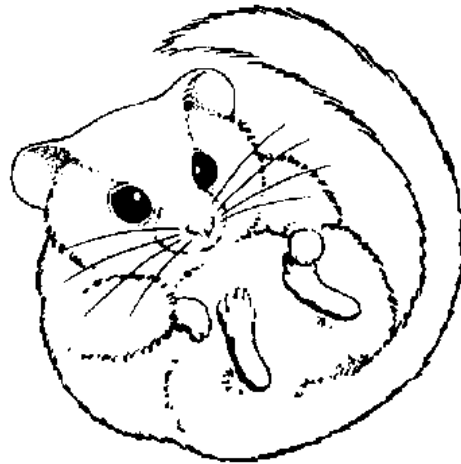


National Dormouse Monitoring Programme

Survey Guidelines and Recording Forms 2011



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***Thank you very much for participating in the National Dormouse Monitoring Programme (NDMP) and good luck with this season's nest box checks.
Happy dormousing!***

For detailed information on dormouse ecology and conservation see *The Dormouse Conservation Handbook* <http://naturalengland.etraderstores.com/NaturalEnglandShop/IN29>
Free printed copies can be obtained from Natural England

Don't forget that you need a licence to handle dormice. They may be granted by Natural England <http://www.naturalengland.org.uk/ourwork/regulation/wildlife/licences/applicationforms.aspx>

or Countryside Council for Wales <http://www.ccw.gov.uk/landscape--wildlife/habitats--species/species-protection/licensing/application-forms.aspx>

NDMP Survey Guidelines

Getting Started

- Nest boxes can be checked once each month from May to October (April to November if possible). Or 4 times a year in the months May, June (pre-breeding), September and October (post-breeding). As an absolute minimum two box checks should be carried out during the year in May or June and September or October. The box checks should be carried out between 15th and 25th of the month, but if you are only able to check outside of this period still do so.
- For each check you will need a supply of large clear polythene bags into which to empty the nest boxes containing dormice, two or three small polythene bags for weighing and scales weighing in grammes (up to 50g).
- A minimum of 50 nest boxes at a site is preferred.
- Do checks in the morning, if possible, in order not to miss torpid dormice because they are of particular interest - they tend to re-warm about midday.

Filling in the Forms

There are two types of dormouse form we would like completed: (One or two items of information will be duplicated on the two forms)

- the **Nest Box Checks Summary Form** should summarise all the checks you make to one nest box site in one year. For each visit, record the total number of boxes checked. **Please complete a line even if you find no dormice on that visit.** It includes a column for the number of nests found in boxes which **DO NOT** contain dormice. Dormouse nests are domed and woven. They are composed of stripped bark or grass, sometimes with an outer layer of concentrically arranged leaves.
- the **Dormouse Record Form** is for details of each dormouse recorded (including those found dead or which escaped) or dormouse nest found even if there is no dormouse present. Please start a new sheet for each date but it is more economical if you only record those boxes in which you find dormice or a dormouse nest (i.e. there is no need to record boxes which are empty).

For each nest box containing a dormouse or a dormouse nest please record:

- a) the box number and the time it was opened
- b) nest OR the total number of dormice in the box (including babies and/or dead)

Then for each dormouse record:

- a) body weight to the nearest 0.5g
- b) sex - do not bother for juveniles less than 7g unless you are really certain
- record M or F
- c) whether torpid or active (record T or A)
- d) breeding condition, record either
TS = male with testes scrotal
P = female clearly pregnant
L = lactating female
PL = female post lactation, sometimes without young
NB = non-breeding - none of the above

These breeding categories are not as difficult to recognise as they might seem. If you are unsure please leave the relevant entry blank.

- e) record if the animal is an adult, juvenile or young:
Adult = generally an animal that has survived at least one winter. Fur orange-brown
Juvenile = independent young in their first year, weight 10g upwards, appearance similar to adult but fur more brownish than adult
- f) for young dormice, please record whether each is:
PINK = with no fur
GREY = with grey fur and eyes still closed
EYES OPEN = grey-brown fur, eyes open

Litters:

Recording data on litter sizes and weights of young is extremely important. This information provides the best indication of how dormice are faring in different habitats and regions. However, females with young should obviously be disturbed as little as possible. If you are unsure, leave nest box young undisturbed. Otherwise we suggest the following guidelines.

