Forestry Statistics 2024
Chapter 5: Environment

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United Kingdom

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Great Britain/England

The Research Agency of the

Forestry Commission

Forest Research is the research agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

The Agency aims to support and enhance forestry and its role in sustainable development by providing innovative, high quality scientific research, data, technical support and consultancy services.

Contents

Introduction

This chapter presents a range of information about the woodland environment, mostly using sources that are outside the scope of National Statistics. They are included to provide additional context to the topic.

Estimates for England, Wales, Scotland and Northern Ireland are included, where possible, in addition to GB or UK totals. Further information on the data sources and methodology used to compile the figures is provided in Chapter 10: Sources and Methodology.

All of the statistics presented in this chapter have been previously released.

Key findings

The main findings are:

- In 2013, the total area of native woodland in Great Britain is estimated to be around 1.51 million hectares (49% of all woodland in Great Britain).

- In 2013, non-native coniferous woodland is the single largest habitat type in Great Britain, accounting for 1.29 million hectares (42%).

- Following a period of long-term decline through the 1970s and 1980s, the woodland bird index remained relatively stable during the 1990s and 2000s. Since 2010 woodland bird populations have continued to decline, with woodland generalist species down by 9% and woodland specialist species down by 26%.

- After moderate declines through the 1990s, the woodland butterfly index has remained stable since the early 2000s, with woodland butterfly numbers down by only 3% since 2010.

- Around four in five respondents (82%) to the UK Public Opinion of Forestry Survey 2023 agreed with the statement "action should be taken by authorities and woodland managers to protect trees from damaging pests and diseases".

5.1 Woodland types and habitats

National Forest Inventory (NFI) reports on woodland ecological condition provide estimates of the areas of woodland types and of woodland habitats in Great Britain. The latest results, published in 2020, are based on data collected during the first survey cycle of the NFI, which ran from 2010 to 2015.

Table 5.1a presents estimates of the extent of each type of woodland from this report. The total area of native woodland in Great Britain is estimated to be around 1.51 million hectares. This equates to around one half (49%) of the woodland area in Great Britain. The proportion of native woodland is highest in England (68%), followed by Wales (48%) and Scotland (32%).

Table 5.1a Woodland area by woodland type, Great Britain, 2013

thousand hectares

Type of woodland	England	Wales	Scotland	Great Britain
Native	914	150	443	1,507
Near native & fragments	29	7	20	57
Non-native	398	155	908	1,461
Not determinable	2	1	17	20
Total	**1,343**	**313**	**1,388**	**3,045**

Source: NFI Woodland Ecological Condition (2020)

Notes:

1. The report NFI Woodland Ecological Condition Scoring Methodology provides further details on woodland types.
2. Comparisons with woodland area should not be made as woodland area is defined differently to woodland habitat (with woodland area being greater than habitat area due to the treatment of land uses like open space and clear-fell).
3. Clear-fell and transition land are included in the estimates. Woodland type for some clear-fell and transition land cannot be determined and are assigned as not determinable.

These figures are outside the scope of National Statistics. For further information see Chapter 10: Sources and Methodology.

Non-native coniferous woodland is the single largest habitat type in Great Britain (Table 5.1b), accounting for 1.29 million hectares (42%). This is the most common habitat type for Scotland (59%) and Wales (46%). For England, lowland mixed deciduous woodland accounts for over one half (56%) of woodlands.

Table 5.1b Woodland area by habitat type, Great Britain, 2013

thousand hectares

Habitat type	England	Wales	Scotland	Great Britain
Lowland beech/yew woodland	54	6	1	62
Lowland mixed deciduous woodland	748	79	82	909
Native pine woodlands	0	0	124	124
Non-HAP native pinewood	0	0	38	38
Upland brichwoods (Scot), birch dominated upland oakwoods (Eng, Wal)	11	2	120	134
Upland mixed ashwoods	32	7	15	54
Upland oakwoods	44	26	33	103
Wet woodland	78	28	63	169
Wood pasture & parkland	8	0	3	11
Broadleaf habitat NOT classified as priority	19	12	21	53
Non-native coniferous woodland	328	145	819	1,292
Clearfelled and transition	22	6	70	97
Total	1,344	313	1,389	3,045

Source: NFI Woodland Ecological Condition (2020)

Notes:

1. The report NFI Woodland Ecological Condition Scoring Methodology provides further details on habitat types.

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5.2 Populations of wild birds

Bird populations provide a good indication of the broad state of wildlife in the UK. This is because they are a well-studied taxonomic group, enabling a more informed interpretation of observed changes, who occupy a range of habitats while still responding to the same environmental pressures that also operate on other groups of wildlife.

