

Temperate forest junior

South of the taiga, temperate hardwood forests, or **deciduous forests**, can be found. They occur in much of Europe, China and the United States, occupying about 5% of the land surface. In this ecosystem plants shed their leaves in the cold season. In these areas, there are marked differences in seasonal temperature: hot and humid in summer and cold in winter. Trees shed their leaves in winter to avoid a useless loss of water through transpiration.

The climate is characterised by an average rainfall of 300-1200 mm, uniformly distributed throughout the year. There is no dry season. Summer usually lasts 4 to 6 months and has a positive effect on vegetation while in winter the majority of trees interrupt their growth. However, winters are milder respect to those at higher latitudes: even on the coldest days, the average minimum temperature does not drop below -2°C.

The temperate forest has only two layers of vegetation. The canopy of the taller trees is generally about 15-30 metres high. Below this there is a layer of shrubs and small trees about 5-10 metres high. Ferns, mosses and lichens can be found in areas with abundant rainfall. Common trees of this biome are: beech, maple, oak, poplar, walnut, linden, chestnut, birch, elm and, in America, even tulip trees.

In this biome there are a very limited number of mammals. In autumn, the animals of this biome collect food supplies for the winter; they prefer nuts and winged seeds that can be preserved for a long time. Many mammals and birds have devised numerous strategies to survive the rigours of winter; many species sleep through the whole winter period, well protected in their dens. Some animals undergo a real hibernation: their body temperature drops, their metabolism is reduced to the minimum and the body fat reserves are sufficient to keep the animal alive. Hedgehogs and mice adopt this strategy.