

Agave americana

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Liliales	Agavaceae

Common name American-aloë (English), wild century-plant (English), century plant (English), American agave (English), American century plant (English), maguey americano (Spanish), Amerikanische agave (German), agave (English), garingboom (Afrikaans), pite (French), spreading century-plant (English), maguey (English), American aloë (English), yucca (English), agave d'Amérique (French), Hundert-jährige agave (German), pita común (Spanish)

Synonym *Agave rasconensis*, Trel. ex Standl.
Agave zonata, Trel.
Aloe americana, (L.) Crantz

Similar species *Furcraea* spp.

Summary *Agave americana* is a large, rhizomatous succulent that grows in a wide range of conditions including cliffs, urban areas, woodlands, grasslands, riparian zones, beaches and sandy areas, and rocky slopes. *A. americana* is tolerant of wind, salt, high temperatures, and extreme drought. It can grow in shallow, very dry, low fertility soil and can colonise bare sand. It is grown for many reasons- ornamental, medicinal and agricultural. In South Australia *Agave americana* mainly invades disturbed sites, road sides and coastal vegetation. It may also harbour introduced animal species, such as rabbits, making feral animal control more difficult.



[view this species on IUCN Red List](#)

Species Description

Agave americana is a large and stemless succulent, with leaves that can grow up to 2 m. Leaves are robust and spear-like, and are in a basal rosette. The leaves have sharp hooks or spines on the edges, and very sharp tips. Leaves have stomata which open at night, taking in carbon dioxide. Flowers are yellow and occur rapidly after maturity, when the plant is 10 - 15 years old. Flowers are at the top of a long stalk (up to 10 m), and are branched, candelabra-like, from the main stalk. These are followed by seed capsules with seeds (black, 5 cm long). The plant dies after fruiting (Badana & Pugnaire 2004; Harris 2008).

Notes

A. americana sap can cause pain and dermatitis in humans if it comes in contact with skin (Kerner *et al.* 1973; Ricks *et al.* 1999). The sap has also been shown to have anti-bacterial, anti-fungal and anti-inflammatory properties (Jin *et al.* 2004; Parmar *et al.* 1992; Peana *et al.* 1997). *A. americana* appears in the FDA Poisonous Plant Database (McGuffin *et al.* 2000).

Direct children of *A. americana*: *A. americana* ssp. *americana* L.; *A. americana* ssp. *marginata* Trel.; *A. americana* ssp. *protamericana* Gentry; *A. americana* var. *expansa* (Jacobi) Gentry; *A. americana* var. *oaxacensis* Gentry (Catalogue of Life 2010; USDA-ARS 2010; ITIS 2010; Smith & Figueiredo 2007)



Uses

Agave americana has several uses: ornamental, medicinal, as a vertebrate poison, agricultural, fodder, erosion control (USDA-ARS, 2010). *A. americana* is grown as an ornamental on all continents, except Antarctica (Nobel 1990).

Fibres derived from *A. americana* have been shown to be more extensible than other natural fibres, and also exhibit high tensile strength and are low density and have a high moisture content (Msahli 2000, in El Oudiani et al. 2009). Ropes and twines made from *A. americana* fibre were important agriculturally (otherwise) in North Africa up until the 1960's (El Oudiani et al. 2009; Jaouadi et al. 2009).

A. americana is grown in South Africa as a fodder crop, although it cannot be directly grazed and requires processing before feeding (De Cock 1980; Le Houérou 2000; Myburgh 1994). *A. americana* is also used to brew an alcoholic liquor beverage, in Mexico and South Africa (Boguslavsky et al. 2007).

A. americana is used in Mexico, Brazil, India and China as a traditional treatment, as it has anti-inflammatory, anti-bacterial and anti-fungal properties and can be used as a diuretic (Boscolo et al. 2010, Jin et al. 2004; Parmar et al. 1992; Peana et al. 1997; Rivera et al. 2010).

Habitat Description

Agave americana can grow in a wide range conditions, including cliffs, urban areas, woodlands, grasslands, riparian zones, beaches and sandy areas, and rocky slopes. *A. americana* is tolerant of wind, salt, high temperatures, and extreme drought. It can grow in shallow, very dry, low fertility soil and can colonise bare sand (ARC 2007; Badano & Pugnaire 2004; Bezona et al. 2009; Le Houérou 2000).

Reproduction

Agave americana is monocarpic, i.e. it dies after fruiting. Bats, birds and insects are important pollinators of *A. americana* flowers. The black seeds produced have a high germination rate, though the majority of seedlings die 8-9 days post-germination. *A. americana* can also reproduce vegetatively from plant and stolon fragments, and via rhizomes. Bulbils are also produced in the floral stems, which can also give rise to daughter plants (Nobel 1988, Arizaga & Ezcurra 2002, in Badano & Pugnaire 2004; Gentry 1982, in Gordon et al. 2005).

