



Species Action Plan: Dormouse

Introduction

Scope

This species action plan is for dormouse, *Muscardinus avellanarius* (also known as hazel dormouse or common dormouse but referred to for the purposes of this document simply as the dormouse). However, many of the actions necessary to conserve this species will be aimed at conserving, extending or enhancing the habitats they use throughout their life cycle. Reference should also therefore be made to the relevant Habitat Action Plans listed in the related plans section, below.

Vision Statement

To maintain and enhance the size, number, distribution and resilience of populations of dormouse in Pembrokeshire.

Description of Species

The dormouse is a strictly nocturnal small mammal, found in deciduous woodland and overgrown species-rich hedgerows where hazel is normally abundant with honeysuckle, an important nesting material. Dormice hibernate during winter on the ground in a damp habitat where the temperature remains cool but the humidity remains high. They become active in April or May. During the summer they spend most of their time searching for food in the branches of trees and shrubs, feeding on a succession of flowers, pollen, insects, fruits and hazelnuts throughout the season. Except for hibernation, they rarely descend to the ground - probably to avoid predation.

Dormice live at low population densities, often fewer than 5 per hectare. They rarely travel more than 70m from their nest in search of food. Females typically give birth to four - five young between June and September. If born too late during the summer, the young may be unable to reach a viable weight (12-15g) by autumn, reducing their chance of survival through hibernation. In

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adverse conditions, the dormouse can conserve energy by becoming torpid (lowering its body temperature and becoming inactive as in hibernation). Dormice can live up to 5 years in the wild, considerably longer than other small mammal species.

Because of their nocturnal, arboreal lifestyle spotting dormice can be difficult. However, examination of discarded hazelnuts may assist in identifying the presence of dormice in an area. A neat, round hole in the shell with tooth-marks on the inner rim which are almost concentric with the hole indicates dormouse. The tooth-marks are radial and nearly parallel with rough marks on the nut surface for a wood mouse; the bank vole leaves radial, near parallel grooves with no rough marks. Larger animals, such as squirrels or jays, will either split the shell completely in half or make a jagged hole in it.

Population Size and Distribution in Pembrokeshire

Dormice are fairly widespread in the southern counties of England from Devon to Kent and in the English counties that border Wales. Several populations have been recorded in Carmarthenshire in recent years.

The population size in Pembrokeshire is unknown, but the species is thought to be more widely spread than current data indicates. Therefore, an absence of records cannot be relied upon to indicate absence of the species in an area. It may be necessary to undertake surveys if presence/absence in an area is to be established with any confidence where suitable habitat exists. Populations have regularly been recorded in the woodlands and hedgerows of the Nevern and Gwaun valleys, Pengelli Forest in North Pembrokeshire and in the gardens of houses on the edge of Newport and Carningli. There are also recent records from the Begelly area in the South of the County and Solva in the West.

Trends

Recent surveys indicate that dormouse is now extinct from at least seven counties in the UK where it was reported to occur a century ago and very thinly distributed in several others, such as Pembrokeshire. The loss of suitable habitat as a result of a decline in coppice management, over-shading of shrubs and inappropriate management of hedgerows may suggest that the population is declining due to isolation and fragmentation of habitat in North Pembrokeshire. However, there is insufficient data to establish a local trend with certainty.

Conservation Status

At a European level, the dormouse is listed on Annex IV of the Habitats Directive 1992, which translated into UK legislation as the Conservation of Habitats & Species Regulations 2010 (Habitats Regulations). Dormouse is listed on Schedule 2 of these regulations. It is also partially protected under Schedule 5 of the Wildlife & Countryside Act 1981 (added in 1988).

The dormouse is a priority species in the UK Biodiversity Action Plan.