Indices of wild bird populations in the UK are produced annually by the Department for Environment, Food and Rural Affairs (Defra) in conjunction with the Royal Society for the Protection of Birds (RSPB), the British Trust for Ornithology (BTO) and the Joint Nature Conservation Committee (JNCC), and cover a range of species that are native to the UK. This data has been produced since the early 1970s for the majority of habitat groups, meaning there is considerable long-term data available on the changes in bird populations, which aids in the interpretation of more short-term variation. The latest statistical release on wild bird populations in the UK was published in November 2023 and includes data to 2022.

The index for woodland birds was expanded in 2007 to cover 38 species. A further change in 2015 resulted in a reduction to 37 species, of which 12 are generalists and 25 are woodland specialists (those that breed or feed mainly or solely in woodland).

Since the early 1990s, when the majority of species group indices stabilised, the UK woodland bird index has generally been about 20 per cent below the level of the early 1970s, with the decline predominantly in woodland specialist species (Figure 5.2).

Causes for the long-term decline in the woodland bird index may include a lack of diversity in habitats and food sources, loss of habitats and food sources through damage caused by increasing deer populations, and a reduction in some migratory species following pressures in other parts of the world.

In recent years, woodland bird indices have largely decreased. Since 2010, woodland generalist species have fallen by 9% and woodland specialist species have fallen by 26%, resulting in a fall across all woodland birds of 22% (Table 5.2).

Table 5.2 Population of wild birds, UK, 2012 to 2022

Year	Total breeding birds	Farmland birds	Seabirds	Woodland birds	Woodland generalists	Woodland specialists
2012	98.7	100.0	90.1	102.3	99.9	103.9
2013	91.3	90.8	86.6	89.5	87.8	90.2
2014	98.5	92.2	94.9	99.6	101.6	99.0
2015	101.4	97.3	92.5	99.5	102.7	98.2
2016	98.7	89.0	95.9	95.0	101.1	92.4
2017	99.6	92.2	97.4	91.7	102.2	86.4
2018	92.2	88.1	89.9	86.8	93.3	84.8
2019	96.4	88.1	94.9	90.5	99.5	86.4
2020	99.8	92.8	97.8	92.3	102.2	87.8
2021	92.9	88.1	89.6	80.7	92.4	75.2
2022	92.2	84.1	94.6	78.3	90.6	73.6

Source: Wild bird populations in the UK (1970 to 2022), BTO, Defra, JNCC, RSPB.

Note:

1. Index: year 2010 = 100.

Figure 5.1 Woodland bird index (2010 = 100), UK, 1970 to 2022
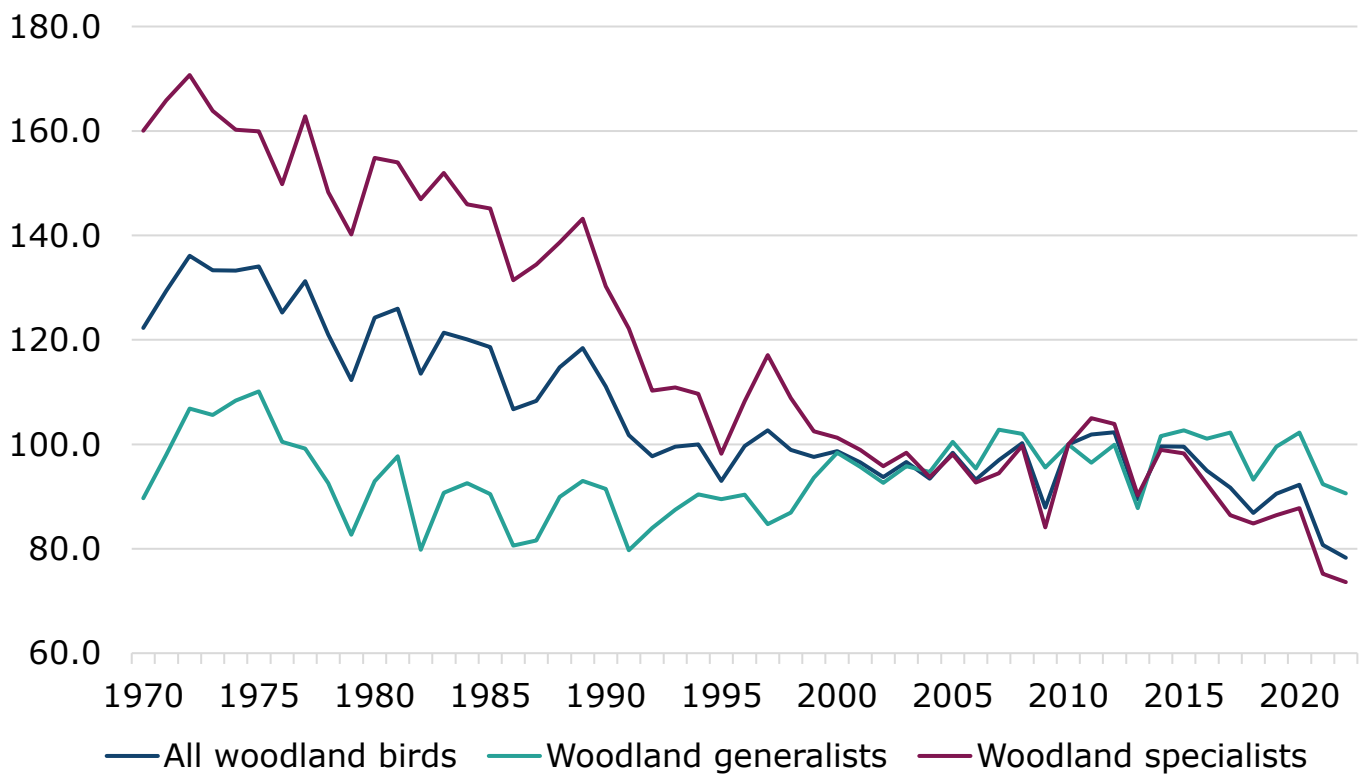
Source: Wild bird populations in the UK (1970 to 2022), BTO, Defra, JNCC, RSPB.

