

***Stenopelmus rufinasus* Proves to be an Excellent *Azolla* Taxonomist**

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Abstract

The frond-feeding weevil, *Stenopelmus rufinasus* Gyllenhal continues to provide excellent control of *Azolla filiculoides* Lamarck in South Africa. During the host specificity testing of this agent, some feeding and development was recorded on *Azolla pinnata africana* (Desv.) R. M. K. Saunders & K. Fowler, which was sourced from Malawi, but it was argued that this was not significant and most probably a laboratory artifact (Hill, 1998), and the weevil was cleared for release. Subsequent host specificity testing, post-release of the agent by McConnachie (2004) showed significantly higher levels of feeding and development on *Azolla pinnata africana* collected in Mpumalanga, South Africa. A ten year post-release evaluation showed that some established has occurred on *A. pinnata africana* in the field, but that this is far less than on *A. filiculoides*, and the weevil did not appear to impact *A. pinnata africana* populations. Recently molecular analysis has shown that what we have been referring to as *A. pinnata africana* in South Africa is in fact *Azolla microphylla* Kaulf., an introduced species. Extensive surveys in South Africa and Mozambique have failed to find *A. pinnata africana* and we now believe that the species used by McConnachie (2004) was *A. microphylla* which is in the same section of the genus as *A. filiculoides* and explains the discrepancy in the host specificity studies.

References

- Hill, M.P. (1998) Life history and laboratory host range of *Stenopelmus rufinasus*, a natural enemy for *Azolla filiculoides* in South Africa. *Biocontrol* **43**, 215-224.
- McConnachie, A.J. (2004) Post release evaluation of *Stenopelmus rufinasus* Gyllenhal (Coleoptera: Curculionidae) – a natural enemy released against red water fern, *Azolla filiculoides* Lamarck (Pteridophyta: Azollaceae) in South Africa. Unpublished PhD Thesis, Wits University, Johannesburg, South Africa pp. 212.