Females with young less than about two weeks old. Young are furless, or have grey fur and eyes still closed: Count the young, leaving them in the nest as far as you can. Quickly weigh 1-3 of the young. We usually weigh these young together and calculate the average weight, because this is more accurate than weighing such very light animals singly. Please do not forget to make a note on the record form if you do this. The female dormouse may disappear into the bottom of the nest box, reluctant to jump out. If so do not disturb her further and just record on the form that there was an adult dormouse present, presumably a female.

Females with young older than about two weeks. Young have eyes open, grey-brown fur and are often very active: To get an accurate count of the number of young you will probably need to take them all out of the box. If they weigh less than about 7g, we usually weigh all the young together in two or three batches and take an average weight.

Comments:

Record anything of interest here, such as truncated tails, white tipped tails, if the dormouse escaped, if the dormouse bit the handler, if there was no nest in the box the dormouse was using etc.

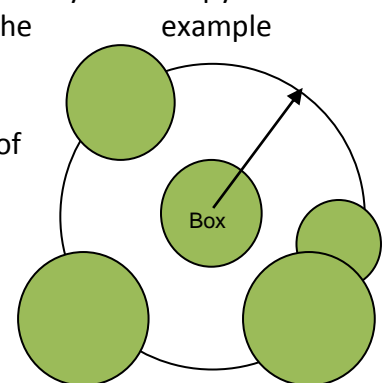
Other Mammals Using the Nest Boxes










We would also be interested to hear about other species you find using the nest boxes. **Please use the recording forms for species other than dormice.** Please only record these other species if you feel you have time. As a minimum you only need to record the box number, species and the number of animals per box but if you can weigh and sex them that data would be very useful too.

Woodland Habitat Survey

We would like to build up a picture, over time, of how the habitat changes around the dormouse nest boxes. If you have the time we would be grateful if you could undertake the habitat survey during the June box check. This only needs to be done at a site every 5 years. Please do make a note of when you did the survey, so you know when it should be repeated. It would also be helpful if you could provide details of the woodland owner, in case we can help with any local woodland management. **Please use the Habitat Survey Form and the Woodland Owner Form.**

1. Visually estimate the percentage canopy cover, which consists of the tallest, most mature trees, in a 10m radius circular quadrat (approximately the size of a helipad!) with the tree the box is fixed to at its centre. Imagine you are looking down onto the area from above and estimate how much of the quadrat is covered by the canopy. Use the table over the page to determine the canopy score. In the example shown below, the cover would be approximately 30% and be given a score 'B'
2. Visually estimate the density of the shrub layer, which consists of the younger individuals of the dominant trees, together with smaller trees and shrubs around the dormouse box. A sparse shrub layer will allow you to see a long way into the wood, a dense shrub layer will not allow you to see far into the wood and a very dense shrub layer will be one associated for example, with a bramble bank or a hedgerow. Use the table over the page to determine the shrub layer score.



Score	Habitat density	Image	Description
A	Canopy 0-25%		None or very few canopy trees. The area may have been recently felled or only low scrub present.
B	Canopy 26-50%		Up to half the quadrat is covered by the canopy. This level of cover is usually found in a well-managed coppice with standards woodland.
C	Canopy 51-75%		Over half the quadrat is covered by the canopy. The increasing cover may be starting to shade out the understorey.
D	Canopy 76-100%		Most of the quadrat is covered by canopy.
1	Shrub layer very sparse		There is little evidence of any shrub layer present, possibly due to shading by the canopy. It is possible to see clearly through the wood.
2	Shrub layer sparse		There is evidence of a shrub layer although it may not be developed. This may occur if the wood has been coppiced or recently thinned.
3	Shrub layer present		There is a well-developed shrub layer but it appears quite open. It is possible to see a reasonable distance into the wood.
4	Shrub layer dense		There is a very developed shrub layer similar to that often found at a woodland edge or coppice at 5-12 years. It is not possible to see far into the wood.
5	Shrub layer very dense		The shrub layer is very dense as in a bramble bank or dense hedgerow.

Returning Records

Please return all records by 1st December 2011. Even if you didn't find any animals during your box checks we would still like to know about the visits you made in the year. Either complete the paper forms or enter your records online at www.ptes.org/dormousemonitoring. If you would like to enter your records online contact Susan Sharafi at susan@ptes.org for a login to the system. Online records can be entered anytime throughout the year, once you have done a check or at the end of the season. One-off dormouse records from non-monitored sites can also be entered online on the National Dormouse Database (NDD), a login is not needed for this.

