

INTRODUCTION TO BIODIVERSITY

WHAT IS BIODIVERSITY?

Biodiversity is a fairly new word to our language, but it is becoming more and more commonly used and understood. It simply signifies the variety of life on earth in all its shapes and sizes – from smallest insect and fungus to the largest mammal or tree. In Scotland alone it is estimated there is something in the order of 90,000 species; worldwide there could be at least 30 million!

This massive variety of life is everywhere, not just in our countryside and gardens, but also in our towns and cities. It is all encompassing – biodiversity enriches all our lives, whether it's a butterfly visiting our garden or a blackbird heard from an office window. It is important to our health, in the use of many species in our medicines and for the fact that it encourages us to take exercise in our surroundings, be it walking or gardening. It is therapeutic too – it has been found that a view of nature from a hospital bed speeds up recovery from operations.

Biodiversity contributes to our overall economy by supplying the raw materials for our clothing, food, drink, fuel, buildings and roads. Tourism based on wildlife is one of Scotland's major income-earners. Environment-based jobs include farming, fishing and services providing water, energy and building materials.

“Biodiversity encompasses the whole variety of life, it is all living things, from the tiny garden to the giant redwood tree. You will find biodiversity everywhere, in window boxes and wild woods, roadsides and rain forests, snow field and seashore.”

The UK Steering Group Report 1995

IS OUR BIODIVERSITY THREATENED?

Our biodiversity is under threat globally, nationally and locally. In the last hundred years at least 100 species have become extinct in Britain alone. This figure palls into insignificance when we consider that the present extinction rate is up to 10,000 times higher than that in prehistoric times. It has been estimated that globally we are currently losing up to 50,000 species every single year – that is 137 a day - 6 each and every hour! If human activity continues to expand at current rates, at least 20% of all species will have disappeared in less than thirty years' time.

The statistics are compelling. A recent study estimates that if every person in the world consumed as much as the average person in the high-income countries of the West, we would need three more Earths to sustain us. So our goal of sustainable development cannot be the continuation and expansion of such intensive use of our natural resources.

In Scotland, we have lost 99% of our ancient pinewoods and 90% of our raised bogs; in Tayside we have lost 35% of our heather moorland. A quarter of Scotland's flowering plants have become rarer and a third of all bird species recorded in Scotland have been found to be in need of special conservation action. The water vole is very nearly extinct in our area – nationally only 2% of its original population remains. Many of our valuable habitats, such as unimproved grasslands and wet woodlands, are at risk of serious damage or loss.

Occasionally a natural process threatens the existence of a species or habitat, but in the majority of cases it is the way we use our natural resources that is the main problem. Although we have little understanding of what the components of our complex web of life are, we know that as a whole they have made it possible for our species to survive. This web is inherently fragile and the way we act affects our part in it, as well as the web itself. We need to consider new options on how to safeguard both our local and global biodiversity to ensure quality of life not just for ourselves and future generations, but also for the other species with which we share the planet. The earth is, after all, the only home we have.

Tayside Biodiversity Partnership

