

The Mountain Beech Forest Ecosystem

The forest is an exciting magical world where all sorts of plants and animals live together. Everything has its place and nothing is unimportant. When you walk through the mountain beech forest at Arthur's Pass look around at all the different trees and plants growing higgledy piggledy all over the place. It seems chaotic doesn't it? Yet every plant and animal has a reason for being in its particular **niche** or position in the forest.

The mountain beech forest is an **ecosystem**. An ecosystem is a complex **community** of many different plants, insects, and birds which live together in harmony. Each **species** has **adapted** to its particular **habitat**, which gives it a place to live and a source of food. Many different species can co-exist in close association because they each have different needs, and are not competing for food and space. Some species help each other, for example a **creeper** like **bush lawyer** has adapted with prickles so it can climb on the supporting beech trees to reach up to the sunlight which it needs to survive.

Each living thing in the forest ecosystem is closely linked in an intricate and often fragile **web**. Anything that affects one part of the forest can upset this delicate balance, and have an effect on other members of the forest ecosystem. If you cut down a tree, this will affect the other plants growing nearby and underneath, the birds who nest and feed in the tree, the insects who live on the tree and the whole cycle of life and death which replenishes the forest's **nutrients**.

The many different plants and animals in the ecosystem are **inter-dependent**; they need each other for survival. Birds eat the fruit of the trees and then **disperse** the seeds to help the **regeneration** of the forest. Insects collecting nectar for food **pollinate** the flowers. Birds eat the insects which otherwise would eat too many leaves on the trees. The forest creatures have taken a long time to establish this pattern of co-operation by developing **adaptations** and habits so they can live in harmony together.

People by introducing stoats, deer and possums to the native forest upset the natural balance. These animals eat the birds and vegetation but there is no natural **predator** to keep their numbers down. The forest rarely adapts to these changes. Hence stoats, deer and possums have caused a lot of damage in the forest since they were introduced 100 years ago.

The Web Of Life

*Light, air, water and soil are the
elements of life*

*Life is divided into producers,
consumers, and decomposers.*

*Everything is becoming something else,
Everything has a home,*

*Homes in a defined area form a
community;*

*Inhabitants of these communities live
together in competition, co-operation,
or neutrality;*

Humans are the chief Predators.