



## Salvinia Molesta

Family name: **Salvinaceae**Common name: **Salvinaceae**Local name: **Selfakair****Wild, Introduced, Invasive**

### Role in Biodiversity

*Salvinia Molesta* have negative impacts on native animals and plants by altering aquatic habitats. The thick mat formed by the weed covers the water surface blocking light penetration into the water, preventing photosynthesis in the water below the mat, increasing sedimentation by slowing the water flow, especially in shallow water bodies, and reducing dissolved oxygen content (DO) in aquatic ecosystems, which sometimes results in fish kills. The high growth rate of *Salvinia Molesta* with slow decomposition affects water body nutrient dynamics, which impacts on all trophic levels.



### Environment and Growing

*Salvinia Molesta* grows in freshwater systems. It prefers stagnant or slowly moving waters bodies including ditches, ponds, lakes, slow rivers and canals. Its growth is greatly stimulated by an increase in nutrients level. It can double its biomass in 2 days under optimal conditions. It is able to tolerate salinity.

Growth requirements:

- Optimal growth temperatures range 20-30°C.
- Optimum pH range 6–7.5.
- Full sun (6 or more hours of direct sunlight a day).



### Reproduction and Communication

*Salvinia Molesta* reproduced mainly by fragmentation. The plant can break into fragments, resulting in small vegetative propagules that are dispersed by water currents to uninfected waters. It can also reproduced by budding, new plants grow from the new buds form at the base of the leaves or along the stem. Each node has five buds, so potential for great and rapid spread is high. Sexually, *Salvinia Molesta* produces only sterile spores.

### Life span

Salvinia plants seldom get totally destroyed by aging. Depending on the climate, *Salvinia molesta* may be either a perennial or an annual. In cases of moderately dense populations, where overcrowding is not evident, the longest period of survival is above 200 days unless it is destroyed by some adverse environmental factor or some other external agency.

In non-tropical regions it may function as an annual but it will still produce significant growth during the summer period.

### Size

The maximum length of the main stem of *Salvinia Molesta* can reach 34 cm with 32 internodes.

### Parts

Stems are horizontal rhizome which float below the water surface and produces three leaves at each node.

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Arial leaves are two, light green, broadly elliptic, about 25 mm long with numerous distinctive egg-beater-shaped hairs growing in parallel rows. Submerged leaves are brownish, filamentous, feathery, root-like, and about 25 cm long.

Fruiting bodies of *Salvinia molesta* are the megasporangia which are globular, sessile, with one, 2 mm long megaspore.

The submerged leaves of *Salvinia* serve as roots by absorbing water and nutrients.

Mature plants, instead of flowers, can produce large quantities of sporocarps, which contain numerous sporangia. They are sessile to long-stalked, globose to ovoid, rounded to apiculate at apex, either clustered at apex of submersed leaf or arising alternately in two rows.

*Salvinia molesta* does not produce seeds. It produces sterile spores which are formed in the sporocarps.

## INTRODUCTION

### Aquatic herb

*Salvinia Molesta*, the giant *Salvinia*, is a free-floating fern native to South America, particularly south-eastern Brazil and now widely distributed in tropical and subtropical areas. This floating fern is known for its capability to invade large bodies of slow-moving fresh water. Based on the environmental, economic and human health impacts, *Salvinia Molesta* considered the world's second most noxious aquatic weed behind water hyacinth on the list of the world's most noxious aquatic weeds .

In Sudan, *Salvinia Molesta* was reported for the first time in the White Nile near Kosti town (N 13° 11' 15.50" E 32° 40' 20.37") in 2019 and and later observed in many other locations on the White Nile between Al Kowa and Al Jabalein. Although this plant has newly invaded these areas, it has a clear impact on people's daily lives in those areas, especially on their health.

## LIVELIHOODS / CULTURE

### Cultivation

*Salvinia Molesta* is not cultivated in Sudan. It is reported as naturally distributed invasive plant.

### Cultural Value

*Salvinia Molesta* has recently been recorded in the White Nile. In areas where it is abundant, such as in Al Hideib village, this plant negatively affects people by obstructing fishing, water extraction, and hosting vectors like malaria-carrying mosquitoes and bilharzia snails.

In Kosti, *Salvinia* is used by some people to reduce turbidity and improve the drinking water taste. They put fragments of this plant in their drinking water pots (zeers). It is also reported to be a good fertilizer.

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### Cultural Expressions

No information available.

## THREATS

*Salvinia molesta* has been added to the list of 100 of the World's Worst Invasive Alien Species. Compiled by the IUCN Species Survival Commission Invasive Species Specialist Group, (ISSG). the list aims to increase awareness and stimulate more conservation action to reduce its impact.

[Image\(s\) source :](#)[Link\(s\)](#)[Compiled By:](#)