

FULL ACCOUNT FOR: Agapanthus praecox

Agapanthus praecox

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Liliales	Liliaceae

Common name African-lily (English), lirio africano (Spanish, Argentina), agapanthus (English),

bloulelie (Afrikaans), lily-of-the-Nile (English), agapanto (Spanish, Argentina), common agapanthus (English), flor de Navidad (Spanish, Argentina), blue lily

System: Terrestrial

(English)

Synonym Tulbaghia praecox , (Willd.) Kuntze

Similar species Agapanthus africanus, Arthropodium cirratum

Summary Agapanthus praecox is a rhizomatous herb that is native to South Africa, along

with its subspecies, *A. praecox* subsp. *minimus*, *A. praecox* subsp. *orientalis* and *A. praecox* subsp. *praecox*. Most cultivated agapanthus are cultivars or hybrids of *A. praecox*, and the subspecies readily hybridise. Agapanthus has characteristic composite florescences that are white or blue and tubular and is

commonly planted as an ornamental.

view this species on IUCN Red List

Species Description

Agapanthus praecox is a rhizomatous, perennial herb. Its leaves are robust, strap-like and evergreen and there are 6 - 20 leaves per individual plant. The leaves grow in dense clumps from bulb up to 60 cm high. The composite inflorescences are large and round, made up of tubular flowers. These are either coloured white or light blue. Inflorescences can grow up to 1.2 m in summer. (ARC 2009; FloraBase 2010; Notten 2004; Weeds of Blue Mountains Bushland 2010). \n

Notes

Known subspecies of *Agapanthus praecox* include *A. praecox* ssp. *minimus*, *A. praecox* ssp. *orientalis* and *A. praecox* ssp. *praecox*. Subspecies readily hybridise, especially when grown in close proximity. In the Auckland region of New Zealand, the sale, propogation, planting and distribution of *A. praecox* is prohibited. However the miniature variety and culativars, along with *A. praecox* ssp. *orientalis* are allowed, despite being weedy (ARC 2009; ReportageEnviro 2010; Notten 2004; USDA, ARS 2007; Weeds of Blue Mountains Bushland 2010). The leaves, sap and rhizomes of *A. praecox* are highly toxic to humans and may cause ulceration of the mouth, skin rashes and burning sensations. Especially toxic to children. *A. praecox* appears on the FDA Poisonous Plant Database. (Barr 2001; DPI Vic 2008b).

Uses

Ornamental, medicinal (FloraBase 2010).



FULL ACCOUNT FOR: Agapanthus praecox

Habitat Description

Agapanthus praecox can grow almost anywhere and survives well in poor soil (FloraBase 2010). Adequate water is required in spring and summer. Preferred conditions for *A. praecox* growth include sun and semi-shade (ARC 2009), and soil that is well-drained, rich, and with plenty of organic matter (FloraBase 2010). Leaves are robust, and the plant is tolerant of frost (ARC 2009), hot and cold, wind, salt and heavy damage (Weedbusters 2010). Rhizomes and seeds are tolerant to sea immersion (Weedbusters 2010). *A. praecox* is easy to grow and it does well even in the poorest of soils, but it must receive some water in summer. To perform at its best, give it rich, well-drained soil with ample compost (decayed organic matter) and plenty of water in spring and summer. It prefers full sun. All the evergreen agapanthus are best lifted and divided every four years or so to ensure flowering. *A. praecox* will tolerate light frost, but is hardy only in the milder parts of the Northern Hemisphere, like the southwest of England and in the Mediterranean (Notten 2004)

Reproduction

Agapanthus praecox is a prolific seeder and primarily reproduces by seed. Reproduction also occurs via rhizomes. Seeds are produced in late summer into autumn, are small, black and shiny and are produced in a three sided capsule. Seed dispersal is effective, via wind, water, garden waste and contaminated soil. A. praecox germinates densely. (FloraBase 2010; Weedbusters 2010; Weeds of Blue Mountains Bushland 2010).

