**Tree Warden Report September 2022**

It is so very sad to walk through a park, woodland or garden and see trees and shrubs  suffering and in some cases dying before your eyes.

Many of our established trees are shedding their foliage early, fruits and seeds are smaller than usual and in many cases insect destroyed .

Whilst newly planted specimen trees in many gardens and parks have been watered  for many others watering is totally out of the question; either because lack of nearby water sources and hosepipe bans or simply because of the sheer number of trees planted. 2022 is probably the worst year this could happen given the numbers of newly planted trees, orchards and woodland to celebrate the Platinum Jubilee of Her Majesty, Queen Elizabeth.

No doubt this autumn we will see a marked increase in tree felling. Most of our established trees will survive but some mature, veteran or ancient trees either reaching the end of their lives or weakened in some way will not .Those that survive will lay down evidence of this summer in their wood.

Trees lay down a series of concentric rings in their wood which in time when the tree is felled tell us how old the tree is and what the weather was like during each year of it's life. The wood can sometimes tell us about forest fires they have survived as this too is marked on the rings.  Essentially, tree rings grow wider in warm wet years and thinner in cold and dry years but there are exceptions and actual details require complex scientific analysis. Conditions such as we are seeing now-drought- may mean the tree may hardly grow at all.

Dendrochronolgy is the scientific method of dating tree rings to the exact year they were formed. This is especailly useful when the tree is too recent for radiocarbon dating. New growth trees occurs in the cells near the bark . Each ring generally marks a complete cycle of seasons( i.e one year). Tree ring data for the Northern Hemisphere currently goes back at least 13,000 years.

In England we have an Oak chronology which has been cross checked from multiple tree samples  going back some 7,400 years. For Oak and Pine in central Europe the cross matched chronology is some 12,500 years.  Dendrochronologists sample from still living as well as dead trees. Obviously, the same technologies can be used to assess the age of wooden structures, furniture, ships and smaller artifacts made of wood.    A combination of Carbon dating and timber rings allowed scientists to pinpoint the wood used to build the Viking Houses at L’Anse Meadows in Newfoundland . The carbon dating showed the spike in Carbon 14 due to solar storms  of 993/994 A.D. and the wood rings showed wood used was from a tree was felled in 1021 A.D. Amazing trees . Amazing Science .

Tracy Gleeson