THE SPREAD OF WATER HYACINTH IN PAPUA NEW GUINEA — A SECOND WARNING OR IS IT TO LATE ?

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Water hyacinth *(Eichhornia crassipes)* is native to South America but has spread to most tropical countries.

Like Sepik weed *(Salvinia molesta)* water hyacinth can be a very serious weed. It can grow extremely quickly and often produces dense mats. However, because water hyacinth is a much bigger and stronger plant than *Salvinia* it is an even greater nuisance. It may be difficult to paddle a canoe through *Salvinia* but it is impossible to do this through a thick mat of water hyacinth.

Dr. David Mitchell warned in 1978 that "as long as water hyacinth remains in Papua New Guinea it constitutes a serious threat to systems such as the Sepik and Fly Rivers and to any man-made lakes that may be constructed".

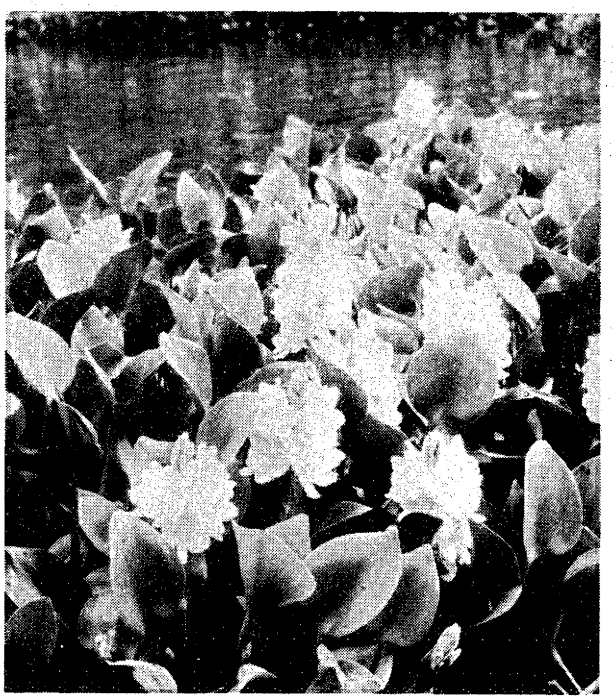
WHAT DOES WATER HYACINTH LOOK LIKE?

Water hyacinth is a free-floating or mud-rooted perennial herb standing up to 1 metre above the water surface. The leaves are arranged in rosettes and have spongy, swollen leaf bases. The leaves are rounded, 2-8 cm in diameter, bright green and shiny. The flowers are pale blue to mauve and grow in upright spikes. Each flower is 4-6 cm across with 6 petals. The upper petal has a yellow blotch in the centre, surrounded by a deep purple-blue margin.

Water hyacinth can grow vegetatively by producing side shoots which break off and develop into new plants. It can also reproduce by seeds. The seeds can stay alive for up to 20 years.

WHERE DOES WATER HYACINTH GROW IN PAPUA NEW GUINEA?

Water hyacinth was first recorded in Papua New Guinea in 1962 when it was found near Bulolo in old gold mining



A mat of water hyacinth growing on a pond near Bulolo.

dredge ponds. It still grows in these ponds. It has also been found in Rabaul and near Keravat but these infestations (large numbers of harmful plants or animals) seem to have been destroyed.

There are recent reports of water hyacinth growing near Madang and Wewak. We have recently seen the plant growing in the Gogol Valley in man-made ponds. The plant was even displayed in an aquarium at a popular hotel in Madang!

Moving a boat in a thick mat of water hyacinth can be very difficult.

HOW CAN THIS WEED BE CONTROLLED?

The most likely agent in spreading this plant is man. People are attracted to this plant by its very pretty flower. They then introduce it to water near their homes.

The spread of the plant by man can be reduced by teaching people to recognise the plant and to be aware of its harmful effects. This is probably best done by producing colourful posters.

Two methods of control can be used. For small infestations, physical removal of the plants is possible. The plants should be dried and burnt with distillate in 200 litre drums.

Larger mats are more difficult to deal with and spraying with herbicide may be necessary. 0.2% 2,4-D ester has been shown to be effective.

In both cases it is very important to check the sites of previous infestations and to deal with further outbreaks as they occur. Sites should be visited monthly for the first 6 months after control and then every 6 months. This monitoring programme may have to continue for 10 years or more to be sure of complete eradication of this weed.

WHAT HAS BEEN DONE TO CONTROL THIS WEED?

Water hyacinth was gazetted as a noxious (harmful) weed in 1962. Control measures were started but the weed was not completely destroyed in Papua New Guinea. Two factors probably caused this lack of success:

1. There is not enough public awareness of the dangers of this plant.

2. Sites of previous infestation were not checked for long enough after control, so reinfestation occurred.

However, it seems that control was successful in both Rabaul and Keravat.

Physical removal of the plant is one method of control, but it is hard work.

WHAT ABOUT THE FUTURE?

It is only a short distance from Madang to the Ramu River and the lakes and lagoons associated with it. The Keram River could then provide a connection to infest the Sepik River system. With the biological control of *Salvinia* now proving successful, infestation of this river system with water hyacinth would be disastrous. This is a very real possibility.

Water hyacinth control should be given a very high priority by National and Provincial Governments. The general public should be made aware of the dangers of this plant and methods of control so that they may play their part in its control.

This is the second warning; let us hope that it is heeded and that it is not too late to control water hyacinth.

FURTHER READING

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(Photographs from Division of Botany, Office of Forests, Lae)