

Chapter 1 : Category:Flora of Great Britain - WikiVisually

Mar 28, 2015 · Whether due to global warming, changing farm practices or loss of habitat, Britain's flora and fauna is changing. Stephen Moss charts some of the new arrivals - and those that have sadly departed.

Displaced by Climate Change Written By: Presented as archival content. Unlike most articles on Britannica. Rather, they are presented on the site as archival content, intended for historical reference only. Audubon also made predictions about how climate change would affect the home ranges and thus the long-term survival of these species. The conclusions were sobering: An illustration of how profound these changes would be is the plight of the common loon *Gavia immer*, known for its haunting call. Similarly, the summer range of the trumpeter swan *Cygnus buccinator* most concentrated in eastern Alaska, northern British Columbia, and the Yukon Territory would be virtually nonexistent in North America by 2050. The fact that they would be substantially affected by environmental changes to their breeding and nesting grounds brought on by climate change did not bode well for other living things, such as terrestrial animals, which cannot move as fast or as far as birds, and especially plants, which are immobile with the exception of dispersal of their seeds by wind, birds, or other factors. In March the Intergovernmental Panel on Climate Change IPCC released the Impacts, Adaptation, and Vulnerability section of its Fifth Assessment Report AR5, a comprehensive accounting of progress toward reigning in the production of greenhouse gases and the likely effects that climate change would have on humans and other forms of life. The report noted that some plants and animals were already dispersing beyond their former home ranges that is, toward the North and South poles and up the slopes of mountains to avoid droughts and excessive heat to a greater extent than what could be expected from human-driven changes to land use. e. Parts of Tosa Bay a body of water adjacent to the Japanese main island of Shikoku that were once dominated by forests of kelp and sea grasses, along with animals associated with that ecosystem, were slowly changing into coral reef ecosystems with the help of tropical fish that were migrating northward. The tropical fish, which were accustomed to scraping algae and other types of food off the coral, were ravenously consuming the thick vegetation of the kelp forest. This pattern of poleward-moving tropical invasion was also occurring to various extents in the Gulf of Mexico, the Eastern Seaboard of the U.S. In North America the U.S. Department of Agriculture USDA reported in December that noticeable changes in climate in the northeastern United States had become apparent in recent years, with warmer winter air temperatures, longer growing seasons, and a greater frequency of extreme weather events. Noting the work done by other studies, the USDA report reiterated predictions that spruce-fir forest habitats would shrink while oak habitats would expand in the region an eventuality that would be accompanied by changes in the numbers and types of animals, greater risk of invasion by exotic species, and changes to the way nutrients flow within these habitats. A study of 38 tree species near the Andes Mountains in South America recorded stands moving vertically up mountain slopes at rates averaging 2. The authors noted, however, that the upslope shifts for these trees needed to increase to 5. The conclusions that could be drawn from the Audubon report and the other studies were that many ecosystems around the world were changing and that some species owing either to competition with other species or to their inability to outpace the effects of climate change would not survive the transition. As far as ecosystem dynamics were concerned, an ecosystem might be able to weather the extinction of one or even a few species in a short amount of time, depending on how important they were. In other words, a spruce-fir forest would remain recognizable as a spruce-fir forest after the elimination of a few plant and animal species. On the other hand, if multiple species could not adapt to the new environmental conditions and died out, the ecosystem would be transformed into a new state, such as the oak forest that the USDA scientists documented. It was expected that as the pace of climate change increased, there would be some degree of loss in biodiversity; the amount would be dependent upon the severity of temperature increases and precipitation changes in different parts of the world. Although several international meetings had convened to develop limits on greenhouse gas emissions, a comprehensive and enforceable global agreement had yet to be implemented. As a result, climatologists and other scientists predicted that by the global average temperature would increase by 0. The best way to minimize the harmful effects of climate

change on plants and animals was for industry to cut greenhouse gas emissions as soon as possible while rapidly switching to alternative forms of energy generation. If these transitions did not occur immediately, were the many forms of life threatened by climate change doomed? Since the late 1980s, ecologists had entertained the possibility of helping some of the species that could not migrate quickly enough on their own. Assisted migration was controversial, however, because animal relocation and plant seeding could introduce harmful organisms to ecosystems that had little or no way of coping with them, risking further loss of biodiversity. In addition, assisted migration would require that large numbers of wildlife officials facilitate and oversee relocations, that rules regarding the transport of species across international borders be changed, and that solutions be developed for organisms living in habitats with disappearing climates. On the other hand, the replanting of vegetation that followed forest clear-cutting by logging companies had become a common practice. Some scientists argued that seeding to establish populations of trees and other plants in new areas in anticipation of climate change could work, if the processes were carried out carefully and with monitored and ecologically sound migration programs. In the absence of a global plan to cut greenhouse gas emissions, plants and animals under immediate threat were forced to move to more-hospitable areas as soon as possible. For those species that were unable to facilitate a rapid departure, assisted migration was one solution, but that remedy also presented challenges.

