

Is One Biological Control Agent Sufficient to Control *Pistia stratiotes*?

C.J. Cilliers

Plant Protection Research Institute, Private Bag X134, Pretoria 0001, South Africa

In South Africa the declared weed, *Pistia stratiotes*, was controlled by the weevil, *Neohydronomus affinis*, within 10 months on a shallow lake. On the fast flowing Sabie River it has taken more than 3 yrs for *N. affinis* to reach a population level where it was *stressing P. stratiotes*. At a third site near Mmabatho, *P. stratiotes* has been brought under biological control by *N. affinis* within 2 yrs after initial release of this weevil. The first 2 sites were in a subtropical region and the third site in an area where frost in winter is common. Climate and habitat structure played an important role in achieving biological control, but the exceptional resurgence of *P. stratiotes* at the third site, the time lapse before *N. affinis* again suppressed the weed, the movement of the substrate, plant and insect on a dynamic system such as the Sabie River, led to the question of whether or not an additional biological control agent should be introduced.
