Nature's Compasses

Finding our way using map and compass can be exciting. But what if you had no map or compass and found yourself stranded in open countryside? Nature navigation relies on your skills of observation. Through it you can find your way to safety.

Nature provides us with a variety of ways of discovering direction, the sun, stars, trees, and the wind. The simplest and most obvious way to find north is by the sun. At dawn it rises in the east, at mid-day it is due south, and in the evening it sets in the west.

Finding Your Way At Night

Except for a few nights every month, the moon, like the sun, can help give you direction. Because the moon reflects the sun's light, the moon always points towards the sun, and thus even at night indicates the direction of the sun. Whether the moon is waxing or waning, an imaginary line through the horns of a crescent moon will always give you, approximately, a north/south line.

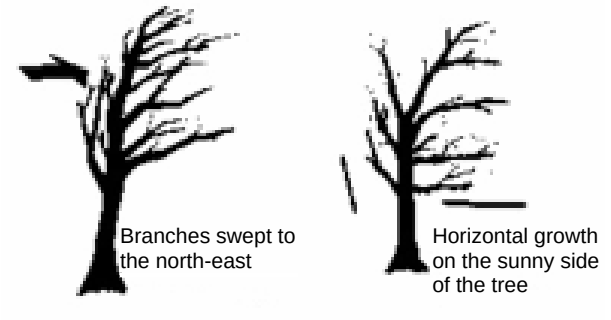
The location of north can also be determined from the stars using the pole star. The Plough constellation is visible all year round as it moves around the Pole Star. On a clear night the Pole Star can be found by plotting a line through the 'pointers'.

As with the sun and moon, the stars also appear from the east and sink in the west. So, if a star rises you are facing east, if it descends you are facing west.

The Wind

Almost every area has what is called a prevailing wind - that is a wind which blows longest and strongest from a particular direction. In the UK this is from the south-west.

Prevailing winds have their impact on trees. You can very often observe how trees in a given area have been influenced by a prevailing wind. They tend to lean in a particular direction. By observing the direction of lean, you can tell from which direction the local prevailing wind blows.



If, say, the trees are leaning north-east, you will find that the prevailing wind blows from the south-west. There are but a few exceptions to this general rule - such as with the trees on some of our coastlines.

Nature also provides other wind-influenced indicators. Spiders, for example, do not construct their webs against the wind. So observation of the general direction in which spider webs' are laid can be helpful.

Birds and insects almost always build their nests in positions that will protect them against the prevailing wind, so keep your eyes open.

Trees As Indicators

We have talked about the prevailing wind effect on trees which causes them to lean in a particular direction. Further studies of trees however can reveal many ways in which a tree can indicate direction.

Concentrate your observations primarily on indigenous trees, because nature designed trees in different shapes, with the main object of enabling them to receive as much light as possible. The observations which follow are only generalisations, but are good pointers.

Trees are affected by many factors. You should not jump to conclusions after studying a single tree only, but confirm your findings by observing several trees in the same vicinity.

Most trees tend to develop more foliage on the sunny side.

In many species, the branches exposed to the arc of the sun, and thus receiving more sunlight, will tend to be more developed. They will reach out southwards at an angle nearer the horizontal. On the other hand, branches on the northern side, lacking sunlight, will tend to grow at a more upwards angle.

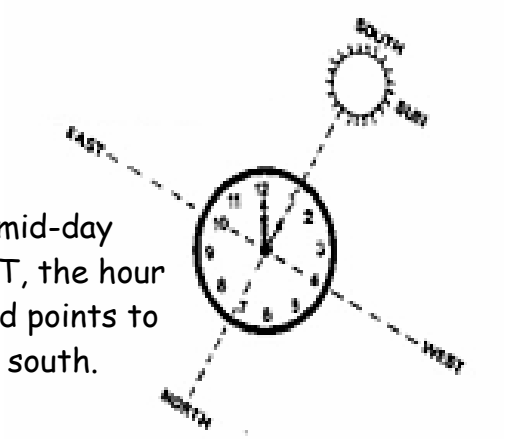
The tree trunk itself may lean sunwards, slightly. (While the prevailing wind usually cause a tree to lean with the wind, the sun can also affect its angle.)

Mosses and lichens will almost always grow on the north side of a tree trunk, rather than on the southern, sun-facing side. Note however that mosses and lichens are also affected by humidity - they flourish best where moisture is retained longer. You can also observe a green strip on the north side of wooden telephone, and similar, poles.

The bark on the north side will often be darker and more tightly grained than on the southern sun facing side.

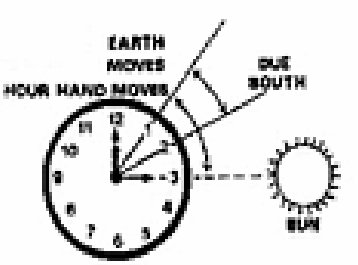
If the tree has been felled, the rings on the stump will be spread further apart on the southern side.

Watch Methods



At mid-day GMT, the hour hand points to the south.

At other times, point the hour hand to the sun. Divide the angle between the hour hand and the 12 o'clock. This line points south.



Shadow method

Place a stick in level ground and mark where the tip of the shadow is cast.

Wait at least 15 minutes and again mark the tip of the shadow.

Draw a line between these two points. This is the east/west line.

A line at right angles to this is the north/south line.