

Feature HOME & GARDEN

Bark-ing up the right tree



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Now the leaves have all but fallen and the golden copper hues of autumn gone, trees create a completely different visual impression, their bare stark branches silhouetted against the skyline. I remember whilst studying arboriculture at college spending countless hours trying to identify trees in their winter state and being encouraged by our tutor discussing the attributes and aesthetics of winter trees. A feature this time of the year is the striking bark that can be seen on some trees.

There are many wonderful types, but first, what is the function of the bark? Bark performs the same function in all trees; it protects the incredibly delicate living tissue in the trunk from the environment, animals and disease. The outer bark is waterproof so it protects the tissues below from drying out. There are parts of the world where woodland or forest fires are common place, here trees can have extra thick bark with amazing insulating properties protecting their living tissue from the heat – the Mediterranean Cork Oak is a great example with thick insulating bark. In contrast young trees with very thin bark planted in hot sunny locations can get sunburnt, such as Beech and Maple.

Bark is a tree's first line of defence against attack from fungal spores, bacteria,

insects and animals. Often bark on some trees is thicker at base and thinner further up the trunk, this is an attempt by the tree to deter browsing animals like deer and rabbits, and you can often see this on Silver Birch and Scots Pine. This is because all the living tissue in which the annual growth of wood and bark occurs, called the Cambium, and the vessels for transporting food and water around the tree is located just under the bark. So any damage to the bark can create a place of entry for fungal or bacterial pathogens.

Most trees put on a layer of bark each year and with the formation of each layer the outer layer dies, this then builds up over time to create thick bark as with Oak trees. Some trees can keep adding to the original layer of bark by dividing new cells, thin barked trees like Beech would be an example of this.

From China and Japan there are wonderful selections of Snakebark Maples that not only have bark that resembles snake skin but have amazing autumn colour. Himalayan Birch with its brilliant white bark can be stunning, especially when planted in groups with Pine trees.

Again from China the Paper Bark Maple has outstanding papery peeling bark and autumn colour, plus in spring time the leaves emerge orange turning pink and then yellow before finally green. The

Tibetan Cherry with its glossy, rich mahogany brown peeling bark is a tree suitable for a small garden. The Persian ironwood is a small tree, which has green-and-grey mottled peeling bark. The Judas tree is unusual in that it produces flower from the bark on the main trunk and branches. Although these exotic trees are stunning, we do not have to look too far to find interesting bark closer to home, for example the beautiful reddish pink flaking bark of the mature Scots pine is hard to beat. The spiralling corkscrew effect from the bark of the Sweet Chestnut or the rough and deeply fissured bark of the ancient Oak. Winter trees can be unusual and interesting, here some more trees to consider for their attractive bark, Japanese Cedar, Eucalyptus, London Plane tree, Myrtle and Strawberry tree.

A good family project on clear days is to take the children on a bark rubbing expedition all you need is paper and crayons. Try to encourage them to identify the tree in its winter state from their impressions made – a challenge for us all.

If you need any further information on regarding this article or any other tree matters please write to us at The Tree Company, Ballydehob, Co Cork or email us at info@thetreecompany.ie or call our Office on 028 37630.

Know your soil and get the most from your garden



By **John Conway**
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In organic and chemical-free horticulture and agriculture, the soil has to be the most important component of the system, as this is where plants get their nutrients. Soil is the 'breathing skin of the earth' and in organics we always refer to 'living soil'. It is the most important factor in deciding whether growing will be successful.

Only a small fraction of the earth's surface has soil suitable to growing food crops, so to get the most from it in a sustainable way we need to understand it (and respect it). A fertile soil is composed of soil particles, water, air, humus, minerals (nutrients) and living organisms.

Soil particles are weathered pieces of rock and they form the inorganic (non-living) components of the soil. Soil particles range in size and are grouped accordingly from gravel, sand, silt and clay. The size of the particle determines the soil type.

Water is found in between and sticking to the soil particles. Soil water is held onto the particle by 'capillary attraction'. The amount of water in the soil depends on the size of the particles; for example if the particles are small they will be held close together and a lot of soil water is kept in between such as in clay soil. If the particles are large, the water will be only held loosely and will drain away easily, i.e. sandy soil.

Air occurs in the spaces between the soil particles. Air is essential for the support of plant life and soil organisms. It is also essential for the breakdown of organic matter.

Humus is broken down plant and animal matter and it provides minerals (nutrients) to the soil. It also serves to bind soil particles together in a 'crumb' structure which leaves space for air and water.

Minerals are from weathered rock but most are released from the breakdown of plant and animal matter. They include nitrates, sulphates and phosphates plus other trace elements which are essential for healthy vigorous plant growth.

Living Organisms are found in every ounce of soil by their millions. Most are microscopic – bacteria, fungi; others are small but visible – insects; some are easily seen – earthworms, beetles. The decomposition by and of micro-organisms add nutrients and fertility to the soil. Earthworms alter the soil structure, making it more fertile and porous and they create channels for air and water filtration. Fertile Soil equals Living Soil.

Soil Types

Most soils are a mixture of types, determined by the proportion content of each.

Clay: this has a smooth, shiny texture, more orange in colour with a sticky feel. Clay is composed of very small particles compacted together where there is limited flow of air and water. As a result clay soils tend to be heavy and slow draining which makes them slow to heat up in spring time. In summer they may dry out and bake hard while in winter they may be soggy. But generally clay is fertile with a high nutrients value and is good for growth as it retains moisture.

Silt: this is usually a minor ingredient in other soil types. It is formed from deposition by rivers. It has a soft silky rather than sticky feel to it. The particles are quite small, but larger than those of clay. It is moisture retentive and fertile but prone to compaction and bad drainage.

Sand: this has a rough, gritty feel. It is composed of large particles. Sand has no moisture retaining qualities so it is free draining – well aerated, dries out quickly – but has no nutrient retaining qualities as the nutrients are leached away, making it an infertile hungry soil, which will need a lot of watering and feeding. It also provides poor anchorage for plant roots. Sandy soil can be improved by adding organic matter.

Gravel: similar to sand but with larger particles – very free draining, usually found in the lower soil layer or in the sub-soil.

Chalk: this is pale in colour with a gritty feel and is composed of very large particles. Chalk is high in lime and has a high pH (alkaline). This can be beneficial for root crops.

Stony soil contains a lot of small stones, even in the topsoil. This can have advantages – improved drainage, as the stone break down to provide minerals.

Peat: this is dark in colour and wet in nature, being very moisture retentive. It has a very high acidity (low pH). Peat is rich in organic matter, making it highly fertile. Peat is formed where wet, acidic conditions prevent full decomposition of organic matter which remains on or near the surface. Because of acidity, peaty soils may need to be limed before most plants can be grown.

Loam: This is a mixture of soil types. The loam will depend on the proportion mix: Mostly clay – Heavy Loam; mostly sand – Light Loam; a good balance of sand, silt and clay – Medium Loam, this is the ideal soil mix.

By knowing which type of soil you have to begin with, and by thinking of it as 'the living and breathing skin of the earth', you will be in a better position to treat it accordingly.

For a range of upcoming courses on organic/chemical free no-till gardening visit www.theholliesonline.com.