General Impacts

Agapanthus praecox can form very dense clumps and pure stands, which exclude all other vegetation. This can lead to suppression of growth of native species, and can result in massive biodiversity loss. The root network is very dense, and can also exclude native species. The roots can crack concrete, causing problems for walkways and roads. Growth on roadways can cause clogging of drains leading to flooding, which can damage roads. (DPI Vic 2008b; NPPA 2008; Weedbusters 2008).

Management Info

A Risk Assessment of Acacia farnesiana for Hawai'i and other Pacific islands was prepared by Dr. Curtis Daehler (UH Botany) with funding from the Kaulunani Urban Forestry Program and US Forest Service. The alien plant screening system is derived from Pheloung et al. (1999) with minor modifications for use in Pacific islands (Daehler et al. 2004). The result is a score of 14 and a recommendation of: \"Likely to cause significant ecological or economic harm in Hawai'i and on other Pacific Islands as determined by a high WRA score, which is based on published sources describing species biology and behaviour in Hawai'i and/or other parts of the world.\" Agapanthus praecox can be controlled using mechnical techniques alone, or in conjunction with chemical methods. Scattered plants should be dug out, and corms and root fragments disposed of carefully (refuse transfer station or dry and burn). Another alternative is to crown the plant, and apply herbicide immediately after. While A. praecox doesn't respond well to most herbicides, this cut-and-paint method has been found to be effective. As plants often resprout and the seed bank can lead to reinfestation, follow up treatments are necessary. (PIER 2010; Weeds of Blue Mountains Bushland 2010; Weedbusters 2010).

Pathway

Principal source:

Compiler: IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Auckland Regional Council (ARC)

Review:

Pubblication date: 2010-09-01

ALIEN RANGE



FULL ACCOUNT FOR: Agapanthus praecox

[1] ARGENTINA

[1] COOK ISLANDS

[1] NEW CALEDONIA

[1] PORTUGAL

[1] UNITED KINGDOM

[7] AUSTRALIA

[1] MARSHALL ISLANDS

[9] NEW ZEALAND

[1] SPAIN

[2] UNITED STATES

BIBLIOGRAPHY

50 references found for Agapanthus praecox

Managment information

Amots Dafni, Peter Kevan, Caroline L. Gross and Koichi Goka, 2010. Bombus terrestris, pollinator, invasive and pest: An assessment of problems associated with its widespread introductions for commercial purposes. Appl. Entomol. Zool. 45 (1): 101 13 (2010)

Summary: Available from: http://www.jstage.jst.go.jp/article/aez/45/1/101/_pdf [Accessed June 14 2010] Chatham Islands Council (CIC) undated. Chatham Islands Pest Management Strategy 2008-2018.

Summary: Available from:

http://www.cic.govt.nz/pdfs/pestManagment/PestStrategy0818 ChathamstrategyPartIIPestManagementProgrammesSections1-5.pdf [Accessed 30 August 2010]

Department of Primary Industries Victoria (DPI Vic) 2008a. Invasiveness Assessment - Agapanthus (Agapanthus praecox subsp. orientalis) in Victoria. The State of Victoria, Australia.

Summary: Available from: http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/invasive_agapanthus [Accessed 30 August 2010] Department of Primary Industries Victoria (DPI Vic) 2008b. Impact Assessment - Agapanthus (Agapanthus praecox subsp. orientalis) in Victoria.

Summary: Available from: http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/impact agapanthus [Accessed 30 August 2010] Department of Environment and Climate Change (NSW) 2007, Lord Howe Island Biodiversity Management Plan, Department of Environment and Climate Change (NSW), Sydney.

Summary: Available from: http://www.environment.gov.au [Accessed June 14 2010]

Department of Environment & Climate Change NSW 2007. Blue Mountains Region Pest Management Strategy 2007-2011. DECC, Sydney, NSW.

Summary: Available from: http://www.environment.nsw.gov.au/resources/pestsweeds/07513BlueMtnsPestStrategy.pdf [Accessed June 14 2010]

Environment Bay of Plenty 2010. Weed 229. Bay of Plenty Regional Council.

