Fire in 1788 and Now[1]

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Aborigines made Australia in 1788, by using fire or no fire to nourish and distribute plants, and plant distribution to locate animals—that is, animals, birds, reptiles and insects. People made a plant community such as grass or open forest a favourable habitat, associated communities to link feed to shelter, and used associations to lure animals. This put every species on ground it preferred, while people knew where their resources were and, subject to Law, could harvest them as they chose. They could make paddocks without fences, because in Australia, almost uniquely, the only large predators to disturb prey were people. People were not aimless hunter-gatherers; they planned and worked hard to make plants and animals abundant, convenient and predictable. They depended not on chance, but on policy.

How? In a phrase, "think universal, act local". Management was universally enforced by religious sanction. To simplify greatly a complex theology, the essence of the Dreaming is conservationist, whatever its social applications. All things with shape—people, ancestors, animals, plants, stars, earth, wind, diseases—are grouped as totems, and those of the same totem must care for each other: an emu man must look after emus and their habitat, and they must look after him, and so on. This bond was illustrated in western Victoria in March 1854, when William Thomas

> was out with a celebrated Western Port black tracking five other blacks. The tracks had been lost some days at a part of the country where we expected they must pass. We ran down a creek; after going some miles a [koala] bear made a noise as we passed. The black stopped, and a parley commenced. I stood gazing alternately at the black and the bear. At length my black came to me and said, "Me big one stupid; bear tell me no go you that way". We immediately crossed the creek, and took a different track. Strange as it may appear, we had not altered our

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> course above one and a half miles before we came upon the tracks of the five blacks, and never lost them after. (Bride 426–27)

Probably man and bear were of the same totem; if so, as well as a general duty to all life, each had immutable obligations to the other, which each neglected at the risk of the very existence of their totem, including, of course, them.

The totem system mattered to 1788 management for three reasons. First, totems were local. There was no point being a seagull woman in spinifex country. Yet the system applied across Australia's immense diversity of climate and terrain, entrenching in Law a single estate. This was a remarkable intellectual achievement. Second, the system privileged specialists, experts in caring for all relating to their totem, alert to its well-being, ready to argue or negotiate to protect it, dedicated to its ceremonies. Third, the system meant that no country could be excluded or neglected. You couldn't have totems in one place and not next door. You couldn't have wilderness. You could have plants like mangroves or dense scrub with fallen timber not touched for generations, but they were as fully under Law as grass burnt annually, and always in mind.

Fire is an important totem. From an early age everyone studied it, and fire totem people and plants devoted their lives to it. It makes land comfortable, comforting, bountiful and beautiful. People grieve at unburnt country gone wild, and feel joy at well burnt country. "[Fire] brings the land alive again", Dean Yibarbuk declared, "When we do burning the whole land comes alive again—it is reborn" (qtd. in Langton 1), and Dinah Marrngawi exclaimed, "Look! All of you, look to the distance, look north, look east, look west, the islands are burning, this is how it should be, this is how it was when the old people were alive, look this country is burning it has been lifted up, we have embraced it again" (qtd. in Rose 26).

Fire lives in language. Yanyuwa people have single words for "badly burnt country", "well burnt country, good to hunt on", and "lighting small fires in a row, to burn a beach front or a large plain" (Rose 27). West Arnhem people have phrases for "low, creeping fires" and for "cleaning the country" with hot fires (Russell-Smith 82; Russell-Smith et al. 174). East of Perth people had one word for every stage of a burn: "ground clothed with vegetation which has not yet been burned", "unburned ground, but ready for burning. Land of which the vegetation is abundant and dry, fit to be set on fire", "ground where vegetation has been burnt", "burned ground", and "young grass springing up after the country has been burned…the seed of any plant" (Moore 12, 45, 60, 81). Most striking, in southwest Australia kalla meant "fire; a fire; (figuratively) an individual's district; a property in land" (Moore 39). Kalla made fire intimate to how people lived, blending heart, soul and Law with country. It still means both fire and the country a person is responsible for. None of these words have an English equivalent; none describe random fire.