Note:

1. Index: year 2010 = 100.
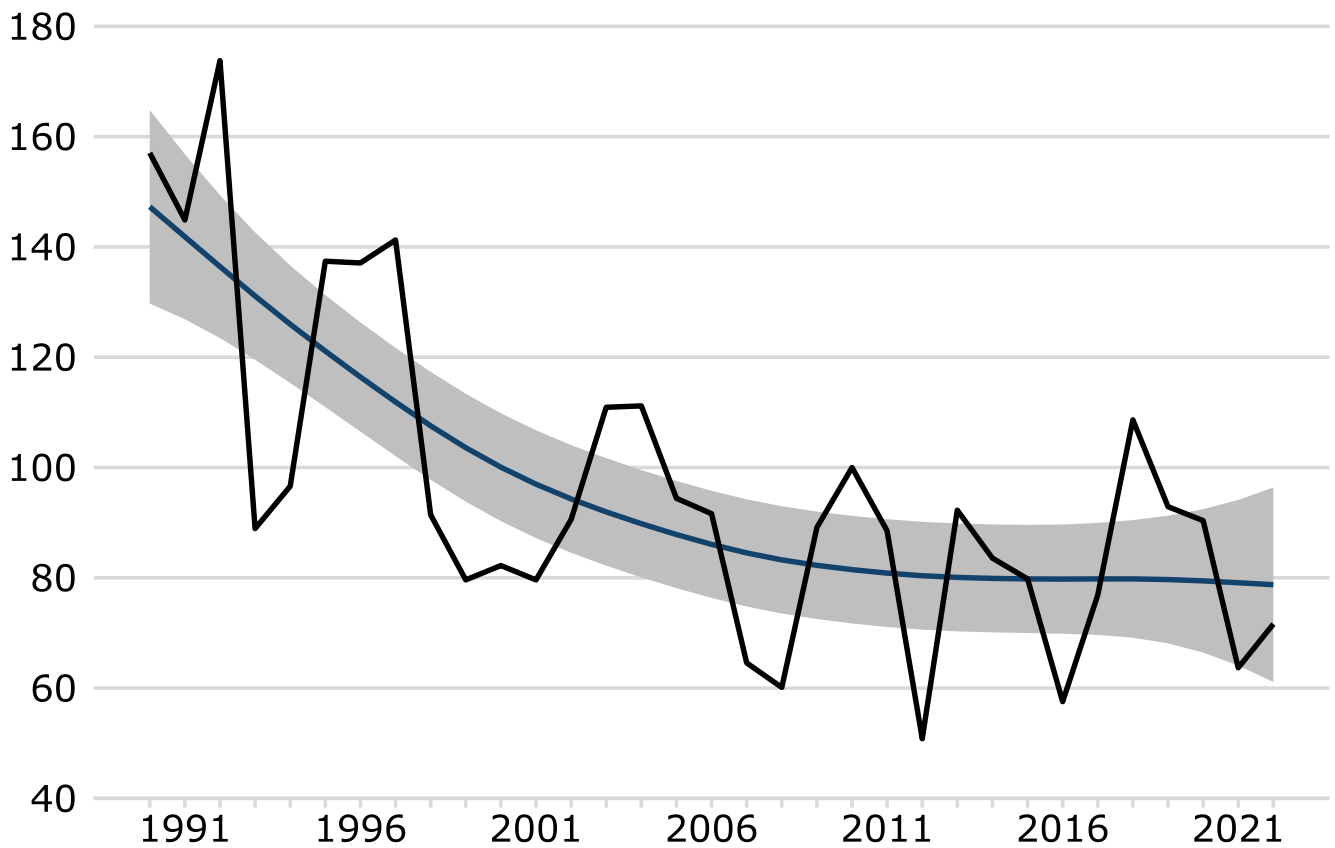
5.3 Populations of woodland butterflies

Pollinating insects are important to many plants, including crops and wildflowers, as they help them reproduce and fruit. Their populations are a good indicator of ecosystem health and food security.

Indices of pollinating insects, including butterflies, bees and hoverflies, are produced annually by Defra, in partnership with Butterfly Conservation, UK Centre for Ecology and Hydrology, BTO and JNCC. For most butterfly species, abundance data has been collected since the mid-1970s. However, for woodland species there is insufficient data to provide reliable estimates prior to 1990. The latest UK Biodiversity Indicators were published in November 2023 with data for 2022 (Table 5.3). The butterfly index includes 50 species, of which 24 are commonly found in woodland.

Figure 5.3 shows the trend in woodland butterfly populations from 1990 to 2022. After a statistically significant long-term decline through the 1990s (smoothed index), butterfly abundance in woodland has remained stable since the mid-2000s, and has shown no significant change in the short term since then (Table 5.3).

The long-term decline of woodland butterflies is thought to be due to a lack of woodland management (see Chapter 1) and loss of open spaces in woods.

Figure 5.3 Woodland butterfly index (2010 = 100), UK, 1990 to 2022

Source: Butterfly Conservation, UK Centre for Ecology and Hydrology, BTO, Defra, JNCC.

Note:

1. Black line: unsmoothed butterfly index; blue line: smoothed butterfly index; grey shading: 95% confidence interval.

Table 5.3 Population of woodland butterflies, UK, 2012 to 2022

Year	Unsmoothed woodland butterfly index	Smoothed woodland butterfly index
2012	50.8	80.4
2013	92.3	80.1
2014	83.6	79.9
2015	79.8	79.8
2016	57.5	79.8
2017	76.9	79.8
2018	108.6	79.8
2019	92.9	79.7
2020	90.4	79.4
2021	63.7	79.1
2022	71.6	78.7

