

GALLS, WITCHES BROOMS AND FASCINATING THINGS ...*Gail Slykhuis*

Plant modifications are many and varied and are often discussed during an ANGAIR nature ramble or track walk. A popular misconception is that insect activity is the sole cause of these oddities.

Whilst insect-forming galls are common, there are other culprits out there that are the cause of some very interesting plant growth. This article will cover several plant modifications that you may have seen on your walks around Anglesea and Aireys Inlet.

Rust Galls — Golden Wattle, *Acacia pycnantha*

Rust galls are caused by a fungus whose spores invade plant leaves and stems; fungal chemicals then stimulate the plant into forming irregularly shaped woody galls that may grow to 150mm in diameter.

The light brown gall will develop a powdery surface as it produces spores, the gall then darkens with age and will often become a home for small insects and spider mites, often mistaken for the cause of the gall.

Golden Wattle, *Acacia pycnantha*, is one of many acacia species capable of being infected by the rust gall fungus, *Uromycladium tepperianum*. The host provides the fungus with nutrients and as a consequence, severely infected trees will be weakened due to the reduced leaf canopy and may die.

You may also have seen these rust galls on wattles with bipinnate foliage e.g. Silver Wattle, *Acacia dealbata*, and Black Wattle, *Acacia mearnsii*, the rust fungus involved with these species being *Uromycladium notabile*.



Rust galls on Golden Wattle

Witches Brooms — Large-leaf Bush-pea, *Pultenaea daphnoides*

These wonderfully named aberrations are not uncommon in the natural environment. Found on woody growth they can be described as a mass of short shoots, emerging from a central point often towards the end of a branch. The resulting compact growth with smaller than normal leaves is noticeably different from the rest of the plant. From a distance I have always thought they could be mistaken for bird nests.

They are often seen on Drooping Sheoak, *Allocasuarina verticillata*, Sweet Bursaria, *Bursaria spinosa* subsp. *spinosa* and Large-leaf Bush-pea, *Pultenaea daphnoides*. Witches brooms can be caused by a variety of agents including aphids, spider mites, rust fungi, phytoplasmas and viruses. Their presence in the plant growing tips causes disruption to normal growth.



Witches Brooms

Fasciation — Austral Grass-tree, *Xanthorrhoea australis*

Last December's nature ramble at O'Donohue's Reserve revealed a spectacular display of flowering Austral Grass-trees, *Xanthorrhoea australis*. Interestingly many flowering spikes displayed unusual growth which is described as fasciation.

The symptoms are found on young growth that has generally grown quickly, as occurs with flowering stems. Fasciation can be found on many Australian natives including species of sheoak and wattle although they are more commonly observed on exotic species such as rose, echium, daphne and agapanthus.

Symptoms may include one or all of the following: stem thickening and flattening, curling of growth, sometimes severe, and a proliferation of small leaves.

It is widely accepted that fasciation is a genetic disorder that causes minimal harm to the plant.



Fasciation on Austral Grass-tree

Refs: *Pests Diseases & Ailments of Australian Plants (1990)* David Jones, Rodger Elliot.

What Garden Pest or Disease Is That? (1994) Judy McMaugh.



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