

Southern Bracket or Artist's Conk?

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Until recently I hadn't given much attention to the large *Ganoderma* brackets that adorn some of the trees of my local site, Hampstead Heath. I had assumed that they were all most likely to be *Ganoderma australe*, the Southern Bracket.

At the beginning of 2016 I was asked by David Humphries, Trees Management Officer of Hampstead Heath, whether I would take a look at a collection he and a colleague had made from *Quercus ilex*, Holm Oak, in nearby Totteridge. He believed that it might have been *G. applanatum*, commonly known as Artist's Conk or Artist's Bracket.

However, this and subsequent collections, once the spores had been measured, all turned out to be *G. australe*. This exercise spurred my curiosity about *G. applanatum*; how common was it in Southern England, did it occur on Hampstead Heath? I certainly hadn't recorded it in 20 years of recording on the Heath. How could others, and I, tell it apart from *G. australe* in the field?

I was able to investigate the spore size, when looking at *G. australe* specimens, by using my available literature but I didn't have actual

G. applanatum spores to compare my *G. australe* spores against; with a case like this it is always preferable if possible. I was subsequently able to compare spores from a confirmed collection of *G. applanatum* from elsewhere.

In addition to recent works on the polypores of Europe by authors such as Ryvardeen & Melo (2014) and Bernicchia (2005), an article by Ann Leonard (1998), specifically compares the two species, both morphologically and microscopically.

Morphology and Habitat

In the field *G. applanatum* and *G. australe* can and often do look identical, with brown, knobbly upper surfaces, white obtuse to narrowed margins, and a white pore surface with very small pores that bruise dark brown (Figs 1 & 2). Both species occur on a variety of broadleaved deciduous trees, including oak, beech, birch, willow, poplar, plane and lime, occurring in woodland, parkland, gardens and cemeteries (Ryvardeen & Melo, 2014).

Ryvardeen & Melo state that *G. applanatum* is primarily a saprotroph, rarely parasitic and then growing at the base of numerous genera of



Fig. 1. *Ganoderma australe* with the upper crust showing the annual growth ridges and the white pore surface which bruises brown. Photograph © Andy Overall.

*Flat 2, 39 Northend Road, Golders Green, London NW11 7RJ



Fig. 2. *Ganoderma applanatum* with one upturned bracket showing the brown staining of the bruised pore surface. Photograph © Andy Overall.

hardwoods, whilst *G. australe* can be found on both dead and living trees, which might suggest that it can be both parasitic and saprophytic which would concur with my observations of *G. australe*. Both cause a mottled white root and butt rot of living and dead hardwoods. Interestingly the comment regarding *G. applanatum* being primarily saprotrophic is not included in Ryvar den & Gilbertson's 1993 Vol. 1 publication *European Polypores* and the source for these statements is not mentioned. This information, if correct, would be important when assessing the management of infected trees. If the ecologies of each *Ganoderma* species really do differ, this would need to be taken into account deciding on treatment of a particular tree.

David Humphries states that, "no one really talks specifically about how to manage trees with separate colonisations of *Ganoderma australe* and *Ganoderma applanatum* but there are some articles and written experiments worth taking

note of, that discuss the different ways in which these two species affect the wood of living trees".

The following are a few statements from some articles and written up experiments:

- Guy Watson, Ted Green and Dr David Lonsdale (2011), remark in the Arboricultural Association's *Fungi on Trees* guide that *G. australe* has the ability to penetrate otherwise sound sapwood, whereas *G. applanatum* is mainly confined to already damaged wood.

- *G. australe* is a weak parasite, whilst *G. applanatum* is principally a true saprotroph on old, already dead stumps, Heinz Butin (2002).

- Under controlled conditions, Schwarze & Ferner (2003), assessed the relative abilities of *G. australe*, *G. applanatum* and *G. resinaceum* to overcome the reaction zone* (R-Zone) within *Platanus x acerifolia*, London Plane. They found that *G. australe* was able to breach the R-Zone

* A reaction zone is a region of active response of living bark and sapwood forming boundaries between sound sapwood and decaying wood to effectively seal off the living tissues.

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