Five features marked 1788 fire. It was planned; it was precise; it could be repeated hence predicted; it was organised locally; and it was universal—like songlines it united Australia. People accepted its price. They must be mobile, constantly attendant, and have few fixed assets. In return they could ration fire's feed, unleash but never free it, and move it about, sustaining more diversity than any natural fire regime could conceivably maintain. It was scalpel more than sword, taming the most fire-prone country on earth to welcome its periodic refreshing, its kiss of life. Far from a feared enemy, fire was the closest ally (Gammage 185).

Newcomers saw this alliance at work. In southwest Australia in November 1840, John Lort Stokes met a party of

> natives engaged in burning the bush, which they do in sections every year. The dexterity with which they manage so proverbially dangerous an agent as fire is indeed astonishing. Those to whom this duty is especially entrusted, and who guide or stop the running flame, are armed with large green boughs, with which, if it moves in the wrong direction, they beat it out . . . I can conceive no finer subject for a picture than a party of these swarthy beings engaged in kindling, moderating, and directing the destructive element, which under their care seems almost to change its nature, acquiring, as it were, complete docility, instead of the ungovernable fury we are accustomed to ascribe to it (Stokes 228).

In Victoria at the same time, docile fires were, as a Scottish visitor put it:

> common during the summer . . . The flames came on at a slow pace . . . as the grass happened to be short, the fiery line seldom rose above the fuel on which it fed; and it would have been no difficult matter to have leapt across it . . . The frequency of these fires is the principal cause of the absence of underwood, that renders the forest so pervious in all directions, and gives to Australia the park-like appearance which all agree in considering its characteristic feature (Murray 199–201).

These examples illustrate a crucial difference in how Australians see landscape fire. Non-Aborigines see a threat, capable of destroying people and property with "ungovernable fury". Aborigines know an ally, as much a friend in the bush as in the fireplace. One group reduces fire to "complete docility"; the other cannot imagine that this is possible. This is no small difference. It means that landscape fire almost completely changed character after 1788: from being docile, it became wild. A Central Australian elder stated, "before the arrival of white people Anungu did not know about really large bushfires, but now they do . . . the country had been properly looked after and it was not possible for such things as large scale bushfires to occur" (Reid et al 95), and a Darling River pioneer noted "a remarkable characteristic of the aborigine . . . the care taken by them to prevent bushfires. In my long experience I have never known any serious bushfire caused by the blacks" (Simpson 3–4). Compare this with Black Summer, Black Saturday, Black Thursday, Ash Wednesday, and any other black day. Such fires have devastated every state capital except, significantly, Darwin, seemingly among the most flammable. Most killed people. Killer fires, unstoppable, typify modern Australia.

How did people survive them in 1788? How did they survive the flames, and how did they survive the aftermath, the black, foodless wastelands? Killer fires could annihilate local groups, while a day's fire might eat a year's food: what then? Traditions and genealogies, incomplete as they are, should show constant proofs of fiery death. They do not. This is extraordinary.

Since people could not fight or outrun black days, they prevented them, by controlling fuel. If ever a people lived by the proverb "prevention is better than cure", it was the people of 1788. They had to plan fire regimes yet allow for fires caused by arson (though the Law made that rare), lightning, escapes and war. Without such provision, land management was at best a risk and at worst pointless.

People burnt on most days: small patch fires on cold wet days which became mini fire-breaks as the country dried; bigger fires following the drying country; if necessary, hot summer fires to clean up what was left. Thus, in most places there was simply not enough fuel for killer fires, and where there was, for example tall dry grass or dense forest with scrub, people ringed it with fire-breaks and perhaps kept away at dangerous times. We think those people improvident, but what is our own last defence against uncontrolled fire? Pray for rain.

Fuel control was only a beginning. I see five stages in 1788 fire's purpose:

1. Control fuel
2. Maintain diversity
3. Balance species
4. Ensure abundance
5. Locate resources conveniently and predictably

Non-Aborigines today battle to achieve stage 1, admire the objectives of stages 2 to 4, and can't imagine stage 5. Yet the five stages show the great benefit and potential of managing land with fire and no fire.