Chapter 2 : flora | Definition of flora in English by Oxford Dictionaries

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In fact the animals in question are European beavers, a much more environmentally-friendly animal than their Canadian cousin, and more likely to improve habitats rather than destroy them. Beavers were originally native here, but went extinct sometime during the 16th century, as a result of hunting for their fur. In mainland Europe, they fell to a low point of individuals during the 19th century, but have since made a strong recovery.

Wild boar The conservation authorities were somewhat embarrassed when reports of "really wild" boars began to appear in the press - usually as a result of an unfortunate motorist literally bumping into one. As escapees from commercial farms, policy dictated that they should be recaptured or killed, to prevent them establishing a permanent presence. But the legislation ignored the fact that wild boars were originally native to Britain, dying out in the 17th century as a result of over-hunting. Once at large, they are also notoriously difficult to track down. So, despite its controversial status, the wild boar looks set to make a permanent return.

Early spider orchid During the construction of the Channel Tunnel, almost five million cubic metres of chalk marl was extracted and used to construct a nature reserve, Samphire Hoe near Folkestone. Almost immediately rare orchids began to colonise, and the site is now home to thousands of early spider orchids, one of our rarest species. Common on the continent, this chalk grassland specialist is also found on Ministry of Defence sites and downland reserves in southern England and north Wales. As its name suggests, it usually flowers for a few weeks in late April and early May.

European swallowtail Larger and paler than the British version, sightings of European swallowtails have increased in the past few years, and the species is now a regular visitor to southern England, where it has occasionally bred. Ironically, the distinctive British swallowtail, confined to a few sites in the Norfolk Broads, remains highly vulnerable, due to its dependence on a single food-plant - milk-parsley.

Another migrant butterfly, the clouded yellow, has recently begun to overwinter in Britain, with successful breeding reported from, among other sites, the cliffs above the beach at Bournemouth!

Marsh frog Introduced to Romney Marsh in Kent in the mids, this noisy and colourful amphibian is now a familiar sight - and sound - in waterways throughout south-east England. As soon as the sun comes out, the marsh frog - a voracious predator - makes its presence known by puffing out its cheeks and producing a loud croak. However, it is a shy creature, and will retreat into the water as soon as it realises it is being observed. This species is likely to benefit from climate change, which should allow it to extend its range northwards, wherever there is suitable wetland habitat.

Black kite In the developing world, black kites have learned to hang around rubbish dumps, where they are adept at scavenging for anything even remotely edible. Whether they can put such talents to the test here is open to question, though their adaptability was revealed last summer when a wandering black kite paired with one of the red kites released as part of the Scottish reintroduction programme. Looks likely to follow hard on the heels of the cattle egret as our next avian colonist.

Striped dolphin Mainly found in tropical and sub-tropical seas, the striped dolphin is able to survive in British waters because of the warming influence of the North Atlantic Drift. Until recently sightings were confined to the English Channel, but in the past decade or so it has spread farther north, with records from the west coast of Scotland, the North Sea and even the Shetland Isles - just a few degrees south of the Arctic Circle. Most records are, unfortunately, of animals stranded on beaches. When seen at sea it can be distinguished from its commoner relatives by the distinctive pale stripe along its sides. The original European population of this great whale was wiped out more than years ago, but by the s, after it was granted protection under international law, the species began to appear again. The increase in sightings is likely to be partly a result of the rise in popularity of whale- watching trips, but may also be due to rising sea temperatures caused by global climate change. It is now spreading north through Europe at a rapid rate, and looks likely to follow the example set by its close relative, the little egret, and become a permanent addition to our avifauna. As their name suggests, cattle egrets live in close association with livestock, feeding on invertebrates attracted by their

ding. In the breeding season adults acquire elegant buffy-orange plumes, which they use in courtship display.