Habitat Requirements

Hazel, oak, honeysuckle and bramble in a well-lit situation are particularly valuable food sources. The shrub canopy composition should be at least 50% coppiced hazel with at least three of the following: oak, hawthorn, sycamore, ash, birch, and blackthorn. It is thought important that honeysuckle and bramble are present and producing flowers and fruit. Standards should be spaced at no less than one every 20 metres. Tree canopies should overlap frequently to enable dormice to move between areas without descending to the ground. The shrub canopy should be well lit and the area of coppiced hazel cut at any one time should not exceed 20% of the total stand within a 20 year period. However, coppicing to benefit dormice may impact upon other species of conservation concern such as barbastelle bats, lichens and the ascomycete fungus, hazel gloves (*Hypocreopsis rhododendri*). Stands of canopy-forming hazel should be assessed for habitat suitability for a range of species and where necessary, the management requirements for each species should be balanced on a site by site basis.

Although coppiced hazel with bramble and honeysuckle is considered 'classic' dormouse habitat, there are records of them living in Pembrokeshire in mature hedgerows and gardens where these plant species are either not present or where their abundance is low.

Threats

Threats to Dormouse in Pembrokeshire come from:

- **Changes in woodland and hedgerow management:** During the middle and later part of the 20th century much of the woodland in North Pembrokeshire, which had been intensively managed over many centuries, fell into a state of neglect. Active coppicing declined and many of the woodlands converted to dense shaded stored coppice with limited woodland edge and heavily shaded, poorly developed shrubs. As well as inappropriate management of woodlands, many of the hazel rich hedgerows are now flailed annually, reducing the availability of food for dormice. Consequently, habitat suitable for dormouse has undergone a significant decline. In recent years coppicing has been reinstated at several woodland sites including Pengelli Forest National Nature Reserve, and the Gwaun and Nevern valley woodlands.
- **Fragmentation and isolation of suitable habitat:** Loss of woodland edge/scrub and fragmentation of suitable sites by removal or inappropriate management of hedgerows reduces opportunities for dispersal and genetic exchange between populations. Small woodlands of less than 20ha, often provide optimal habitat with a relatively large woodland edge, but probably contain too few individuals to sustain a viable population. A population of fewer than 20 animals is thought to be vulnerable to chance extinction as a result of poor breeding success. It is essential that small woodlands with good habitat are linked by woodland strips or well developed hedgerows to increase dispersal and the functional size of a total population. In addition to the

above, a relatively new threat is that of clear felling in response to outbreaks of tree diseases such as ash dieback or sudden oak death.

- **Climate change and weather conditions:** Short term weather change (such as a succession of poor, wet summers) may reduce availability of food and affect breeding success. A reduction in food intake, particularly in August-October will threaten survival through hibernation. Mild winters may also cause the dormouse to come out of hibernation prematurely when there are no available sources of food. Small populations are more vulnerable to the effects of such fluctuations in environmental parameters. Long term changes in climate with warmer drier summers may induce changes in species composition and ecology. Good ecological connectivity is essential to allow species to alter their range in response to climate change. The extent and significance of any changes is not known and long-term monitoring will be required.
- **Predation:** Badger, fox, stoat & weasel amongst others may be considered 'natural' predators. However, many ad-hoc records of dormouse are from householders whose cats bring in dead animals. Where dwellings are near suitable dormouse habitat it is thought that predation by domestic cats may be a significant risk.

Related Plans & Policies and Further Reading

Other plans / policies directly affecting the management of dormouse in Pembrokeshire are:

- Woodland Habitat Action Plan:
<http://ukbars.defra.gov.uk/project/show/36390>
- Lowland Farmland Habitat Action Plan:
<http://ukbars.defra.gov.uk/project/show/36387>
- Pengelli Forest National Nature Reserve Management Plan: Available upon request from the Wildlife Trust of South & West Wales, Welsh Wildlife Centre, Cilgerran, Cardigan. SA43 2TB.
- A Guide to Hazel Management for Dormice in Pengelli Forest National Nature Reserve: Available upon request from the Wildlife Trust of South & West Wales, Welsh Wildlife Centre, Cilgerran, Cardigan. SA43 2TB.
- North Pembrokeshire Woodlands SAC Management Plan:
<http://www.ccg.gov.uk/landscape--wildlife/protecting-our-landscape/special-sites-project/north-to-rhos-sac-list/north-pembs-woodlands-sac.aspx>
- Bright, P., Morris, P. & Mitchell-Jones, T. (2006). The Dormouse Conservation Handbook (2nd edition). Natural England. Available here:
<http://publications.naturalengland.org.uk/publication/80018>

