GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: ***Mikania micrantha***

Mikania micrantha 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Asterales	Asteraceae

Common name Chinesischer Sommerefeu (German), mile-a-minute weed (English), Chinese creeper (English), American rope (English), liane americaine (French), fue saina (Niuean), wa mbosuthu (Fijian), wa mbosuvu (Fijian), wa mbutako (Fijian), wa ndamele (Fijian), ovaova (Fijian), wa bosucu (Fijian), usuvanua (Fijian)

Synonym

Similar species

Summary Mikania micrantha is a perennial creeping climber known for its vigorous and rampant growth. It grows best where fertility, organic matter, soil moisture and humidity are all high. It damages or kills other plants by cutting out the light and smothering them. A native of Central and South America, M. micrantha was introduced to India after the Second World War to camouflage airfields and is now a major weed. It is also one of the most widespread and problematic weeds in the Pacific region. Its seeds are dispersed by wind and also on clothing or hair.

view this species on IUCN Red List

Species Description
A branched, slender-stemmed perennial vine. The leaves are arranged in opposite\r\npairs along the stems and are heart-shaped or triangular with an acute tip and a broad base. Leaves\r\nmay be 4-13cm long. The flowers, each 3-5mm long, are arranged in dense terminal or axillary\r\ncorymbs. Individual florets are white to greenish-white. The seed is black, linear-oblong, five-angled\r\nand about 2mm long. Each seed has a terminal pappus of white bristles that facilitates dispersal by\r\nwind or on the hair of animals (Pacific Island Ecosystems at Risk).

Reproduction
Reproduces sexually by seeds, and vegetatively by rooting at nodes.
A single plant may cover over 25 square metres within a few months, and release as many as 40,000 viable seeds every year. In some locations flowering and seed production are during short days only.

Nutrition
Grows best where fertility, organic matter, soil moisture, and humidity are all high. Can tolerate some shade.

General Impacts
Once established, *Mikania micrantha* spreads at an alarming rate, readily climbing and twining on any vertical support, including crops, bushes, trees, walls and fences. Its shoots have been reported to grow up to 27mm a day. Vegetative reproduction is also efficient and vigorous. Although intolerant of heavy shade it readily colonises gaps.\r\n

\r\n*M. micrantha* damages or kills other plants by cutting out the light and smothering them. In this respect it is especially damaging in young plantations and nurseries. It also competes for water and nutrients, but perhaps even more importantly, it is believed that the plant releases substances that inhibit the growth of other plants.\r\n

\r\n*M. micrantha* is one of the three worst weeds of tea in India and Indonesia and of rubber in Sri Lanka and Malaysia. In Samoa, incursions of *M. micrantha* have caused the abandonment of coconut plantations, and the weed has been reported to kill large breadfruit trees. It also causes serious problems in oil palm, banana, cacao and forestry crops, and in pastures. While it does not grow well in rice paddies, it can encroach from the edges to smother the crop.\r\n

\r\n(Northern Territory Department of Business, Industry and Resource Development)