Source: Butterfly Conservation, UK Centre for Ecology and Hydrology, BTO, Defra, JNCC.
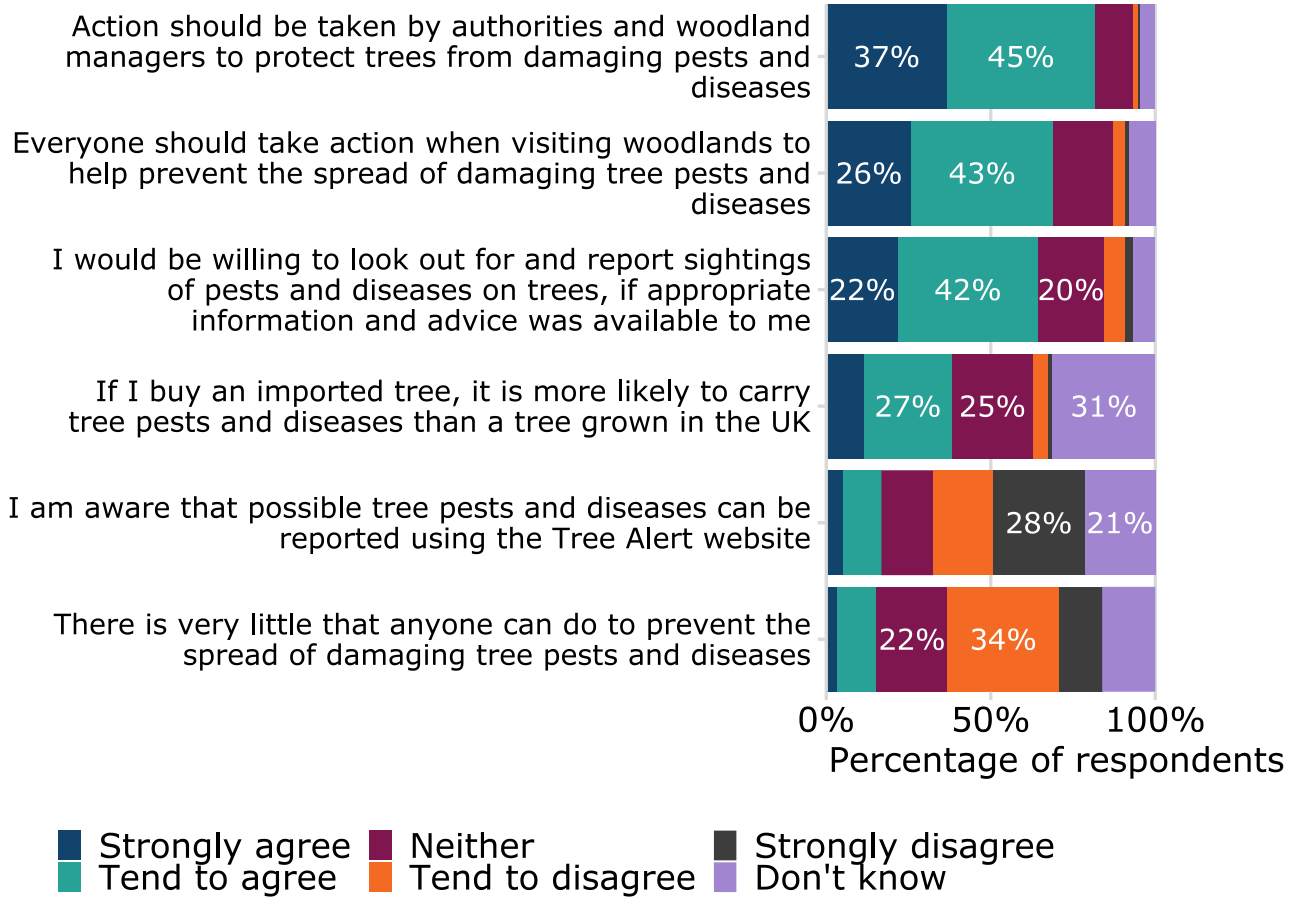
Note:

1. Index: year 2010 = 100.

5.4 Public attitudes to tree health issues

Forest Research (and previously the Forestry Commission) has surveyed public attitudes to forestry and forestry-related issues since 1995. The most recent surveys were conducted in 2023 (with separate surveys in Wales, Scotland, Northern Ireland and across the UK as a whole). Full results are available on the Public Opinion of Forestry homepage.

Respondents to the UK survey in 2023 were asked their views on a range of statements relating to tree health. The highest level of agreement was seen with the statement "action should be taken by authorities and woodland managers to protect trees from damaging pests and disease", with 82% of UK respondents agreeing (agree or strongly agree) (Figure 5.4 and Table 5.4). This compares with only 15% agreeing with the statement "there is very little that anyone can do to prevent the spread of damaging tree pests and diseases".

Figure 5.4 Respondents' views on issues related to tree health and diseases, UK, 2023

Source: Public Opinion of Forestry Survey 2023: UK and England.

Base: All respondents (11,055).

Notes:

1. The range of uncertainty around any result should be no more than ±1.4%.

These figures are outside the scope of National Statistics. For further information see Chapter 10: Sources and Methodology.

Table 5.4 Proportion of respondents who agreed or strongly agreed with issues related to tree health and diseases, UK, 2017 to 2023

Statement	2017	2019	2021	2023
Action should be taken by authorities and woodland managers to protect trees from damaging pests and diseases	85	85	77	82
Everyone should take action when visiting woodlands to help prevent the spread of damaging tree pests and diseases	74	74	69	69
I would be willing to look out for and report sightings of pests and diseases on trees, if appropriate information and advice was available to me	65	65	62	64
If I buy an imported tree, it is more likely to carry tree pests and diseases than a tree grown in the UK	48	46	44	38
I am aware that possible tree pests and diseases can be reported using the Tree Alert app or website	23	25	29	17
There is very little that anyone can do to prevent the spread of damaging tree pests and diseases	23	23	24	15

Source: UK Public Opinion of Forestry surveys (2017 to 2023).

Base: 1,804 (2017), 2,174 (2019); 5,119 (2021); 11,055 (2023).

Note:

1. The range of uncertainty around any result should be no more than ±3.5% for surveys with around 2,000 respondents, no more than ±2.1% for surveys with around 5,000 respondents and no more than ±1.4% for surveys with around 11,000 respondents.

2. To compare results over time, a difference of at least 5 percentage points is required to indicate that there is a significant difference.

These figures are outside the scope of National Statistics. For further information see Chapter 10: Sources and Methodology.

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