European bee-eater The attempted breeding by a pair of these exotic and colourful birds in the Wye Valley last summer was, unfortunately, curtailed by a hungry fox. But bee-eaters did successfully nest in a County Durham quarry in , raising two young under the admiring gaze of thousands of birders. Although often considered a Mediterranean species, the bee-eater has spread rapidly northwards during the latter half of the 20th century, and may well make a permanent leap across the Channel during the next few years. Birders would do well to listen for their distinctive bubbling call, given by migrating flocks flying high overhead.

The departing Snowy owl In , birders on the island of Fetlar in Shetland celebrated the unprecedented breeding of snowy owls, the very first time this arctic species had nested in Britain. They had extended their range southwards as the result of a brief period of climatic cooling in north-eastern Scotland and Scandinavia. Sadly for Harry Potter fans, as temperatures rose, conditions became unsuitable for this magnificent owl, and breeding last occurred in Today, snowy owls occasionally turn up as wandering visitors to Shetland and the Western Isles, but are unlikely to breed here again.

White-beaked dolphin Despite a welcome increase in sightings of whales and dolphins in British and Irish waters, this species appears to be heading into a possibly terminal decline. Scientists monitoring sightings and beach strandings of white-beaked dolphins have found a dramatic drop in numbers. This is most likely a result of a rapid rise in sea temperatures, itself due to global climate change, which affects this cool-water species more than most. Unless the warming trend is reversed, the white-beaked dolphin is likely to disappear first from the shallow waters around our west coast, then from the cooler North Sea.

Greater horseshoe bat The rarest of our 17 species of bat - and indeed one of our rarest mammals gets its name from the distinctive horseshoe-shaped flap of skin around its nose, which aids it in the process of echolocation. It is confined to south-west England and south Wales, probably because the mild climate of these areas enables it to feed during the winter. The relict Welsh population, in particular, suffers from low genetic diversity, and without conservation efforts may not survive much longer.

Ptarmigan One of a trio of montane specialists likely to suffer from the effects of global warming on their Scottish highland home, the others being snow bunting and dotterel. These all depend on the delicate arctic-alpine ecosystem of the high tops. Each year the decrease in snow cover on the Cairngorm plateau, and the resulting changes in vegetation and insect life, threaten these rare and fascinating birds with extinction.

Ptarmigan are the only British birds to turn completely white in winter for camouflage - which may not seem quite such a good idea if the snow disappears.

Wood white This delicate butterfly thrives on "edge" habitats, such as open rides through woodland. It enjoyed a brief population boom in the 60s and 70s, thanks partly to the legacy of Dr Beeching: Since then, like so many of our woodland butterflies, it has declined in numbers. It did appear to be thriving in Ireland, until observant scientists discovered that most Irish "wood whites" in fact belonged to a different species - the two only being told apart by examining their genitalia under the microscope.

Wild cat This legendary and almost impossibly elusive predator faces rapid extinction. This is not, as with so many other creatures, because of climate change or modern farming practices, but simply because interbreeding with feral and domestic moggies has so diluted the gene pool, that there may now only be a few hundred truly wild cats in existence. Most of those that do remain are in the remotest parts of the Grampian Mountains and the Scottish Highlands. Not always easy to tell apart from hybrids, pure-bred cats show distinctive vertical black stripes on their coat and black rings around their tails.

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Wart-biter bush cricket The wart-biter bush-cricket is just managing to cling on in five widely separated populations on ancient chalk grassland and heathland in southern Britain, from the South Downs to Wiltshire. It is one of our largest and most impressive insects: Despite its common name, this species has probably always been rare and localised in Britain - the English name is a translation of the Latin "verrucivorus" - pertaining to warts. When crushed, the leaves give out the characteristic "bitter almond" scent of cyanide. Soon afterwards it was reintroduced

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Chapter 3 : The changing flora and fauna of Britain.

Advice on buying a wood, as well woodland activities, flora and fauna, conservation and other woodland topics. Our changing flora. Britain was an island.

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Chapter 4 : Climate change refugia for the flora and fauna of England - NECR

Conference proceedings; Book: The changing flora and fauna of Britain. pp pp. Conference Title: The changing flora and fauna of Britain. Abstract: The proceedings of a symposium of the Systematics Association at Univ. Leicester, Apr. , include the following: Reid, D.A. Changes in the British macromycete flora (, 2 ref.). Booth, C.