This table is not perfect: for example, it omits no fire which was as much a tool as fire, and it doesn't locate animals, but it does convey the subtlety and variety of 1788 fire:

TABLE 1. Management Fires: "A fire a day keeps bushfires away"

	Type	Purpose	Where
Burn early, burn often:	Small, cool, damp, cold times. Planned.	Protect camps, special places, fire sensitive species.	See purpose. Edges.
Follow the drying country 1:	Small becoming more extensive, frequent. Planned and opportunist.	Balance species, fire breaks, freshen grass, fire-stick farming, protect conservation areas (special places).	Grass, woodland, edges and clearings. Heath?
Follow the drying country 2:	Bigger, cool, frequent. Planned and opportunist.	Fire-stick farming, fire breaks, clear seedlings or scrub, balance habitats.	Grass, scrub, woodland, forest, rocky country, water edges. Reeds?
Make country:	Hot but confined. Planned. Often in summer.	Reduce fuel, hunt, signal, expose food, germinate plants (fire and smoke), promote bulbs and tubers, refresh canopies? burn single trees, balance species and habitats?	Long grass, scrub, trees, rocky hills, reeds?
Clean up:	Hot, extensive. Planned. Uncommon. Summer.	Clean dirty / neglected country, reduce fuel, clear trees, germinate scrub, hunt.	Most common in open country. Wet forest and rainforest occasionally.
Unplanned?	War		

You see that fire was almost infinitely varied: big, little, hot, cool, patch burns, sheet burns, changes in extent, frequency, timing and thus intensity according to season, purpose and circumstance.

By no means was all 1788 fire "fire-stick farming". In 1968, Rhys Jones coined this term to describe one fire type: patch-burning grass to bring on green growth to lure grazing animals (Jones 224–28). But this was an end-point, a harvesting. It was common in 1788 and visible in the record now, but it was used on ground that other fires had made ready long before, including

those hot fires so hard to control but so essential to regenerate some plant species, clean country, and hunt in season. The misunderstanding reflects how blind most of us are about sustainable fire management: we miss how much it depends on prior planning and preparation. To think fire-stick farming was all people did in 1788 is like confusing burning sugarcane with farming sugar.

Across fire's complex variety one factor was constant: fire was controlled. As Ludwig Leichhardt put it in 1845, it was part of the "systematic management" of country (355). Law united Australia philosophically, fire united it ecologically. Local expertise was crucial not because of universal fire, but because of local plant variety. The genius of 1788 fire was that no matter what the plant community, people everywhere used fire successfully to make country useful, abundant and beautiful.

Note that word, "beautiful". After "bush", the most common word newcomers used to describe the land was "park", a word marking how Europe's gentry made land useful and beautiful. In Australia newcomers saw parks but not gentry. "The country looked very pleasant and fertile", Sydney Parkinson wrote in 1770, "and the trees, quite free from underwood, appeared like plantations in a gentleman's park" (134). Robert Dawson thought the country inland from Port Stephens (NSW) truly beautiful:

> [I]t was thinly studded with single trees, as if planted for ornament . . . It is impossible therefore to pass through such a country . . . without being perpetually reminded of a gentleman's park and grounds. Almost every variety of scenery presented itself . . . The first idea is that of an inhabited and improved country, combined with the pleasurable associations of a civilized society (103).

In Tasmania, John Hudspeth praised a "beautiful and rich valley . . . more like a gentleman's park in England, laid out with taste, than land in its natural state" (qtd. in Giblin 306), and W. H. Leigh thought the country south of Adelaide "a wild but beautiful park, which reminded one of the domain of an English noble" (qtd. in Moon 45). There are hundreds of such remarks. Fire worked its magic across Australia.

Parks were even in the far inland, that harsh country which horrified and sometimes killed newcomers. West of the Darling, Charles Sturt came on "a beautiful park-like plain covered with grass, having groups of ornamental trees scattered over it . . . I never saw a more beautiful spot. It was, however, limited in extent, being not more than eight miles in circumference . . . encircled by a line of gum-trees" (286–87). This is the language of England. The plain is park-like because it reminds Sturt of English parks. Like a park it is limited in extent, but prettily bounded. It has scattered groups of trees, which in England could only be, as Sturt put it, "ornamental". And it had grass. Across the inland grass evoked parks. On the Eyre Peninsula Edward Eyre "passed through a very pretty grassy and park-like country" (190); north of Glen Helen, Egerton Warburton saw "country . . . beautiful, with park-like scenery and splendid grass" (148); in the west Petermann Ranges, Ernest Giles noted "a fine piece of open grassy country—a very park-like piece of scenery" (176); in bleak country north of Lake Eyre, J. W. Lewis met "a plain thickly grassed and studded with fine green gum trees, most park-like in appearance" (*Journal*).

