European Community Directive
on the Conservation of Natural Habitats
and of Wild Fauna and Flora
(92/43/EEC)

Fourth Report by the United Kingdom
under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the species:

S1341 - Common dormouse (*Muscardinus avellanarius*)

UNITED KINGDOM
**IMPORTANT NOTE - PLEASE READ**

- The information in this document represents the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the species are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).
- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.
### NATIONAL LEVEL

#### 1. General information

<table>
<thead>
<tr>
<th>1.1 Member State</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Species code</td>
<td>1341</td>
</tr>
<tr>
<td>1.3 Species scientific name</td>
<td>Muscardinus avellanarius</td>
</tr>
<tr>
<td>1.4 Alternative species scientific name</td>
<td></td>
</tr>
<tr>
<td>1.5 Common name (in national language)</td>
<td>Common dormouse</td>
</tr>
</tbody>
</table>

#### 2. Maps

<table>
<thead>
<tr>
<th>2.1 Sensitive species</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2 Year or period</td>
<td>1995-2016</td>
</tr>
<tr>
<td>2.3 Distribution map</td>
<td>Yes</td>
</tr>
<tr>
<td>2.4 Distribution map Method used</td>
<td>Complete survey or a statistically robust estimate</td>
</tr>
<tr>
<td>2.5 Additional maps</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 3. Information related to Annex V Species (Art. 14)

<table>
<thead>
<tr>
<th>3.1 Is the species taken in the wild/exploited?</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Which of the measures in Art. 14 have been taken?</td>
<td></td>
</tr>
<tr>
<td>a) regulations regarding access to property</td>
<td>No</td>
</tr>
<tr>
<td>b) temporary or local prohibition of the taking of specimens in the wild and exploitation</td>
<td>No</td>
</tr>
<tr>
<td>c) regulation of the periods and/or methods of taking specimens</td>
<td>No</td>
</tr>
<tr>
<td>d) application of hunting and fishing rules which take account of the conservation of such populations</td>
<td>No</td>
</tr>
<tr>
<td>e) establishment of a system of licences for taking specimens or of quotas</td>
<td>No</td>
</tr>
<tr>
<td>f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens</td>
<td>No</td>
</tr>
<tr>
<td>g) breeding in captivity of animal species as well as artificial propagation of plant species</td>
<td>No</td>
</tr>
<tr>
<td>h) other measures</td>
<td>No</td>
</tr>
</tbody>
</table>
3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

<table>
<thead>
<tr>
<th>a) Unit</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>b) Statistics/quantity taken</th>
<th>Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Season/ year 1</td>
</tr>
<tr>
<td>Min. (raw, ie. not rounded)</td>
<td></td>
</tr>
<tr>
<td>Max. (raw, ie. not rounded)</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>No</td>
</tr>
</tbody>
</table>

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

4. Biogeographical and marine regions

<table>
<thead>
<tr>
<th>4.1 Biogeographical or marine region where the species occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic (ATL)</td>
</tr>
</tbody>
</table>

England


Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)


Juskaitis, R. & Siozynyte, V. (2008). Habitat requirements of the common dormouse (Muscardinus avellanarius) and the fat dormouse (Glis glis) in mature mixed forest in Lithuania. Ekologia 27: 143-151.


Wales


Chanin P, Gubert L. 2012 Common dormouse (Muscardinus avellanarius) movements in a landscape fragmented by roads. Lutra, 55, 3-15


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DJ, McDonald RA. 2018. Climate, landscape, habitat, and woodland management associations with hazel dormouse Muscardinus avellanarius Mammal Review 48, 209-223


