

# Biodiversity

*'Let the heavens rejoice, let the earth be glad;  
let the sea resound, and all that is in it.  
Let the fields be jubilant, and everything in them.  
Then all the trees of the forest will sing for joy.'*  
(Ps.96:11-13)

**Bio-diversity** simply means 'the variety of life on earth'.  
*'As the psalmists so eloquently sang, God's glory is to be found in the whole of the vast order of the universe and in the miraculous detail of nature in all its forms.'*  
(Archbishop George Carey)

**Bio-diversity** means our Life-Support Systems. The exact number of species of living organisms is unknown — conservative estimates suggest about 12 million. Many are small and not yet identified, but provide essential food or support for more familiar forms of life. Humans and other animals, plants, fungi and micro-organisms all depend on each other.  
The IUCN (International Union for Conservation of Nature) in 2010 concluded that over 18,000 species, big and small, are threatened with extinction. One in three amphibians and almost half of all freshwater turtles are threatened, together with one in eight birds and one in four mammals. Extinction means the final, irrevocable disappearance of a species from the face of the earth, never to be seen again. It is possible that we are facing a major extinction event.

## UK habitat loss in the last 50 years

Saving the habitats where plants and animals live is vitally important, whether abroad or in the UK.

Lowland (peat) bogs: down 95%

Native pinewoods: down 70%

Chalk downland: down 70%

Lowland wet grassland: down 60%

Lowland heathland: down 40%

Local authorities are setting up Local Biodiversity Action Plans (BAPs) to protect what is left of these habitats.

## Plants

Without plants, life on Earth would cease to exist. Biodiversity is not just about different species; it includes variation within species. This genetic diversity enables a species to survive in face of adversity, such as pests, disease, drought and climate change. When populations of a wild species of plant decline, or crop plants are restricted to a small number of widely grown varieties, those that remain are much more vulnerable to disease, devastation by pests and even extinction. Kew Gardens' Millennium Seed Bank Project is gathering and storing seeds from plants most at risk across



the world. However, the varieties of fruit and vegetables grown and sold commercially are very limited. Regulations restrict the sale of vegetable seeds to a few registered varieties. The Heritage Seed Library at Garden Organic exchanges UK seeds from 700 unregistered vegetables they are not allowed to sell. National fruit collections keep our genetic heritage safe: Brogdale in Kent grows 2,500 different apple varieties, plus pears, plums and soft fruit; Harlow Carr Gardens in Harrogate preserves the UK rhubarb collection.

## Birds

*'The trees of the Lord are watered abundantly, the cedars of Lebanon which he planted. In them the birds build their nests; the stork has her home in the fir trees.'*

(Ps.104:16-17)

In the last 20-30 years the numbers of UK farmland birds have declined by 42% and woodland birds by 15%. Some previously common urban and garden species such as house sparrows and starlings are in serious decline. Others like the magpie, carrion crow and woodpigeon are on the increase. According to the RSPB the loss of farmland birds was largely caused by:

- effects of pesticides on the insects eaten by birds
- loss of mixed farms with their range of habitats
- change to autumn-sown crops instead of spring-sown

There are hopeful signs. Changes in farming practices are already showing encouraging upturns in some bird populations, and the Environmental Stewardship scheme for farmland will help further improvement. Bitterns, corncrakes, stone-curlews and curlew buntings were at serious risk of extinction in the UK as recently as the mid-1990s. Thanks to concerted conservation action their numbers are increasing.

## Other animals

*'The high mountains are for the wild goats; the rocks are a refuge for the badgers.'* (Ps. 104:18)

Some animal species that have become extinct in the UK since 1900: Exploding bombardier beetle 1928; Horned dung-beetle 1955; Burbot (a fish) 1972; Ivell's sea-anemone 1983 (now globally extinct);  
Mouse-eared bat 1990;  
Essex emerald moth 1991.



And in the rest of the world: Passenger Pigeon 1914; Tasmanian Tiger (Thylacine) 1936; Caribbean Monk Seal 1952; Golden Toad 1966; Javan Tiger c1980; Tecopa Pupfish 1973; Pyrenean Ibex 2000; Baiji Rover Dolphin 2006; Zanzibar Leopard 2012.