People worked hard for that. Managing fire and its ceremonies was 1788's hardest and most constant work. Doing nothing was not an option. Hardly a day passed without a fire being lit somewhere, always according to Law, always with purpose, often as part of a larger fire plan—of course adjusted to circumstance, as seasons vary, rain is erratic, plants have life cycles, animals populate unevenly, fire has long and short term effects, people differ on what to favour. Elders

were responsible for any fire, even a campfire, lit on land in their care. They decided what to burn, when, and how, but in deciding obeyed strict protocols with ancestors, neighbours and specialist managers. "What must be made absolutely clear, is that the rules for fire and fire use are many and varied, and are dependent upon an intimate knowledge of the physical and spiritual nature of each portion of the land. Without this knowledge, it is impossible to care for country in the appropriate way" (Kelly 11) and "You sing the country before you burn it. In your mind you see the fire, you know where it is going, and you know where it will stop. Only then do you light the fire" (Rumsey and Weiner 109). Hard-won local expertise blended with knowing fire as a living part of the Dreaming, subject to Law via ceremony.

The gains were immense. Fire's challenge became opportunity. Controlled fire averted uncontrolled fire, fire or no fire distributed plants and attracted or deterred grazing animals and therefore predators with the precision of a flame edge. All was placed where fire or no fire put it. Australia was not natural in 1788, but made. This was the greatest achievement in our history.

Are there lessons for today? Much has changed since 1788. Australia endures continuing invasions of feral people, animals and plants, and an ignorant and increasing population much less evenly distributed than in 1788, most with eyes fixed on the wider world. If being Australian means being able to look after our own place, we have far to go. On this long road, we should consider Australia's soil, especially compaction, erosion, salinity and topsoil loss; surface fresh water loss following watercourses cutting deeper and summer plant cover being destroyed or reduced; the value of local initiative and control linked to Australia-wide management values. Here, I mention fire, species protection and control, and Aboriginal expertise.

FIRE

In 1788, grass was central to healthy country. Grassland carried many useful plants, and most animals with most meat. It was a firebreak, it made seeing and travelling easier, and it confined forest, making forest resources more predictable. Almost always it took the best soil, and probably there was more grass then than now. Today, trees are central. Australia has a National Tree Day, when we plant trees to "regenerate" the bush. We don't have a National Grass Day and don't seem likely to. This bias means that we let trees and scrub run wild, and not only in parks and reserves. There is nothing "green" about this. Inevitably, it fuels killer fires, and even without fire it endangers grassland plants and animals.

We should burn more. A few months after the February 2009 fires, I saw on television people joyful at the bush regenerating. I was dismayed. Another fire cycle was beginning, to end in another killer fire twenty to forty years on. In 1788, people would never have let that happen, because their children could not have survived the coming holocaust. Instead, in autumn and winter 2009, they would have burnt big patches of new growth with cool fires, then over the years regularly burnt to keep those patches clear. Most scrub species need hot fire to regenerate; cool fires won't let that mid-height scrub layer take hold to lift flames from ground to canopy. It was no accident that newcomers delighting in 1788's parks so often reported no "underwood". That not only made parks; it was a vital fuel control.

Many non-Aborigines oppose frequent burning. Black ground is ugly, and smoke is unpleasant and unhealthy: it pollutes water, causes asthma, dirties washing and so on. All true, but does this justify letting fuel run amok, and in time even bigger fires devastate? And can the result really

remain ugly when so many early newcomers praised so much country as beautiful and park-like? Of course we must make more smoke now than then, because we've let fuel build up. It is a daunting task to return to 1788's safer balance, but 1788 shows us the rewards if we do. If you truly know how to use fire you can manage any vegetation, from spinifex to rainforest.

SPECIES PROTECTION

Thinking how to reconcile fuel control with species protection illuminates how alarmingly remote we are from 1788's skills. In 1788, people put every species in habitats each not merely tolerated, but preferred. This added immense complexity to any fuel control plan. Today, that complexity splits firies from greenies, often hostile to and contemptuous of each other. This badly misses the big picture. It blocks a crucial alliance of immense potential, blinds us to what we must learn to care for our country, and demonstrates a need for Aboriginal leadership.

