**Cinnamomum camphora**

**System:** Terrestrial

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plantae</td>
<td>Magnoliophyta</td>
<td>Magnoliopsida</td>
<td>Laurales</td>
<td>Lauraceae</td>
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</tbody>
</table>

**Common name**
- arvore da camphora (Portuguese), camphor laurel (English), camphre (French), camphrier (French), Japanese camphor (English), kampferbaum (German), canfora (Italian), kuso-no-ki (Japanese), alcanfor (Spanish), alcanforero (Spanish), campher (German), camphor tree (English)

**Synonym**
- *Laurus camphora*, (L.)

**Similar species**
- *Cinnamomum zeylanicum*

**Summary**
Cinnamomum camphora is native to Japan, China, Taiwan and northern Vietnam. *C. camphora* has become widely naturalised in Australia. In the United States, it grows along the Gulf Coast and in California. *C. camphora* seeds are easily spread by birds from cultivated yards to open forests, and it is also spread to new locations through plant nursery sales. *C. camphora* fruits, leaves, and roots are toxic to humans in large doses.

**Species Description**
The camphor tree is a broadleaved evergreen growing to heights of 15 - 30m achieving a canopy that is twice as wide as its height. According to FFI (2003), the leaves of *C. Camphora* are 5-8cm long, 1.5-5cm wide, oval-shaped, and taper into an acute apex. Leaf bases are wedge-shaped or rounded and the leaf surfaces are bright green and lustrous above, duller and slightly greyish-green below. The fruit of *C. Camphora* is a black drupe, about 2cm in diameter, held by a leathery floral, funnel-like tube that occurs in clusters at the end of a stalk. The leaves of the camphor tree give off a strong odour when crushed making it easy to identify.

**Notes**
Major chemical compounds in wood and leaves of *C. camphora* are camphor, safrole, linalool, 1,8-cineole, a-pinene, a-terpineol, ?-cymene.

**Uses**
According to LCD (2000), *C. camphora* is widely planted as a shade tree, screen, or windbreak. In China and Japan, it is grown commercially for its medicinal oil.
Habitat Description
LCD (2000) indicates that *C. camphora* prefers fertile, sandy soil. It will tolerate a pH anywhere in the range of 4.3 to 8, and will grow in full sun or partial shade. However, *C. camphora* does not do well in wet soils. Established trees are tolerant of drought. Occurs primarily in drier disturbed areas such as roadides and fencerows, but has invaded natural areas such as mesic hammocks, upland pine woods, and scrubland.

Reproduction
WAC (UNDATED) indicates that *C. camphora* flowers are hermaphroditic. The fruit ripens in autumn and turns black when ripe. Seeds of *C. camphora* have poor germination due to a hard seed coat.

General Impacts
Murray and Ramey (2003) note that *C. camphora* grows like a weed, infesting forests and displacing native trees. According to LCD (2000), *C. camphora* fruits, leaves, and roots are toxic to humans in large doses. They contain chemicals that stimulate the central nervous system and may affect respiration or cause convulsions. In Chinese medicine, camphor is forbidden for pregnant women and those with a deficiency of vital energy or yin.

Management Info
Preventative measures: A Risk Assessment of *C. camphora* 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 7.5 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."
Physical: According to Starr et al. (2003), small seedlings of *C. camphora* can be hand pulled or grubbed out. It is important that the roots are removed otherwise the tree could regrow.
Chemical: Foliar spray with herbicides on young *Cinnamomum camphora* trees up to 3m tall is also effective. Basal bark or cut stump herbicide treatments are effective for trees up to 6m, or with a basal stem diameter up to 30cm with no multi stems. For basal bark, spray from ground level up to a height of 30cm or higher than where multi stems branch.

Principal source: *Cinnamomum camphora* (LCD, 2000)
*Pacific Islands Ecosystems at Risk*, (PIER, 2002)

Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review: Ching-Te Chien (Ph.D.) Associate Researcher Taiwan Forestry Research Institute.
Taipei, Taiwan

ALIEN RANGE

[10] UNITED STATES [1] VIETNAM
[1] VIRGIN ISLANDS, U.S.

BIBLIOGRAPHY

19 references found for Cinnamomum camphora

Management information
Summary: A study on the use of a screening system to assess proposed plant introductions to Hawaii or other Pacific Islands and to identify high-risk species used in horticulture and forestry which would greatly reduce future pest-plant problems and allow entry of most nonpests.

Summary: Advice to the Minister for the Environment and Heritage from the Threatened Species Scientific Committee (TSSC) on Amendments to the List of Key Threatening Processes under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act): Cinnamomum camphora, Camphor Laurel most toxic chemotypes.

European and Mediterranean Plant Protection Organization (EPPO), 2006. Guidelines for the management of invasive alien plants or potentially invasive alien plants which are intended for import or have been intentionally imported. EPPO Bulletin 36 (3), 417-418.

PIER (Pacific Island Ecosystems at Risk), 2002. Cinnamomum camphora
Summary: Ecology, synonyms, common names, distributions (Pacific as well as global), management and impact information.

Summary: A description of management and control procedures of C. camphora.

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]

General information
Centre des ressources biologiques, Plantes tropicales. INRA-CIRAD. 2007.

Conservatoire Botanique National De Mascarin (BOULLET V. coord.) 2007. - Cinnamomum camphora Index de la flore vasculaire de la R'union (Trach?phytes) : statuts, menaces et protections. – Version 2007.1
Summary: Base de donn?es sur la flore de la R'union. De nombreuses informations tr?s utiles.

Summary: A short summary on the description of C. camphora.
GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: Cinnamomum camphora


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.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=18175 [Accessed December 31 2004]


RGIS (Rockledge Gardens Information Sheet). UNDATED. Camphor Tree.


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