In the Field

- make sure everyone is as quiet as possible throughout the check to minimise the chances of waking up dormice before a box is bunged and any dormice escaping before they are sexed and weighed
- try not to call to other members of the team to reduce disturbance to wildlife in the wood
- when putting the bung in the hole at the back of the box make sure you can see it, rather than feel for it, to ensure no dormice are trying to get out and get trapped
- when checking a nest box ensure the bung is in place before opening the lid
- you may like to use clear Perspex squares to slide over the top of the open nest box to get a better look (as pioneered by Ian Hillier from the Surrey dormouse group!)
- if you need to take the nest box off the tree for a full check make sure it is resting on a flat piece of ground and in a large clear plastic bag first
- carry out the check as close to the tree that the box was on so that if any animals escape they will hopefully climb into a tree they are familiar with
- if the nest box has a removable rather than hinged lid check the underside and if it's clear then take it right out of the box before checking the nest
- if the nest box has a hinged lid hold it open through the plastic bag to make sure it doesn't suddenly drop down
- remove the bung from the box and bag too – especially if it's a large one – to prevent the dormice hiding inside it

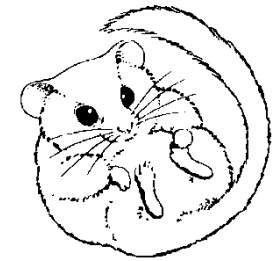
- before checking a box roll your sleeves up – dormice find it easier to run up material than bare skin and they also like running up inside them!
- make sure not to ruin the structure of the nest whilst checking for animals – gently feel for the central nesting chamber and then around the edge of the nest in all the corners. If it feels empty it is okay to carefully take the whole nest out to check underneath
- if a dormouse jumps out of the box on the ground make sure everyone stands still whilst the most experienced person tries to catch it, but ensure the dormouse doesn't get stressed. If it isn't caught quite quickly put the box back and move away carefully
- take particular care not to handle dormice by the tail, as the skin is easily stripped off and does not regrow
- before putting the animals back in the nest box make sure there is a clear route for them to get back into the central chamber
- when putting animals back in the nest box make sure the lid is on securely and post them gently through the hole at the back, blowing their tail to make them pull it in before putting the bung back in
- when putting mothers and young back in the nest boxes place the young in first then post the mother back through the hole at the back
- and don't forget at the end of the box check count the bungs back in to ensure none have been left in the back of any nest boxes

Nest Box Hygiene

- clear boxes of all material over the winter months of December, January or February unless dormice are present
- during the rest of the year remove all damp, smelly, infested or rotting nesting material and any dead animals discovered (this may include wood mouse or other nests). This prevents dormice getting mites or parasites and will prolong the life of the nest boxes. Dilapidated and old boxes should be replaced as dormice may be less inclined to use them
- it's recommended to remove all terrestrial mammal species other than dormice from nest boxes except if young are present. Do not eject or disturb roosting bats
- use separate bags for each monitoring site to reduce the risk of cross site contamination. We recommend using disinfectant hand gel if working between sites and disposing of any bags and bungs if you find a sick animal during a box check

National Dormouse Monitoring Programme
NEST BOX CHECKS SUMMARY FORM

2011



Please complete a line of this form for each check you make of your dormouse nest boxes during the season - even if you do not find any dormice. **N.B.** *The total number of dormice recorded should be the same as the number of dormice entered on your Dormouse Record Form for that date.

Site Name: _____ **Site Number:** _____ **Monitor's Email:** _____

Sub-section (if relevant): _____

Date of box check	Monitor	Number of boxes checked	Total number of dormice recorded*	Total number of nests found in boxes WITHOUT dormice	Comments

*Please complete this form and return it, with your Dormouse Record Forms, by 1st December 2011 to:
 Susan Sharafi, PTES, 15 Cloisters House, 8 Battersea Park Road, London SW8 4BG (Tel: 020 7498 4533; email: susan@ptes.org) or enter online*



NEST BOX CHECKS SUMMARY FORM - For species other than dormice

Please complete a line of this form per species found on each check carried out. **Do not include dormice on this form.**

Site Name: _____

Site Number: _____

Sub-section (if relevant): _____

Date of box check	Monitor	Number of boxes checked	Species e.g. Wood mouse, Yellow-necked mouse	Total number of individuals recorded per species	Comments

*Please complete this form and return it, with your Dormouse Record Forms, by 1st December 2011 to:
Susan Sharafi, PTES, 15 Cloisters House, 8 Battersea Park Road, London SW8 4BG (Tel: 020 7498 4533; email: susan@ptes.org)*



Date (15-25th): _____ 2011

RECORDING FORM - For species other than dormice

Monitor: _____ Site Name: _____ Site Number: _____

Total No of boxes checked: _____

Box No.	Species	No. of individuals found	Sex (M or F)	Weight (in g)	Breeding Condition (NB, TS, P, L or PL)	Comments

Please keep a copy and return your records by 1st December 2011 to:

Susan Sharafi, PTES, 15 Cloisters House, 8 Battersea Park Road, London SW8 4BG (Tel: 020 7498 4533; email: susan@ptes.org)

Woodland Owners Form

Woodland name: Grid Ref:

Monitor:

Address:

.....