List of reptiles of Ireland The viviparous lizard is the only land reptile native to Ireland. Only one land reptile is native to the country, the viviparous lizard. It is common in national parks , particularly in the Wicklow Mountains. Slowworms are common in parts of The Burren area in County Clare , but they are not a native species and were probably introduced in the s. Legend attributes the absence of snakes in Ireland to Saint Patrick , who is said to have banished them from the island, chasing them into the sea after they assailed him during a day fast he was undertaking on top of a hill. In reality, no species of snake ever inhabited Ireland, due to it losing its land-bridge to Britain before snakes came north after the Ice Age. List of amphibians of Ireland Three amphibians are found in Ireland, the common European brown frog , the smooth newt , and the natterjack toad. There are questions over whether the frog is actually native to Ireland, with some historic accounts stating that the frog was introduced in the 18th century. The natterjack toad is only found in a few localised sites in County Kerry and western County Cork. For atlases see Atlases of the flora and fauna of Britain and Ireland. It reached Ireland some time after the ice age. List of birds of Ireland The Atlantic puffin is a migratory bird to Ireland, common at coastal areas. About bird species have been recorded in Ireland. Many of these species are migratory. There are Arctic birds, which come in the winter, and birds such as the swallow , which come from Africa in the summer to breed. Many birds which are common residents in Britain and continental Europe are rare or unusual in Ireland, examples include the tawny owl , willow tit , marsh tit , nuthatch , and all woodpecker species except the recently established great spotted woodpecker. Although Ireland has fewer breeding species than Britain and Continental Europe because there are fewer habitat types, fewer deciduous woodlands, Scots pine forests, heaths, and high mountain ranges , there are important populations of species which are in decline elsewhere. Storm petrels largest breeding numbers in the world , roseate tern , chough , and corncrake. Four species of bird have Irish subspecies. These are the coal tit *Parus ater hibernicus* , dipper *Cinclus cinclus hibernicus* , jay *Garrulus glandarius hibernicus* , and red grouse *Lagopus lagopus hibernicus*. The European robin is a year-round resident in Ireland. These and the rook , starling , great tit , and blue tit are among the most numerous and commonly seen. Over the period , populations of pigeons, warblers, tits, finches, and buntings have remained stable or shown an increase there were massive declines during the s. Kestrel , common swift , skylark , and mistle thrush have continued to decline due to changes in agricultural practices such as increased use of pesticides and fertiliser. Climate change has also played a role. Also of note are golden eagles , recently reintroduced after decades of extinction Golden Eagle Reintroduction Programme in County Donegal. Another conservation effort is habitat management to encourage the red-necked phalarope. The white-tailed eagle , re-introduced in following a year absence from Ireland. Three quarters of the world population of pale bellied brent geese winter in Strangford Lough in County Down. In , the golden eagle was reintroduced into Glenveagh National Park after a year absence from Ireland. A total of 46 golden eagles have been released in Ireland since In , the first golden eagle chick hatched in Ireland since re-introduction. Six weeks later one was shot dead, it was found to have 8 shotgun pellets in it. Fifteen of these birds have been released in total. While the osprey and marsh harrier have slowly returned to Ireland naturally. Atlantic salmon Ireland has fish species in its coastal waters [17] and 40 freshwater species in its rivers and lakes. There are many aquatic mammals too, such as bottlenose dolphins , killer whales , and harbour porpoises. Sea turtles are also common off the western seaboard, and the walrus has also been found around the Irish coasts, but is very rare with only a handful of sightings. There are 24 species of cetaceans and five species of sea turtles have been recorded in Irish waters. It is the habitat for many deep sea fish and was first investigated in the summers of and by Charles Wyville Thomsons H. Other notable fish include the basking shark , ocean sunfish , conger eel , hagfish , boarfish *Capros aper* , large-eyed rabbitfish , lumpsucker , cuckoo wrasse , and the thresher shark. In a study of the marine fauna of the Celtic

Sea based on 61 beam trawl catches, the common dragonet and the hermit crab *Pagurus prideaux* were the most ubiquitous species. There are an estimated 11, species of insect recorded in Ireland 11, actual at October
Many more remain to be found. The site is regularly updated but gaps still exist.