General Impacts

One of the major impacts of *Agave americana* is its large leaves shading out native plant species. *A. americana* also has a very dense network of rhizome offshoots, which could draw resources away from native species. The rhizomatous nature of *A. americana* could also alter the nutrient status of the soil. *A. americana* may have adverse effects on human and animal health (Badano & Pugnaire 2004; Macdonald et al. 2003; NPPA 2008; Williams 2008).

Management Info

Control of *Agave americana* is mainly achieved by using a combination of physical and chemical management techniques. Small plants are usually removed manually, while larger plants can be treated manually and/or with herbicide. Effective chemical treatments include cutting down leaves close to the ground and painting the stump immediately with herbicide and injection of herbicide. Follow up treatment may be necessary, especially for larger plants (Bickerton 2006; Ecoscape (Australia) Pty Ltd 2005; Weedbusters 2010).

Pathway

A. americana is thought to be unintentionally introduced into sand dunes where it becomes invasive (Badano & Pugnaire 2004).

Principal source:

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

Review: Francisco I. Pugnaire, Estacion Experimental de Zonas Aridas, Consejo Superior de Investigaciones Cientificas

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ALIEN RANGE

[1] ARGENTINA	[9] AUSTRALIA
[1] BRAZIL	[1] CHINA
[1] COSTA RICA	[1] CROATIA
[1] CYPRUS	[2] ECUADOR
[1] ETHIOPIA	[1] FIJI
[1] FRANCE	[1] FRENCH GUIANA
[1] FRENCH SOUTHERN TERRITORIES	[1] GREECE
[1] INDIA	[1] ITALY
[2] JAPAN	[1] KENYA
[1] KIRIBATI	[1] LESOTHO
[1] MALAWI	[1] MALTA
[1] MEDITERRANEAN AREA	[1] MOROCCO
[1] NETHERLANDS	[6] NEW ZEALAND
[1] OMAN	[1] PAKISTAN
[1] PERU	[1] PHILIPPINES
[2] PORTUGAL	[1] ROMANIA
[1] SINGAPORE	[1] SOUTH AFRICA
[3] SPAIN	[1] SRI LANKA
[1] TAIWAN	[1] THAILAND
[1] TONGA	[1] TUNISIA
[1] UNITED STATES	[1] VIRGIN ISLANDS, U.S.
[1] ZIMBABWE	

Red List assessed species 3: CR = 3;

[Cheirolophus crassifolius](#) **CR**

[Cremnophyton lanfrancoi](#) **CR**

[Helichrysum melitense](#) **CR**

BIBLIOGRAPHY

117 references found for *Agave americana*

Managment information

Andreu J., Vila M., Hulme P.E. 2009. An assessment of stakeholder perceptions and management of noxious alien plants in Spain. *Environmental Management* 43: 1244-1255.

[Banyule City Council 2006. Banyule Weed Management Strategy. Victoria, Australia.](#)

Summary: Available from:

<http://www.banyule.vic.gov.au/Assets/Files/banyule%20weed%20management%20strategy%20parts%201%20%20and%203.pdf> [Accessed 31 August 2010]

[Bay of Plenty Regional Council 2010. Weed Index Result - Agave americana.](#)

Summary: Available from: <http://www.envbop.govt.nz/Environment/Weed255.aspx> [Accessed 31 August 2010]

Bickerton 2006. Using herbicide to control century plant (*Agave americana*): implications for management. In: C. Preston, J.H. Watts, N.D. Crossman (eds) 15th Australian Weeds Conference Proceedings: managing weeds in a changing climate. Weed Management Society of SA Inc. Pp 219.

[City of Albany 2009. Subdivision and development guidelines. Western Australia, Australia.](#)

Summary: Available from: http://www.albany.wa.gov.au/download/671/Subdivision_Development_Guidelines_2009.pdf [Accessed 31 August 2010]

[City of Holdfast Bay 2003. Pine Gully Vegetation Management Plan. South Australia, Australia.](#)

Summary: Available from: http://www.holdfast.sa.gov.au/webdata/resources/files/MgmtPlan_Pine_Avenue_Gully.pdf [Accessed 31 August 2010]

[City of Tea Tree Gully. Pest plants management in creeks and waterways policy. South Australia, Australia.](#)

Summary: Available from:

http://www.teatreegully.sa.gov.au/webdata/resources/files/Pest_Plants_Management_in_Creeks_and_Waterways_Policy.pdf [Accessed 31 August 2010]

Global Invasive Species Database (GISD) 2024. Species profile *Agave americana*. Available from:

<https://iucngisd.org/gisd/species.php?sc=1664> [Accessed 23 November 2024]

[City of Wanneroo 2002. Gnangara Lake Reserve Management Plan 2002-2007. Western Australia, Australia.](#)

Summary: Available from:

<http://www.wanneroo.wa.gov.au/cproot/733/3/Gnangara%20Lake%20Reserve%20Management%20Plan%202002-2007.pdf> [Accessed 31 August 2010]

[Cordingley S.P., Petherick C.E. 2005. Vegetation Management Plan for the Henley South and West Beach Dune Reserve, City of Charles Sturt, Adelaide. South Australia, Australia.](#)

Summary: Available from:

http://www.charlessturt.sa.gov.au/webdata/resources/files/Vegetation_Management_Plan_-_Henley_South_and_West_Beach.pdf [Accessed 4 August 2010]

[Department of Environment and Conservation Western Australia \(DEC WA\) 2009. Succulent weed reduction at Ravensthorpe a success. Government of Western Australia.](#)

Summary: Available from: <http://www.dec.wa.gov.au/content/view/5079/1560/> [Accessed 31 August 2010]

[Ecoscape \(Australia\) Pty Ltd 2005. North Cottesloe Coastal Natural Areas Management Plan 2005 - 2010.](#)

Summary: Available from: http://www.cottesloecoastcare.org/publications/North_Cott_%20Man_%20Plan.pdf [Accessed 28 July 2010].

[Environmental Training and Employment Inc. \(EnvITE NSW\) 2005. Shelly Beach to Lighthouse Beach Vegetation Management Plan. Ballina Shire Council, New South Wales, Australia.](#)

Summary: Available from:

<http://www.ballina.nsw.gov.au/content/uploads/Shelly%20Beach%20to%20Lighthouse%20Beach%20VMP.pdf>

[Accessed 31 August 2010]

[Environmental Training and Employment Inc. \(EnvITE NSW\) 2006. Lennox Point, Vegetation Management Plan. Ballina Shire Council, New South Wales, Australia.](#)

Summary: Available from:

<http://www.ballina.nsw.gov.au/content/uploads/LENNOX%20POINT%20PLAN%20final%202006.pdf> [Accessed 31 August 2010]

[Erskine A., King L., Delaney M. 2002. Vegetation Management Plan Seven Mile Beach. Environmental Training and Employment \(Northern Rivers\) Inc., New South Wales, Australia.](#)

Summary: Available from:

<http://www.ballina.nsw.gov.au/content/uploads/SEVEN%20MILE%20BEACH%20PLAN.pdf> [Accessed 4 August 2010].

[Frankston City Council undated. Frankston City Council Weed Guide. Victoria, Australia.](#)

Summary: Available from:

http://www.frankston.vic.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/262/65.pdf&siteID=18&str_title=Landscape%20Guidelines%20Weed%20Guide.pdf [Accessed 31 August 2010]

[Moyne Shire Council 2010. Environmental Weeds. Victoria, Australia.](#)

Summary: Available from:

http://www.moyne.vic.gov.au/page/PagePrint.asp?Page_Id=857 [Accessed 31 August 2010]

[National Pest Plant Accord \(NPPA\) 2008. Technical Advisory Group Assessment of National Pest Plant Accord Species assessment. Biosecurity New Zealand.](#)

Summary: Available from:

http://www.biosecurity.govt.nz/files/regs/imports/risk/nppa_tag_assessment.pdf [Accessed 31 August 2010].

[Northland Regional Council 2010. Northland Regional Pest Management Strategies 2010-2015.](#)

Summary: Available from:

<http://www.nrc.govt.nz/upload/2412/Plant%20Pests%20-%20Sections%204.4%20-%204.6.pdf> [Accessed 31 August 2010]

[Parks Victoria 2003. Grampians National Park Management Plan.](#)

Summary: Available from:

http://www.parkweb.vic.gov.au/resources07/07_0938.pdf [Accessed 31 August 2010]

[Randwick City Council 2010. Century Plant *Agave americana*. New South Wales, Australia.](#)

Summary: Available from:

http://www.randwick.nsw.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/97/20.pdf&siteID=1&str_title=20091201Agave%20americana.pdf [Accessed 31 August 2010]

[Shire of Manjimup 2008. Shire of Manjimup Weed Strategy. Western Australia, Australia](#)

Summary: Available from:

http://www.manjimup.wa.gov.au/policies_and_documents/Documents/weed_strategy/weed_strategy/file/at_download [Accessed 31 August 2010]

[Shoalhaven City Council 2005. Management Strategy Southern Foreshore Reserve Narrawallee Beach. New South Wales, Australia.](#)

Summary: Available from:

