

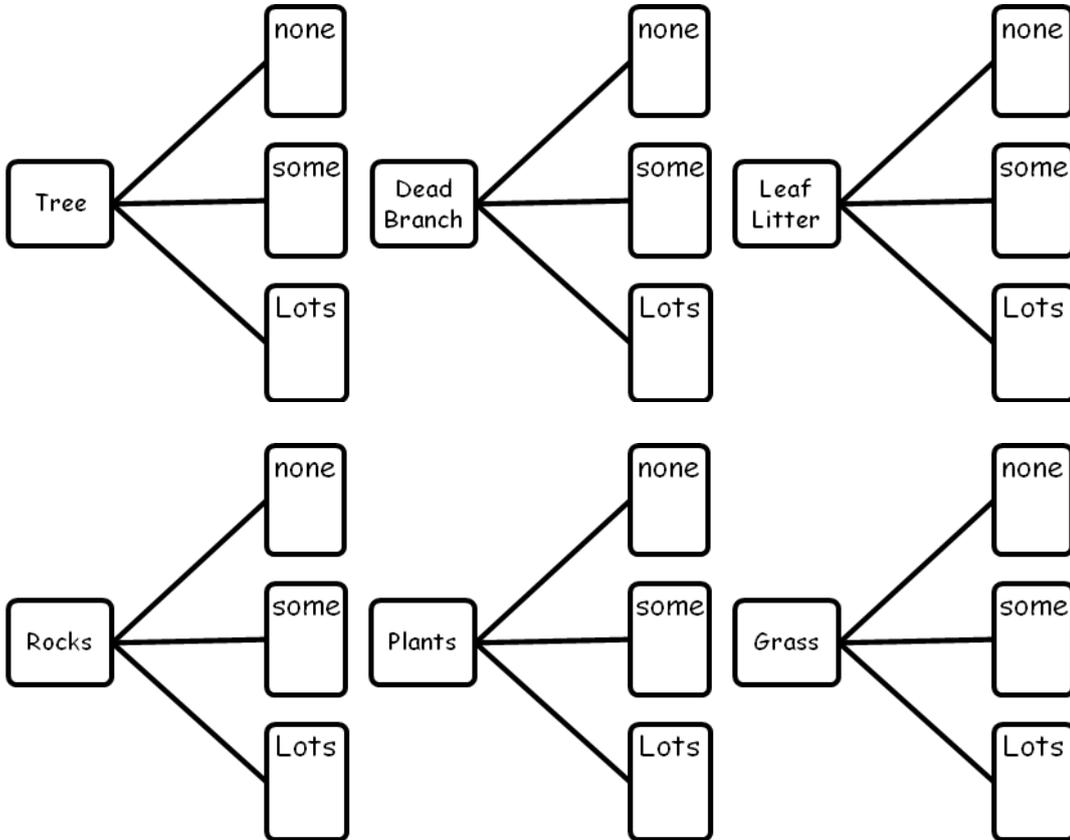


Penmoelallt... a woodland lost in time.

BIODIVERSITY

Way Station 7
www.merthyrnats.org.uk
 GPS location: N 51°46.29
 W 003° 25.30
 O.S co-ordinates: SO 020 090

Have a careful look around our 'Deer' biodiversity tree. What type of habitats can you see?



Use your collection to make a woodland biodiversity collage.
 You could:

- Add a frame of twigs.
- Take a photograph to show everyone at home.
- Leave your picture in the woodland for others to enjoy!

Remember! Always wash and dry your hands before you eat.

How many different things can you spot? How many examples of each did you find?
 Make a mark with a pencil or pen in the empty box every time you spot something.
 DON'T touch the fungi, they are easily broken and could be poisonous.

Some things with six legs	<input type="text"/>	Some things with wings	<input type="text"/>
Plants with broad leaves	<input type="text"/>	Fungi	<input type="text"/>
Ferns	<input type="text"/>	Plants with narrow leaves	<input type="text"/>
Lichens	<input type="text"/>	Mosses	<input type="text"/>



Thank you to all our dedicated volunteers, without whose help, the Penmoelallt Woodland Project would not have been possible.

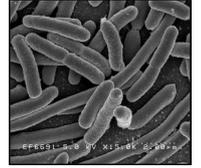


BIODIVERSITY: beginning at our 'Deer' Oak tree.



