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Doomed Flora and Fauna - Why Current Bushfire Mitigation Levels Must be Increased

Are ideologically driven academics, aided by conservation land managers, who obligingly accept their research recommendations pushing Australian flora & fauna to the next mass extinction event?

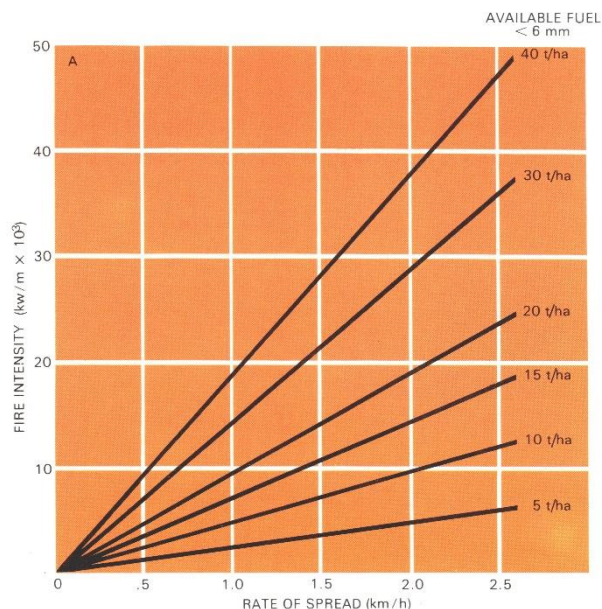
Over the past 20 years, fire and ecological research and conservation land management has been increasingly underpinned by a wilderness (Wild Country) or terra nullius view of the Australian biota.

In June 1972, an early terra nullius opinion was voiced in the NSW Bush Fire Bulletin by two botanists from the Royal Botanic Gardens and National Herbarium in Sydney.

With regard to the ecological effects of high intensity summer bushfires compared to the ecological effects of low intensity fires in other seasons, the botanists expressed the opinion that: *"These (regular planned low intensity fires) will be damaging to flora and fauna (using any definition of "damage")*.

Natural fires generally (if not always) occur during hot, dry, windy weather in summer, or at least the hotter months. It is this regime to which our plants (and animals) are presumably adapted. To state or suggest that winter hazard reduction is a substitute for, or equivalent to, summer wildfire is quite ludicrous. Most plants and animals have growth rhythms which reflect seasonal conditions and to superimpose a completely alien fire regime may well be more devastating than the occasional "10 year" crown fire.

These botanists seem to have denied Aboriginal burning over the past 50,000 years (plus or minus) was not confined just to the summer months and has shaped the evolution of the Australian biota. They gave no evidence of understanding that more frequent fires of low intensity (less than 500 kilowatts/metre) have much more subtle effects on biodiversity than high intensity bushfires emitting 5,000 to 80,000 kilowatts per metre of fire line.



Fine Fuel Load/Ha (less than 6mm) vs Fire Intensity (kw/m x10³) Luke & McArthur



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They also failed to understand "natural" summer bushfires" post European arrival have generally burnt in much heavier fuels than was the case under Aboriginal management. From the above graph, it is apparent that fire intensity in fine fuels (less than 6mm in diameter) of 20 or more tonnes per hectare (t/ha) is much higher than is the case with fires under the same weather conditions burning in fuels of 5 to 10 t/ha.

Fifty years later, a number of fire and ecology experts continue to have what might best be described as a poor understanding of fire intensity under varying fuel loads and weather conditions and the consequential impacts on biodiversity. Two quotes from the Western Australian Leeuwin Group, Professor of Botany, interviewed by the ABC in June 2021 are typical of many media reports in recent years.

"In 1967, they (WA) started a process of intensive burning." This was actually an extensive program of low intensity burning, not high intensity burning.

"Our letter to the premier is saying, as scientists, the protective value of just a target, burning wilderness, burning remote from infrastructure and human lives and property does not make sense."

The fire mitigation approach proposed by the Leeuwin group has been developed and steadily implemented in eastern Australia over the past 20 years. The "Colgate ring of confidence" (just mitigate near human assets) approach to bushfire mitigation contributed to the scale of the 2019-20 bushfire disaster and the catastrophic impact on biodiversity.

A landscape scale of bushfire mitigation must be implemented again, if the scale and impact of high intensity bushfires on biodiversity and human lives and assets, including timber production from native forests and plantations, is to be reduced in future drought years.