<http://www.shoalhaven.nsw.gov.au/council/pubdocs/LandManagement/MgmtStrategySthnResNarrawallee.pdf> [Accessed 31 August 2010]

[Tunison J.T., Zimmer N.G. 1992. Success in controlling localized alien plants in Hawaii Volcanoes National Park. In: C.P. Stone, C.W. Smith, J.T. Tunison \(eds.\) Alien Plant Invasions in Native Ecosystems of Hawaii: Management and Research. Cooperative National Park Resources Studies Unit, University of Hawaii. Honolulu. Pp 506.](#)

Summary: Available from:

<http://www.hear.org/books/apineh1992/pdfs/apineh1992v2tunisonzimmer.pdf> [Accessed 28 July 2010]

[Weedbusters 2010. *Agave americana*.](#)

Summary: Available from:

http://weedbusters.co.nz/weed_info/detail.asp?WeedID=35 [Accessed 22 July 2010].

[Williams P.A. 2008. Biological success and weediness of some terrestrial weeds not present in the Northland Regional Council s RPMS.](#)

Summary: Available from:

<http://www.envirolink.govt.nz/PageFiles/385/434-nlrc62.pdf> [Accessed 31 August 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.

General information

Arianoutsou M., Bazos I., Delipetrou P., Kokkoris Y. 2010a. The alien flora of Greece: taxonomy, life traits and habitat preferences . Biological Invasions.

