GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Zizania latifolia***

Zizania latifolia 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

Common name water-bamboo (English), Manchurian zizania (English), Manchurian water-rice (English), Manchurian wild rice (English), Manchurian wildrice (English), kwo-bai (English), Wasserbambus (English), makomo (English), coba (English), kuw-sun (English), wild rice stem (English), makomo dake (English), jiao-bai (English), ricegrass (English)

Synonym *Zizania caduciflora* , (Trin.) Hand.-Mazz.
Hydropyrum latifolium , Griseb

Similar species *Typha orientalis*

Summary Zizania latifolia is a perennial aquatic grass. In places where it has been introduced, its dense growth can exclude almost any native species of plant, fish, or animal. It blocks drainage systems and if not controlled can easily overgrow pasture and farmland converting productive farmland into swamp.

view this species on IUCN Red List

Species Description
Zizania latifolia is a perennial aquatic grass, which grows up to 4m tall, with spreading rhizomes. The flowers are hermaphrodite (have both male and female organs). *Z. latifolia* is tall and upright with 2-3cm wide leaves up to 2.5m long and a stout midrib. The flower head is 40-60cm long, and is purplish or red brown in colour (Environment Waikato, 2002); National Pest Plant Accord, 2001; Plants for a Future, 2000).

Notes
Zizania latifolia grows symbiotically with the fungus *Ustilago esculenta* which causes the stem to enlarge (Bruinsa *et al.* 1998).

Uses
Plants for a Future (2000) state that \"The swollen stem bases, infected with the smut fungus *Ustilago esculenta*, are eaten as a vegetable by the Chinese. They must be harvested before the fungus starts to produce spores since the flesh deteriorates at this time. They are parboiled then sautéed with other vegetables and have a nutty flavour reminiscent of coconut. The wild forms of this species have developed resistance to the smut, so especially disease-susceptible cultivars are grown. The seed can be cooked. It can be used like rice in sweet or savoury dishes. The seed can also be ground into a flour and used in making cakes, biscuits etc. Young inflorescences can be cooked and used as a vegetable. Young shoots can be eaten either raw or cooked and have a pleasant sweet taste. Leaves can be woven into mats.\" As for medical uses the authors report that, \"The shoots, roots and the seed are diuretic and febrifuge and the leaves are tonic.\"

Habitat Description
Shaw and Allen (2003) report that In New Zealand, \"*Zizania latifolia* has been recorded from lagoons, river banks, tidal flats, roadside ditches, and damp paddocks.\" *Z. Latifolia* is a relatively hardy plant that can grow in both fresh and salt water (Environment Waikato, 2002). Yamaguchi (1990) states that, \"*Zizania latifolia* can be grown in stagnant ponds and in poorly drained soils.\" It does well in sandy, loamy or clayey soils; in acid, neutral or alkaline soils and can grow in full sun or semi-shade (Plants for the future, 2000).

General Impacts
The Auckland Regional Council (2002) reports that, *Zizania latifolia* is a very invasive plant. It can invade pastures causing good land to become waterlogged and form swampy areas. The rhizomes of the plant can also penetrate into and through stopbanks, opening them up and eventually destroying them. It can damage lakes and streamside plant communities by overtopping and suppressing other marginal species. *Z. latifolia* is difficult to eradicate because any root or rhizome fragments will regrow. Herbicides are the most effective control measure, but use of these is restricted because many chemicals can affect waterways. There are concerns that the spread of *Z. latifolia* could seriously affect the use of farmland, and freshwater and estuarine ecosystems. (The Auckland Regional Council 2002; Environment Waikato, 2002; The Northland Regional Council, 2002).

Management Info
Chemical: The National Pest Plant Accord (2001) states that, \"Where only a few plants are established they can be carefully dug out and disposed of, or can be treated with herbicide. Larger areas can be sprayed with herbicide, but follow up treatments are usually necessary.\"

Pathway
It is often cultivated as a food crop in East Asia and is often grown as cover for wild fowl along the sides of lakes in Britain (Plants for a Future, 2000).Cumberland (1966) reported the likely introduction of *Z. latifolia* in the soil ballast of ships. (Champion and Clayton, 2000).

Principal source: Environment Waikato, 2002. Manchurian Wild Rice (*Zizania latifolia*)

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ALIEN RANGE

[11] NEW ZEALAND

[2] UNITED KINGDOM

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Summary: This report is the first stage in a three-stage development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand.
Available from: http://www.doc.govt.nz/upload/documents/science-and-technical/sfc141.pdf [Accessed 13 June 2007]

Champion, P.D.; Clayton, J.S. 2001. Border control for potential aquatic weeds. Stage 2. Weed risk assessment. Science for Conservation 185. 30 p.
Summary: This report is the second stage in the development of a Border Control Programme for aquatic plants that have the potential to become ecological weeds in New Zealand. Importers and traders in aquatic plants were surveyed to identify the plant species known or likely to be present in New Zealand. The Aquatic Plant Weed Risk Assessment Model was used to help assess the level of risk posed by these species. The report presents evidence of the various entry pathways and considers the impact that new invasive aquatic weed species may have on vulnerable native aquatic species and communities.
Available from: http://www.doc.govt.nz/upload/documents/science-and-technical/SFC185.pdf [Accessed 13 June 2007]
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Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
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