

CHAPTER 5

AN APPLIED PASTORAL ECOLOGY, AND LANDSCAPE CHANGE

Or

A TRADITIONAL PASTORAL ECOLOGY

Sheep, cattle and horses are not indigenous to Australia, and there are no creatures like them amongst Australia's fauna. So, in historical time, before the arrival of European pastoralists, the snow country was never visited by large herbivores, aside from small numbers of kangaroos and emus which wandered up there in summer. The grazing pressure throughout its recent evolution was virtually zero; and not surprisingly the capacity of some alpine vegetation communities to cope with grazing is low. Making matters worse, domestic livestock have hard hoofs which easily break through the vegetative cover of mountain soils, exposing them to erosion by frost, wind and water. And sheep are a triple threat because they graze into the root zone of grasses and herbs thus making soils even more vulnerable to erosion.

From a water management perspective grazing of livestock in the snow country is certainly not ideal. And that is why from the 1930s and 1940s state governments were keen to initiate some control over grazing. Large public investments in water storage dams – Hume, on the River Murray, Eildon, on the Goulburn River; Glenmaggie, on the Macalister River – and the Kiewa River hydro-electricity plant really concentrated attention on the matter.

Some decades later biodiversity, and protection of alpine flora and fauna, emerged as issues demanding even closer scrutiny of snow country grazing.

Most snow country graziers had a different perspective, arising from their experience and skill in managing pasture. They were confident they were using the snow country responsibly. Even if they accepted there was some basis for the case against grazing, from their point of view there was no need for these concerns to necessarily preclude grazing. To defend their interests, they articulated a narrative of mountain cattlemen as caring custodians of the land, who understood the snow country well, and would never do anything to harm it.¹ As traditional users, they had an intimate knowledge of the landscape, kept fuel loads down, helped control weeds and vermin, played a valuable role in search and rescue, and maintained refuge huts. Any serious environmental damage that may have occurred was attributed to wildfires, rabbits, and huge numbers of starving sheep brought to the snow country during horrific droughts of yesteryear.

Cattlemen saw the snow country through the lens of a primary producer; they interpreted biomass in the context of carrying capacity: how many head of cattle it would run that year. But, as the oral history shows, they also had a solid understanding of ecology as it related to their livelihood.

¹ See for example Voice of the Mountains, No. 3, 1974

In this chapter I discuss some of the ecological understandings that underpinned traditional rangeland management in the snow country, and attempt to synthesise many individual insights into a coherent collective account of how the snow country looked before it was grazed, how it has subsequently changed over time, and how routine annual grazing might, or might not, have been a principal agent of such change. We can't go back in a time machine to view the landscape before grazing began, and there are no photographs of the snow country at that time. However, the oral history paints a helpful picture.

One important beginning reference point to keep in mind is that grazing did not significantly diminish the amount of forest cover in the snow country. There was some thinning and clearing of trees on the few small allotments leased under land settlement legislation (mainly on the Cobungra high plains), but beyond that tenure conditions prohibited soil disturbance and tree removal so there was only localized tree felling for construction of fences, yards and refuge huts. The search for environmental impacts therefore narrows to the forest understorey, the open grassy plains, and water bodies, particularly stream margins and boggy, swampy ground.

What the earliest graziers saw when they first visited the snow country depended on fire history, which was a product of human activities and the forces of nature.

Before the arrival of Europeans, aboriginal communities burnt the bush almost everywhere they went. It is well known that tribes from the surrounding regions made annual visits to the snow country to eat Bogong moths. The moths themselves migrate there from the inland plains to avoid the summer heat and hibernate in cool rock crevices. However, it appears from the oral history that Bogong moths weren't the only attraction:

Aboriginals were regular visitors (to the Dargo High Plains) for centuries; you can find old camps and quarries and grinding stones (with hollows in them the shape of an axe). They used water worn basalt and diorite from nearby river valleys. The camping spots are sheltered from the westerly and north westerly winds, are flat, & have a water supply. The aboriginals didn't just walk through; they lived on the DHP's during the summer, attracted by the plentiful wildlife. (Appendix F, Jim Treasure)

