by Warner & Son.

Watsonia 'Brighton' Flowers "purple in a bright and pleasing shade" (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Brisbane' Flowers purple (Warner, 1926). Released by Warner & Son circa 1926; however, the name was very soon misapplied to a plant with crimson scarlet flowers (Anon, 1930) and to another with flesh pink flowers (Cowlishaw, 1928; Montague, 1930) which was later distributed under this name by Law Somner.

Watsonia 'Canberra' Flowers a deep rosy-mauve; still extant in New Zealand (Redgrove, 1991). Not mentioned in any Australian source seen, but the name strongly suggests its inclusion on this list. Watsonia 'Caulfield' Flowers large, pale pink (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Clunes' Flowers white with a mauve throat (Anon, 1930). Released by Ormond Plant Farm in 1930. Watsonia 'Croydon' Flowers pale mauve, darker shaded in the tube (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Hobart' Released circa 1924 by Warner & Son, described as "tall late white with well-shaped round flowers" (Warner, 1924). Pescott (1926) confirms that the flowers were pure white; but the name was later misapplied to a plant with soft rose-pink flowers (Montague, 1930) which was distributed under this name by Law Somner.

Watsonia 'Lock' Flowers very large with long tube, bright pink (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Lorne' Flowers rosy pink, darker shaded in the throat (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Malvern' Flowers pale heliotrope (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Melbourne' Dwarf. Flowers large, described as "shell pink" (Brunning, 1924), salmon-pink (Warner, 1924; Pescott, 1926; Cowlishaw, 1928), buff salmon (Anon, 1933) or buff salmon shaded darker in centre (Yates, 1936). Released circa 1923 by Warner & Son.

Watsonia 'Perth' Flowers rosy purple (Warner, 1926), described also (Anon, 1933) as magenta. Released circa 1924 by Warner & Son.

Watsonia 'Portland' Flowers pale salmon-pink (Anon, 1930). Released by Ormond Plant Farm in 1930. Watsonia 'Queenstown' Dwarf. Flowers lilac mauve (Warner, 1926). Released circa 1925 by Warner & Son.

Watsonia 'Sale' Flowers pale salmon-pink, darker shaded on the exterior (Anon, 1930). Released by Ormond Plant Farm in 1930.

Plant Farm in 1930. Watsonia 'Sydney' Very tall with many long laterals. Flowers large, wide open, variously described as deep mauve (Brunning, 1924), mauve-pink (Warner, 1926), lilac-pink (Cowlishaw, 1928) or two-toned, deep mauve with a deeper mauve tube (Anon, 1930). Released circa 1923 by Warner & Son and sold by Yates in the 30s; (Manual Manual 1930). however, the name was soon misapplied to another cultivar with ruby red flowers (Montague, 1930; Anon. 1933). Watsonia 'Victoria' Tall. Flowers vieux rose, with long tube (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'White Australia' Flowers large, white with very faint pink veining (Anon, 1926); perianth lobes "prettily waved" (Anon, 1930), ie undulate. Flowers were said by both sources to be semi-double; this may mean that the lobes were very broad and even more imbricate than in cultivars such as 'Clarendon Pearl'. First exhibited at Garden Week, Melbourne, in 1925.

#### **APPENDIX B**

#### **OTHER AUSTRALIAN HYBRIDS PRE 1940**

Watsonia 'Avalon' Flowers tricoloured, a pale pink but shading to mauve and salmon (Montague, 1930; Brunning, 1934). Watsonia 'Beauty' Flowers very pale pink (Montague, 1930; Brunning, 1934). Renascent, spring-flowering.

Bred in Sydney in the 1920s (Anon, 1939). Watsonia 'Clarendon Pearl' Tall. Flowers large, white with a waxy appearance, lobes broad with undulate

margins (Montague, 1930).

Watsonia 'Corallina' Flowering in late spring. Flowers almost stellate due to the lanceolate acute perianth lobes narrower than in most hybrids. Colour was described as "coral chrome shade, with a touch of salmon" (Montague, 1930) or "chocolate-chrome" (Brunning, 1934).

Watsonia 'Eunice Hunt' Late spring-flowering. Tall. Flowers salmon-apricot (Montague, 1930; Brunning, 1934).

Watsonia 'Geisha' Flowers rosy-pink shaded with mauve (Anon, 1930). Released by Ormond Plant Farm in 1930.

Watsonia 'Holloway's Giant White' Flowers large, pure white (Anon, 1938). Marketed by Yates.

Watsonia 'Lady Fawkes' Flowers described as orange-red (Cowlishaw, 1928) or salmon-red (Montague, 1930). Bred in Sydney in the early 1920s and marketed by Yates in 1930s.

Watsonia 'Lesley Carson' Flowers salmon-pink (Brunning, 1939). Bred in Queensland, probably in the 1930s. Watsonia 'Maitland' Late spring-flowering; tall. Flowers large, open, "crushed strawberry" colour (Montague, 1930; Anon, 1939). Marketed by Yates in the 1930s.

Watsonia 'Mauveen' Tall. Flowers large, deep mauve (Montague, 1930; Brunning, 1934).

Watsonia 'Montague's Pink' Flowers shell pink (Anon, 1939). Bred by Philip Montague at Frankston, Victoria, and released in autumn 1937.

