



Drought. We are currently going through a very dry spring and early summer and symptoms of drought are beginning to be evident. Drought stress can also reduce the ability of a tree or shrub to resist other infections making them more susceptible to infestations of insects, fungi and bacteria.

Drought:

Early effects: Foliage wilts during the day and recovers at night, older leaves and needles are often pale or brown and may fall. As drought continues all leaves and needles may wilt and die, whole shoots may die back and there can be gummy exudations on the stems. Young and newly planted trees often die. In following years the crowns of trees may be thin, in evergreens foliage can be patchy due to lack of older needles and there may be patches of dead bark.

Remedy: Watering newly planted trees during dry weather, being careful to avoid water logging, use mulch to reduce water loss from the soil and prevent soil compaction by vehicles and pedestrians which can prevent water soaking into the soil.

Similar symptoms to drought

Cypress aphid *Cinara cupressi* shows similar symptoms to drought on leylandii, Lawson cypress and Monterey cypress, with early stages turning yellow and then brown, these symptoms are often found at the base of trees and hedges and result in a loss of screening. Black Sooty mould develops on honey dew produced as aphids feed and is often present on stems and branches. The feeding aphids move before symptoms show and are often difficult to find even though they are up to 4mm in size, new growth will not develop from old wood. The aphid can be sprayed as soon as symptoms show (May—October) with a suitable insecticide for aphid control on amenity trees.

Maintaining a weed free area around new plantings increases the moisture available. Mature trees are more difficult to irrigate and may benefit from soil improvement by decompaction and mulching when dry weather is over. Pests such as wood boring insects, which might not normally be a serious problem are able to invade more effectively during drought and can cause the death of trees that would otherwise recover.

Below: Eucryphia suffering from drought.



Below: Cypress aphid damage



We found **Verticillium Wilt/Veticillium dahliae** on a Norway Maple/*Acer platanoides* which also has symptoms of die-back and wilting. This is a fungal pathogen that disrupts the water flow within the tree causing wilting of leaves in parts of the crown and die-back of bark on the stem whilst other parts of the tree can look healthy. The cross section of infected wood usually has an olive green stain in the current annual growth ring which can be seen in the photos of the main stem after the tree was felled and in the stump before it was ground out to prevent spread. The soil will be infected with the pathogen and you should not re-plant in the same area. Stresses such as the current drought will reduce the trees resistance to this disease. Below: Verticillium wilt



Above: Coryneum Canker.

Ramorum disease has recently been discovered on European Larch *Larix decidua*

As well as Sitka Spruce *Picea sitchensis* in south west England . It is a fungus like disease that shows symptoms of wilting of new foliage which then is retained looking brown and withered. Fungal spores are released from the dead foliage and can be carried long distances in the air especially in moist, misty conditions. Entire trees may be girdled, resin bleeds become evident on stems and trees can be killed in one season as the disease progresses. Symptoms may be found on *Rhododendron spp*, *Camellia spp*, and less commonly on Beech/*Fagus spp* and Oak/*Quercus spp*. Some larch felling has been undertaken as a precaution against spread by local woodland owners, the forestry Commission must be notified if the disease is suspected.



We have also noticed an increase in **Coryneum canker/Seiridium cardinal** in mature Monterey cypress/*Cupressus macrocarpa* which shows as scattered brown foliage and die-back of twigs and branches. It is caused by fungal infection that causes the bark to die back around the branch circumference resulting in death of foliage and die back of branch ends. This is a slow moving but very disfiguring disease, early stage symptoms can be pruned out , but it may only be a temporary measure, badly infected trees will need removal.



Left: Larch woodland that has recently been felled.

Next Issue: Ancient Trees.