

# *Species Surveys - Small Mammals*

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Developing Best Practice in Survey and Reporting  
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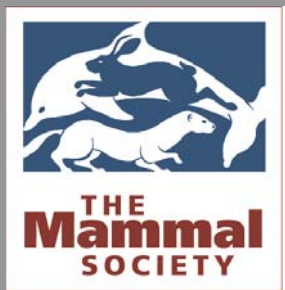
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A Small Mammal weighs less than 200gms - includes most water voles but excludes most brown rats

Generally it is taken to mean non-volant (earthbound) species but today bats are included

Cover surveying bats, dormice, water voles, harvest mice, water shrews (in 10 minutes!) but references are included for each species



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# *Bat Roost Surveys - Buildings*



- Licence
  - need a scientific licence to disturb only
- Health and Safety
  - dark, difficult conditions, ladders, rotten floors, vandalism, asbestos, disease
- Equipment
  - ladder, powerful torch with a red filter, head torch, small torch, camera, overalls, mask, gloves, mirror, endoscope, binoculars, 35mm film containers, hi-vis vest, bat detector

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# *Bat Roost Surveys - Buildings*



Outside - use binoculars to look for greasy dark marks around soffits, fascias etc., look for droppings on vegetation, cills, stuck to walls (avoid surveying straight after or during rain)



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# *Bat Roost Surveys - Buildings*

Inside – roof space tells a lot – check the ridge, complex timber joints for Natterer's, chimneys for Serotines, tops of walls; listen; smell. Check upstairs cills, fireplaces.



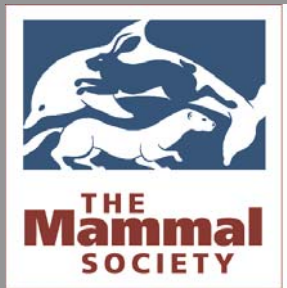
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# *Bat Roost Surveys - Buildings*

Emergence Surveys – What will you learn from them?

- Most buildings do not house bats
- Generally find only small numbers of droppings  
How likely is it that you will detect bats leaving a building?
- You do not need to carry out emergence surveys to obtain a Natural England licence



but.....

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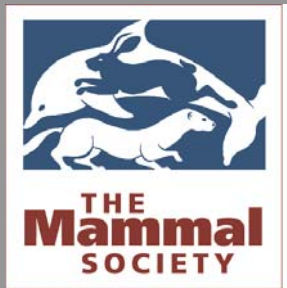
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# *Bat Roost Surveys - Buildings*

Emergence surveys are useful if you:

- have a space you are fairly sure contains bats but is inaccessible – but learn about building construction
- want to know the size of a maternity colony
- want to look at dispersal routes from roosts
- want to know if you have brown long eared bats roosting in a building

Internal surveys are much more productive for BLEBs, so use a remote recording detector such as an Anabat, for several nights at a time.



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# *Bat Roost Surveys - Buildings*



Dawn swarming surveys are often extremely useful, especially for following bats to roost sites in large complexes of buildings and for identifying roost entrances



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# *Bat Roost Surveys - Trees*

- Most trees with seriously important bat roosts look like they have – they have cracks, splits, flaking bark, lightning strikes, holes and cavities
- Cave dwelling bats are very loyal to their roost sites but tree dwellers treat their trees like the dangerous structures they are and move frequently – radio tracked barbastelles, roosting under bark, moved every three days



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# *Bat Roost Surveys - Trees*

Emergency surveys rarely tell you if there is a bat roost in a tree because the bats probably won't be there.

