

Holly, Ivy and Mistletoe

By Lizzie Maddison

At this time of year, the sight of the red berried holly in the hedgerow lifts the spirit. The more subtle ivy flowers and berries, equally lovely but request a little more searching out. Finally mistletoe, not a plant we see up North very often. We would need to visit the old apple orchards and ancient woodlands further south to see the large bunches of white jewelled berries hanging down from the top of the trees in all of their glory.

At the beginning of Winter, evergreen shrubs were brought into the home as part of the Winter solstice way back in the mists of time. They must have brought great cheer in the long, dark, winter days as well as being a reminder of the coming spring.

Holly

Holly represented immortality in ancient culture. It was believed to protect against evil spirits, thunder and lightning and many other threats common at the time.

At this time of year, Holly was taken into the homes to shelter the elves and fairies.

Apparently, humans and fairy people could live together without coming to any harm during the winter solstice.



Early records show that Holly was as given as gifts for the Roman festival of Saturnalia which ended during the Winter solstice. Many of these Pagan rites became integrated into Christianity, the most famous being the crown of thorns. Early Christians frequently disguised their worship by using the old holly traditions. So many stories about holly relate to magical powers, especially from medieval times onwards, and there are still some echoes today. Often holly can be found growing in the hedge, it was thought to obstruct the passage of witches as they ran along the top of the hedge. Cutting down a whole tree was regarded as bad luck although branches were allowed and frequently used as cattle food.

The sturdy wood of Holly had many uses including handles for the horse plough, stocks for horse whips, teapot lids and handles. Coppiced holly was used for chimney brushes. The holly was often planted as a sightline for winter ploughing.

Unsurprising, therefore, that so many places are named after the old English name for holly, holegn, including Hollin, Hollington.

Family Aquifoliaceae

[The holly family]

Genus *Ilex*

Species *Ilex aquifolium* [Holly]

General features

Evergreen trees/shrubs, leaves often with spiny edges. Higher up the tree the leaves are **less spiny** when it is sometimes called **slike** holly



Holly is a **dioecious** shrub with **separate** plants for the **male and female** flowers. You need to search deep among the holly leaves earlier in the year to find the tiny white flowers.

Flower Structure

Four free **sepals** and four free **petals**.

The **male** flower will **have four stamens** along with the four petals and sepals.

The **female** flower, a **four lobed stigma** [sessile] and a **superior four celled ovary**.



After **fertilisation**, the flower forms a **fruit** which is a red berried **drupe**.

Ivy

Family Araliaceae

[Ivy family]

There are 3 genera in the Ivy family

1. *Hedera* – this genus contains the common ivy.
2. *Fatsia*
3. *Aralia*

Hedera helix

[Common Ivy]

Ivy flowers much later in the year than most flowering plants, offering a much-needed food source to late season butterflies such as red admiral, honey bees, hoverflies and wasps. The flowers are tiny but very beautiful and worthy of closer inspection.

General features

An **evergreen, poisonous climber** with numerous short roots arranged along the climbing stems. The leaves vary depending on whether they are on the vegetative non-flowering stems or on the flowering stems.

Ivy has **2 types of leaf**, the **nonflowering shoots** carrying the well know **marbled, palmate, leaves** whilst the leaves on the flowering stems are **much less divided**.

The vegetative shoots have more palmately lobed leaves which are often used in **keys for identification**



The leaves on the flowering stems are **much less divided**



Hairs present on the leaves and young stems are also **diagnostic for the different species**. In the common ivy, *Hedera helix*, the hairs are **stellate and whitish**.

Flower Structure

Ivy flowers are bisexual where the male and female flowers are found within the same flower. Contrast this with the holly where the male and female flowers are carried on separate plants

Ivy flower detail

Flower Structure

Terminal umbel white/green, bisexual flowers
5 small teeth replace sepals
5 petals
5 free stamens
Single style and minute stigma
After fertilisation, fruit black berry



5 petals

5 stamens



Single style/tiny stigma

5 celled ovary

Fruits



Developing ivy fruits which will form **black berries** when mature

Mistletoe

Family Santalaceae

[Mistletoe family]

There are 2 genera within the family *Santalaceae*

Genus *Viscum*

Mistletoe

Genus *Thesium*

Bastard toad-flax

Viscum album

[Mistletoe]

Tangled masses of mistletoe situated high up in the trees are quite a common sight in the apple growing regions of the country. The gleaming white mistletoe berries form part of our folklore, many myths and customs are associated with mistletoe due to the powerful magical properties it was thought to possess. From Druidic traditions onwards, mistletoe was used to guard against evil, as a cure for many diseases such as epilepsy, measles, and to increase fertility and health.



Shakespeare called it 'the baleful Mistletoe,' after Balder, the 'God of Peace' in Scandinavian legend. Although the Gods ensured that Balder was protected against harm from all living things, the Gods had forgotten about mistletoe. Inevitably this fact was discovered and Balder was killed by an arrow made of Mistletoe. In one version of the myth, the other gods pleaded for his life so he was revived.

Mistletoe was ever afterwards associated with the goddess of love. It was ordered that everyone who passed under it should give and receive a kiss, to demonstrate that the mistletoe had become an emblem of love and not of hate.

General features

Mistletoe is a semi-parasitic, poisonous, evergreen shrub. It is found growing on many species of tree including hawthorn, apple, poplar, elm and oak. A partial parasite, it penetrates into the tissue of the host tree using structures called haustoria. These slender, tube-like projections enter the host via the branches drawing water and nutrients directly from the tissue. So, although mistletoe still carries out photosynthesis to make its sugars, it does not need roots to grow into the soil.

The fact that the plant was able to grow above the ground without roots, and hence no access to nutrients, was very puzzling to our ancestors. It only served to support the theory of spontaneous generation prevalent at the time by which living organisms were thought to be brought to life from the dust of the earth by God.

The common mistletoe has smooth, oval leaves which grow in pairs along the woody stems. The leaves are evergreen and photosynthesise.

The plant is dioecious, like holly, so the male and female flowers are carried on separate plants.



Flower Structure

Flowers are small white flowers carried in clusters of 3 to 5. Both male and female have a whorl of 4 tepals. The male flowers have four stamens attached directly to tepals. The female flowers have a one celled ovary and a stigma attached directly to ovary.

Fruits

Fruit a one seeded berry with a waxy white coating. The berries grow in clusters of two to six and are well adapted for seed dispersal. A sticky layer containing sugar rich viscin is present underneath the outer coat of the berry which attracts birds. As the birds feed on the berries, the sticky seeds adhere to the birds' beak. The birds try to remove the seeds by wiping the seeds off on the tree branches. In doing so, the seeds harden and attach to the tree branch. Eventually the seeds germinate and the young mistletoe embeds itself into the branch.



Some of the seeds are eaten and pass out in the bird droppings onto the tree. Here they will germinate in a fertile, ready-made medium.