Watsonia 'Multiflora' Pale-rose flowers appearing early in spring. Also called "fulgens" by Montague (1930). Watsonia 'Narrabeen' Flowers deep salmon pink (Montague, 1930). Bred in Sydney in the 1920s and marketed by Yates in the 1930s.

Watsonia 'Netta' Flowers clear soft salmon-pink (Montague, 1930).

Watsonia 'Novelty' Flowers nearly yellow (Montague, 1930).

Watsonia 'Peach Blossom' Flowers peach-blossom pink (Montague, 1930).

Watsonia 'Peach Blows' Flowers pale pink (Montague, 1930). Watsonia 'Peach Blow' Flowers pale pink (Montague, 1930). Bred in the late 1920s. Watsonia 'Perfection' Released by Brunning; flowers pale pink (Brunning, 1918). Watsonia 'Pink Perle' [Pink Pearl] Flowers pale pink, described as "pearly pink" (Montague, 1930). Watsonia 'Rosa Holloway' [Rose Holloway] Flowers large, pale pink (Montague, 1930). Watsonia 'Rose Perle' Flower colour deeper than 'Pink Perle' (Montague, 1930), deep rose (Brunning, 1934). Watsonia 'Ruby' Flowers a clear amethyst ruby colour (Anon., 1922; Brunning, 1924; Montague, 1930). Watsonia 'Salmonette' Tall. Flowers pale salmon pink (Montague, 1930; Brunning, 1934). Watsonia 'Lingue' Dwarf, Flowers pale salmon pink (Montague, 1930; Brunning, 1918; 1924).

Watsonia 'Unique' Dwarf. Flowers heliotrope, each lobe with a darker stripe (Brunning, 1918; 1924).

Watsonia 'White Queen' Flowers white. Bred in Queensland (Anon, 1936), and marketed by Yates.

#### References

- Anon. (1918). Winter Flowers, Bulbs, Spring Flowering Sweet Peas. (F.H. Brunning: Melbourne).
- Anon. (1922). Winter Flowers and Bulbs. (F.H. Brunning: Melbourne).
- Anon. (1926). Bulb Culture. The Australian Garden Lover 1: 428.
- Anon. (1930). The Ormond Garden Book 1930–31. (Ormond Plant Farm Pty Ltd: Ormond, Victoria). Anon. (1933). Law Somner Pty Ltd Catalogue 1933–34. (Law Somner Pty Ltd: Melbourne). Anon. (1936). Yates' Annual 1936. (Arthur Yates & Co.: Sydney). Anon. (1938). Yates' Annual and Autumn Reminder 1938. (Arthur Yates & Co.: Sydney). Anon. (1930). Law Sommer Dru Ltd Catalogue (Law Sommer Pty Ltd: Sydney).

- Anon. (1939). Law Somner Pty Ltd Catalogue. (Law Somner Pty Ltd: Melbourne).
- Brunning, L.H. (1924). The Australian Gardener. 20th edn. (F.H. Brunning: Melbourne). Brunning, L.H. (1934). The Australian Gardener. 23rd edn. (Robertson & Mullens: Melbourne).
- Brunning, L.H. (1939). Australian Home Gardener. (Ideal Home Library: London).
- Cheers, G. ed. (1997). Botanica. (Random House Australia). Cooke, D.A. (1986). Iridaceae. Flora of Australia 46: 1–66.
- Cooke, D.A. (1998). Bulbil watsonia is a variety of Watsonia meriana (L.)Miller (Iridaceae) J.Adelaide Bot. Gard. 18: 5-7.

- Cowlishaw, G.K. (1928). Watsonias: The new Australian hybrids. *The Garden Lover* 3: 391. Eliovson, S. (1955). South African Flowers for the Garden. (Howard Timmins: Cape Town). Eliovson, S. (1968). Bulbs for the Gardener in the Southern Hemisphere. (Reed: Wellington).
- Goldblatt, P. (1989). The Genus Watsonia. Ann. Kirstenbosch Bot. Gard. 19. (National Botanic Gardens: Capetown).
- Hitchmough, J. (1989). Garden Bulbs for Australia and New Zealand. (Viking O'Neil: Ringwood).
- Horn, W. (1962). Breeding research of South African plants: III Intra- and inter-specific compatibility in Ixia L., Sparaxis Ker., Watsonia Mill. and Zantedeschia Spreng. J. South African Bot. 28: 269-277.
- Sparaxis Ker., Watsonia Mill. and Zantedeschia Spreng. J. South African Bot. 28: 269–277 Macoboy, S. (1991). Bulbs and Corms. (Angus & Robertson: North Ryde). Montague, P. (1930). The new watsonias should be freely grown. The Australian Garden Lover 6: 33. Pescott, E.E. (1926). Bulb Growing in Australia. (Whitcombe & Tombs: Melbourne). Redgrove, H. (1991). An Illustrated Handbook of Bulbs and Perennials. (Reed: Balgowlah). Warner, W.R. (1924). The new hybrid Watsonias. The Home Gardener 8: 269. Warner W.R. (1926). Advertisement in The Australian Garden 2 (1997).

- Warner, W.R. (1926). Advertisement in The Australian Garden Lover 2: 40.