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subsequent feeding surface. In the Cossidae the feeding surface is entirely overlain by bark and underlying tissue.

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Record of *Wiseana signata* (Walker) (Lepidoptera: Hepialidae) larvae in sand dunes

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Abstract

The larvae of *Wiseana signata* are recorded in non-pasture covered sand dunes.

The larvae of *Wiseana* Viette are subterranean, living in silk-lined tunnels, and usually feed on foliage at the ground surface (Miller 1971). The species of *Wiseana* have become one of the most serious pest problems for improved pastures in New Zealand (Kain 1980). Extensive pastures are of relatively recent establishment; much of the pre-European landscape being covered by forest (Miller 1925). It has been suggested that the populations of *Wiseana* were originally in comparatively low numbers (Lowe 1973). *Wiseana* has been recorded as a pest in tussock grasslands (Kelsey 1968) but nothing is recorded of *Wiseana* species in non-pasture habitat with the possible exception of Miller (1971) who records *W. signata* feeding on *Phormium* sp. *W. signata* (Walker) is recorded here in poorly consolidated sand dunes.

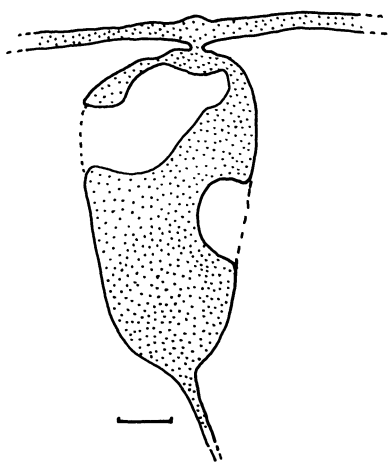


Fig. 1. Longitudinal section of *Muehlenbeckia australis* tuber showing feeding damage (non stippled area) possibly due to larvae of *Wiseana signata*. Scale line = 10 mm.

The Wellington Branch of the Entomological Society of New Zealand visited the northern "Wilderness Area" (40°57'S, 174°58'E) of Queen Elizabeth Park, Raumati, on 24 January 1982. This area comprises a sand dune community of the southern boundary of the Raumati residential area. The dunes are covered in early seral vegetation of shrubs, creepers, grass, and herbs.

The author and Mr M. J. Meads (Ecology Division, DSIR) excavated *W. signata* larvae from the floor of a gully bottom about 25 m from the seashore. The ground excavated was covered mainly with grass. Three pupae and 3 larvae were removed from an area of about 0.5m² and a depth not exceeding 200 mm. The actual depth of the larvae was not determined because the dry sandy soil lacked cohesion. Pupae were reared to the adult for specific determination.

Several tubers of *Muehlenbeckia australis* (Forst. f.) Meissn were found with feeding damage (Fig. 1). One larva was placed with a tuber and no alternative food supply under laboratory conditions and was observed to feed on it. Damage to barley and potato tubers has been recorded for *Wiseana* in rare instances (Perrott 1974) and Miller (1971) records *W. signata* sometimes feeding on the rhizomes of *Phormium* sp., especially in dry situations. It is therefore possible that the root damage observed here was due to *W. signata*.

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