Chapter 5 : Fauna of Ireland - Wikipedia

The changing flora and fauna of Britain: proceedings of a symposium held at the University of Leicester, April, Author: D L Hawksworth ; Systematics Association.

Flora of Scotland – The flora of Scotland is an assemblage of native plant species including over 1, vascular plants, more than 1, lichens and nearly 1, bryophytes. The total number of species is low by world standard but lichens and bryophytes are abundant. There are a variety of important trees species and specimens, a Grand Fir in Argyll is the tallest tree in the United Kingdom, the Arran Whitebeams, Shetland Mouse-ear and Scottish Primrose are endemic flowering plants and there are a variety of endemic mosses and lichens. Conservation of the environment is well developed and various organisations play an important role in the stewardship of the countrys flora. Numerous references to the countrys flora appear in folklore, song, Scotland enjoys a diversity of temperate ecologies, incorporating both deciduous and coniferous woodlands, and moorland, montane, estuarine, freshwater, oceanic, and tundra landscapes. There are more than 30, freshwater lochs and 6, river systems, below the tree line there are several zones of climax forest. Birch dominates to the west and north, Scots Pine with Birch and oak in the eastern Highlands and oak with Birch in the Central Lowlands, much of the Scottish coastline consists of machair, a fertile dune pasture land formed as sea levels subsided after the last ice age. Machairs have received considerable ecological and conservational attention, chiefly because of their unique ecosystems, the total number of vascular species is low by world standards, partly due to the effects of Pleistocene glaciations and the subsequent creation of the North Sea. Nonetheless, there are a variety of important species and assemblages, cliffs and mountains host a diversity of arctic and alpine plants including Alpine Pearlwort, Mossy Cyphal, Mountain Avens and Fir Clubmoss. On the Hebridean islands of the west coast, there are plantago pastures, Scots Lovage, first recorded in by Robert Sibbald, and the Oyster Plant are common plants of the coasts. Bogbean and Water Lobelia are common plants of moorland pools and lochans, the Least, Yellow and White Water-lilies are also widespread. Pipewort has generated some controversy regarding its discovery, classification and distribution. It was found growing on Skye in the 18th century, although there was subsequent confusion as to both the discoverer and the scientific name – now agreed to be *Eriocaulon aquaticum* 2. *Anemone nemorosa* – *Anemone nemorosa* is an early-spring flowering plant in the buttercup family Ranunculaceae, native to Europe. Common names include wood anemone, windflower, thimbleweed, and smell fox and it is a herbaceous perennial plant growing 5–15 centimetres tall. The plants start blooming soon after the foliage emerges from the ground, the compound leaves are palmate or ternate and the flowers are solitary, produced on short stems, held above the foliage. They grow from underground stems called rhizomes and the foliage dies back down by mid summer. The rhizomes spread just below the surface, forming long spreading clumps that grow quickly, contributing to its rapid spread in woodland conditions. The flower is 2 centimetres diameter, with six or seven tepals with many stamens, in the wild the flowers are usually white but may be pinkish, lilac or blue, and often have a darker tint on the backs of the tepals. The flowers are pollinated by insects, especially hoverflies, grown from seed the plants take around five years to flower. The yellow wood anemone is a plant with slightly smaller. The plant contains poisonous chemicals that are toxic to animals including humans, *Anemone nemorosa* is grown as an ornamental plant for use in gardens and parks. Cultivars Many cultivars have been selected for use, such as *Anemone nemorosa* *Allenii* which has large blue flowers. It has been awarded the AGM H4, like both of its parents 3. *English Botany* – *English Botany* is the title of a major publication of British plants, an enormous set of volumes that was issued between and Smith were illuminated by Sowerbys 2, hand-colored plates, the volumes were issued by subscription, as a part work over 23 years, until its eventual completion in This amounted to 36 volumes which came to be referred to Sowerbys Botany, while extensive, the work was never intended to be comprehensive, Smith would be the first to do such a survey with his first two volumes of *Flora Britannica* at the end of that century. Combined with increased sales of books, and the amateurs and gardeners enthusiasm for botany, identification of the plants, in correspondence with the details in the plates, gave the work accuracy and utility beyond that of decorative books and more akin to formal botanical works.