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Plan Aims

No	Aim	Deadline	Comments
	Maintain and enhance public awareness of and engagement with the conservation requirements of the dormouse	Next review Jan 2020	
	Maintain the quality and quantity of suitable habitat for dormouse in Pembrokeshire and the ecological connectivity between suitable sites in order to maintain the range and population size of dormice in the County	Next review Jan 2020	
	Expand the quality and quantity of suitable habitat for dormouse in Pembrokeshire and enhance ecological connectivity between suitable sites in order to expand the range and/or population size of dormice in the County	Next review Jan 2020	

Suggested Action

Code	Action	Report By	Lead Role	Progress / Additional Information
	Dormouse survey at Teifi Marshes WTSWW: http://ukbars.defra.gov.uk/action/show/4255		WTSWW	
	Dormouse recording at Pengelli Forest WTSWW: http://ukbars.defra.gov.uk/action/show/3338		WTSWW	
	Dormouse management at Pengelli Forest WTSWW:		WTSWW	

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	http://ukbars.defra.gov.uk/action/show/4044			
	Establish a survey programme for dormice, targeting areas of suitable habitat where dormice have not yet been found.		PBP	
	Ensure positive management of dormouse habitat through the provision of management agreement payments. Ensure woodland and hedgerow management is appropriate for dormice when reviewing/considering woodland grant applications where appropriate.		Various	Management schemes run by Pembrokeshire biodiversity partners include PCNPA conservation scheme, NRW section 39 agreements and SSSI agreements, South Hook Section 106 agreement, NRW woodland grant scheme, National Trust, Tir Gofal / Glas Tir.
	<u>Through the implementation of Pembrokeshires Biodiversity SPG, ensure all Planning applications are assessed for possible effects on biodiversity resources. Ensure that planning applications which affect LBAP Habitats and Species are addressed and include full ecological surveys which are properly considered, and mitigation measures which significantly addresses potential negative impacts.</u>		PCC/PCNPA	
	<u>Ensure that partnership organisations' management, plans and agreements (including tenancy agreements where appropriate) address the requirements of sympathetic management of biodiversity.</u>		All partners	
	Provide advice to woodland managers on management techniques to ensure dormouse requirements are considered. Promote the use of existing literature on habitat management for dormice. (Bright, P. Morris, M.			Takes place through advisory group in N Pems? Woodland habitat focus group. Pembrokeshire Woodland Forum

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	Mitchell-Jones, T. The Dormouse Conservation Handbook 2nd edition (2006). Natural England).			
	Ensure woodland and hedgerow management is appropriate for dormice and licensed where necessary when reviewing/considering woodland grant applications.		NRW	
	Identify potential dormouse habitat and linking corridors in North Pembrokeshire.		PBP	
	Extend management of woodland and associated habitats for dormice in the Gwaun Valley, Cilrhydd and Nevern Valley where appropriate opportunities arise		NRW, PCNPA, WTSWW	,
	Support training in conservation of dormice and/or provide advice to land managers on appropriate management of sites supporting dormice.		PBP	
	Provide training to local conservation professionals highlighting recent records of populations in sub-optimal habitat and/or areas of the County not previously thought to support dormice.		PBP	
	Build capacity in Pembrokeshire amongst conservation Professionals to study Dormouse populations by encouraging formal qualifications in survey and increasing the number of people licensed to handle Dormice.		PBP	