## 5. Range

<table>
<thead>
<tr>
<th>5.1 Surface area (km²)</th>
<th>82516</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2 Short-term trend Period</td>
<td>2013-2018</td>
</tr>
<tr>
<td>5.3 Short-term trend Direction</td>
<td>Stable (0)</td>
</tr>
<tr>
<td>5.4 Short-term trend Magnitude</td>
<td>Complete survey or a statistically robust estimate</td>
</tr>
<tr>
<td>5.5 Short-term trend Method used</td>
<td>Complete survey or a statistically robust estimate</td>
</tr>
<tr>
<td>5.6 Long-term trend Period</td>
<td></td>
</tr>
<tr>
<td>5.7 Long-term trend Direction</td>
<td></td>
</tr>
<tr>
<td>5.8 Long-term trend Magnitude</td>
<td>a) Minimum</td>
</tr>
<tr>
<td>5.9 Long-term trend Method used</td>
<td>b) Maximum</td>
</tr>
<tr>
<td>5.10 Favourable reference range</td>
<td>a) Area (km²) 82516</td>
</tr>
</tbody>
</table>
6. Population

6.1 Year or period
1995-2016

6.2 Population size (in reporting unit)
- a) Unit: number of map 1x1 km grid cells (grids1x1)
- b) Minimum
- c) Maximum
- d) Best single value: 4169

6.3 Type of estimate
Minimum

6.4 Additional population size (using population unit other than reporting unit)
- a) Unit: number of individuals (i)
- b) Minimum: 388700
- c) Maximum: 2639000
- d) Best single value

6.5 Type of estimate
95% confidence interval

6.6 Population size Method used
Based mainly on extrapolation from a limited amount of data

6.7 Short-term trend Period
2005-2014

6.8 Short-term trend Direction
Decreasing (-)
Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

### 6.9 Short-term trend Magnitude
- a) Minimum
- b) Maximum
- c) Confidence interval

### 6.10 Short-term trend Method used
Complete survey or a statistically robust estimate

### 6.11 Long-term trend Period
1993-2014

### 6.12 Long-term trend Direction
Decreasing (-)

### 6.13 Long-term trend Magnitude
- a) Minimum 31.36
- b) Maximum 39.86
- c) Confidence interval

### 6.14 Long-term trend Method used
Complete survey or a statistically robust estimate

### 6.15 Favourable reference population (using the unit in 6.2 or 6.4)
- a) Population size
- b) Operator
- c) Unknown x
- d) Method

#### c) Unknown

The FRP for this species is unknown because there is insufficient information to set an FRP value. For further information see the 2019 Article 17 UK Approach document. The current population estimate has extremely wide confidence limits due to data deficiencies around habitat density estimates and, although it is known that there have been large and sustained population declines, it is not possible to set an FRP value.

### 6.16 Change and reason for change in population size
- Genuine change
- Improved knowledge/more accurate data
- Use of different method

The change is mainly due to: Genuine change

### 6.17 Additional information
The number of 1km squares has been calculated from the UK count of 1km squares where the species has been recorded. This is a minimum count because it only includes number of recorded occupied 1km squares.

Reasons for change in the population are genuine change (Goodwin et al. (2017)) and change in the methodology used to calculate population size (Mathews et al. (2018)). The 2018 population estimate has been calculated using more robust methods, although still has low reliability.

The National Dormouse Monitoring Programme (NDMP) provides a statistically robust estimate of population trends and shows a significant long-term population decline of more than 1% per year on average. The population parameter is therefore considered to be Unfavourable-bad.

### 7. Habitat for the species
The UK National Dormouse Monitoring Programme (NDMP) has shown a continuing decline in this species. One of the potential reasons for this decline is habitat loss and change, but the short-term trend for habitat is unknown as there are insufficient data. Quantity and quality of suitable habitat are also unknown, so this parameter is considered to be unknown.
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8.2 Sources of information

8.3 Additional information

Abandonment of traditional forest management (B04) | H
---|---
Clear-cutting, removal of all trees (B09) | H
Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels) (E01) | M
Conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions) (F01) | M
Invasive alien species of Union concern (I01) | H
Problematic native species (I04) | M
Temperature changes (e.g. rise of temperature & extremes) due to climate change (N01) | M
Increases or changes in precipitation due to climate change (N03) | M
Desynchronisation of biological / ecological processes due to climate change (N06) | M

