

Oak Tree Galls

A couple of weeks ago Peter drew my attention to the ground underneath our young oak trees. It was covered in round brown objects 15 - 20 mm across, most of which had been broken open. I immediately assumed they were Oak Apples – but apparently not - they are **Oak Marble Galls**. According to Wikipedia, mature galls are sometimes broken open by voles or woodpeckers in order to reveal the tasty morsels inside. Because plant galls, of all kinds and shapes are simply “*abnormal outgrowths of plant tissues*.” They can be caused by various parasites, from fungi and bacteria to insects and mites” so they often have something tasty inside.



In the case of Marble Galls, the culprit is the Marble Gall Wasp *Andricus kollari*. It has a complex lifestyle, as do most gall wasps, with a sexual and an asexual generation. Each marble gall is home to a female wasp, which emerges then searches for a Turkey Oak where she lays eggs. These hatch and produce small galls between the bud scales. From these galls hatch both males and females which mate, then the females look for a sessile or pedunculate oak to lay their eggs in a bud, which then produce the next crop of Marble Galls. I’m pretty sure there are Turkey Oaks at St Brides Castle - in fact I think our book stall at the fete shelters under a large specimen!

The true **Oak Apple** gall is a larger object (20 – 40 mm diameter) with a reddish tinge – usually solitary whereas Marble galls are often in clusters. It is again caused by a wasp *Biorhiza pallida*. We don’t seem to have these on our oak trees. However, we have definitely hosted the galls of *Andricus foecundatrix* – I had never seen them before and had to look them up. They are called **Artichoke Galls**, for good reason – they resemble a Globe Artichoke flower and they develop from a leaf bud. The sexual generation of this wasp develops on oak catkins. Apparently they favour young oak trees.



Another common oak gall is the **Knopper Gall** – this found its way to the UK in the 1960s. This gall is essentially a highly distorted ridged and spiked acorn and can severely affect the acorn crop on an affected tree. At one time it was thought that these galls would be a real problem for the oak population in the UK but they in fact seem to be very periodic. In years when they are very common, the Jays have to look elsewhere for their winter stores of food!



When researching this article I came across a new word – inquiline. These are insects which live harmlessly in the gall taking advantage of a warm and cosy home. Of course, the actual wasp larva and even the inquilines can be parasitised and even the parasites can be parasitised It’s a tough life out there!

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