- Arianoutsou M., Delipetrou P., Celesti-Grapow L., Basnou C., Bazos I., Kokkoris Y., Blasi C., Vil M. 2010. Comparing naturalized alien plants and recipient habitats across an east-west gradient in the Mediterranean Basin. *Journal of Biogeography*.
- Arvalo, Jos Ramn; Juan Domingo Delgadoa; Rudiger Ottoa; Agustin Naranjo; Marcos Salas; Jose Maria Fernandez-Palacios, 2005. Distribution of alien vs. native plant species in roadside communities along an altitudinal gradient in Tenerife and Gran Canaria (Canary Islands). *Perspectives in Plant Ecology, Evolution and Systematics* 7: 185-202.
- Arvalo J.R., Afonso L., Naranjo A., Salas M. 2010. Invasion of the Gran Canaria ravines ecosystems (Canary Islands) by the exotic species *Acacia farnesiana*. *Plant Ecology* 206: 185-193.
- Badano E.I., Pugnaire F.I. 2004. Invasion of *Agave* species (Agavaceae) in south-east Spain: invader demographic parameters and impacts on native species. *Diversity and Distributions* 10: 493-500.
- Batianoff G.N., Naylor G.C., Olds J., Neldner V.J. 2009. Distribution patterns, weed incursions and origins of terrestrial flora at the Capricorn-Bunker Islands, Great Barrier Reef, Australia. *Cunninghamia* 11: 107-121.
- Bean W.J. 1912. Some gardens and parks in S. Europe. *Bulletin of Miscellaneous Information (Royal Gardens, Kew)* 1912: 284-297.
- [Bezona N., Hensley D., Yogi J., Tavares J., Rauch F., Iwata R., Kellison M., Wong M., Clifford P. 2009. Salt and wind tolerance of landscape plants for Hawaii i. Landscape 13. University of Hawaii.](#)
- Summary:** Available from: <http://scholarspace.manoa.hawaii.edu/handle/10125/12324> [Accessed 27 July 2010].
- Biondi D., Pedrosa-Macedo J.H. 2008. Plantas invasoras encontradas na rea urbana de Curitiba (PR). *Floresta* 38: 129-144.
- Boguslavsky A., Barkhuysen F., Timme E., Matsane R.N. 2007. Establishing of *Agave americana* industry in South Africa. 5th International Conference on New Crops, Southampton, September 2007, pp 17.
- Boscolo O.H., Fernandes L.R.R.M.V., de Senna Valle L. 2010. An ethnobotanical survey as subsidy for the generation of researches related to biotechnology. *International Research Journal of Biotechnology* 1: 1-6.
- [Cali et al. 2004. Participatory rural appraisal in the upland ecosystem of Mt. Malindang, Misamis Occidental, Philippines. Biodiversity Research Programme for Development in Mindanao: Focus on Mt. Malindang and Environs. SEAMEO SEARCA, College, Laguna.](#)
- Summary:** Available from: <http://www.searca.org> [Accessed 30 July 2010].
- Carboni M., Santoro R., Acosta A.T.R. 2010. Are some communities of the coastal dune zonation more susceptible to alien plant invasion? *Journal of Plant Ecology* 3: 139-147.
- [Catalogue of Life 2010. Agave americana L. Catalogue of Life: 2010 Annual Checklist. 2010.](#)
- Summary:** Available from: <http://www.catalogueoflife.org/annual-checklist/2010/details/species/id/7278511> [Accessed 22 July 2010].
- Celesti-Grapow L., Alessandrini A., Arrigoni P.V., Banfi E., Bernardo L., Bovio M., Brundu G., Cagiotti M.R., Camarda I., Carli E., Conti F., Fascetti S., Galasso G., Gubellini L., La Valva V., Lucchese F., Marchiori S., Mazzola P., Peccenini S., Poldini L., Pretto F., Prosser F., Siniscalco C., Villani M.C., Viegi L., Wilhelm T., Blasi C. 2009. Inventory of the non-native flora of Italy. *Plant Biosystems* 143: 386-430.
- [Chong K.Y., Tan H.T.W., Corlett R.T. 2009. A checklist of the total vascular plant flora of Singapore: native, naturalised and cultivated species. Raffles Museum of Biodiversity Research. National University of Singapore, Singapore.](#)
- Summary:** Available from: http://rmbn.nus.edu.sg/raffles_museum_pub/flora_of_singapore_tc.pdf [Accessed 30 July 2010].
- Cosnard F. 1828. *Catalogue des plantes cultivées au Jardin botanique et de naturalisation de Cayenne, Guyane française (FR)*. A Cayenne, de L Imprimerie du Gouvernement.
- Cotler H., Maass J.M. 1999. Tree management in the northwestern Andean Cordillera of Peru. *Mountain Research and Development* 19: 153-160.
- De Cock G.C. 1980. Drought resistant fodder shrub crops in South Africa. In: H.N. Le Hourou (ed). *Browse In Africa*. Papers presented at the International Symposium on Browse in Africa Addis Ababa, April 8-12 1980, and other submissions.
- [Department of Primary Industries Victoria \(DPI Vic\) 2009. Invasive Plants - Succulents. The State of Victoria.](#)
- Summary:** Available from: http://www.dpi.vic.gov.au/DPI/Vro/vrosite.nsf/pages/weeds_succulents [Accessed 31 August 2010]
- [ecologia Environment 2006. Aztec Resources Limited Koolan Island iron ore mine and port facility significant flora management plan.](#)
- Summary:** Available from: <http://www.mtgibsoniron.com.au/uploads/17.07.09%20K1%20Significant%20Flora%20Management%20Plan.pdf> [Accessed 28 July 2010].
- El Oudiani et al. 2009. Elastic recovery and viscoelastic behaviour of *Agave americana* L. fibers. *Textile Research Journal* 79: 166-178.
- Ennabili A., Gharnit N., El Mokhtar E.H. 2000. Inventory and social interest of medicinal, aromatic and honey-plants from Mokrisset region (NW of Morocco). *Studia Botanica* 19: 57-74.
- Fernanda Vendramini F., Diaz S., Gurvich D.E., Wilson P.J., Thompson K., Hodgson J.G. 2002. Leaf traits as indicators of resource-use strategy in floras with succulent species. *New Phytologist* 154: 147-157.
- Finerman R., Sackett R. 2003. Using home gardens to decipher health and healing in the Andes. *Medical Anthropology Quarterly* 17: 459-481.
- Francis P. 1984. Plants as human adornment in India. *Economic Botany* 38: 194-209.
- Frenot et al. 2001. Human activities, ecosystem disturbance and plant invasions in subantarctic Crozet, Kerguelen and Amsterdam Islands Gajasen & Gajasen 1999. Ecological rationalities of the traditional homegarden system in the Chao Phraya Basin, Thailand Gebauer J., Luedeling E., Hammer K., Nagieb M., Buerkert A. 2007. Mountain oases in northern Oman: An environment for evolution and *in situ* conservation of plant genetic resources. *Genetic Resources and Crop Evolution* 54: 465-481.
- Genillier-Foin N., Avenel-Audran M. 2007. Dermate purpurique de contact au suc de *Agave americana*. (Purpuric contact dermatitis from *Agave americana*). *Annales de Dermatologie et de Vnrologie* 134: 477-478.
- [Gordon, D.R., Onderdonk D.A., Fox A.M., Stocker R.K., Gantz C. 2008. Australia/New Zealand Weed Risk Assessment adapted for Florida - Agave americana \(century plant\). Data used for analysis published in: Predicting Invasive Plants in Florida using the Australian Weed Risk Assessment. Invasive Plant Science and Management 1: 178-195.](#)
- Summary:** Available from: http://www.hear.org/wra/tncflwra/pdfs/tncflwra_agave_americana_ispm.pdf [Accessed 22 July 2010].
- [Government of the Republic of Kiribati 2004. State of the environment report 2000-2002.](#)
- Summary:** Available from: <http://www.sprep.org/att/IRC/eCOPIES/Countries/Kiribati/20.pdf> [Accessed 27 July 2010].
- Granda P. 2005. Carbon sink plantations in the Ecuadorian Andes. *Accin Ecolgica*.
- Groves R.H., Di Castri F. (eds) 1991. *Biogeography of Mediterranean invasions*. Cambridge University Press.

