

BIODIVERSITY

Communications Toolkit

Life on Land

- Scotland has 90,000 species and counting, 20,000 of which are different plants and fungi.
(Source: www.scotland.gov.uk/Publications/2004/05/19366/37243)
- Nature provides medicines such as aspirin, heart stimulants, antibiotics, anti-malarial and cancer fighting compounds. About a quarter of all prescription drugs come from plants. Yet less than 1% of rainforest plants have been tested for their medicinal properties.
(Source: www.nerc.ac.uk/research/issues/biodiversity/important.asp)
- At 17% of the Scottish land area, forest and woodland cover is relatively, but not exceptionally, low by European standards.
(Source: Scotland's Biodiversity Resource, www.biodiversityscotland.gov.uk)
- Over half (54%) of our native bird species have declined in the last 20 years.
(Source: www.nerc.ac.uk/research/issues/biodiversity/sixth.asp)
- Almost three quarters (71%) of our 58 butterfly species have reduced in number in the last 20 years.
(Source: www.nerc.ac.uk/research/issues/biodiversity/sixth.asp)
- Scotland has the entire British population of Golden Eagles – 442 pairs out of a world population of approximately 125,000.
(Source: Watson J. The Golden Eagle, Poyser, & The Status of the Golden Eagle *Aquila chrysaetos* in Britain 2003, Eaton et al, Bird Study)
- Over a quarter (28%) of our plant species have significantly decreased in distribution and number in the last 40 years.
(Source: www.nerc.ac.uk/research/issues/biodiversity/sixth.asp)
- Heather moorlands are distinctive and remarkable for their beauty and economic value, wild plants and animals. Within Europe, they are now extensive only in the British Isles, and particularly in Scotland. Moorland is an important breeding or feeding habitat for 57 bird species, of which 12 are of European importance.
(Source: Scotland's Biodiversity Resource, www.biodiversityscotland.gov.uk)
- Scotland's mild, wet climate is shared by few other places in the world and is uniquely appropriate for mosses, liverworts and lichens which require a humid climate. Therefore in its deciduous oak woodlands in particular, but also on its mountains and in its extensive blanket bogs, Scotland has internationally important populations of these species. For instance, Scotland has more than 60% of the European bryophyte flora, including endemics such as Scottish beard-moss and Scottish thread-moss.
(Source: Lichens ; Mosses & Liverworts, Naturally Scottish series, SNH, 2004 ; 2005)
- We know more about the biodiversity on land than in any other environment. But there is still much to be discovered. Scientists working in New Guinea are finding a lost world of unknown and rare species. The rainforests here are second only in size to the Amazon and many parts are uninhabited and inaccessible. Mammals once thought extinct are thriving in the remote mist-covered Foja mountains. New species of birds, frogs, butterflies and plants are revealing themselves to the scientists.
(Source: www.nerc.ac.uk/research/issues/biodiversity/facts.asp)

