

W.8 KARIBA WEED/KARIBAVARING

(*Salvinia molesta* Mitchell)

Family: Salviniaceae

(Compiled by the Botanical Research Institute, Pretoria)

Kariba weed is a small, green to yellow-green, free-floating fern. Its thin horizontal stem bears pairs of oval leaves, notched at the tip and varying in width from 10 to 60 mm. The leaves are unwettable and velvety due to a dense cover of hairs, each bearing a minute cage-like structure at the tip. These hairs trap air bubbles and thus keep the plant afloat. Leaves of young plants are green, longer than broad, and lie almost flat, while in older plants, growing in dense mats, they are yellowish-green to brownish, broader than long and tend to fold together. Below each pair of leaves hangs a third, very modified, leaf that is divided into numerous, finely feathered, root-like parts

to 250 mm long. Clusters of rounded, sterile fruiting bodies, about 1 mm in diameter, may be attached to these root-like leaves. Kariba weed propagates only vegetatively and regenerates easily from small fragments which include a growing point.



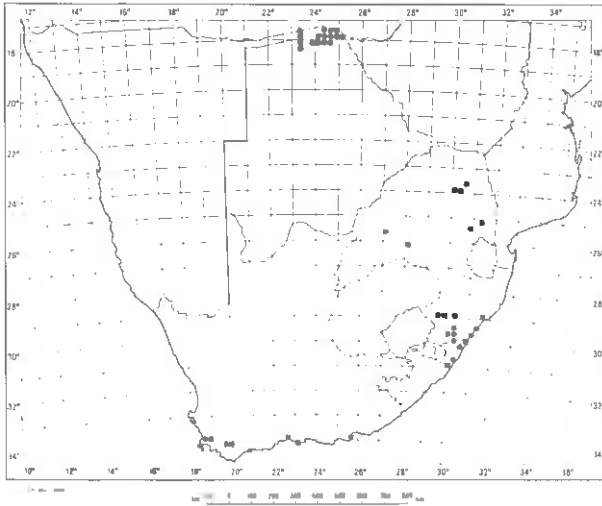
Related species

The kariba weed was formerly misidentified as *S. auriculata* Aubl.

Only one species of *Salvinia* is found in South Africa. It is thought to be a native of South America and of possible hybrid origin. A second species, *S. hastata* Desv., occurs naturally on the lower Zambezi and Shire Rivers. It is similar to Kariba Weed but the hairs on its leaves do not end in cage-like structures. The genus *Salvinia* with about 10 species, is mainly of South American origin.

Distribution

Kariba weed is today one of the most troublesome aquatic weeds widely distributed in tropical and subtropical countries such as India, Malaysia and Australia and in African countries such as Kenya, Zambia, Zaire, Zimbabwe, Angola, Mozambique, eastern Caprivi, Botswana and South Africa. In South Africa it is found in Transvaal, Natal and the southern and south-western Cape. Man is responsible for long distance dispersal while agents such as water currents, wind, floods, animals and navigation cause local spread.



Ecology

Under favourable conditions, plants of kariba weed may double their mass in 4 to 10 days. On Lake Kariba the species was first noticed in May 1959. Three years later 1 003 km² of the water surface was covered by the weed. Permanent mats are formed in areas sheltered from wave action, especially where partially submerged objects provide anchorage. Growth of the species accelerates with an increase in temperature up to 36 °C. Kariba weed tolerates saline conditions for short periods. It is damaged, but not completely killed, by moderate frost.

Importance

Mats of kariba weed up to 0,5m thick or more may choke dams, small lakes, rivers and canals, and may promote build-up of organic debris resulting in low oxygen levels and poor water quality. Dense masses of the weed impede navigation, fishing and other recreational activities and provide a breeding place for carriers of malaria and bilharzia.

Smaller mats of the plant may be beneficial, however, in that they provide a habitat suitable for an increase in wild life, especially birds and insects. Kariba weed effectively absorbs excess nutrients which can then be readily removed from the water with the plants.



Legislation and Control

In terms of Proclamation 252/1956 (Government Gazette 2002/2 Nov. 1956) of the Weeds Act, No. 42 of 1937, kariba weed is a proclaimed noxious weed throughout the Republic of South Africa. For control measures see Steyn, Scott, Ashton & Vivier (1979).

Note

The name *Salvinia* commemorates Antonio Maria Salvini (1633-1729), Professor of Greek in Florence; *molesta* = annoying.

Species Number: 0000.210-00100

Literature

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