However, the first four volumes of English Botany came to be misattributed due to a request by Smith to remain anonymous on the title. Sowerbys name as the publisher, with a credit to himself as illustrator, the title is still given in book sales as Sowerbys. The illustrations allowed a reader not familiar with botany to identify plants, also, however, Smith was derisive of the ability of images alone to describe a plant. The graphics needed the formal description and explanation, without which only a superficial knowledge could be gained from the text, despite disagreement between the two men, they continued to issue the work, the absence of Smiths name in the title was corrected in later volumes and editions. Considered to be the first extensive coverage of British flora, there was none of the kingdom Fungi, without Smith, Sowerby added Coloured figures of English fungi, for the species of this domain. Later editions of the book were to take advantage of a colour printing. The third edition in saw editor John Boswell alter the text and include a popular portion 4. *Fagus sylvatica* – *Fagus sylvatica*, the European beech or common beech, is a deciduous tree belonging to the beech family Fagaceae. *Fagus sylvatica* is a tree, capable of reaching heights of up to 50 m tall and 3 m trunk diameter, though more typically 25–35 m tall. A year-old sapling will stand about 4 m tall and it has a typical lifespan of – years, though sometimes up to years. In cultivated forest stands trees are harvested at 80– years of age. In open locations, it will become shorter and more massive. The leaves are alternate, simple, and entire or with a crenate margin, 5–10 cm long and 3–7 cm broad. When crenate, there is one point at each vein tip, the buds are long and slender, 15–30 mm long and 2–3 mm thick, but thicker where the buds include flower buds. The leaves of beech are often not abscised in the autumn and this particularly occurs when trees are saplings or when plants are clipped as a hedge, but it also often continues to occur on the lower branches when the tree is mature. Small quantities of seeds may be produced around 10 years of age, F. Flower and seed production is abundant in years following a hot, sunny and dry summer. In the Balkans, it shows some hybridisation with oriental beech, in the southern part of its range around the Mediterranean, it grows only in mountain forests, at –1, m altitude. Although often regarded as native in southern England, recent evidence suggests that F, the beech is classified as a native in the south of England and as a non-native in the north where it is often removed from native woods. It is often planted in Britain, similarly, the nature of Norwegian beech populations is subject to debate. If native, they would represent the range of the species. However, molecular analyses support the hypothesis that these populations represent intentional introduction from Denmark before. However, the beech in Vestfold and at Seim north of Bergen in Norway is now spreading naturally, though not demanding of its soil type, the European beech has several significant requirements, a humid atmosphere and well-drained soil 5. *Hyacinthoides non-scripta* – *Hyacinthoides non-scripta* is a bulbous perennial plant, found in Atlantic areas from north-western Spain to the British Isles, and also frequently used as a garden plant. It is known in English as the common bluebell or simply bluebell, in spring, H. It is protected under UK law, and in other parts of its range. A related species, H. *Hyacinthoides non-scripta* was first described by Carl Linnaeus in his seminal work *Species Plantarum*, the specific epithet *non-scriptus* means unlettered or unmarked and was intended to distinguish this plant from the classical hyacinth of Greek mythology. This mythical flower, which was almost certainly not the modern hyacinth and his lover, the god Apollo, shed tears that marked the new flowers petals with the letters AIAI as a sign of his grief. In , Pierre Chouard transferred the species to its current placement in the genus *Hyacinthoides*, *Scilla* was the original Greek name for the sea squill, *Drimia maritima*, Endymion is a character from Greek mythology, *Hyacinthoides* means like a hyacinth. The type species of *Hyacinthoides* is H. Common names for *Hyacinthoides non-scripta* include bluebell, common bluebell, English bluebell, British bluebell, wild hyacinth, wood bell, fairy flower, in Scotland, the term bluebell is used for the harebell, *Campanula rotundifolia*. *Hyacinthoides non-scripta* forms a clade with three other species – H. *Hyacinthoides non-scripta* is a plant that grows from a bulb. It produces 3–6 linear leaves, all growing from the base of the plant, an inflorescence of 5–12 flowers is borne on a stem up to mm tall, which droops towards the tip, the flowers are arranged in a 1-sided nodding raceme. The flowers are strongly and sweetly scented, the seeds are black, and germinate on the soil surface. The bulbs produce contractile roots, when these roots contract, they draw the bulbs down into layers of the soil where there is greater moisture. This may explain the absence of H. *Ipheion uniflorum* – *Ipheion uniflorum* is a species of flowering plant, related to the onions, so is placed in