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- Scotland is remarkable for the abundance and extent of its breeding seabird populations. For instance, Scotland is the stronghold of the northern gannet with 14 colonies with nearly 200,000 pairs. St Kilda is the world's largest colony.
(Source: Harris M. P., Murray S. & Wanless S. The Status of Northern Gannet in Britain & Ireland in 2003/04 BB 98, No 6, June 2005)
- Scotland has the most northerly world populations of species such as the natterjack toad and barn owl.
(Source: Amphibians & Reptiles, Naturally Scottish series, SNH, 2004; Owls of Europe, Mikkola H., Poyser)
- The red kite became extinct in Scotland as a breeding bird in the 19th Century due to persecution. It has been successfully reintroduced to Scotland since 1989. There are already 76 breeding pairs.
(Source: RSPB/SNH Red Kite project; Red Kites, Naturally Scottish series, SNH, 2002)
- The Scottish population of white-tailed eagles is now about 150 birds as a result of a reintroduction programme which has run for 35 years. The last breeding pair before 1983 were shot in Skye in 1916. The eagles are a major tourist resource believed to be worth £1.5m annually to the economy of Mull.
(Source: RSPB/SNH Sea Eagle Project Group Newsletters; Sea Eagles, Naturally Scottish series, SNH, 1996)
- The last breeding osprey were also shot in 1916, on Loch Loyne. When they began to return to Scotland, the nests were protected round the clock. There are now 182 breeding pairs and the benefit to the Scottish economy is believed to be £3.5m a year.
(Source: Scottish Raptor Monitoring Scheme Report 2004, Etheridge et al, RSPB.)
- Scotland is important as a mild wintering ground for substantial populations of wildfowl. The world population of Svarlbard barnacle geese (23,000) winter in the Solway. Half of the world's Greenland white-fronted geese winter in Scotland. 76% of the Iceland and Greenland populations of pink footed geese and 100% of the Iceland population of greylag geese, also winter in Scotland.
(Source: Waterbird Review Series, WWT)
- Scotland has very important feeding grounds for wintering waders. For instance in winter Scotland supports 40% (19,900) of the East Atlantic population of the purple sandpiper.
(Source: SPA Species Accounts, JNCC website)
- Although north-west Europe is not an important centre for ancient endemic species, Scotland has some organisms not found elsewhere in the world notably the Scottish crossbill & the Scots primrose.
(Source: Birds of the Western Palearctic, Cramp & Simmons, Oxford; New Atlas of the British & Irish Flora, Preston, Pearmore & Dines, Oxford)
- Throughout most of the last century increasing intensification in agriculture, and the spread of urbanisation, have led to the loss of much of our semi-natural land, as well as many of our hedgerows and farm ponds. As a result, farmland birds, wildflowers, mammals and pond-life have all declined.
(Source: www.scotland.gov.uk/Publications/2004/05/19366/37243)
- After a period of decline in forest cover, followed by intensive planting with non-native conifers, we are now seeing an increase in the area of woodland with native species. Over the past 20 years there has been a significant shift to more sustainable forest management, including diversification of planted forests, and restoration of management in degraded native woods.
(Source: www.scotland.gov.uk/Publications/2004/05/19366/37243)
- No overall change was detected in the mean number of plant species recorded per 1km square throughout Scotland (an overall decline of 0.6% was not statistically significant). Neither were there changes within most broad habitats, including the arable and horticultural broad habitat, which is subject to a high degree of year-on-year disturbance. Significant changes in plant diversity were observed only in the acid grassland and dwarf shrub heath broad habitats.
(Source: Scottish Environmental statistics online, Scottish Executive website)

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- Invasive species are organisms that thrive after they are accidentally or intentionally transplanted from one ecosystem to another. When invasive species enter an ecosystem, they occupy habitats and compete for food. Often people are responsible for this by introducing exotic plant species into their gardens that then escape into the wild. One in five of the UK's wild flowering plants arrived by this route.
(Source: www.nerc.ac.uk/research/issues/biodiversity/pressures.asp)
- Wild bird populations are considered to be a good indicator of the broad state of the wildlife and countryside. The overall index of populations of British breeding birds has been relatively stable over the last two decades. Since the mid-1970s, farmland and wood bird populations have seen significant decreases of nearly 50% and 20%, respectively. Coastal bird populations have risen by over 20%. However, both farmland and woodland bird populations appear to have stabilised, with little change since 1996.
(Source: www.defra.gov.uk/environment/statistics/wildlife/kf/wdkf03.htm)
- Between 1994 and 2005, 23 out of 54 breeding bird species recorded on at least 30 squares in Scotland showed a statistically significant increase in abundance. The largest increase was recorded for House Martin (166%). Seven species showed a significant decrease, the largest of which were that for Kestrel, Lapwing and Curlew (all down by 48%). Another 24 species showed no significant change in abundance. Some of these changes are likely to reflect short-term or localised fluctuations in environmental conditions, e.g. for Wren and Goldcrest, rather than long-term trends.
(Source: Scottish Environmental statistics online, Scottish Government website www.snh.org.uk/pdfs/publications/commissioned_reports/F04AB09.pdf)