

Bluebells for Britain

A report on the 2003

Bluebells for Britain survey



PLANTLIFE

Bluebells for Britain

Front cover: a bluebell wood near Ashridge, Hertfordshire

The *Bluebells for Britain* survey is one of the projects in the *Making it Count for People and Plants* programme. This is a joint initiative between Plantlife International and the Botanical Society of the British Isles (BSBI), which is being funded through the generous support of the Heritage Lottery Fund.

Plantlife International is the UK's leading charity dedicated to the conservation of wild plants in their natural habitats. The charity acts directly to stop common plants becoming rare in the wild, to rescue wild plants on the brink of extinction, and to protect sites of exceptional botanical importance. The charity carries out practical conservation work, influences relevant policy and legislation, involves its members in many aspects of its work and collaborates widely to promote the cause of wild plant conservation. Plantlife International hosts the secretariat for Planta Europa, the network of organisations working for plant conservation across Europe.

Plantlife International would like to thank the following people for their help and support: Bjorn Beckmann, Michael Braithwaite, Andy Brown, Mick Crawley, Dr Trevor Dines, Dr Jenny Duckworth, Sarah Garnett, Martin Harper, Eugenia Holotova, Neil Ireland, Philippa Lane, Sue Malcolm, Beth Newman, Mary Smith, Abigail Rowley, Gosia Slabiak, Jacqueline St Quinton, Anna Sabine, Joe Sutton, Lucy Whitter and Tim Wilkins.

Written by Dr Emma Pilgrim and Nicola Hutchinson

Edited by Gail Vines



Protection under the law

Since 1998, through the listing of the native bluebell on Schedule 8 of the Wildlife and Countryside Act (1981), it has been illegal for anyone to collect native bluebells from the wild for sale. This legislation was designed specifically to protect the bluebell from unscrupulous bulb collectors who supply garden centres.



Bluebell woods are an essential part of our natural heritage and are one of the most stunning sights of the British countryside.

Summary

Britain has three different species of bluebells but only one is indigenous. The distinctiveness of our native bluebell *Hyacinthoides non-scripta* could be at risk because it readily cross-breeds with both its Spanish cousin *Hyacinthoides hispanica*, often planted in gardens, and with the resulting fertile hybrid *Hyacinthoides hispanica x non-scripta*.

More than two thousand people took part in the *Bluebells for Britain* survey in March 2003 recording the different species of bluebell across both urban and rural landscapes. The survey set out to raise awareness of the threat posed to our native bluebell particularly by its Spanish counterpart.

Encouragingly, the majority of records received were of pure native bluebell populations in its stronghold habitat, broadleaved woodland. However, fears about the potential threat to the native bluebell through hybridisation were confirmed by the alarming finding that one in six broadleaved woodlands recorded had a mixture of bluebells present. This draws attention to the problem facing the genetic integrity of the native bluebell as the Spanish and hybrid bluebells encroach into its favoured habitat.

Plantlife International recommends that more research is urgently needed to understand the intermixing of genes between the species. The law must remain firm on preventing the uprooting of wild native bluebell populations for commercial purposes, and licences need to be granted to permit the legal sustainable collection of native bluebell seed to meet the growing demand for bluebells. Horticultural suppliers need to ensure that the bluebell bulbs they sell are accurately labelled and harvested from sustainable sources. Equally, gardeners must take care to avoid planting Spanish or hybrid plants in the countryside or near native bluebell populations.

Contents

Summary	3
Introduction	4
Bluebells for Britain: the results	8
Recommendations	10
How to get involved in the <i>Making it Count for People and Plants</i> programme	11

Beware the fairy bells

Bluebells are famous for their rich folklore. In times past, when forests were forbidding places, people believed that bells rang out to summon fairies to their gatherings. Alas, any human who heard a bluebell ring would soon die. A field of bluebells was thought to be associated with fairy enchantments.



Our native wild plants must be preserved for all generations to enjoy, now and for the future.