Woodland Owner (if known):

Address (if known):

.....

Is there evidence of active coppicing in the wood? Yes/No

Is there active management in the wood? Yes/No

Would you, or the woodland owner, be interested in receiving a copy of the PTES leaflet on *Managing Small Woodlands for Dormice?* Yes/No

Tree and shrub species	Relative abundance through the wood (tick box)			
	Dominant	Abundant	Frequent	Occasional
Alder				
Ash				
Birch spp				
Blackthorn				
Bramble				
Conifer spp				
Hazel				
Honeysuckle				
Oak spp				
Rhododendron				
Sycamore				
Willow spp				
Yew				
Other				

National Dormouse Monitoring Programme (NDMP)

New Site Registration Form

Name of Monitor:

Address:

Telephone Number:

Email:

Site Name:

Grid Reference:

County:

Number of Boxes at Site:

Date Boxes Put Up:

I would/would not be willing to help train new dormouse monitors

I would/would not like to join the dormouse discussion forum

I would/would not like to enter my dormouse records online

Please also send the twice yearly *Dormouse Monitor* the newsletter of the NDMP, to:

Name:

Address:

Name:

Address:

Please return to Susan Sharafi, PTES, 15 Cloisters House, 8 Battersea Park Rd, London SW8 4BG;
susan@ptes.org

Health and Safety

The aim of this checklist is to help you improve your own personal safety while carrying out dormouse monitoring visits in the field. The activities and hazards are not intended to be completely exhaustive; this assessment of hazards is for guidance only. Remember that each site is unique and must be assessed individually. If in doubt about any aspect of health and safety relating to a site, always seek further advice from People's Trust for Endangered Species (PTES) before proceeding with the visit. Please remember that as a volunteer you are under no obligation to take part in this scheme. You should not put yourself or any others in danger.

Hazard	Precautions to be taken to remove hazard or reduce risk level (one precaution may tackle several hazards)
Inclement weather	<ul style="list-style-type: none"> • Wear appropriate clothing for the time of year, and be prepared for weather changes. • Carry waterproof &/or warm clothing. Hazards can increase significantly in heavy rain, strong wind & thunderstorms • Avoid/terminate all outside activity in inclement weather
Uneven ground	<ul style="list-style-type: none"> • Identify potential hazards • Wear sturdy boots or shoes • Use footpaths where possible • No distracting work should be carried out while walking
Traffic hazards	<ul style="list-style-type: none"> • High visibility clothing should be worn whenever working in the vicinity of roads and someone else should keep watch for traffic
Tetanus & leptospirosis	<ul style="list-style-type: none"> • While not common, these diseases can have severe effects, and in rare cases result in death. Clean any cuts etc immediately with clean water & cover adequately • Ensure that your anti-tetanus treatments are up-to-date (normally within last 10 years) • Avoid contact with water, particularly if contaminated with cattle/rat urine. Wash hands thoroughly & always before eating or smoking. If you contract flu-like symptoms, tell your doctor that you may have been exposed to Weil's disease
Lyme's disease	<ul style="list-style-type: none"> • When working in grassland areas where deer are present, wear long trousers & long socks. Check exposed skin for ticks. If a tick is found & you contract flu-like symptoms, tell your doctor that you may have been exposed to Lyme's disease
Alcohol & drugs	<ul style="list-style-type: none"> • Anyone under the adverse influence of alcohol or drugs is not permitted to take part in any PTES activities. If you are using prescribed drugs, seek medical advice on any side effects that may affect your performance (eg drowsiness)
Lone Working & Personal attack	<ul style="list-style-type: none"> • Working alone should be avoided. Try to work in a pair. If this is not possible, always notify someone (partner, friend, neighbour) where you are going and when you expect to be back. Agree on a course of action if you have not returned home by the time you stated • Lone workers should be aware of the location of the nearest house or phone so that help can be called if required. In general, anyone working alone, or those working on sites remote from the emergency services, should carry a mobile phone. This should be tested at the start of the visit to detect reception blind spots
Getting lost	<ul style="list-style-type: none"> • Use a map and compass if necessary • Use a mobile phone in an emergency

