

Host Searching Behaviour of the Seed Weevil, *Melanterius ventralis*: Implications for the Biological Control of *Acacia longifolia* in South Africa

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The seed weevil, *M. ventralis*, is the second biological control agent to be introduced from Australia to curb the seed production of *A. longifolia*. In field studies, *M. ventralis* was equally efficient at finding *A. longifolia* pods where they occurred in low and high densities. (The previously released gall wasp, *Trichilogaster acaciaelongifoliae*, greatly reduces the reproductive potential of its host, except in very wet areas where the trees are better able to cope with the stress of galling). Laboratory studies on the foraging of *M. ventralis* explain the field observations: the sequential searching behaviour of the adults directed them to the outer canopy, where pods occur, irrespective of pod density. However, where pod densities were low, or where previous oviposition by other *M. ventralis* females had occurred, less time was spent foraging on those pods. Where pod densities were higher, the weevils were initially slow to disperse. Both field and laboratory studies have revealed that *M. ventralis* is an excellent supplementary agent to *T. acaciaelongifoliae*. The 2 insects together reduce seed production of *A. longifolia* to only 1% of levels formerly found in South Africa. However, because of the initially slow rate of dispersal, the weevils will need to be manually redistributed to as many areas as is possible over the range of the weed.
