

Preliminary observations on the Tinney's insect assemblages

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At the site of the brushwood trackways at Tinney's a series of samples for the investigation of fossil insect assemblages has been collected, to form a progressive sequence from the area bordering the high ground of the Polden Hills into the peat land. Two factors have emerged from the preliminary study of the insects extracted from these samples; that the trackways crossed an area of raised bog and that the faunas nearest the high ground show signs of man's activities in this area.

The environment of the trackways

The main indicator species from the peat around the trackways are beetles characteristic of raised bogs. All of the phytophages are species recorded from the raised bog section of the Difford's monolith (page ) and their host plants are summarized below. Records of aquatic species, notably Hydroporus scalesianus, indicate that pools were present on the surface of the peat. It is significant, however, that beetles such as Ilybius guttiger and Hydroporus obscurus, which require acid water and which were recorded at the trackway level at Abbot's Way, appear to be absent from Tinney's. Also, the numbers of aquatic species are lower at Tinney's than at this other raised bog site, suggesting that the brushwood tracks may have crossed a drier landscape where the proximity of the limestone outcrops inhibited the development of very oligotrophic conditions. The fauna at Tinney's more closely resembles that of Rowland's, another trackway constructed across raised bog, where drier conditions were inferred from the relatively lower numbers of aquatic species. The faunas of all three contrast strongly with those recorded at the trackway levels at Meare and Difford's, where faunal enrichment has resulted from the inwashing of calcareous water.

## Faunal variation at Tinney's

The numbers of insects extracted from the samples at Tinney's are generally low, a factor which must be considered when assessing the significance of differences between them. It is likely that the apparently limited distribution of certain species is a random factor with no environmental significance. For instance, the ground beetles Nebria brevicollis and Dyschirius globosus are absent from those samples nearest and furthest away from the high ground, but both are present in the intermediate area. The species are eurytopic and it is possible that they were widespread in the area and that they would be recorded with an intensive programme of sampling. Certain species, however, are consistently present in the samples nearest the high ground but are so far absent elsewhere. These are animal-associated species of the Scarabaeidae and Histeridae families and several individuals of two species of Aphodius (dung beetles), together with Margarinotus sp. (a beetle which lives in highly decayed vegetation or more commonly dung or carrion), have been recorded. There is no evidence as to whether the species were living in situ at the track site, a possibility if cattle were being driven across the structures. The species, however, are strong fliers and may have been part of the population on the island, living in a grazing area, which flew on to adjacent peat lands. This would explain the presence of these species in the samples nearest the high ground. Supporting the evidence for land use by grazing are records of individuals of Elateridae in the same samples. Two species commonly recorded elsewhere in the Levels, Actenicerus ajselandicus and Sericus brunneus, are marsh or bog inhabitants, and the presence of larvae as well as adults shows that they were living in situ. At Tinney's, however, in addition to these species, there are records of typical grass land species. So far these records are confined to the samples nearest the high ground and adults, only, have been recorded, suggesting that they are being derived from the higher ground.

The available results indicate that continued research into the insect faunas in this area where abundant archaeological remains are preserved could provide further information on man's activity.

Table of host plants of phytophagous beetles from Tinney's

Beetle	Host plant	
<p><b>Chrysomelidae</b> (= leaf beetles)</p> <p><u>Plateumaris discolor</u></p> <p><u>Chaetocnema concinna</u></p>	<p><u>Eriophorum</u> spp.</p> <p>Cruciferae</p>	<p>Cottongrass</p>
<p><b>Curculionidae</b> (= weevils)</p> <p><u>Micrelus ericae</u></p> <p><u>Limnobaris pilistriata</u></p>	<p><u>Erica</u> spp.</p> <p>Cyperaceae</p> <p>e.g. <u>Eriophorum</u> spp. and <u>Cladium mariscus</u></p>	<p>Heather</p> <p>Reeds, sedges and rushes</p> <p>Cottongrass</p> <p>Saw toothed sedge</p>