The aboriginals were at Pinnibar for a long time. We found many axe heads and sharpening stones. They were after wombats, & dug round holes to dig them out. They were probably also there for the possums which were in the grasses in the thousands. The artefacts were found at about 4,500 feet, amongst the woolly butt; that's where the possums were, amongst the Woolly butt and white gum, but not in the snow gum as it was too cold there. (Appendix F, Joe Gibson)

Paddy Wilson reared a family on Nunnett. Tom Wilson was born there. Paddy Wilson also lived at a roadside camp at Saw Pit Creek. When he was at Nunnett a mob of blacks came out, & he had to keep firing muzzle loads out of the window to keep them away. (Appendix F, Mick Murphy)

Up until the 1880's there were native cats, tiger cats, bandicoots, kangaroo rats & marsupial rats or mice in all the country; it was fully stocked with them. But they all disappeared after rabbits ate out the country. Native grasses can't stand continual browsing to the ground. So when the winter pasture was eaten out by rabbits there was no place for the natives to

shelter in winter. Wombats survived because they can eat roots; similarly, Emu's. Kangaroo's, possums, koala's etc died out from European diseases. (Appendix F, Jim Treasure)

In the past there were kangaroo's on DHP's; and blackfish in the streams until trout were introduced; also eels. Kangaroos were grazing there before the rabbits. (Appendix F, Jim Treasure)

These stories suggest that there was a quite significant aboriginal presence in the snow country each summer, until their communities were vanquished by European settlement. And without doubt there was an accompanying cultural burning routine. The fire regime would have been tailored to maintain a healthy grassy habitat for small mammals, especially amongst the woolly butt trees, and perhaps to a lesser extent in the snow gum woodlands. Maybe patches of snow plain were also burnt to attract kangaroos and emus to strategically designed hunting grounds not far from camping places.

Annual cultural burning in the snow country came to an end by the 1850s if not before. Thereafter there was no intentional burning until the European graziers arrived, maybe five, ten or twenty years later, depending on the locality. What these graziers found, whether they understood it or not, was a cultural landscape that was starting to fall into disrepair.

As Bill Gammage has described², the classic forest-scape produced by the intricate cool-burning practices of aboriginal communities, over thousands of years, was an open grassy woodland with large mature trees widely spaced, giving a park-like appearance. This is certainly what some of the oldest mountain grazing families remember in their oral history.

Before Fitzgerald's, Braithwaite's had Shannonvale. They ran cattle in the bush & used the divide between here (Shannonvale) & Bundar (River) (known as Braithwaite's Top). Back then the bush was much different. There were plenty of big old trees and fewer smaller trees. (Appendix F, Brinny Fitzgerald)

The Alpine Ash forests used to be open park country. The best grazing was at the junction of Alpine Ash & snow gum; grazing here was much better than on the tops. (Appendix F, Wally Ryder)

In addition to deliberate cultural burns, there were also uncontrolled bush fires started by lightning strikes, usually in spring. Perhaps the regular burning by aboriginals moderated the severity of these bushfires. However, in 1851 gigantic bushfires swept through Victoria, probably aided by careless use of fire by European settlers. We know large areas of snow country must have been affected if only because many stands of Alpine Ash trees harvested after the 1940's are believed to have dated to 1851. Alpine Ash seeds only germinate after a very hot fire has killed the parent trees and provided a nutrient-dense ash bed on the scorched ground.

Pioneer graziers would have been delighted with the open and varied landscape they first encountered, which was ideal for sheep and cattle. And while much of it could be immediately

² Gammage, Bill, 2012, *The Biggest Estate on Earth. How Aborigines Made Australia*. Allen & Unwin. ISBN: 9781743311325

stocked, the quality of feed and carrying capacity could be substantially improved by progressively burning off the woody heath, leaf and bark litter, and old dry tussock grass to promote the growth of tender fresh new shoots. So this is what they did. They almost immediately began to change the snow country's ground cover. Each year, usually after the summer grazing season, they ran cool burns over different tracts of their runs. In time the ground cover biomass was significantly reduced, with dry grass accumulations and woody species being replaced with lush new growth.

Some graziers I interviewed had personal memories of the snow country that reached back to the early 1900's, and others were the custodians of family legends that went back even further.