9. Conservation measures

9.1 Status of measures

a) Are measures needed? | Yes
b) Indicate the status of measures | Measures identified and taken

9.2 Main purpose of the measures taken

9.3 Location of the measures taken | Both inside and outside Natura 2000

9.4 Response to the measures | Medium-term results (within the next two reporting periods, 2019-2030)

9.5 List of main conservation measures

Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land (CA01)
Restore small landscape features on agricultural land (CA02)
Maintain existing traditional forest management and exploitation practices (CB02)
Reinstate forest management and exploitation practices (CB03)
Adapt/manage reforestation and forest regeneration (CB04)
Reduce impact of transport operation and infrastructure (CE01)
Manage conversion of land for construction and development of infrastructure (CF01)
Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities (CF02)
Reintroduce species from the directives (CS02)
Manage other native species (CS04)

9.6 Additional information
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10. Future prospects

10.1 Future prospects of parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Range</td>
<td>Poor</td>
</tr>
<tr>
<td>b) Population</td>
<td>Bad</td>
</tr>
<tr>
<td>c) Habitat of the species</td>
<td>Poor</td>
</tr>
</tbody>
</table>

10.2 Additional information

Future trend in Range is Unknown; Future trend in Population is Very Negative - decreasing >1% (more than one percent) per year on average; and Future trend in Habitat for the species is Negative - decreasing <=1% (one percent or less) per year on average. For further information on how future trends inform the Future Prospects conclusion see the 2019 Article 17 UK Approach document.

11. Conclusions

11.1. Range

Favourable (FV)

11.2. Population

Unfavourable - Bad (U2)

11.3. Habitat for the species

Unknown (XX)

11.4. Future prospects

Unfavourable - Bad (U2)

11.5 Overall assessment of Conservation Status

Unfavourable - Bad (U2)

11.6 Overall trend in Conservation Status

Unknown (x)

11.7 Change and reasons for change in conservation status and conservation status trend

a) Overall assessment of conservation status

No change

The change is mainly due to:

b) Overall trend in conservation status

Use of different method

The change is mainly due to: Use of different method

11.8 Additional information

Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is approximately equal to the Favourable Reference Range.
Conclusion on Population reached because: (i) the short-term trend direction in Population size is decreasing by more than 1% per year.
Conclusion on Habitat for the species reached because: (i) the area of occupied habitat is unknown and (ii) the habitat quality is unknown and (iii) the short-term trend in area and quality of habitat is unknown.
Conclusion on Future prospects reached because: (i) the Future prospects for Range are unknown; (ii) the Future prospects for Population are bad; and (iii) the Future prospects for Habitat for the species are poor. Overall assessment of Conservation Status is Unfavourable Bad because two of the conclusions are Unfavourable Bad.
Overall trend in Conservation Status is based on the combination of the short-term trends for Range - stable, Population - decreasing, and Habitat for the species - unknown.
Overall assessment of Conservation Status has not changed since 2013.
Overall trend in conservation status has changed from deteriorating in 2013 to unknown in 2019. This is due to change in method and is not genuine change.
Trends for Favourable parameter conclusions have been included in 2019 and
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13. Complementary information

13.1 Justification of % thresholds for trends

13.2 Trans-boundary assessment

13.3 Other relevant Information

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)

12.2 Type of estimate

12.3 Population size inside the network Method used

12.4 Short-term trend of population size within the network Direction

12.5 Short-term trend of population size within the network Method used

12.6 Additional information

were not included in 2013. In addition, the Future prospects trend for 2019 has been removed from the assessment of overall trend, whereas it was included in 2013. Without these changes the overall trend would continue to be deteriorating.
The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.
Figure 2: UK range map for S1341 - Common dormouse (*Muscardinus avellanarius*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by The Mammal Society applying a range mapping tool as outlined in Matthews et al. (2018), to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.