### Sea Creatures

*'Yonder is the sea, great and wide, which teems with things innumerable.'* (Ps. 104:25)

We know more of the moon than we do of the deep mysterious oceans. Industrial fishing and fish farming are increasing. Fish stocks are plummeting, coral reefs are being destroyed by pollution, dynamite fishing, tourism and souvenir hunters. Non-Government Organisations and campaigning groups have battled long and hard to protect large sea mammals.

### Why does bio-diversity matter to Christians?

*'The earth is the Lord's and everything in it.'* (Ps. 24:1)  
Some would argue that the extinction of a dung beetle is insignificant or that extinctions are all part of God's plan. Psalm 8 describes people as *'rulers over the works of God's hands'*. Everything is *'under their feet'* (v. 6). But in the first and last verses the Psalmist proclaims that the earth is God's. We are accountable to God for how we use other creatures. John Calvin (d. 1564) wrote in his commentary on Genesis, *'The custody of the garden was given in charge to Adam, to show that we possess the things which God has committed to our hands, on the condition that, being content with the frugal and moderate use of them, we should take care of what shall remain.'*

No species lives in isolation. For example birds depend on a variety of other species to provide their food — from grasshoppers and seeds to fish and rabbits. We need biological resources to feed and clothe us and provide housing, medicines and spiritual nourishment. But according to the Bible all creatures are good in themselves. They are not just for our use. All creation from wild animals and cattle to fruit trees and people praise God by living their natural lives.

As Pope John Paul II said, *'Nature should be respected and preserved so that by establishing a healthy proper relationship with it, people can be led to contemplate the mystery of God's greatness and love.'*

Archbishop Rowan Williams has said: *'The Earth is a gift of God to all creatures, and clearly our human duty is to appreciate it, cherish it, celebrate it, take care of it, and share it, not just amongst ourselves but all creatures of God, present and future.'*

**To think about...** Country churchyards often contain the last 'unimproved' grassland in an area. Some parishioners want to manage part of the churchyard as a meadow, cutting the grass only late in summer so wildflowers can seed, and to encourage Sunday School children to observe wildlife attracted by the long grass and flowers. Others like the churchyard to look tidy with short grass and think children wandering around graves looking for insects and

lichens is disrespectful to the dead. What do **you** think?

### Practical Steps

1. Encourage **prayers and church services** which include God's earth and people struggling to protect bio-diversity.
2. Manage **your churchyard** to benefit wildlife. Plan a Nature Trail through an old part of your churchyard pointing out different trees, plants, lichens, and stone.
3. Urge church authorities to **nurture land** under their control in ways which increase its biodiversity.
4. **Contact your local authority** for details of their local Biodiversity Action Plan, and help with local conservation.
5. Grow **old and rare fruit varieties** from Brogdale in your garden.
6. **Garden organically**, use peat-free compost, dig a pond and leave wildlife habitats. Remove slabs or concrete and let life live. Allow plants to seed in the autumn so birds can feed on them. Tidy up later!
7. Play **nature games** with Sunday School.
8. Support local, national and international **conservation charities**, and actively support their campaigns.
9. Learn to identify and appreciate **local wildlife**.
10. Buy **food** that is "Wildlife friendly".

### Global & national action plans

Along with over 100 other countries the UK signed the Convention on Biological Diversity at the Earth Summit in Rio de Janeiro in 1992. This led to the establishment of the UK Biodiversity Action Plan (BAP) which aims to maintain and enhance bio-diversity. In November 2010 a new plan was made at Nagoya, Japan, to work towards saving the biodiversity of the world up to 2020.

### Organisations active in this area:

A Rocha  
Biodiversity Action Plan  
Brogdale Horticultural Trust  
Living Churchyards Project  
The Wildlife Trusts  
Natural England  
Heritage Seed Library (Garden Organic)  
Kew Gardens Millennium Seed Project  
Plantlife International  
RSPB  
Worldwide Fund for Nature (WWF)  
United Nations Environment Programme  
International Union for the Conservation of Nature

### Join us!

Send £18 standard (low income £10), £28 joint/family/corporate, or a donation for church membership (we recommend £25).  
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