Summary: Available from: http://www.envbop.govt.nz/Environment/Weed229.aspx [Accessed June 30 2010] Environment Waikato undated. Environment Waikato pest guide.

Summary: Available from:

http://www.ew.govt.nz/PageFiles/3599/Environment%20Waikato%20pest%20guide%20section%204%20-%20Nuisance%20pests.pdf [Accessed 30 August 2010]

FloraBase the Western Austalian Flora, 2010. Agapanthus praecox subsp. orientalis F.M.Leight. J.S.African Bot. Suppl.4:21 (1965)

Summary: Available from: http://florabase.calm.wa.gov.au/browse/profile/18380 [Accessed June 14 2010]

Gallagher, Rachael; Linda Beaumont; Paul O. Downey; Lesley Hughes and Michelle R. Leishman, 2006. Assessing the potential impacts of climate change on weeds in New South Wales: establishing priorities. Fifteenth Australian Weeds Conference **Summary:** Available from: http://www.caws.org.au/awc/2006/awc200610351.pdf [Accessed June 14 2010]

Greater Wellington Regional Council 2010. Agapanthus (Agapanthus praecox).

Summary: Available from: http://www.gw.govt.nz/agapanthus-agapanthus-praecox/ [Accessed June 29 2010]

Healy, A.J., 1958. Contributions to a Knowledge of the Adventive Flora of New Zealand, No 6. Transactions of the Royal Society of New Zealand, Vol 85, Part 4, pp 531-549, November, 1958.

Summary: Available from: http://rsnz.natlib.govt.nz/volume/rsnz 85/rsnz 85 04 005990.pdf [Accessed 10 June 2010]

Hingston A.B. 2006a. Is the introduced Bumblebee (Bombus terrestris) assisting the naturalization of Agapanthus praecox ssp. orientalis in Tasmania? Ecological Management & Restoration 7: 236-238.

Hingston, Andrew B. 2007. The Potential Impact of the Large Earth Bumblebee Bombus terrestris (Apidae) on the Australian mainland: Lessons from Tasmania

Summary: Available from: http://abganew.com/attachments/062_Bumblebees%20Abstract.pdf [Accessed June 14 2010] Howell, Clayson 2008. Consolidated list of environmental weeds in New Zealand. DOC Research & Development Series 292

Summary: Available from: http://csl.doc.govt.nz/upload/documents/science-and-technical/drds292.pdf [Accessed 10 June 2010]

Murrindindi Shire Council undated. Native plant species as alternatives to invasive species. Victoria, Australia.

Summary: Available from: http://www.murrindindi.vic.gov.au/Files/Native_plant_alternatives.pdf [Accessed 30 August 2010]

NPPA 2008. Technical advisory group assessment of National Pest Plant Accord species. Biosecurity New Zealand

Summary: Available from: http://www.biosecurity.govt.nz/files/regs/imports/risk/a-tag-assessments.pdf [Accessed 30 August 2010] Pacific Island Ecosystems at Risk (PIER) 2008. Risk Assessment Agapanthus praecox Willd., Liliaceae

Summary: Available from: http://www.hear.org/pier/wra/pacific/agapanthus praecox htmlwra.htm [Accessed June 14 2010] Pacific Island Ecosystems at Risk (PIER) 2010. Agapanthus praecox Willd., Liliaceae

Summary: Available from: http://www.hear.org/pier/species/agapanthus praecox.htm [Accessed June 14 2010]

Reportage Environmental Edition 2010. Councils halt cultivation of Agapanthus plants. 13 May 2010

Summary: Available from: http://www.reportage-enviro.com/2010/05/councils-halt-cultivation-of-agapanthus-plants/ [Accessed June 14 20101



FULL ACCOUNT FOR: Agapanthus praecox

Sullivan, Jon J., Susan M. Timmins and Peter A. Williams, 2005. Movement of exotic plants into coastal native forests from gardens in northern New Zealand. New Zealand Journal of Ecology (2005) 29(1): 1-10

Summary: Available from: http://homepage.mac.com/tabebuia/science/NZJEcol29_1_1.pdf [Accessed June 14 2010]

Timmins, Susan M., Mark Smale, Jon J. Sullivan and Peter A. Williams, Environmental weeds along New Zealand roadsides: an initial assessment. Fifteenth Australian Weeds Conference

Summary: Available from: http://www.caws.org.au/awc/2006/awc200611771.pdf [Accessed June 14 2010]

Weedbusters 2007. Plant me instead! West Coast Nelson/Marlborough region.