Here is one story about the beginning of grazing on Mt Pinnibar:

The first European at Pinnibar was Jack Toland who was hunting blue possums. He was out there by or before 1898, & he had a camp between Mt Pinnibar & Horseshoe Creek. He burnt the country while he was out there; at that time the country was heavily covered by bark & leaves. Toland had country on the other side of Gibbo, not far from Pinnibar. But he didn't put cattle up at Pinnibar. He reckoned that the country wouldn't grow grass, so he left. There wasn't much grass there then, but it came good after rain in 1902, before the drought, & during the drought the grass came up very good. John Gibson didn't have many cattle at this time, especially for the size of the run (29,000 acres). He was the first to put stock out there, & that was in 1901. (Appendix F, Joe Gibson)

What I detect from this story is an understanding that in the absence of fire the understory of snow gum woodland tends towards a state of sparse grass cover because of heavy leaf and bark litter. The pioneering graziers first inclination was to burn away this litter in the expectation of fresh new growth the following season. However, the woodland at Mt Pinnibar didn't immediately respond as hoped; a few years passed before conditions were conducive to good regrowth of grass. That unexpected delay, to the ultimate benefit of the Gibson family, was an unusually fortuitous event which made this little piece of history memorable.³

In another story:

George Maddison was the first grazier on Mt Bogong, in 1882. He cleared the Staircase Spur track in 1882. That year the cattle were hard to muster as they were so fat – that's how good the country was then. Some died coming down the spur (because their shoulders couldn't support their weight on the down slopes). (Appendix F, Jack Maddison)

This story is particularly interesting because a/ the remarkable quality of the early mountain pasture so described was apparently not commonly experienced again, and b/ because that verdant state was assumed, incorrectly, to be the virgin state. In fact, 1882 was not the first year livestock were grazed on Mt Bogong. The area was briefly held as a run in 1859/60, and regular grazing was well under way in the mid 1870's when the Mount Bogong ridge was divided between the Balinacraig

³ Actually it is hard to believe that the first grazing of Mt Pinnibar wasn't till 1901. Regular grazing of most other significant tracts of snow country had commenced by the 1870's, and that included the neighbouring long ridge to the east of Pinnibar, that runs from Davies Plain down to Tom Groggin on the River Murray. But clearly by the late 1890's there was no sign or memory of grazing on Pinnibar at an earlier time.

and Carvillton pastoral runs. So the Mt Bogong environs no doubt were subject to at least five years of annual burning by graziers to stimulate the growth of palatable fresh grass.

Other stories add further detail:

When we started you could run thousands of head on Mt Bogong ... (I have) been going up for over 50 years. If not grazed the grass gets very long & dries out & rots, & then the grass will stop coming up. (Appendix F, W Hodgkin)

If you take all the stock off for long enough the snow grass will become coarse and rough and nothing will eat it, & the clover will die out (Appendix F, Jim Treasure)

The open plains were never (deliberately) burnt – if fires touch it, it is ruined as it burns to the ground. Snowgrass is matted & takes years to repair (Appendix F, Bill Howard)

Snow grass is not good feed but if burnt is ok & would come up; horses do well on it. (We) often threw a match on the snow grass but it wouldn't burn far. (Appendix F, Stewart Hollonds)

Cattlemen had to burn to regenerate the grass. (But they burned) the woodland only; no advantage in burning the open plains – better to eat it off. (Appendix F, Jim Treasure)

All informants agreed that the floor of the snow gum woodland had to be regularly burnt to get rid of the accumulated leaf and bark litter. But firing the open plains was controversial. From the early grazier's perspective dry matted snow grass was not good stock feed, so it had to be burnt off to stimulate fresh growth. But at some later date, probably based on considerable experience, a view seems to have emerged that continued burning of alpine and snow plain tussock grass was probably not such a good idea. Better that the grass be kept young by continued grazing (which wouldn't allow it to become long and dry).



Snow gum woodland near Mt Wellington, 1913. Note the accumulation of sticks, bark and leaf litter, and lack of grass. Photographer: Waugh, Arthur John 1868-1928. Identifier H83.125/38, SLV

The question of whether or not to burn the open plains was also connected to a concern for the peat bogs which feed many of the streams originating on the high plains.