Introduction

The *Bluebells for Britain* survey is one of the projects in the *Making it Count for People and Plants* programme. This exciting and innovative programme of action is vital for conserving Britain's wild plants. Its purpose is to build a clear picture of the state of our UK flora by carrying out a range of surveys, organised by both Plantlife International and the Botanical Society of the British Isles (BSBI), funded generously by the Heritage Lottery Fund over an initial period of three years. The information gathered will be used to form the basis of appropriate conservation management plans that we hope will promote a healthy environment for wild plants.

The *Bluebells for Britain* survey was launched to alert the public to the potential threats to our native bluebell *Hyacinthoides non-scripta*. This charismatic plant, voted the nation's favourite flower in Plantlife's *County Flowers* project in 2002, is emblematic of spring in Britain. It thrives in shady habitats such as broadleaved woodland where it can dominate the ground flora, though it also occurs in hedgerows, bracken communities and open grasslands, particularly in the damper west of Britain.

The UK is home to almost half of the world's population of *Hyacinthoides non-scripta*. Globally, this species is threatened, underlining the international obligation we have to protect this species. Our native bluebell could be damaged by:

- **competition and hybridisation** with its close relative the Spanish bluebell *Hyacinthoides hispanica*
- **habitat loss** as a result of poor management, conversion of broadleaved woodland to agriculture, or conifer plantations
- **unsustainable collection**, although since 1998 it has been illegal to collect bluebells from the wild for commercial purposes
- **climate change**, although the potential fate of the native bluebell in a warmer climate remains uncertain

The native bluebell's Spanish relative is more vigorous than our native species and can readily cross-breed with it to create a fertile hybrid *Hyacinthoides hispanica x non-scripta*. Plantlife International is concerned that this cross-breeding between the three different species could have dramatic consequences for the genetic integrity of our native bluebell. To learn more about the distribution of these different species, we asked the public to let us know wherever they found bluebells.

Legal collection

There is a high demand for bluebells from gardeners and from conservation restoration schemes, that needs to be met by a legal supply of native bluebells. Current legislation allows for the issuing of a special licence from the government or devolved administrations, which permits the sustainable collection of wild seed for sale. Such licences provide safeguards to ensure sustainable collection and protection for wild bluebell populations. Whilst at least one licence has been issued to date

in England for the collection of seed for sale, so far no equivalent licence has been issued in Scotland. Without the collection of local provenance bluebell seed from Scotland we run the risk of damaging the genetic health of our bluebell populations in Scotland by continuing to plant bluebells of English origin, hybrids or the non-native Spanish bluebell. One issue to remember when licences are granted for seed collection is that there must be a system to ensure that legally raised native bluebell stocks remain distinguishable from illegally collected wild bulbs.



A native bluebell between the roots of trees in Powys, Wales.



Native bluebell *Hyacinthoides non-scripta*

A bulbous perennial, our indigenous species is native to north-western Europe, where it seems to prefer slightly acidic soils and partial shade. Early in the growing season, they can be a dominant species in coppiced woods on light soils, but they are also found on hedge-banks, and sea-cliffs. The native bluebell's deep violet-blue flowers have a strong sweet scent, and the flower stems droop or nod distinctively to one side.



Hybrid bluebell *Hyacinthoides hispania x non-scripta*

The Spanish bluebell can readily cross-breed with the native bluebell to form the fully fertile hybrid. The hybrid was first recorded in the wild in the UK in 1963, and is also extremely common in gardens. Hybrid plants can demonstrate characteristics of both the native and Spanish bluebells.



Spanish bluebell *Hyacinthoides hispanica*

This species, native to Portugal and western Spain, was first introduced in British gardens as an ornamental plant in the 1680s. It was favoured over the native because it can grow almost anywhere and has bolder blooms. This is a more upright plant than the native bluebell. Its flowers range in colour from pale to mid blue, or white or pink, and has characteristically deep blue pollen. The Spanish bluebell was first recorded in the wild in the UK in 1909. This species is often confused with the hybrid and has therefore probably been over-recorded by botanists in the past.