Groves R.H., 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., Waterhouse B.M. 2003. Weed categories for natural and agricultural ecosystem management. Bureau of Rural Sciences, Canberra.

Summary: Available from: <http://adl.brs.gov.au/brsShop/data/PC12781.pdf> [Accessed 2 August 2010].

Gunatilaka A.A.L., Sotheeswaran S., Balasubramanian S. 1978. Economically useful plants of Sri Lanka II: Commercially important steroidal saponinogens from Sri Lanka plants. Journal of the National Science Council of Sri Lanka 6: 121-128.

Guézou A., Pozo P., Buddenhagen C. 2007. Preventing establishment: An inventory of introduced plants in Puerto Villamil, Isabela Island, Galapagos. PLoS ONE 2: e1042.

Henderson L. 2007. Invasive, naturalised and casual alien plants in South Africa. Bothalia 37: 215-248.

Hulme *et al.* 2008. Assessing the risks to Mediterranean islands ecosystems from alien plant introductions. In: B. Tokarska-Guzik, J.H. Brock, G. Brundu, L. Child, C.C. Daehler, P. Pyšek (eds.) Plant Invasions: Human perception, ecological impacts and management. Pp 39-56.

Summary: Available from: <http://www.montsevilla.org/BookChapters%5CHulme%20et%20al2008.pdf> [Accessed 27 July 2010].

[Integrated Taxonomic Information System \(ITIS\) 2010. *Agave americana* L.](#)

Summary: Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=182660 [Accessed 22 July 2010].

Jaouadi M., M sahli S., Sakli F. 2009. Optimization and characterization of pulp extracted from the *Agave americana* L. fibers. Textile Research Journal 79: 110-120.

Jin J.M., Zhang Y.J., Yang C.R. 2004. Four new steroid constituents from the waste residue of fibre separation from *Agave americana* leaves. Chemical & Pharmaceutical Bulletin 52: 654-658.

Josep Penuelas J., Sardans J., Llusià J., Owen S.M., Carnicer J., Giambelluca T.W., Rezende E.L., Waite M., Niinemets J. 2010. Faster returns on leaf economics and different biogeochemical niche in invasive compared with native plant species. Global Change Biology 16: 2171-2185.

Kato H., Hata K., Yamamoto H., Yoshioka T. 2004. Effectiveness of the weed risk assessment system for the Bonin Islands. In: F. Koike, M.N. Clout, M. Kawamichi, M. De Poorter, K. Iwatsuki (eds.) Assessment and Control of Biological Invasion Risks. SHOUKADOH Book Sellers, Kyoto, Japan and the World Conservation Union (IUCN), Gland, Switzerland. Pp 65.

Kerner J., John Mitchell J., Maibach H.I. 1973. Irritant contact dermatitis from *Agave americana* L.. Archives of Dermatology 108:102-103.

Le Houérou H.N. 2000. Utilization of fodder trees and shrubs in the arid and semiarid zones of West Asia and North Africa. Arid Land Research and Management 14: 101-135.

[Lindsay A., Herpich M. 2009. EWeedMAT: Environmental Weed Management Action Tool: The Yorke Peninsula Case Study. Land & Water Australia, ACT.](#)

Summary: Available from: <http://nlwra.gov.au/files/products/defeating-weed-menace/pn22421/pn22421.pdf> [Accessed 2 August 2010].

Macdonald I.A.W., Reaser J.K., Bright C., Neville L.E., Howard G.W., Murphy S.J., Preston G. (eds.) 2003. Invasive Alien Species in Southern Africa: national reports & directory of resources. Global Invasive Species Programme, Cape Town, South Africa.

Marco A., Lavergne S., Dutoit T., Bertaudiere-Montes V. 2010. From the backyard to the backcountry: how ecological and biological traits explain the escape of garden plants into Mediterranean old fields. Biological Invasions 12: 761-779.

Maroyi A. 2009. Traditional homegardens and rural livelihoods in Nhema, Zimbabwe: A sustainable agroforestry system. International Journal of Sustainable Development & World Ecology 16: 1-8.