(We) didn't burn the open plains because if (we) did the peaty stuff would catch fire and would burn for weeks – and was never the same thereafter (referring to the Dargo HP's) (Appendix F, Roy Gow)

This recollection of Roy Gow suggests that the open plains were in fact burnt from time to time, with unfortunate consequences for the peat bogs. However, for the peat soils to burn they had to be dry, and the quickest way for a bog to dry out is if its soft protective cover of moss is breached, exposing the heavily organic soil to the sun and wind, and thus facilitating rapid evaporation of soil moisture. The most obvious way for the vegetative cover to be disturbed is by livestock wandering into the bogs.

In fact, early visitors to the snow country sometimes referred to peat bogs as 'bottomless', and there is no dispute that cattle did commonly enter bogs either by accident or in search of drinking water.

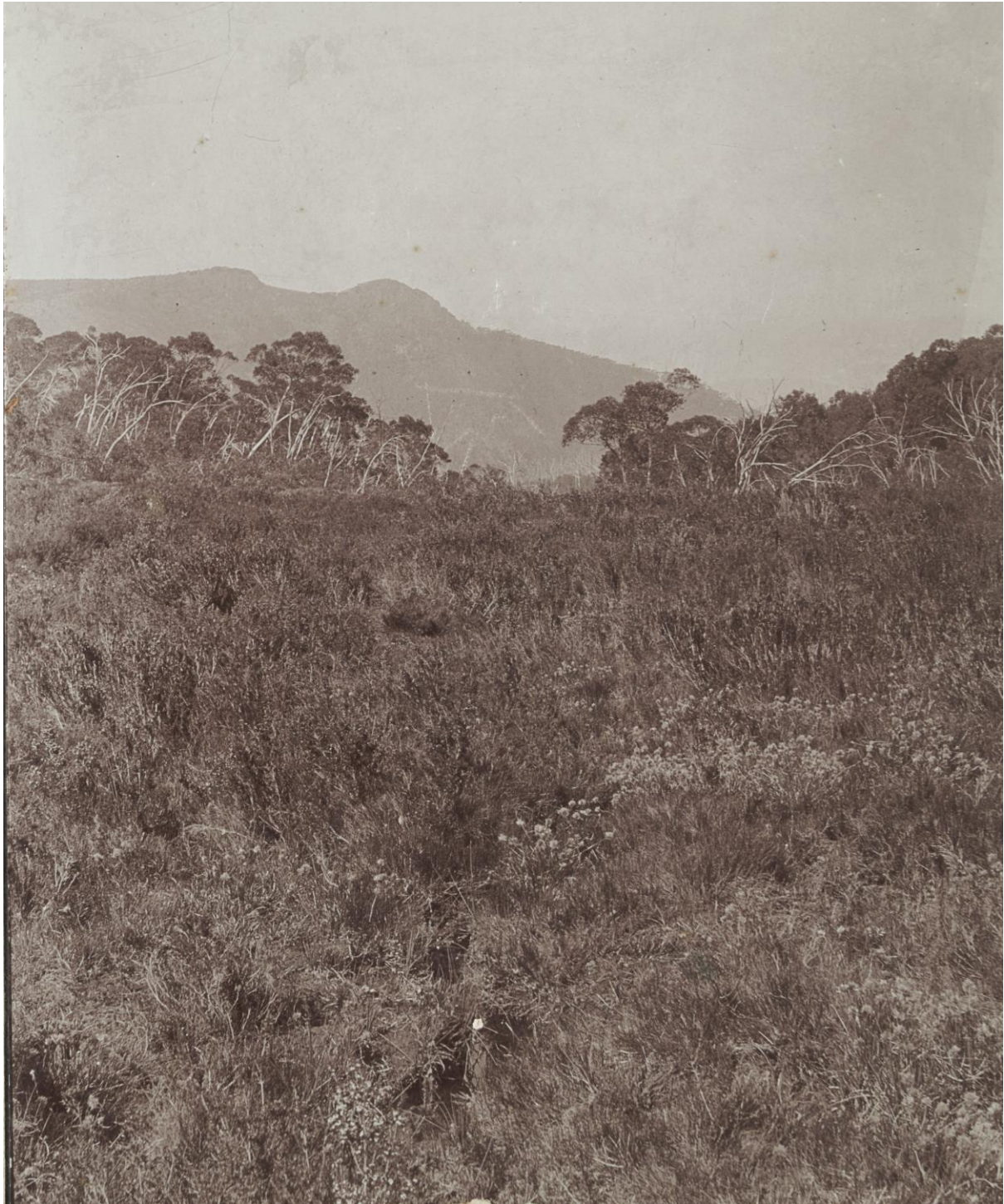
Cattle aren't attracted to bogs by choice. (Appendix F, Bob Gilder)