BIODIVERSITY is the word used to describe the variety of life around us. It is the study of how all living things in a place relate to one another. Imagine Penmoelallt Wood is a big orchestra or band. Everything you can see: plants, animals, birds, insects, mosses, lichen and fungi, together with things that are too small for you to see, are working together to make the environment work in harmony. Bacteria, mosses, lichen and fungi help to make soil. Plants take water from the soil and use light to grow and make energy. Plants need bacteria in the soil to make the chemicals they need. Plants need animals, birds and insects to spread their pollen and seeds. Many animals, birds and insects need plants for food and for shelter. Some animals and birds need insects or other animals and birds for their food. If any of these players in the wood becomes weak or dies, the wood suffers and the 'amazing music' is not as good as it was.

BACTERIA and **VIRUSES** are too small to see without a microscope. Bacteria were first observed by Antonie van Leeuwenhoek in 1676. Viruses were discovered in 1898. They were not seen until 1931 when the electron microscope was invented. Bacteria can be helpful or harmful. You need bacteria living in you to digest your food properly but they can also cause illnesses like tonsillitis. Viruses live inside the cells of animals and plants. They cause illness but they do good as well. They keep sea water and fresh water healthy by killing bacteria and algae. Bacteria and Viruses are the unseen foundation of the rich biodiversity in Penmoelallt Wood.



Our 'Deer' Oak tree and the rocks close by, have a lot of **LICHEN** growing on them. Lichens have three different forms. They can be leafy, bushy or flat. They are made up of two or more different organisms living together, a fungus and an alga (the simplest type of plant). The fungus provides the body in which the alga lives. The alga provides food for the fungus, by using a chemical compound called chlorophyll, sunlight, water and a gas called carbon dioxide found in the air. Lichens are very sensitive to pollution in the air. If you see a lot of lichens in a habitat you know the air is healthy.

There is a **BRACKET FUNGUS** on our 'Deer' Oak tree. Bracket Fungus can be seen all through the year. Sometimes you can tell how old the fungus is by counting how many rings it has. Mushrooms are one of three types of fungus. Most of the familiar shapes we think of as mushrooms are only visible during the fruiting season, usually in Autumn. The main part of the fungus is underground or under the branch or trunk of the tree. Fungi do essential work in the woodland. They break down and use all the dead plant and animal material that falls to the ground. Imagine what would happen if they did not do their work, after a few years the dead leaves of autumn would build up and fill the whole wood and you would find the bodies of all the animals and birds that had died during the year, lying on the ground!



MOSS grows on our 'Deer' Oak tree, on dead branches and on rocks nearby. Mosses are simple plants. They grow in clumps or mats in damp and shady places. They make spores instead of flowers and seeds. Sometimes you can see thin stalks with capsules on the end of them that carry spore pods. There are more than 12,000 species, or types of moss. North of the Equator moss grows much more on the north side of trees and rocks. You could use this fact to help you find your direction. Mosses can hold a lot of water; one species has been used to help put out fires and another as a first aid dressing on wounds.

FERNS have proper stems, leaves and roots unlike mosses but they too do not produce flowers or seeds. They are able to grow where flowering plants cannot survive so you can find them close to deserts and also in swamps, on rocky hillsides and in the dark parts of a wood where there is not enough light for other plants. Many can only grow with the help of special fungi that help them to cope with the acidity of the soil. Some like to grow on trees such as those on the 'Deer' Oak tree. They are rich sources of food for animals because they contain a lot of protein, fat and energy. Birds and bats feed on their spores. However some ferns are very poisonous.



An example of **BIODIVERSITY IN ACTION**. This butterfly is the Silver-Washed Fritillary. If you are lucky you will see one in the summer months in Penmoelallt Wood. It needs mossy tree bark as a safe place for laying its eggs. The eggs hatch into larvae. The larvae need the leaves of the common dog-violet that grows on the woodland floor for their food. The adults (butterflies) feed on aphid honeydew and nectar from bramble flowers and thistles. As the butterflies feed they spread pollen from plant to plant. Pollen is needed to make the seeds that are found in the fruit. The birds of the woodland need the butterflies as their food. We enjoy the blackberries!

Remember to keep the Countryside Code!

- Be Safe - plan ahead and follow any signs.
- Leave gates & property as you find them.
- Leave machinery and livestock alone.
- Protect plants & animals and take your litter home.
- Keep dogs under close control.

You want to know more?

Visit these websites:
www.greatplanthunt.org/biodiversity
www.nhm.ac.uk/nature-online/british-natural-history/uk-biodiversityportal/index
www.biodiversityislife.net