1788 can help answer key questions about endangered species. Why did they flourish then? How was their habitat conserved? What changes have damaged it since? Think how many plants and animals have declined or become extinct since 1788. No network of totem specialists alert to changes in range or abundance or habitat guarded them. Often we didn't even notice their going until too late or nearly, nor even now do we know why they vanished. Tim Flannery, concerned and knowledgeable, writes of a range of small marsupials, "The causes of these extraordinary extinctions are thought to have been varied" (8). That's a cop-out, but don't blame Tim: blame us newcomers. We don't manage. We can't control fire; we can't care for Australia's unique species. We know so little.

Historical records apart, non-Aborigines only recently began to learn the value of fire in species protection. As late as 1969, Rhys Jones's fire-stick farming essay noted, "Leadbeater's Possum, once thought to be almost extinct in Victoria, increased its numbers after several large fires had provided it with its preferred habitat". He meant uncontrolled fires, for he continued, "I have been interested to read in recent weeks that a policy of burning-off may be initiated as a new method of forest conservation" (227–28). We have since learned more about how dependent many plants and animals are on well-timed and well-spaced fire, and how crucial habitat maintenance is. Tim Flannery's *Quarterly Essay* describes the fine results of the alliance between ecologists and the Australian Wildlife Conservancy in bringing endangered animals back from the brink (61–8). These are splendid principles of protection, but I suggest that a national network of local alliances between species conservationists, fire-fighters and Aboriginal people offers great possibilities for species conservation.

ABORIGINAL EXPERTISE

There is a tremendous irony in *terra nullius*, or "the mere occupation of a desert or uninhabited land", as the Colonial Office put it in 1822 (Watson 414). Europeans need not have chosen this excuse. Where they didn't choose it around the world, where they met farmers, mostly they still took what they wanted. They invoked it here because they thought little of Aborigines. They had no use for people who didn't farm. In 1688, William Dampier remarked that northwest coast people were "the miserablest People in the World . . . they have no Houses, but lye in the open air without any covering . . . the Earth affords them no Food at all. There is neither Herb, Root, Pulse, nor any sort of Grain, for them to eat, that we saw" (464–66). He saw no farms, so he saw

no food. In 1836, Charles Darwin called Aborigines "a set of harmless savages wandering about without knowing where they shall sleep at night, and gaining their livelihood by hunting in the woods" (434). The *Sydney Herald* declared in 1838,

> [T]his vast country was to them a common . . . their ownership, their right, was nothing more than that of the Emu or Kangaroo. They bestowed no labour upon the land and that—and that only—it is which gives a right of property to it. Where, we ask, is the man endowed with even a modicum of reasoning powers, who will assert that this great continent was ever intended by the Creator to remain an unproductive wilderness? (qtd. in Rowley 37).

There is the irony. Australia had no wilderness in 1788, no *terra nullius*. It has both now. It is we who converted country we can't use to fuel bombs in scrub, forest, national park and even desert. If we took the *Herald* seriously we would hand big tracts of country back to their owners.

That's not a bad idea. 1788's plant patterns began decaying once fire was stopped. Grass belts along water and grass plains in trees or scrub filled in. Open forest became scrubby; dense forest and rainforest expanded. The people of 1788 showed that it need not be so. They showed that making fire an ally works: that you can end killer fires or nearly, that fire can help protect species diversity and abundance, that land can be made beautiful. They gave a gift so great that we should be indebted to them forever. Today, their descendants know less than they did, but much more than almost all the rest of us, while many want to learn more, and will stay on country, accumulating crucial lifetimes of local knowledge. What a priceless resource this is! Aboriginal expertise could guide land and species management towards tackling a most serious challenge: to reconcile more frequent fire with species protection, to see that fire and no fire makes and protects preferred habitats for every plant and animal species in this country. Imagine more projects supporting such initiatives at local and national levels. Imagine Aboriginal men and women in senior policy positions in national parks and the like. Imagine Aboriginal-led companies successfully managing fire and land for pastoral stations and mining companies, leading in carbon sequestration, and rescuing from extinction their totem allies. What an Australia that would be, and what an example to the world. A

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