the allium subfamily of the Amaryllidaceae. It is known by the common name springstar, or spring starflower, along with all the species of the genus *Ipheion*, some sources place it in the genus *Tristagma*, but research published in suggested that this is not correct. It is native to Argentina and Uruguay, but is cultivated as an ornamental and reportedly naturalized in Great Britain, France, Australia. This is a herbaceous perennial growing from a bulb and producing flat, shiny, green, hairless. The foliage has a scent when crushed. The stem grows up to 20 cm tall and bears a solitary flower in spring. Each honey-scented, star-shaped flower has six pointed lobes up to 3 centimeters long in shades of pale to deep purple-blue. *Ipheion uniflorum* has been grown in the UK since , when collected from near Buenos Aires arrived in the country. It is recommended for growing in a position outside or as long-flowering pot plant in an unheated greenhouse. Various named forms are in cultivation, some of which may be hybrids, Wisley Blue is a clear lilac blue, Froyle Mill is a deeper violet blue, Album is white. The cultivar Alberto Castillo, also white, has flowers and was collected in the s by Alberto Castillo.

Primula veris – *Primula veris* is a herbaceous perennial flowering plant in the primrose family Primulaceae. This species frequently hybridizes with other *Primulas* such as *Primula vulgaris* to form false oxslip which is confused with true oxslip. The common name cowslip may derive from the old English for cow dung, an alternative derivation simply refers to slippery or boggy ground, again, a typical habitat for this plant. The species name *veris* is the case form of Latin *ver*. Other common names include *cuy lippe*, herb peter, *paigle*, *peggle*, key flower, key of heaven, fairy cups, petty mulleins, *crewel*, buckles, *palsywort*, plumrocks, *tittypines*. *Primula veris* is an evergreen or semi-evergreen perennial plant growing to 25 cm tall and broad, with a rosette of leaves 5–15 cm long. The deep yellow flowers are produced in spring, in clusters of blooms together on a single stem, each flower is 9–15 mm broad. Red- and orange-flowered plants occur rarely but can be widespread in areas where coloured primula hybrids bloom at the same time as the native cowslip enabling cross-pollination. The cowslip is frequently found on open ground than the primrose, including open fields, meadows, coastal dunes. The plant suffered a decline due to changing agricultural practices throughout the s and s in Britain and it may therefore be rare locally, though where found it may be abundant. Additionally the seeds are now included in wildflower seed mixes used to landscape motorway banks. This practice has led to a revival in its fortunes, in cultivation this plant has gained the Royal Horticultural Societys Award of Garden Merit. The roots of *Primula veris* contain several glycosides of 5-methoxysalicylic methyl ester, in the dried crude root, their phenolic aglycones are responsible for the typical odor reminiscent of methyl salicylate or anethole. Rare side effects of the saponins can be nausea or diarrhea while some of the constituents are possibly responsible for allergic reactions. The subspecies *macrocalyx*, growing in Siberia, contains the phenolic compound *riccardin C*, cowslip leaves have been traditionally used in Spanish cooking as a salad green. This wine was more precious than elderberry wine, which was the drink for cold weather, for snow and this herb was already mentioned by Pliny the Elder for its early blooming attributes. In the Middle-Ages it was known as St. Peters herb or *Petrella* and was sought after by Florentine apothecaries.

Primula vulgaris – *Primula vulgaris* is a species of flowering plant in the family Primulaceae, native to western and southern Europe, northwest Africa, and southwest Asia. The common name is primrose, or occasionally common primrose or English primrose to distinguish it from other *Primula* species also called primroses and it is a perennial growing 10–30 cm tall, with a basal rosette of leaves which are more-or-less evergreen in favoured habitats. The leaves are 5–25cm long and 2–6 cm broad, often wrinkled, with an irregularly crenate to dentate margin. The delicately scented flowers are 2–4 cm in diameter, borne singly on slender stems.

The Changing Flora and Fauna of Britain by Hawksworth, D (Ed). Academic Press, This is an ex-library book and may have the usual library/used-book markings calendrierdelascience.com book has hardback covers.

