

## River where the Oak trees grow

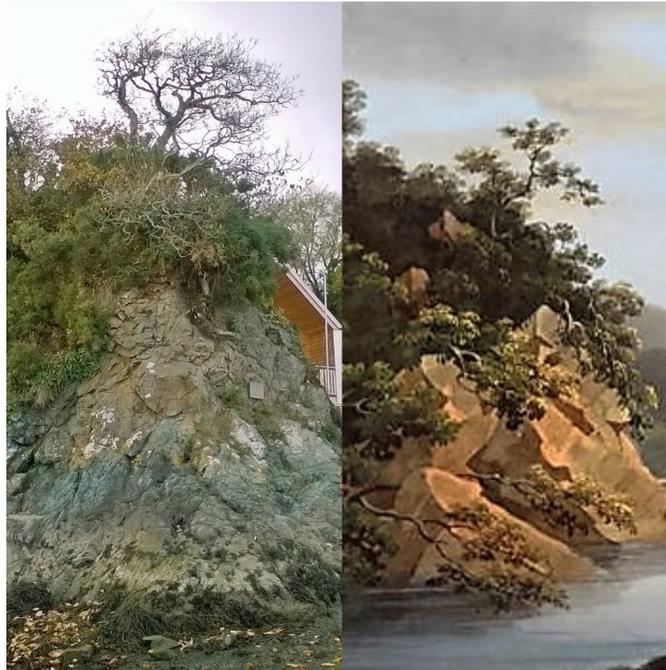
The name Dart comes from the Celtic Brythonic name 'Deruenta', meaning where the Oak trees grow. And the age of these trees, which are much older than previously assumed, hint that they have been growing here from the time such language was commonplace. Indeed Oak woodland has certainly been growing on the valley sides of the Dart since the last Ice age.

It is still easy to find many of the Oaks that are direct descendants of the incredible ancient woodland that covered the valley sides of not just the Dart valley and estuary. All the Ria estuaries of the South West, which are not true estuaries but actually valleys flooded by rising sea levels, so iconic to the South West and of huge value to the region. Indeed the nation of Britain and its rise in power and influence in the world has a lot to thank these trees.

Take a walk along the edge of the Dart estuary, at Stoke Gabriel and look closely at leaves of the remnant Oaks - they are all different tree by tree. The genetic variation between each tree is huge as each tree has micro-evolved to adapt to the site they grow.

Some recent surveying and research has thrown up more questions than answers, but the simple fact prevails that these trees are important for our understanding of trees globally. Some of the Oaks atop the small cliffs have adapted growth which defies our current understanding about trees; growing counterweights and even feet to balance their immense canopies to stretch out over the salty water - often known as 'Elephant oaks', but trees aren't meant to do this! The roots grow in salt laden soils and it is not just the Oaks that do so but an undercanopy of species unusual for the region, including Wild Service Trees and Wayfaring Trees.

Helping to age these trees, which due to their growth cannot be aged effectively by counting rings on fallen stems, was problematic. However the lure of the landscape drew famous artists to the Ria estuaries, including Turner and Constable and the resulting paintings helped substantially in aging the trees.



On the right hand side of the above image is part of the painting of Stoke Gabriel by Thomas Walmsley in the late 18<sup>th</sup> Century. The Oak on top of this spur of rock is clearly the same as today. In more than 200 years the tree has not grown much. This tree is probably more than 400 years old and it is still only a relatively small tree compared with some of it's neighbours.

Many of these extraordinary trees have been lost and all are under threat. The main losses are due to historic land use, where the soils of these areas was simply too valuable for agricultural purposes. However there are now unprecedented threats from climatic changes which are altering the soils these trees have adapted to over 100's of years and also from a complete lack of new trees. Natural regeneration of these trees is thwarted by unnatural pests, particularly the grey squirrel. There is a shortage of suitable land and where the Oak trees have been lost completely from the banks of the estuary necessary modern human engineering to protect the banks has made any re-planting impossible.

A new 'bottom up' project is underway by the South Hams Tree Warden Network and Your Trees CIC, which aims to encourage communities up and down the Dart estuary to start planting the offspring of these extraordinary trees to ensure they continue to grow in this unusual and wonderful landscape of which they are a crucial element.