Removing Spanish or hybrid bluebells from your land

Should you wish to dig up the non-native variety of bluebell from your garden or land, please dispose of them carefully. Plantlife International recommends that they are dug up once the plants have finished flowering, with their leaves intact and left in the sun to dry out for as long as a month. This will ensure that the bulb has been killed. Only when bulbs are dead should they be composted. Composting bulbs before they are

dead could lead to inadvertently propagating them. Please remember the law regarding wild plants – it is only legal to dig up wild plants on your own land so do not attempt to remove Spanish or hybrid bluebells from land owned by others.



Figure 1: The distribution of records received in the *Bluebells for Britain* survey

Bluebells for Britain: the results

We asked our recorders to describe the places they found bluebells, by choosing among seven habitat categories: boundary features (walls, paths, road verges, hedgerows, grass strips, lines of trees, dry ditches); broadleaved wood and scrub; bracken; built-up areas and gardens; conifer wood; grassland; coastal. We then asked volunteers to identify the bluebells as native, Spanish, hybrid or a mixture of these. Finally, to give some idea of the population sizes involved, we asked surveyors to estimate the area that they covered.

We received a total of 4500 records from the survey – figure 1 displays the distribution of records received from the UK. Three quarters of records were for the native bluebell *Hyacinthoides non-scripta*. Figure 2 shows proportions of native bluebells recorded in different habitats. Not surprisingly, the native bluebell was most often recorded (71% of records) in broadleaved wood/scrub habitat. More than 50% of native bluebells were recorded in sites with an area between 100m² and one hectare, and 16% were from sites of more than one hectare (figure 4).

The 37% of Spanish bluebell records and 39% of hybrid or mixture records from the ‘built up areas and gardens’ category (figure 2) probably reflects the popularity of the Spanish and hybrid bluebells as garden flowers. That a further 30% of Spanish bluebells and 20% of those recorded as hybrid or a mixture were found along boundary features (such as road verges) would seem to support this.

Most notable, however, is the occurrence of hybrid and mixed bluebell populations in broadleaved woodland. Such habitat is traditionally the stronghold of the native bluebell. Nearly 40% of mixed bluebell populations were recorded in broadleaved woodland habitat (figure 2), and this represents 15% of the total number of bluebell sites that were broadleaved woodland (figure 3). This means that one in six broadleaved woodland sites recorded had either the Spanish or hybrid bluebell present alongside a native bluebell population. That a proportion of these woodland sites (57%) are within or close

All ages took part in the *Bluebells for Britain* survey. Here a Plantlife staff member helps to identify the features of a native bluebell.



NIKKI GIBBS/PLANTLIFE

Figure 2: The percentage of native (A), hybrid/mixture (B) and Spanish (C) bluebells recorded in different habitats.