Summary: Available from:

http://weedbusters.co.nz/downloads/PlantMeInstead/Plant%20me%20instead%20nelson%20final%2002%20feb%202010.pdf [Accessed 30 August 2010]

Weedbusters 2009. Plant me instead! Bay of Plenty region.

Summary: Available from: http://www.envbop.govt.nz/Environment/PlantMeInstead/files/PlantMeInstead.pdf [Accessed 30 August 2010] Weedbusters 2010. Information sheet *Agapanthus praecox*.

Summary: Available from: http://www.weedbusters.co.nz/weed info/detail.asp?WeedID=34 [Accessed June 29 2010]

Weedbusters, 2010. Information sheet Agapanthus praecox

Summary: Available from: http://www.weedbusters.co.nz/weed_info/detail.asp?WeedID=34 [Accessed June 14 2010]

Weeds of Blue Mountains Bushland 2010. Agapanthus.

Summary: Available from: http://www.weedsbluemountains.org.au [Accessed June 29 2010]

Weeds of Blue Mountains Bushland, N.d. Agapanthus: Bush Invader. Agapanthus praecox ssp orientalis

Summary: Available from: http://www.weedsbluemountains.org.au/Agapanthus.asp [Accessed June 14 2010]

Wotherspoon and Wotherspoon, 2002. The evolution and execution of a plan for invasive weed eradication and control, Rangitoto Island, Hauraki Gulf, New Zealand. In *Turning the tide: the eradication of invasive species:* 381-388. Veitch, C.R. and Clout, M.N.(eds). IUCN SSC Invasive Species Specialist Group. IUCN. Gland. Switzerland and Cambridge. UK.

Summary: Eradication case study in Turning the tide: the eradication of invasive species.

Yarra Ranges Council (YRC) undated. Agapanthus

Summary: Available from: http://www.yarraranges.vic.gov.au/files/5d70dc8b-8442-4a72-8548-9d2700dd7471/Agapanthus.pdf [Accessed 30 August 2010]

General information

Australian Biological Resources Study, undated. Agapanthus praecox subsp. orientalis. Flora of Australia Online.

Summary: Available from: http://www.anbg.gov.au/abrs/online-resources/flora/stddisplay.xsql?pnid=6275 [Accessed June 30 2010] Barr A.C. 2001. Household and qarden plants. In: M.E. Peterson, P.A. Talcott (eds) Small Animal Toxicology. Saunders, Philadelphia. Pp 263-320. FDA Poisonous Plant Database.

Summary: Available from: http://www.accessdata.fda.gov/scripts/plantox/detail.cfm?id=2656 [Accessed 30 August 2010]

Catalogue of Life 2010. Catalogue of Life - 2010 Annual Checklist: Agapanthus praecox.

Summary: Available from: http://www.catalogueoflife.org [Accessed 29 June 2010]

FloraBase the Western Austalian Flora, 2010. Agapanthus

Summary: Available from: http://florabase.calm.wa.gov.au/browse/profile/21218 [Accessed June 14 2010]

Global Compendium of Weeds (GCW), 2007. Agapanthus praecox (Liliaceae)

Summary: Available from: http://www.hear.org/gcw/species/agapanthus_praecox/ [Accessed June 14 2010]

Groves, R.H. (Convenor), Hosking, J.R., Batianoff, G.N., Cooke, D.A., Cowie, I.D., Johnson, R.W., Keighery, G.J., Lepschi, B.J., Mitchell, A.A., Moerkerk, M., Randall, R.P., Rozefelds, A.C., Walsh N.G., and Waterhouse, B.M. 2003. Weed categories for natural and agricultural ecosystem management. Bureau of Rural Sciences, Canberra.