Use a tree climbing arborist, or better still, a cherry picker and look yourself



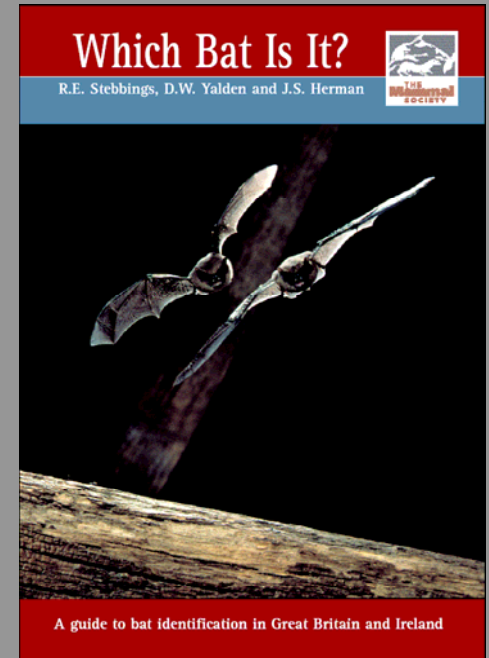
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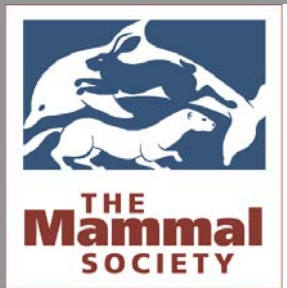
# *Bat Roost Surveys*

ID droppings from:

- The Mammal Society's new booklet
- your own reference collection
- The Bat Conservation Trust's course book



Bat Survey Guidelines available on line from May  
[www.bats.org.uk/biodiversity/BatSurveyGuidelines.asp](http://www.bats.org.uk/biodiversity/BatSurveyGuidelines.asp)



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# *Small Mammal Surveys*

Where?

- Dormice - “All areas of woody habitat that occur within the geographical range of the dormouse, especially in the south, should be target noted as suitable dormouse habitat”. Draft Design Manual for Roads and Bridges 2<sup>nd</sup> Edition  
Do not dismiss scrub
- Water voles and water shrews – along suitable water bodies
- Harvest mice – long grass and reed beds



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When?

- Don't rely on notoriously sparse local mammal records
- Can only survey for dormice between April and November although signs present in winter – try for two summers
- Water vole season can be surprisingly short - from when active in spring to when vegetation obscures signs in summer
- Use live traps on platforms to catch harvest mice in summer, nest searches in autumn and winter



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How?

- Try to use a suite of methods wherever possible
- You cannot prove absence, only presence
- Live mammal traps (Longworths or Shermans) can catch harvest mice, water shrews and water voles but not dormice



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# *Small Mammal Surveys*

- Try to use survey methods which have a recognised protocol
- Think of innovative ways to overcome problems and test them
- If using field signs, learn signs of similar species to avoid confusion