Management Info
Chemical: Control of *Mikania micrantha* is difficult, because of the high output of viable seeds, and because new plants can grow from even the tiniest stem fragments. Other than complete destruction of all the stems, herbicides provide the only suitable method of control at present (Northern Territory Department of Business, Industry and Resource Development). \"Probably susceptible to: 1) many residual herbicides at standard rates; 2) translocated herbicides including glyphosate and 2,4-D before flowering; 3) contact herbicides (including paraquat) while still a seedling; however established plants will probably recover from the base\" (Swarbrick, 1997 in PIER, 2003).
\r\nBiological: *Liothrips mikaniae* was introduced into Solomon Islands in 1988, but failed to establish (Swarbrick, 1997). \"A number of very promising (and probably specific) natural enemies are known in Central and South America... Of these a thrips, *L. mikaniae* appears to be specific and to have considerable potential as a biological control organism. A bug, *Teleonemia* sp., several beetles and an eriophyid mite, *Acalitus* sp. also warrant serious consideration. A number of other natural enemies of little known specificity also attack *M. micrantha*\" (Waterhouse and Norris, 1987). Fungal pathogens have also been investigated in India as a potential biological control method (Swarbrick, 1997 in PIER, 2003).\r\n
\r\nOceania: At two regional technical meetings on plant protection and biosecurity in March 2002 and March 2004, 11 Pacifc Ocean \r\r\ncountries rated mile-a-minute (*M. micrantha*) and giant sensitive plant (*Mimosa diplotricha*) among their \r\r\ntop 10 worst weeds. \r\n
\r\nThe meetings further resolved for the Secretariat of the Pacifc Community (SPC) to assist Pacific Island Countries and \r\r\nTerritories to address major weeds of the region. As a result, SPC submitted a proposal to ACIAR to fund a major biocontrol \r\r\nproject against these two weeds. Both *M. micrantha* and *M. diplotricha* were rated in the “most important” \r\r\ncategory and have good prospects for biocontrol. Three countries, Papua New Guinea (PNG), Fiji and Samoa, which rated both weeds highly, were \r\r\nchosen to be initial implementers of the proposed project as they showed initial interest and had suitable facilities to \r\r\nimplement the activities. \r\n
\r\nA project development visit to Fiji, PNG and Samoa was carried out by Warea Orapa, Coordinator Weed Management, and Michael \r\r\nDay, an Entomologist based at Alan Fletcher Research Station, Queensland to establish linkages and discuss the proposed \r\r\nproject on the two weed pests. Because of conflicting views on Mikania in Samoa, Samoa has officially opted to wait till the \r\r\nresearch work is completed in Fiji and PNG. In addition, the proposed project may concentrate only on Mikania biocontrol \r\r\nsince field populations of the psyllid *Heteropsylla spinulosa*, released in these countries under the GTZ Biocontrol \r\r\nProgramme in Fiji and Samoa in the mid-1990s and independently released in PNG (by Ramu Sugar in 1992), are established.\r\n
\r\n*M. micrantha* in PNG has long been regarded as a problem weed, especially in large plantation areas as well as \r\r\nsmallholder farms on New Britain Island and several other areas. Support for a biocontrol project has been aired since 2002 \r\r\nby the National Agricultural Research Institute (NARI) and the Cocoa and Coconut Institute. For more information contact \r\r\nWareaO@spc.int (Pacific Pest Info, No. 55, January 2005).

Pathway
Mikania micrantha was introduced into India after the Second World War to camouflage airfields (New Scientist, 2003)

Principal source: Pacific Island Ecosystems at Risk (PIER), 2003. *Mikania micrantha*

Compiler: IUCN/SSC Invasive Species Specialist Group (ISSG)

Review:

Pubblication date: 2005-01-24

ALIEN RANGE

[4] AMERICAN SAMOA **[1]** AUSTRALIA

[1] BANGLADESH
[1] CHINA
[1] COOK ISLANDS
[1] FRENCH POLYNESIA
[1] HONG KONG
[4] INDONESIA
[1] MAURITIUS
[1] NEPAL
[1] NIUE
[1] PALAU
[1] PHILIPPINES
[1] SAMOA
[1] SRI LANKA
[1] TOKELAU
[1] TUVALU
[1] WALLIS AND FUTUNA

[1] BRITISH INDIAN OCEAN TERRITORY
[1] CHRISTMAS ISLAND
[1] FIJI
[1] GUAM
[2] INDIA
[1] MALAYSIA
[3] MICRONESIA, FEDERATED STATES OF
[1] NEW CALEDONIA
[1] NORTHERN MARIANA ISLANDS
[1] PAPUA NEW GUINEA
[1] REUNION
[1] SOLOMON ISLANDS
[1] THAILAND
[1] TONGA
[1] VANUATU

BIBLIOGRAPHY

20 references found for **Mikania micrantha**

Managment information

Csurhes, S. and Edwards, R., 1998. Potential environmental weeds in Australia: candidate species for preventative control. Queensland Department of Natural Resources.

Day, M. D., A. Kawi,3 K. Kurika, C. F. Dewhurst, S. Waisale, J. Saul-Maora, J. Fidelis, J. Bokosou, J. Moxon, W. Orapa, and K. A. D. Senaratne., 2012. *Mikania micrantha* Kunth (Asteraceae) (Mile-a-Minute): Its Distribution and Physical and Socioeconomic Impacts in Papua New Guinea Pacific Science 66(2):213-223. 2012

Julien, M. H. (ed.) 1992. Biological control of weeds: a world catalogue of agents and their target weeds (3rd edition). CAB International, Wallingford, UK. 28pp.

Kueffer, C. and Mauremootoo, J., 2004. Case Studies on the Status of Invasive Woody Plant Species in the Western Indian Ocean. 3. Mauritius (Islands of Mauritius and Rodrigues). Forest Health & Biosecurity Working Papers FBS/4-3E. Forestry Department, Food and Agriculture Organization of the United Nations, Rome, Italy.

