



A COMPELLING CASE

for

BIOLOGICAL LANDSCAPE REHYDRATION

By John Stafford

BEFORE IN AUTUMN 2018



AFTER IN AUTUMN 2023






WHAT MADE THE DIFFERENCE?



**Due to the collapse of organic soil structure on my property
:-**

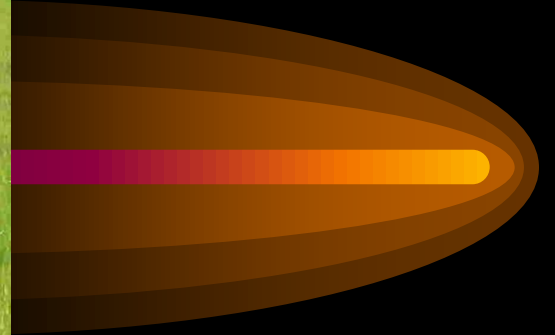
**All of the native tree tap roots in the now anaerobic subsoil,
died.**

**Consequently the only means left for these trees to acquire
moisture was via their feeding roots in the topsoil, as its
varying moisture levels throughout the year permitted.**



So, weren't those opening before and after photos shown in the wrong order? Surely my soil hydrology was only going from bad to worse.

Well that was the case until I stumbled upon a most remarkable capability that has been attributed to soil fungi.



I chose to use this tractor and slasher to mow my tall, dry grass woodland understorey in late spring of 2017.

Initially this mowing left me with just the planned shortened dry grass. But repeats of this exercise in subsequent years resulted in something far more encouraging.



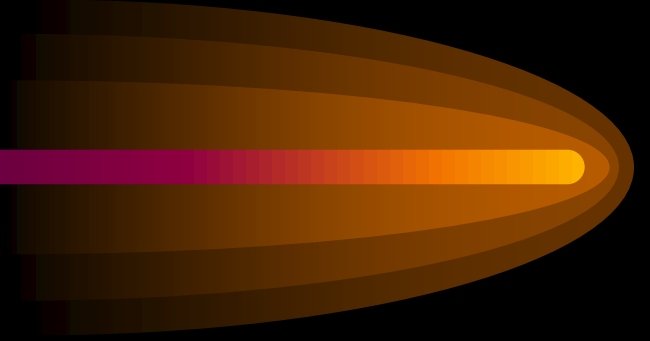
My onetime, seemingly futile hope of having a property that was incapable of burning during summer, was now looking more like a possibility.

April 2021 Note the contrasting dry landscape in the background

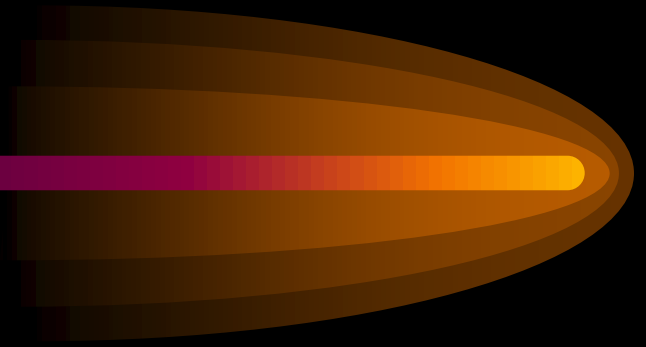
When attending a forestry field day, I asked a guest speaker what I had done to achieve such favourable results.

“The answer is simple. Your soil contains two types of fungi. One is saprophytic and the other mycorrhizal.

When you mowed your grass in late spring you fed and multiplied the saprophytic fungi. However during summer as the topsoil dried out, the two fungal types engaged in their symbiotic relationship to hydraulically relocate moisture from the subsoil to the topsoil ”



**On four timbered hilltops
on my property, I now have
lush green understorey
pasture right through
summer.**



**Topsoil that was once nigh impervious to
water inflow, is now not only porous and
healthy, but hopefully sequestering carbon
to help restore its structure.**



The original cause of my tree dieback was compacted soil that had rotted the subsoil roots. Could this microbiological soil management strategy reverse a disaster that is now rampant in forests and bushland around the world?