Risk of drowning	<ul style="list-style-type: none"> • Non-swimmers should be accompanied when walking by water • Do not cross rivers unless by bridge • Avoid work when risk of flooding & be aware of tides • Keep at safe distance from bank/cliff/water edge
Danger of injury through accident	<ul style="list-style-type: none"> • Identify potential hazards • Wear appropriate footwear for the location/terrain & weather conditions • Avoid well known danger spots. Do not cross railway lines or other potentially hazardous sites e.g. quarries, ravines • Carry a torch & spare batteries if working late afternoon, a compass &, when in remote areas, a change of clothes • Talk to landowners about the location of potentially hazardous animals • Avoid contact with animals & dung
Fencing	<ul style="list-style-type: none"> • Be aware and avoid touching or climbing over electric fences • Be aware and avoid touching or climbing over barbed-wire fences, please make sure your tetanus vaccine is up to date
Trees	<ul style="list-style-type: none"> • Be aware of low or fallen branches and take care to avoid them • Be aware of other wildlife – especially bees, wasps & hornets

Request for Dormouse Bodies from ZSL for Post Mortem

REASONS FOR CARRYING OUT POST MORTEM EXAMINATIONS ON DORMICE

The main reason for carrying out post mortem examinations on free-living dormice is to gather valuable information on disease threats to dormice and to detect emerging infectious diseases should they occur. This will additionally give the opportunity to collect samples for other studies on dormice. The following samples and information with direct relevance to the reintroduction programme will be collected:

- The cause of death and subclinical diseases, if present
- The parasite burden related to sex and age
- Data on the area, habitat and circumstances in which the dormouse was found
- The transponder number, if present, and hence the origin of the dormouse.
- Data on body measurements, condition score and body weight, leading to an assessment of the condition of the dormouse at the time of year it is found
- Serum samples for retrospective studies on virus infection (depending on additional funding)
- Teeth and eyes for future ageing studies

In addition, information will be gained on any zoonotic infections harboured by dormice, enabling assessment of the health risks to dormice workers and implementation of necessary protective measures.

PROTOCOL FOR SUBMITTING DEAD DORMICE FOR POST-MORTEM

Please provide the following data if possible:

- Name and contact details of the finder
- National grid reference and/or address of the site where the dormouse was found
- Habitat type the dormouse found in e.g. hedgerow, deciduous woodland, garden, or, in case of captive dormice, conditions under which it had been kept
- Events surrounding the death, if known, e.g. brought in by a cat, found dead in a nest box with newly born young, extreme weather conditions, evidence of predators in vicinity
- Any other information known about this dormouse that might be relevant

How to send your dormouse:

- Wrap the dormouse in kitchen paper or cotton wool
- Put the wrapped dormouse in two securely sealed plastic bags, which are tightly closed
- Place the bagged dormouse in a cardboard roll to prevent crushing during postage
- Place in a suitable cardboard box with the completed submission form and add a freezer pack if possible to keep the dormouse cool during postage or place ice in a sealed plastic bag if a freezer pack is not available
- Clearly label the box “**PATHOLOGICAL SPECIMEN. HANDLE WITH CARE**” and mark with the sender’s name and address
- Send as next day guaranteed delivery to arrive on a weekday. Please refrigerate your dormouse if there is a delay before posting

Send by Special delivery/courier to arrive the next day to the following address:

PLEASE ENSURE THE PACKAGE IS POSTED TO ARRIVE ON A WEEKDAY

Ghislaine Sayers
Veterinary Department
Paignton Zoo Environmental Park
Totnes Road
Paignton
Devon
TQ4 7EU

Or to: Fieke Molenaar/Tony Sainsbury
Zoological Society of London
Institute of Zoology
Wellcome Building
Regents Park
London NW1 4RY

POST-MORTEM SUBMISSION FORM DORMOUSE

TO BE POSTED WITH SUBMITTED CARCASE

Date found	
Location and Grid Reference	
Species	
Identification number (if applicable)	
Age class	Juvenile / Adult / Unknown
Sex	Male / Female / Unknown
Preservation	Refrigerated / Frozen / None / Other
Sender's name	
Sender's address	
Sender's telephone number	
Circumstances of death (clinical signs prior to death, situation in which specimen was found)	

Thank you for your help

Health and Safety:

Please remember that dormice can carry diseases that can be infectious to humans. Sensible hygiene precautions should always be taken when handling them:

- *Do not package dormice in areas used to prepare food*
- *Wash hands thoroughly with disinfectant soap after handling dead dormice*
- *Do not eat or drink while handling dead dormice*