Summary: This document gives the status of all weed species found in Australia.

Hingston A. 2006b. Weeds that have become more invasive in Tasmania since the introduction of bumblebees

Summary: Available from: http://www.aussiebee.com.au/bumblebees-and-weeds.html [Accessed 29 June 2010]

Hosking, John R.; Conn, Barry J.; Lepschi, Brendan J.; Barker, Clive H., 2008. Plant species first recognised as naturalised for New South Wales in 2002 and 2003, with additional comments on species recognised as naturalised in 2000-2001. Cunninghamia. 10(1). 2007. 139-166.

Summary: Available from: http://www.rbgsyd.nsw.gov.au/_data/assets/pdf_file/0009/85068/Cun101139Hos.pdf [Accessed 10 June 2010]

Howell Clayson J., John W.D. Sawyer 2006. New Zealand Naturalised Vascular Plant Checklist. New Zealand Plant Conservation Network,

November 2006.

Summary: Available from: http://nzpcn.org.nz/publications/Naturalised-list-06-new.pdf [Accessed 10 June 2010]

Hurrell J.A., Delucchi G. 2007. Agapanthaceae, Anthericaceae and Hyacinthaceae adventitious in Argentina. Revista del Museo Argentino de Ciencias Naturales Nueva Serie 9: 103-107.

Integrated Taxonomic Information System (ITIS) 2010. Agapanthus africanus (L.) Hoffsgg.

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=506476 [Accessed June 14 2010]

Integrated Taxonomic Information System (ITIS) 2010. Agapanthus L Her.

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=500768 [Accessed June 14 2010]

Integrated Taxonomic Information System (ITIS) 2010. Synonym: Agapanthus umbellatus L Her.

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=508419 [Accessed June 14 2010]

Jamieson 2004. Agapanthus africanus. PlantZAfrica.com - South African National Biodiversity Institute.

Summary: Available from: http://www.plantzafrica.com/plantab/agapanafric.htm [Accessed 30 August 2010]



FULL ACCOUNT FOR: Agapanthus praecox

Notten A. 2004. Agapanthus praecox Willd. PlantZAfrica.com - South African National Biodiversity Institute.

Summary: Available from: http://www.plantzafrica.com/frames/plantsfram.htm [Accessed 29 June 2010]

O Shea, E. M. and J. B. Kirkpatrick, 2000. The Impact of Suburbanization on Remnant Coastal Vegetation in Hobart, Tasmania. Applied Vegetation Science, Vol. 3, No. 2 (Dec., 2000), pp. 243-252

Rippey, E., J.J. Rippey, B. Green & J. N. Dunlop, 2002. Comparison of the vegetation of the islands in Shoalwater Bay (Rockingham, Western Australia) with that of the coastal bushland. Journal of the Royal Society of Western Australia, 85:169-179, 2002

Summary: Available from: http://www.rswa.org.au/content/work/journals/PDF/85(4)/85(4)rippey.pdf [Accessed June 14 2010] USDA, ARS 2007. Taxon: *Agapanthus praecox* Willd. National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database].

Summary: Available from: http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?410534 [Accessed August 27 2010] Vander Velde N. 2003. The vascular plants of Majuro Atoll, Republic of the Marshall Islands. Smithsonian Institution, Atoll Research Bulletin No. 503: 1-141

Summary: Available from: http://www.botany.hawaii.edu/faculty/duffy/arb/497-508/503.pdf [Accessed June 14 2010] Victorian Government Department of Sustainability and Environment (DSE Vic) 2009. Advisory list of environmental weeds of the Inland Plains bioregions of Victoria. The State of Victoria, Australia.

Summary: Available from:

 $\label{lem:http://www.dpi.vic.gov.au/CA256F310024B628/0/1D0FB8E465303845CA257615001F11B1/\$File/Ranking+Inland+Plains+weeds-rev2a.pdf [Accessed 30 August 2010]$