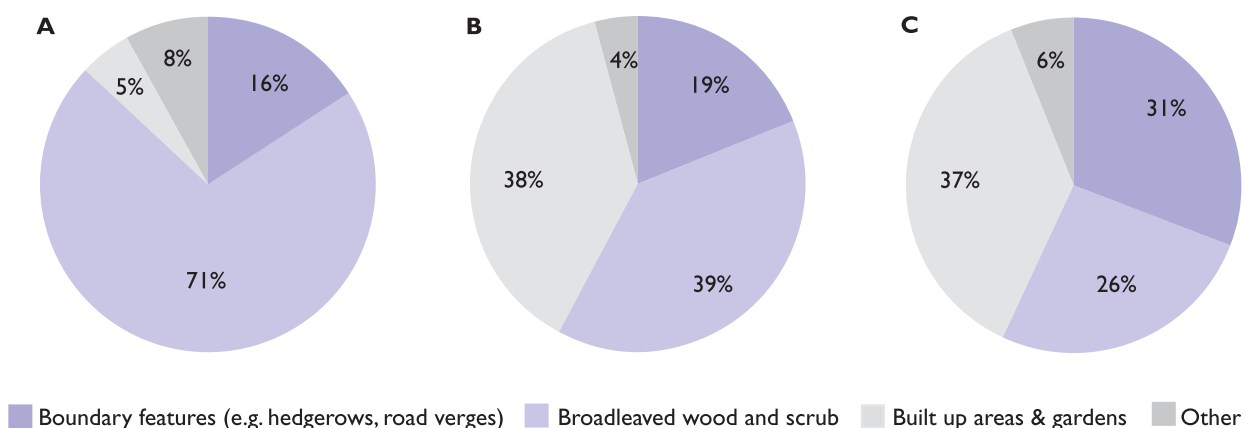


Figure 3: The percentage of native, Spanish and mixed bluebell populations recorded in a broadleaved woodland.

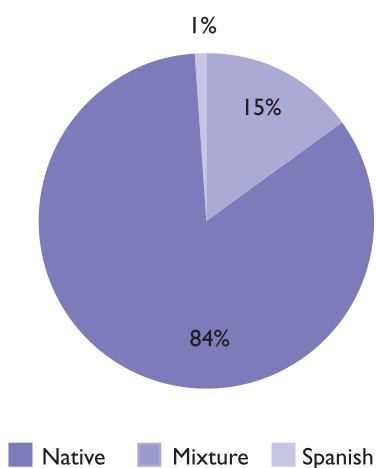
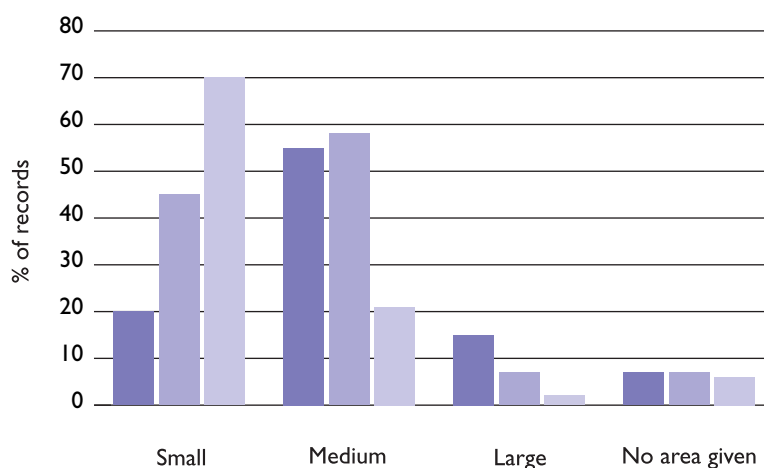


Figure 4: The area size of sites bluebells were recorded in - small (<100m²), medium (100-1000m²) and large (>1000m²).



to residential areas does not detract from the fact that a habitat that would once have been solely the domain of our native bluebell is now frequently home to the Spanish and hybrid as well.

It is reassuring that in broadleaved woodlands the native bluebell was recorded considerably more frequently than was a mix of bluebells, confirming that the native bluebell still dominates in this its preferred habitat. However, the fact that one in six broadleaved woodlands was recorded as having a mixed or hybrid bluebell population highlights the problem of contamination by non-native bluebells and the potential threat that hybridisation poses to Britain's national wild flower emblem.

Recommendations

We have a global responsibility to protect this most evocative of our wild flowers and Plantlife International strongly urges the following to help conserve our native bluebell:

- Further research is needed to determine the level of threat these newcomers represent to the native bluebell - to discover, for instance, how readily they can cross-breed and over what distance. We also need to learn more about the distribution of the three species overall, and about sites where they co-exist. Plantlife International is supportive of proposals by Edinburgh University to conduct research into the field performance of the three bluebell species to assess how much the native bluebell could be threatened by the vigour of the Spanish and hybrid bluebells. Such information is vital if we are to learn more about the transfer of genes among these species.
- It should remain illegal to take bluebell bulbs from the wild for commercial purposes and no bulb collected from the wild should enter the horticultural trade. But there should be a legal supply of native bluebells for gardeners and for habitat restoration. Licences should be granted for sustainable harvesting of wild bluebell seed for direct sale to the market or for 'bulking-up' for subsequent sale of bulbs.
- The horticultural industry must end the misleading sale of either the Spanish or hybrid bluebell under the guise of the native bluebell, and sign up to the joint Flora locale/Plantlife International code of practice for collectors, growers and suppliers of wild flora (www.floralocale.org).
- Gardeners should double check that supplies of native bluebells are genuine and are not sourced illegally from the wild. If in doubt, they should not buy them. Gardeners should never plant Spanish/hybrid bluebells in the countryside, or in gardens near native populations, and should compost excess garden material carefully.

Beware the bulb trade



During the Bluebells for Britain survey, we received many letters from people who wanted to buy bulbs of *Hyacinthoides non-scripta* but noticed that what was on sale seemed to be the Spanish bluebell *Hyacinthoides hispanica* (above).

Readers of Gardening Which? had similar fears, prompting Rosemary Ward,

its Member Services and Campaigns Manager, to do some investigating. The Gardening Which? team bought bluebell bulbs that were labelled as the native *H. non-scripta* yet whose packets were adorned with a picture of its Spanish cousin. Fortunately, the bulbs did in fact turn out to be the native bluebell, but this inappropriate labelling is cause for concern.

For those wishing to source native bluebells, Flora locale (www.floralocale.org) puts people in touch with suppliers in

their area who sell seeds of local provenance.

Similarly, The Bluebell Recovery Project, an initiative between Landlife (www.landlife.org.uk) and The Mersey

Forest (www.merseyforest.org.uk), aims to keep British woodlands rich in bluebells by producing a legitimate source of native bluebell bulbs and running a programme of replacing bulbs and seed back into woodland. It is a long-term project, involving local people, community groups and schools.

How to get involved in the *Making it Count for People and Plants* programme

The Common Plants Survey is the only national annual survey of wild plants in the UK. We have carefully chosen a set of 65 of the UK's common plants which are both easy to identify and indicative of particular habitats. We ask participants to look for these plants in randomly selected 1km squares close to where they live. By surveying these random squares each year, we hope to build up a picture about the health of the British countryside.

To get involved please visit the Plantlife International website

www.plantlife.org.uk, email enquiries@plantlife.org.uk, or phone our hotline (01722) 342755. You can also write to us at Plantlife International, 14 Rollestone Street, Salisbury, SPI 1DX.

Further Reading

Mabey, R (1996) *Flora Britannica: The definitive guide to wild flowers, plants and trees*, Sinclair-Stevenson, London

Pearman, Preston & Dines (2002) *The New Atlas of the British and Irish Flora*

Wigginton (1999) *The British Red Data Book 1: Vascular Plants* 3rd edition, JNCC, Peterborough

Plantlife (1991) *Death knell for bluebells*. Plantlife, London.



Native bluebells beside the ruins of the castle at Tintagel in Cornwall demonstrate how bluebells are an important part of our landscape.

Bluebells for Britain



Further copies of this report are available from Summerfield Books priced at £5 (incl. p+p)
Plantlife Bookstore, Summerfield Books
Main Street, Brough, Cumbria CA17 4AX



PLANTLIFE

Plantlife International – The Wild Plant Conservation Charity
14 Rollestone Street, Salisbury, Wiltshire, SP1 1DX, UK
Tel: +44 (0)1722 342730 Fax: +44 (0)1722 329035
e-mail: enquiries@plantlife.org.uk website: www.plantlife.org.uk

Plantlife International – The Wild Plant Conservation Charity is a charitable company limited by guarantee.
Registered Charity Number: 1059559 Registered Company Number: 3166339
© April 2004. ISBN: 1 904749-03-8