[Martin T.G., Campbell S., Grounds S. 2006. Weeds of Australian rangelands. The Rangeland Journal 28: 3-26.](#)

Summary: Available from:

<http://www.southwestnrm.org.au/sites/default/files/uploads/ihub/martin-tg-campbell-s-grounds-s-2006-weeds-australian-rangelands.pdf> [Accessed 1 September 2010]

[McGuffin M., Kartesz J.J., Leung A.Y., Tucker A.O. 2000. FDA Poisonous Plant Database. Herbs of commerce, 2nd edition. American Products Association, 421 pp.](#)

Summary: Available from: <http://www.accessdata.fda.gov/scripts/plantox/detail.cfm?id=18120> [Accessed 31 August 2010]

Mito & Uesugi 2004. Invasive alien species in Japan: the status quo and the new regulation for prevention of their adverse effects. Global Environmental Research 8: 171-191.

Myburgh D.W. 1994. The response of farmers to the drought hazard in the Karoo environment. GeoJournal 33: 401-410.

Neales T.F. 1970. Effect of ambient carbon dioxide concentration on the rate of transpiration of *Agave americana* in the dark. Nature 228: 880-882.

Negesse T., Makkarb H.P.S., Becker K. 2009. Nutritive value of some non-conventional feed resources of Ethiopia determined by chemical analyses and an in vitro gas method. Animal Feed Science and Technology 154: 204-217.

Negi P.S., Hajra P.K. 2007. Alien flora of Doon Valley, Northwest Himalaya. Current Science 92: 968-978.

Newton L.E., Mbugua P.K. 1993. A check-list and identification key for succulent plants in general cultivation in Nairobi. Journal of The East Africa Natural History Society and National Museum 82: 43-53.

Nishida K., Nakamura I., Morales C.O. 2009. Plants and butterflies of a small urban preserve in the Central Valley of Costa Rica. Revista de Biología Tropical 57: 31-67.

Nobel P.S. 1990. Environmental influences on CO₂ uptake by agaves, CAM plants with high productivities. Economic Botany 44: 488-502.

Ochoa & Andrade 2003. The introduced flora to Machu Picchu Sanctuary: an inventory and management priorities for biodiversity conservation (SP). Ecología en Bolivia 38: 141-160.

Parmar V.S., Jhaa H.N., Gupta A.K., Prasada A.K., Gupta S., Bollb P.M., Tyagib O.D. 1992. New antibacterial tetratriacontanol derivatives from *Agave americana* L.. Tetrahedron 48: 1281-1284.

Peana A.T., Moretti M.D.L., Manconi V., Desole G., Pippia P. 1997. Anti-inflammatory activity of aqueous extracts and steroidal saponinogens of *Agave americana*. Planta Medica 63: 199-202.

Peyton B. 1980. Ecology, distribution, and food habits of spectacled bears, *Tremarctos ornatus*, in Peru. Journal of Mammalogy 61: 639-652.

Pretto F., Celesti-Grappow L., Carli E., Blasi C. 2010. Influence of past land use and current human disturbance on non-native plant species on small Italian islands. Plant Ecology Plant Ecology pp. 1-15. Article in press.

[Queensland Herbarium 2002. Invasive Naturalised Plants in Southeast Queensland, alphabetical by genus. Queensland Government Environmental Protection Agency.](#)

Summary: Available from: <http://www.derm.qld.gov.au/register/p00726aa.pdf> [Accessed 31 August 2010]

Rasheed S., Dasti A.A. 2003. Quality and mechanical properties of plant commercial fibers. *Pakistan Journal of Biological Sciences* 6: 840-843.

Ricks M., Vogel L., Elston L., Hivnor C. 1999. Purpuric agave dermatitis. *Journal of the American Academy of Dermatology* 40: 356-358.

Riphey E., Hislop M.C., Dodd J. 2003. Reassessment of the vascular flora of Rottnest Island. *Journal of the Royal Society of Western Australia* 86: 7-23.

Rivera, G., Bocanegra-García, V. and Monge, A. 2010. Traditional plants as source of functional foods: a review. *Plantas tradicionales como fuente de alimentos funcionales: una revisión*. *CyTA - Journal of Food* 8: 159-167.

[Santos Guerra, A. 2011. *Crambe microcarpa*. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.2.](#)

Summary: Available from: <http://www.iucnredlist.org/apps/redlist/details/176463/0> [Accessed 16 January 2012]

Silva L., Smith C.W. 2006. A quantitative approach to the study of non-indigenous plants: an example from the Azores Archipelago. *Biodiversity and Conservation* 15: 1661-1679.

Smith G.F., Figueiredo E. 2007. Naturalized species of *Agave* L. (Agavaceae) on the southeastern coast of Portugal. *Haseltonia* 13: 52-60

[Space, J.C., Flynn T. 2001. Report to the Kingdom of Tonga on invasive plant species of environmental concern. U.S.D.A. Forest Service, Pacific Southwest Research Station. Institute of Pacific Islands Forestry Honolulu, Hawaii, USA.](#)

Summary: Available from: <http://lyris.sprep.org/att/IRC/eCOPIES/Countries/Tonga/12.pdf> [Accessed 27 July 2010].