New Scientist vol 178 issue 2401 - 28 June 2003, page 10. Fungus in your tea, sir?
Summary: Biocontrol of *Mikania micrantha*

Pacific Pest Info Newsletter. Published by the Secretariat of the Pacific Community: Plant Protection Service, Private Mail Bag, Suva, Fiji Islands. Tel: (679) 3370-733; Fax: (679) 3370-021.
Pacific Pest Info No. 51, August 2004. ISSN: 1728-5291. Secretariat of the Pacific Community, Plant Protection Service.
Summary: Available from: http://www.spc.int/pps/PestInfos/PestInfo51_Aug04.pdf [Accessed May 20 2005]

PIER (Pacific Island Ecosystems at Risk), 2003. *Mikania micrantha*
Summary: Ecology, synonyms, common names, distributions (Pacific as well as global), management and impact information. Available from: http://www.hear.org/pier/species/mikania_micrantha.htm [Accessed 18 August 2003].

Sankaran, K.V.; Muraleedharan, P.K.; Anitha, V. (2001) Integrated management of the alien invasive weed *Mikania micrantha* in the Western Ghats. Final report of the research project KFRI/283/97 August 1997- December 1999.
Summary: Distribution, impacts and management notes from Kerala, India.

The Secretariat of the Pacific Community (SPC)., undated. *Mikania* Biocontrol Project. Biological control of mile-a-minute weed (*Mikania micrantha*) in Fiji and Papua New Guinea
Summary: Available from: http://www.spc.int/lrd/mikania/Index.htm [Accessed 24 May 2007]

Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.
Summary: This database compiles information on alien species from British Overseas Territories. Available from: http://www.jncc.gov.uk/page-3660 [Accessed 10 November 2009]

Wilson, Colin, Wildlife Management Officer, Department of Infrastructure, Planning and Environment, Parks & Wildlife Service, Northern Territory, Australia.
Summary: Compilor of original GISD profile of *Chromoleana odorata*.

General information

Conservatoire Botanique National De Mascarin (BOULLET V. coord.) 2007. *Mikania micrantha*. - Index de la flore vasculaire de la R&#65533;union (Trach&#65533;ophytes) : statuts, menaces et protections. - Version 2007.1
Summary: Base de donn&#65533;es sur la flore de la R&#65533;union. De nombreuses informations tr&#65533;s utiles. Available from: http://flore.cbnm.org/index2.php?page=taxon&num=d3f93e7766e8e1b7ef66dfdd9a8be93b[Accessed March 2008]

Florence J., Chevillotte H., Ollier C.,& Meyer J.-Y. 2007. *Mikania micrantha*. Base de donn&#65533;es botaniques Nadeaud de l Herbier de la Polyn&#65533;sie fran&#65533;aise (PAP).
Summary: Base de donn&#65533;es sur le flore de Polyn&#65533;sie Fran&#65533;aise. Available from:http://www.herbier-tahiti.pf/Selection_Taxonomie.php?id_tax=7364 [Accessed March 2008]

Fournet, J. 2002. Flore illustr&#65533;e des phan&#65533;rogames de guadeloupe et de Martinique. CIRAD-Gondwana editions.

Innes, J. G. 1990. Ship Rat. The Handbook of New Zealand Mammals. King, C. M. (ed.) Oxford University Press: 206-225.
Summary: A complete reference to the ship rat in New Zealand.
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Mikania micrantha*
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.
Available from:
http://www.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Mikania+micrantha&p_format=&p_ifx=plglt&p_lang=
[Accessed March 2005]
Meyer, J.-Y. 2000. Invasive plants in the Pacific Islands. In: The Invasive Species in the Pacific: A Technical Review and Draft Regional Strategy. Sherley, G. (tech. ed). Published in June 2000 by the South Pacific Regional Environment Programme (SPREP).
Summary: Resource that includes the distribution of invasive species throughout the Pacific Islands.
Meyer, J.-Y. 2004. Threat of invasive alien plants to native flora and forest vegetation of eastern Polynesia. Pacific Science, 58, 357-375
Summary: Dans cet article, la menace croissante des plantes exotiques envahissantes est discut�e et les esp�ces les plus envahissantes sont d�crites. Des hypoth�ses sur l invasibilit� des �les sont pr�sent�es � la lumi�re des observations et des donn�es r�colt�es.
Swarbrick, J. T. 1997. Weeds of the Pacific Islands. South Pacific Commission, Noumea, New Caledonia.