

# THE WATER HYACINTH WEEVILS

(*Neochetina eichhorniae* and *Neochetina bruchi*)

A natural enemy of WATER

HYACINTH (*Eichhornia crassipes*)

in South Africa

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DOSSIERS ON BIOLOGICAL CONTROL AGENTS AVAILABLE TO AID ALIEN PLANT CONTROL

## DESCRIPTION

Adult weevils are 4 - 5 mm long, nocturnal and during the day shelter in the leaf sheath near the crown of the plant or in rolled leaves. *Neochetina eichhorniae* is mottled brown/grey, while *N. bruchi* is brown/tan.

## LIFE CYCLE

Adults are long lived ( $\pm$  280 days). Females of both species produce between 350 and 400 eggs. *N. eichhorniae* females inserts eggs into the leaf tissue of the younger leaves while *N. bruchi* females prefer to lay their eggs on the upper part of the older petiole (leaf stem). Eggs are white and take between 9 and 16 days to hatch. There are 3 immature stages in both species. Pupation occurs after 56 days, below the surface of the water, on the roots of the plant. The adults emerge 7 days later.

## FEEDING DAMAGE

The larvae tunnel into the petiole from the leaves and into the crown, where they excavate small pockets. They feed on developing auxiliary buds. The older larvae are usually found on the older petioles, but can attack younger petioles. The adults feed on the epidermis of the leaf, forming characteristic, square feeding scars.

## IMPACT ON WATER HYACINTH

The larvae bore into the petioles and the crown (growth point) of the plant causing water logging and ultimately death of the plant. Adult feeding causes the leaves of the plant to dry out. Dense mats of the weed start to break up as the new growth is damaged. Long-term damage results in the reduction of the production of flowers, leaves and daughter plants and a stunting of plant growth. Under the correct environmental conditions, these two agents, in combination with the other biological control agents that have been released on water hyacinth can bring the weed under complete control. Under these conditions no other control methods should be required.



*Neochetina eichhorniae* (left) and *N. bruchi* (right)



Adult weevil damage on the leaf surface



Damage by weevil larva to the plant



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**ADDITIONAL INFORMATION IS AVAILABLE. PHONE: Weedbuster Toll-free Helpline: 0800 005 376**  
**WEBSITE: PPRI website is located via links from the Agricultural Research Council website: [www.arc.agric.za](http://www.arc.agric.za)**