[Starr F., Starr K. 2010. Plants of Hawaii: *Agave americana*.](#)

Summary: Available from: <http://www.hear.org/starr/images/search/?q=Agave+americana&o=plants> [Accessed 22 July 2010].

[Stevens, D. & Lanfranco, E. 2006. *Cheirolophus crassifolius*. In: IUCN 2012. IUCN Red List of Threatened Species. Version 2012.1](#)

Summary: Available from: <http://www.iucnredlist.org/apps/redlist/details/61621/0> [Accessed 1 March 2012]

Stoie A. 2007. *Ex situ* conservation of several species of succulent plants in the Cluj-Napoca Agrobotanical Garden. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca* 35: 39-47.

Tanasescu V.F., Teodorescu G. 2006. Exotic useful plants cultivated in the greenhouse complex of the botanical garden from Iasi (note II). *Buletinul Gradinii Botanice Iasi* 13: 33-41.

Thaman R.R. 2010. Vascular plants of the University of the South Pacific, Laucala Bay Campus, Suva, Fiji Islands. Present in Fiji.

[The Gaia Foundation 2006. Integrated management of specially protected coastal areas in Malta. Annex 2 to Management Plan For Ghajn Tuffieha : Habitat Restoration Plan.](#)

Summary: Available from:

<http://www.projectgaia.org/documents/download/Activity%20Report%20June%202006%20-%20GT%20-%20annex%204.pdf> [Accessed 27 July 2010].

Tyynel T., Niskanen A. 2000. Use and sustainability of Miombo Woodlands under community management in Zimbabwe. *Nordic Journal of African Studies* 9: 118-142.

[USDA-ARS 2010. *Agave americana* L. National Genetic Resources Program. Germplasm Resources Information Network - \(GRIN\) \[Online Database\]. National Germplasm Resources Laboratory, Beltsville, Maryland.](#)

Summary: Available from: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?1690> [Accessed 22 July 2010].

[USDA-NRCS 2010. *Agave americana* L. \(American century plant\). The PLANTS Database \(<http://plants.usda.gov>, 31 August 2010\). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.](#)

Summary: Available from: <http://plants.usda.gov/java/profile?symbol=AGAM> [Accessed 22 July 2010].

Van den Eynden, Veerle; Eduardo Cueva and Omar Cabrera, 2003. Wild foods from southern Ecuador. *Economic Botany* Volume 57, Number 4, 576-603

[Vitelli J.S., Pitt J.L. 2006. Assessment of current weed control methods relevant to the management of the biodiversity of Australian rangelands. *The Rangeland Journal* 28: 37-46.](#)

Summary: Available from:

<http://www.southwestnrm.org.au/sites/default/files/uploads/iHub/vitelli-js-pitt-jl-2006-assessment-current-weed-control-methods-relevant.pdf> [Accessed 1 September 2010]

Weber E., Sun S.G., Li B. 2006. Invasive alien plants in China: diversity and ecological insights. *Biological Invasions* 10: 1411-1429.

[Western Australian Agriculture Authority 2009. Harmful garden plants in Western Australia. Government of Western Australia.](#)

Summary: Available from: http://www.agric.wa.gov.au/objtwr/imported_assets/content/hort/flor/flodpw/harmfulplants.pdf [Accessed 31 August 2010]

[Wright A.E., Cameron E.K. 1990. Vegetation management of northern offshore islands. In: D.R. Towns, C.H. Daugherty, I.A.E. Atkinson \(eds\) Ecological restoration of New Zealand islands. Conservation Sciences Publication No. 2 Department of Conservation, Wellington, New Zealand. Pp 221-239.](#)

Summary: Available from: <http://192.206.154.93/upload/documents/science-and-technical/EcologicalRestorationNZIslands.pdf#page=79> [Accessed 4 August 2010].

Wu S.H., Sun H.T., Teng Y.C., Rejmanek M., Chaw S.M., Yang T.Y.A., Hsieh C.F. 2010a. Patterns of plant invasions in China: Taxonomic, biogeographic, climatic approaches and anthropogenic effects. *Biological Invasions* 12: 2179-2206.

Wu S.H., Yang T.Y.A., Teng Y.C., Chang C.H., Yang K.C., Hsieh C.F. 2010b. Insights of the latest naturalized flora of Taiwan: Change in the past eight years. *Taiwania* 55: 139-159.

Zonneveld B.J.M., Leitch I.J., Bennett M.D. 2005. First nuclear DNA amounts in more than 300 angiosperms. *Annals of Botany* 96: 229-244.