GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Alternanthera philoxeroides***

Alternanthera philoxeroides 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Caryophyllales	Amaranthaceae

Common name xi han lian zi cao (Chinese), alligator weed (English), pig weed (English)

Synonym
Achyranthes philoxeroides , (Mart.) Standl.
Alternanthera paludosa , Bunbury
Alternanthera philoxerina , Suess.
Alternanthera philoxeroides , (Mart.) Griseb. var. *luxurians* Suess.
Alternanthera philoxeroides , (Mart.) Griseb. var. *obtusifolia* (Mart. ex Moq.) Hicken
Alternanthera philoxeroides , (Mart.) Griseb. var. *acutifolia* (Mart. ex Moq.) Hicken
Alternanthera philoxeroides , (Mart.) Griseb. forma *angustifolia* Suess.
Alternanthera philoxeroides , (Mart.) Griseb. var. *lancifolia* Chodat
Bucholzia philoxeroides , Mart.
Telanthera philoxeroides , (Mart.) Moq.
Telanthera philoxeroides , (Mart.) Moq. var. *acutifolia* Mart. ex Moq.
Telanthera philoxeroides , (Mart.) Moq. var. *obtusifolia* Mart. ex Moq.

Similar species *Alternanthera caracasana, Alternanthera denticulata, Alternanthera sessilis, Ludwigia adscenciens, Persicaria decipiens, Polygonum amphibium, Tradescantia fluminensis*

Summary Alternanthera philoxeroides, commonly known as alligator weed, is a perennial stoloniferous herb that can be found in many parts of the world, infesting rivers, lakes, ponds and irrigation canals, as well as many terrestrial habitats. The aquatic form of the plant has the potential to become a serious threat to waterways, agriculture and the environment. The terrestrial form of Alternanthera philoxeroides grows into a dense mat with a massive underground rhizomatous root system. The canopy can smother most other herbaceous plant species. It has proven to be extremely expensive to attempt controlling Alternanthera philoxeroides.

view this species on IUCN Red List

Species Description
The Commonwealth of Australia (2000) states that, \"*Alternanthera philoxeroides* is a summer growing perennial herb. It has small white papery flower heads 8-10cm in diameter, that appear generally from November to March. *A. philoxeroides* does not produce viable seed. The leaves are shiny, spear-shaped, opposite, sessile, entire and about 2-7cm long and about 1-2cm wide. One of the main identifying features of alligator weed is that the stems are hollow when mature. This weed produces masses of creeping and layering stems, up to 10m long. Over water, roots are adventitious. On land adventitious roots and thickened taproots occur. Over water stems grow to 60cm high and have large, hollow internodes. On land stems are shorter and internodes smaller and much less hollow. Frost and ice kill exposed stems and leaves; however, protected stems survive to support the next season's growth. Mats may extend 15 metres over the water surface and become so robust they can support the weight of a man. Reproduction is asexual with maximum growth in mid-summer. The plant responds to high levels of nutrients and withstands 10 percent sea-strength salinity or up to 30 percent salinity in flowing brackish water.\"

Habitat Description
Alternanthera philoxeroides is a perennial stoloniferous herb found in both aquatic to terrestrial habitats. Rui-Yan and Ren (2004) have found *A. philoxeroides* infesting rivers, lakes, ponds, and irrigation canals, as well as many terrestrial habitats.Sainty *et al.* (1998) state that, \"*A. philoxeroides* grows on a wide range of substrata, from sand to heavy clay. When floating on water, it may be rooted in the bank or substrate, or free floating.\"

Reproduction
Sainty *et al.* (1998) states that, \"*Alternanthera philoxeroides* does not produce viable seed under field conditions (Center and Balciunas, 1975; Sainty, 1973; Julien, 1995). Consequently reproduction is entirely vegetative and relies on the production of nodes. Each node has two axillary buds. Stem nodes, portions of thicker roots, and underground stems are all capable of growth. Dispersal is by fragmentation.\"

General Impacts
Gunasekera (1999) states that, \"*Alternanthera philoxeroides* is considered to be one of the worst aquatic weeds in the world. The aquatic form of the plant has the potential to become a serious threat to waterways, agriculture and the environment. The terrestrial form grows into a dense mat with a massive underground rhizomatous root system. The canopy can smother most other herbaceous plant species.\" Buckingham (1996) states that, \"Floating stems grow across the surface of the waterway forming a dense interwoven mat. This mat clogs the waterway and out competes native plants along the shore.\" The Commonwealth of Australia (2000) states that, \"Alligator weed disrupts the aquatic environments by blanketing the surface of the water impeding penetration of light, gaseous exchange (sometimes leading to anaerobic conditions) with adverse affects on flora and fauna. Mats impede flow and lodge against structures thereby promoting sedimentation and contributing to flooding. They prevent access to and use of water, promote health problems by providing habitats for mosquitoes and degrade natural aesthetics.\" Control of this species has proven to be an expensive and complicated ordeal wherever it has established.

Management Info
Preventative measures:: The Australian Department of the Environment and Heritage (2003) state that, \"*Alternanthera philoxeroides* has rarely, if ever, been successfully eradicated once it has infested a water body, despite numerous costly attempts. For this reason, the highest priority for the management of alligator weed is an effective system of early detection and eradication before infestations become established.\"
A Risk assessment of *Alternanthera philoxeroides* for Australia was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 12 and a recommendation of: reject the plant for import (Australia) or species likely to be of high risk (Pacific).
The wetland and terrestrial *A. philoxeroides* is regarded as a 'Weed of National Significance in Australia' because of its invasiveness, its impacts- both economic and environmental and because it is difficult to control.
The Alligator weed Strategic plan for Australia is a detailed document that outlines the biology, impacts and management options to control its spread.
A weed management guide for alligator weed has been developed by CRC for Australian Weed Management and the Commonwealth Department of the Environment and Heritage that briefly describes different options for the control and management of its spread including integrated management.
A more recent publication Van Oosterhout (2007) brings together information and advice on the best and most effective advice for eradication, suppression and containment of alligator weed in Australia, from over 30 years of research. Species description: NSW Department of Primary Industries alligator weed profile describes in detail its physical characteristics, distinguishing features and descriptions of similar species to aid in accurate identification.

Pathway
It was probably introduced into Australia at Carrington (Newcastle docks area) in NSW when ship's ballast was dumped. It was first recorded there in 1946 (Commonwealth of Australia, 2000).The movement of contaminated plant mulch was identified as one reason for the recent spread (Coventry *et al.* 2002).

Principal source:

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG) with support from the Terrestrial and Freshwater Biodiversity Information System (TFBIS) Programme (Copyright statement)
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ALIEN RANGE

[42] AUSTRALIA
[1] FRANCE
[2] INDONESIA
[2] MYANMAR
[1] PAPUA NEW GUINEA
[1] SINGAPORE
[2] THAILAND
[7] CHINA
[3] INDIA
[2] ITALY
[4] NEW ZEALAND
[1] PUERTO RICO
[1] SRI LANKA
[13] UNITED STATES

Red List assessed species 1: LC = 1;

Alternanthera sessilis **LC**

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IUCN/SSC Invasive Species Specialist Group (ISSG)., 2010. A Compilation of Information Sources for Conservation Managers.
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