

A SIMPLE TECHNIQUE FOR THE TRANSLOCATION OF ANTHILLS

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ABSTRACT

A simple technique is described for the successful translocation of anthills of the yellow meadow ant (*Lasius flavus*). Over 30 anthills have been moved using this technique and all contained ants the following year. The technique has application in experimental ecology as well as species conservation on a local scale.

INTRODUCTION

THE yellow meadow ant (*Lasius flavus*) has a mainly southern distribution in Britain, becoming steadily scarcer as one moves through the Midlands and Wales, and is uncommon in Scotland (Barrett, 1977). In Telford New Town, Shropshire, the anthills of *L. flavus* are mainly restricted to a few small unimproved meadows on the edges of woodlands such as Lloyds Coppice and Workhouse Coppice on the slopes of the Severn Gorge (see Tobin *et al.*, 1987). The nearby area known as Lightmoor also had two small unimproved meadows with anthills. However, the line of the new Ironbridge by-pass was to go across the larger of these two meadows. The local scarcity of the meadow ant prompted an examination of methods for the removal of some thirty anthills to the smaller of the two meadows.

TRIAL MOVES IN 1984

An initial experimental move of two anthills was carried out in April 1984, at a time of year when the ants had not warmed up sufficiently to become very active. Two anthills were moved—one to a glade created by a drilling rig as part of the route survey for the new road, the other to the adjacent meadow which already contained *L. flavus* anthills. The tops of the anthills were removed using spades and placed on one side; a JCB digger was also tried but found to be too clumsy. The underlying colony was then removed by spade. A layer of clay approximately 30–60 cm under the existing anthills had prevented the ants digging downwards and the colonies had spread out sideways. The soil was very dry and the existing tunnel structure broke up during these excavations. The resulting mixture of soil and ants was moved to the new sites and placed in newly excavated holes of similar depth and area. It was intended to replace the tops of the anthills along the same alignment as they originally had as anthills of *L. flavus* are often orientated along a particular axis (Step, (1932), p. 171; Sinker *et al.*, (1985), p. 98). However, both the tops collapsed during the move and the orientation was only very approximate.

The two translocated anthills were checked in June 1984. The one in the new glade had been dug up, possibly because the fresh soil prompted an investigation. The anthill which was moved to the adjacent meadow, which already had anthills, was an active colony and a small new anthill had appeared in the centre of the mound which was the collapsed anthill.

MAIN MOVE IN 1985

The successful move of one anthill, combined with the knowledge that work on the new road would start in 1986, prompted the removal of all the threatened anthills in spring

1985. A new method was devised in order to prevent the break-up of the anthill during the move. Each anthill was dug up with part of the underground colony, care being taken to keep the hill intact. It was then turned through approximately 90° and placed in a wheelbarrow which was resting on its side next to the anthill being excavated. The wheelbarrow was then pushed upright with the anthill upside down and it could then be easily transported to the new site. The remaining soil, ants, and eggs from the underground part of the colony were then shovelled into a second wheelbarrow and placed in the newly excavated hole. The anthill was then placed on top with the same alignment as it had previously had. This technique was used to move over thirty anthills, with only minimal collapses, to the adjacent meadow. A couple of anthills were also successfully moved to Stirchley Grange Environmental Centre, approximately 4 km away, by putting the wheelbarrows containing the anthills on a lorry. It is possible that the soil was slightly damper than in 1984 and this reduced the tendency of the anthills to collapse during the move.

These anthills were examined in August 1986 and were all found to contain yellow meadow ants. The anthill which was moved in the initial 1984 experiment, and which had collapsed during the move, was now approximately 45 cm × 30 cm × 30 cm high and had developed a small offshoot.

DISCUSSION

The experimental translocation of anthills has previously been successfully attempted with, for example, *Lasius flavus* (Pontin, 1969) and *L. niger* (Elmes, 1971) using a sheet of galvanised iron. The flexibility of the current technique, combined with the success in transporting anthills in the wheelbarrow on a lorry, suggest that the technique has a wide application for both experimental ecology as well as species conservation on a local scale.

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