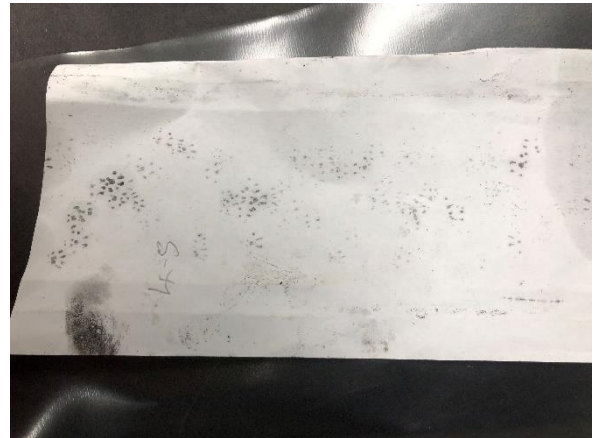


Report on Small Mammal Footprint Tunnel Survey July 2022

Small mammals are usually surveyed using Longworth traps, which are designed to trap live animals to allow identification of species and work out population sizes. They are expensive, time consuming to check (early morning and late evening), need a licence to handle small mammals and cause stress to the animals, especially if they are breeding. The tunnels we are trialling were designed to identify dormice and are suspended in trees, and larger versions are used for hedgehogs.

Method

The tunnels are tubes which have a wooden insert upon which paper is stuck using wide masking tape. A paste of edible charcoal in vegetable oil is put on the tape and the idea is that the mammals investigate the tube, get charcoal on their feet and then leave footprints on the paper. They only need checking once a week, and only left in place until footprints are found, showing presence of species such as wood mice, bank voles, field voles and shrews.



Eight tubes were placed in seven locations around Fairfield. (see map) Long grass was the preferred habitat, searching through tussocks to discover mammal runs and ensuring that the tubes are flat on the ground, and spaced at around 2 m apart in a line, marked by canes. They were left in place from the 6th to 13th July 2022. The tunnels were examined, and then left in place for another week before collection.



★ Location of footprint tunnels

Results

See table

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | key |
|--------------------|------------|------------|-------|--------------------|-------------------|-----------|---------|------------------------|
| | BIG MEADOW | HAY MEADOW | MARSH | GRASS VERGE ARABLE | POND VERGE ARABLE | PONY WOOD | ORCHARD | |
| 1 | 0 | S | S | S | 0 | M | ?BIRD | S <5, indistinct |
| 2 | S | S | S | 0 | M | L | 0 | M 5 - 25 |
| 3 | M | S | L | S | 0 | L | S | L >25 |
| 4 | L | 0 | L | S | M | S | S | 0 clean or paper eaten |
| 5 | L | 0 | L | L | M | L | 0 | |
| 6 | L | L | L | S | 0 | M | 0 | |
| 7 | 0 | S | L | S | S | 0 | 0 | |
| 8 | 0 | L | L | 0 | 0 | 0 | 0 | |
| | | | | | | | | |
| TOTAL TUNNELS USED | 5 | 6 | 8 | 6 | 4 | 6 | 2 | |
| ABUNDANCE | L | S | L | S | M | L | S | |

Summary

These results give only a very simple indication of small mammal activity in each specific area where the tubes were placed and not necessarily predictive of the whole area. The verge of Big Meadow, Upper Sowerholme Marsh and Pony Wood had the highest levels of activity, the orchard border next to the houses the least. Snails and slugs eat the paper!

Identification

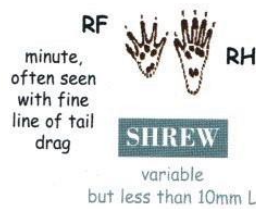
It is hard to identify to species but the size of the majority of the footprints indicates that they were small mammals such as wood mice, bank voles or field voles. The chart below shows some of the prints and sizes.

One tube adjacent to the orchard may have either bird or small rat prints, but they were not clear enough to be definite.

paws with four or five elongated toes

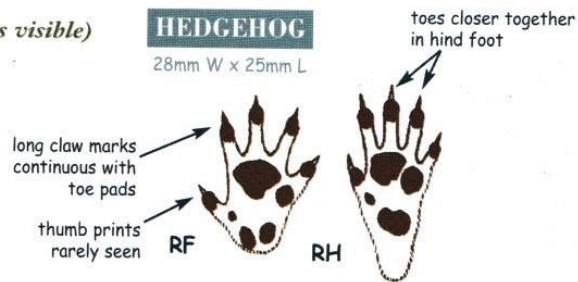
five toes on all feet

(beware, thumb print not always visible)

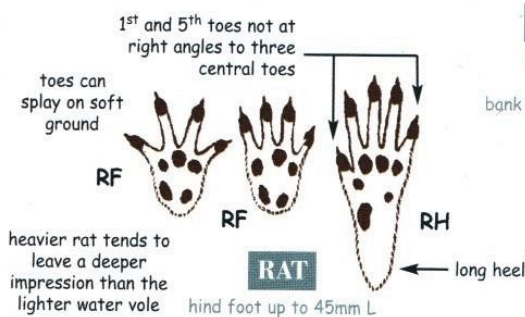


HEDGEHOG

28mm W x 25mm L

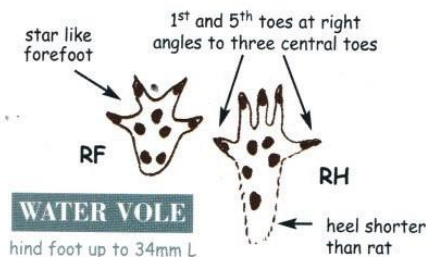


four toes on forefoot, five toes on hind foot



WOOD MOUSE

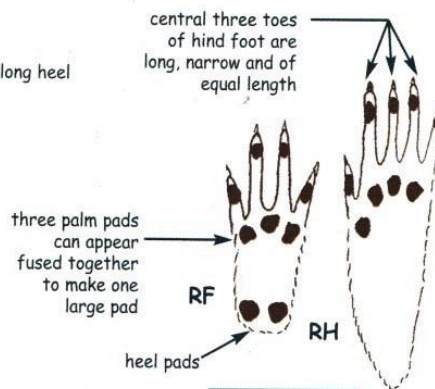
forefoot approx 10mm L
hind foot up to 20mm L
bank vole and field vole are similar



WATER VOLE

hind foot up to 34mm L

beware, footprints of young rats can be confused with water vole



SQUIRREL

forefoot 25mm W x 35mm L
hind foot 35mm W x 45mm L
not possible to distinguish grey and red squirrels



Discussion

The method works in that it is an easy, non-invasive way of identifying small activity in an area. If prints are clear, identification of the species is possible.

However:

- Unless used over a larger area the population of animals cannot be gauged, just the activity in a relatively small area, which was selected as being suitable. This may be useful if deciding management techniques.
- The weather can affect results as the oil can dry out or the paper dissolve if it is too hot, or too wet.
- The numbering or the tubes needs to be done in such a way as to be more permanent as labels were eaten or numbers washed off. Individual sticks for each tube will help finding them again.