A Long eared owl in the UK. In general the avifauna of Britain is similar to that of Europe , consisting largely of Palaearctic species. As an island, it has fewer breeding species than continental Europe, with some species, like crested lark , breeding as close as northern France , yet unable to colonise Britain. The mild winters mean that many species that cannot cope with harsher conditions can winter in Britain, and also that there is a large influx of wintering birds from the continent or beyond. There are about species regularly recorded in Great Britain, and another that occur with varying degrees of rarity. Many of the bigger species, such as the grey wolf and the brown bear , were hunted to extinction many centuries ago. However, in recent times some of these large mammals have been tentatively reintroduced to some areas of mainland Britain. The largest wild mammals that remain in Britain today are predominantly members of the deer family. The red deer is the largest native mammal species, and is common throughout England , Scotland and Wales. The other indigenous species is the roe deer. The common fallow deer is in fact not native to Britain, having been brought over from France by the Normans in the late 11th century. It has become well established. It is widespread and expanding in Scotland from west to east, with a strong population in Peeblesshire. Bands of sika exist across the north and south of England though the species is absent in Wales. There are also several species of insectivore found in Britain. The hedgehog is probably the most widely known as it is a regular visitor to urban gardens. The mole is also widely recognised and its subterranean lifestyle causes much damage to garden lawns. Shrews are also fairly common, and the smallest, the pygmy shrew , is one of the smallest mammals in the world. There are also seventeen species of bat found in Britain: Rodents are also numerous across Britain, particularly the brown rat which is by far the most abundant urban animal after humans. Some however, are becoming increasingly rare. Habitat destruction has led to a decrease in the population of dormice and bank voles found in Britain. Due to the introduction of the North American grey squirrel , the red squirrel had become largely extinct in England and Wales, with the last populations existing in parts of North West England and on the Isle of Wight. Rabbits and brown hares were introduced in Roman times, [7] [8] while the indigenous mountain hare remains only in Scotland and a small re-introduced population in Derbyshire. In the absence of the locally extinct wolf and brown bear the largest carnivores are the badger, red fox , the adaptability and opportunism of which has allowed it to proliferate in the urban environment, and the Scottish wildcat whose elusiveness has caused some confusion over population numbers, and is believed to be highly endangered. Various species of seal and dolphin are found seasonally on British shores and coastlines, along with harbour porpoises , orcas , and many other sea mammals.

Chapter 7 : Fauna of England - Wikipedia

Species under effect. European beaver. Last autumn's news, that beavers were being released into a pen at the Cotswold Water Park as a prelude to full-scale reintroduction, provoked the usual press hysteria about the damming of rivers and the destruction of trees.

However, the sea level rose; Doggerland was covered with water and the English Channel formed " Britain was an island. Species that arrived after the ice age and before our separation from Europe are generally regarded as our native species. Many other species have arrived since then but they have been introduced either deliberately or accidentally. Non-native species that were introduced into the U. Many are garden escapes and are quite localised; these do not represent a threat to our native species. However, every now and then, there comes along a species that proves to be problematical. Perhaps, it becomes abundant or dominant in a particular area or habitat. Some species can grow rapidly either by spreading vegetatively without seeds, by rhizomes, runners etc or through producing prolific quantities of seeds. It can reproduce by seed or vegetatively. A mature plant can produce hundreds of flowers; and each flower head can form between and seeds. A single plant may release millions of seeds. These seeds germinate well in areas where the ground has been disturbed or is covered with moss. The young seedlings establish associations with soil fungi " which enables them to do well in nutrient-poor soils. The plant also spreads asexually as when its branches or shoots come in contact with soil, they form roots. This feature and its sideways growth habit means that it can spread even into unfavourable areas. It may form large stands of vegetation, which create dense shade. Some species in the ground layer of plants underneath R. Some of our native plants, which are found right across the UK, can grow at the expense of other archaeophytes or native species. The Countryside Survey has monitored our plants and animals since , and records changes in our countryside. In the most recent report fieldwork conducted in the Summer, , it was noted that plants like bramble, nettle, ivy and hawthorn were becoming increasingly common, together with a number of grasses. Whilst the increase in nettles and brambles offers some benefits; for example, brambles provide fruits for dormice, nettles provide food for red admiral and peacock butterflies and both offer cover for hedgehogs " their unchecked growth and spread results in problems for smaller, low growing species such as harebells and wild strawberries. Where woodland is not managed e.

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The fauna of England is also very diverse since its landscapes are very different from each other and so this is represented in the flora and fauna.

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In most of Great Britain there is a temperate climate which receives high levels of precipitation and medium levels of sunlight. Further northwards, the climate becomes colder and coniferous forests appear replacing the largely deciduous forests of the south.