

**Further observations on the feeding of adult *Micraspis frenata* (Erichson, 1842) (Coleoptera: Coccinellidae) on the pollen of grasses (Poaceae) in New South Wales, Australia**

by James R. Turner\* & Dr Trevor J. Hawkeswood#

\* PO Box 371, Penrith, New South Wales, 2750, Australia.

#270 Terrace Road, North Richmond, New South Wales, 2754, Australia.

Turner, J.R. & Hawkeswood, T.J. (2003). Further observations on the feeding of adult *Micraspis frenata* (Erichson, 1842) (Coleoptera: Coccinellidae) on the pollen of grasses (Poaceae) in New South Wales, Australia. *Calodema*, 1: 22-23.

**Abstract:** Further observations on the feeding by adults of *Micraspis frenata* (Erichson, 1842) (Coleoptera: Coccinellidae) on grass pollen are recorded here. The new host plant is the introduced species *Lolium perenne* L. (Poaceae). This brings the recorded number of grass hosts for this beetle to seven.

### **Introduction**

A paper dealing with the pollen-feeding behaviour of the Australian ladybird beetle *Micraspis frenata* (Erichson, 1842) (Coleoptera: Coccinellidae) has been provided recently by Hawkeswood & Turner (2002). Since that paper was completed and published, further observations on the species have been made and these are provided below.

### **Observations**

On 12 September 2002, a small patch of weeds was examined by the first author at the side of a road at North Richmond, New South Wales. A large number (over 30) individuals of *M. frenata* were observed crawling over the inflorescences and stems of the introduced grass, *Lolium perenne* L. (Poaceae) which was growing commonly amongst the weeds. Other weeds in flower at the time within the roadside included *Capsella bursa-pastoris* (L.) Medik (Brassicaceae), *Cerastium glomeratum* Thull. (Caryophyllaceae), *Plantago lanceolata* L. (Plantaginaceae) and *Trifolium campestre* L. (Fabaceae), while nearby on a house grew a profuse-flowering specimen of the fragrant smelling *Jasminum polyanthum* L. (Oleaceae). Examination of these plants found no specimens of *M. frenata* on them. In addition, aphids were found on a few fruiting *Capsella bursa-pastoris* (L.) Medik. (Brassicaceae) but the *M. frenata* appeared to ignore these because no beetles were found on these plants either. On *L. perenne*, *M. frenata* was mostly observed attempting to feed on unopened anthers which remained within the flowers and had not yet emerged on their pedicels outside the green floral parts. However, some *M. frenata* were observed feeding on anthers which were yellow and obviously still relatively full of pollen grains on some inflorescences with earlier opened flowers. No larvae of *M. frenata* were detected on any plants, host or otherwise

## Discussion

It appears that in some western Sydney districts, *M. frenata* is a spring and summer active beetle on the pollen (anthers) of certain native and introduced grasses (Hawkeswood & Turner, 2002). The timing of the flowering (phenology) of these various species of grasses appears to be staggered over the 3-5 month spring summer period. The number of identified grass species recorded to date as food plants for adults of *M. frenata* is seven (see below). It is interesting to note that *M. frenata* ignored the pollen of other plants in the area (all are Dicotyledonae) and also ignored the large populations of aphids on the *Capsella* inflorescences. Presumably, because the pollen of the grass is copious, it is thus easily obtained by the beetles and may offer a higher nutritive value than the aphids or the pollens of the other flowers. Perhaps feeding on aphids by the ladybird beetles occurs during the night time and this suggestion needs verification. In the case of the dicotyledons, pollen may be less copious and more difficult to obtain from the flowers because the anthers are hidden within the flowers.

Seven species of grasses have now been recorded as host plants for *M. frenata*. These are *Chloris gayana* Kunth, *Chloris truncata* R.Br., *Paspalum urvillei* Steud., *Setaria gracilis* Kunth [= *Setaria geniculata* (Lam.) Beauv.], *Sorghum bicolor* (L.) Moench ssp. *bicolor* and *Themeda australis* (R.Br.) Stapf. (Poaceae)(Hawkeswood & Turner, 2002) and *Lolium perenne* L. (Turner & Hawkeswood, this paper). Further records of grass pollen feeding will no doubt be made in the future but more interesting would be further observations on nectar feeding on Dicotyledonae as recorded in *Asclepias* and *Gomphocarpus* (Asclepiadaceae) by Hawkeswood (1994).

## References

- Hawkeswood, T.J. & Turner, J.R. (2002). Observations on the adults of *Micraspis frenata* (Erichson, 1842) (Coleoptera: Coccinellidae) feeding on the pollen of native and non-native grasses (Poaceae) in eastern New South Wales, Australia. *Journal of the Entomological Research Society*, 4: 21-29.
- Hawkeswood, T.J. (1994). Notes on the Australian ladybird beetle *Micraspis frenata* (Erichson)(Coleoptera: Coccinellidae) feeding on nectar from *Asclepias* and *Gomphocarpus* flowers (Asclepiadaceae). *Giornale Italiano di Entomologia*, 7: 67-71.

\*\*\*\*\*