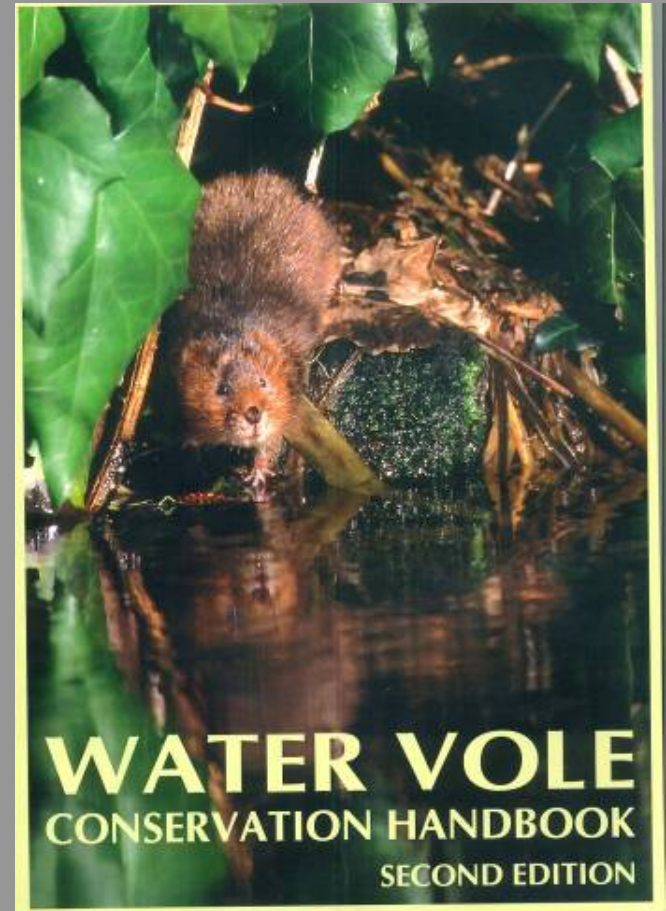
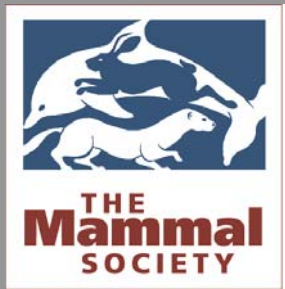
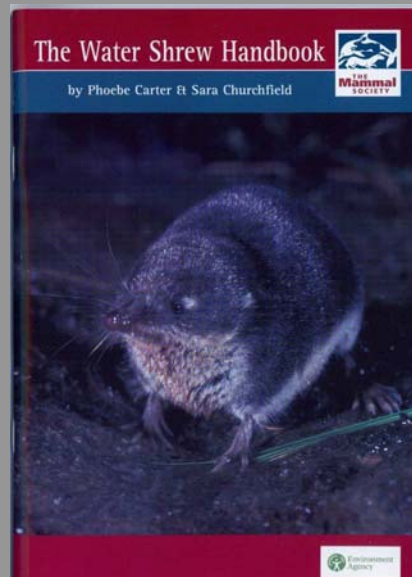
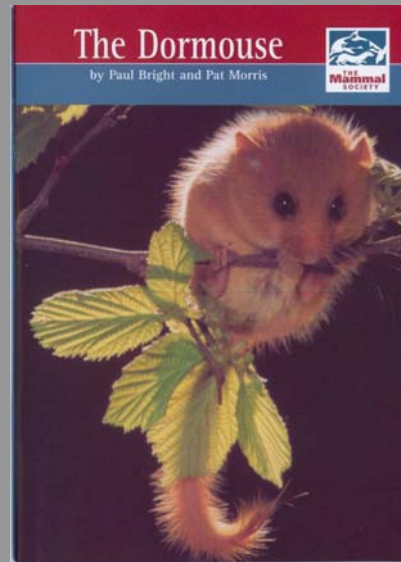
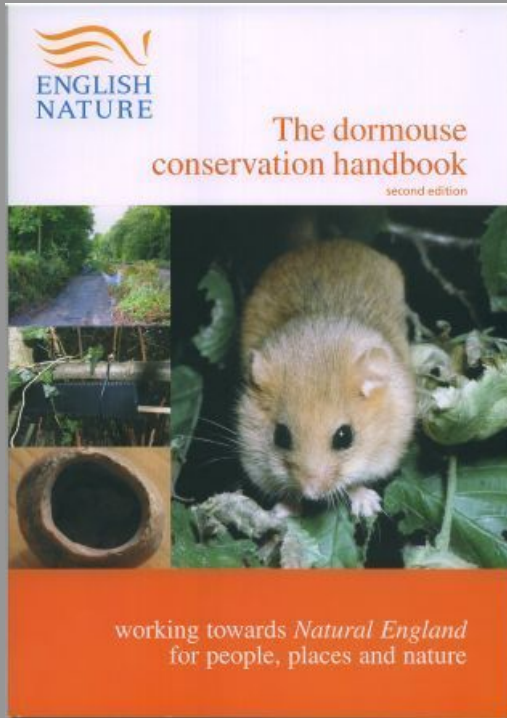


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# Small Mammal Surveys

## References



Published by Wildcru

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Next time -  
large mammals



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