Cattle sometimes drowned in bogs; it was not uncommon to see them in bogs; but usually they avoided them (Appendix F, Arthur Guy)

When (I) first went out to the mountains the Forests Department [Mansfield] were not interested [in the bogs, but] after complaints by conservationists they put dams in below moss beds & cattle never went in to the moss beds after that. (Appendix F, Fred Ross)

While graziers were well aware of the problem of cattle entering bogs, the short term tenure system certainly didn't incentivise them to fix it, but neither did it prohibit remedial actions by individual graziers. Those renting uncommitted Crown lands could have constructed protective fencing to keep cattle out, and with the Ministers consent could even build small dams,⁴ as the Forests Department had arranged for the reserved forests east of Mansfield. The fundamental negating issue was twofold: the long term lifespan of such assets was not matched by guaranteed tenure of similar duration; and there was no culture of negotiated or cooperative management of uncommitted Crown lands (bearing in mind that the Lands Departments key roles were to administer private use tenancies, and to reserve lands for management by other public bodies). So, across most of the snow country a state of virtual paralysis prevailed on this issue.

⁴ Clause 16?, proforma grazing licence, section 123, Land Act, 1928



An in-tact peat bog near Mt Wellington, c.1913 (Arthur Waugh)

Aside from the incidental trampling of bogs, and firing of the rangelands, regular grazing created a bare ground between the snow grass tussocks which could then be colonized by other plants. Under natural conditions a fire might sweep across a snow plain burning off the dry grassy umbrella of the tussock grass plants, and exposing bare ground between the bundled grass stems. Into that space will grow other plant species whose role it is to quickly colonize the bare ground and hold the soil

together. Over time the tussock grass rejuvenates and as it grows larger its foliage hangs over the intervening spaces, gradually smothering many of those plants that had colonized the bare ground. Hence the progression towards a tussocky climax condition. The effect of regular grazing was therefore to create a more or less perpetual post-fire state, where the tussocks are prevented from sprawling to the sides and smothering bare ground colonizers. This may explain why graziers observed more floristic variety in heavily grazed areas.

The wild flowers appear to grow best where grazing occurs. (Appendix F, Bob Gilder)

The higher the stocking of the HP's with cattle, the greater the proliferation of wild flowers. (Appendix F, Jim Treasure)

And if the colonizers happen to be palatable – perhaps more palatable than the tussock grass - then they will not be able to do their job of protecting the ground, hence there will be more bare ground in a grazed area and the likelihood of accelerated erosion of the spaces between the tussocks.

Virtually all my informants bemoaned the closing up of the bush following the scorching bushfires of 1939.

The 1939 fires wrecked a lot of country. They burnt the sides of the (Bogong High Plains) plateau & the woolly butt and then the scrub came.

The 1939 fires burnt mainly the sides of the plateau – burnt everything. Crossed the tops in strips. I was there on my own at Cole hut. The fire came out of the river & burned the paddock. The fires burned into the ground, eg on Mt Bogong the ungrassed areas there now were caused by the fires. (Appendix F, Wally Ryder)

After the 1939 fires the country got too dirty. Once (we) ran cattle on the spurs, but after 1939 the scrub became too thick & then (we) grazed further up. (Appendix F, Jack Keating)

The value of (Baw Baw) mountain for grazing depreciated by 50% after the 1939 fires. Mustering Flat is 84 acres & is always boggy. In 1939 the whole thing burnt to the water level. Snow gums were burnt to points about 2 feet high; the fire flattened everything. And 600 cattle were killed. Only 19 survived; they were on a patch on Mt Erica which did not burn. We didn't put stock up again for 2 or 3 years afterwards. Before the fires the snow gum woodland was grassy. After the fires it became scrubby as it is today. You used to be able to go from Tanjil Flat to Ski Village & you could see for long distances. Now the scrub is too thick. (Appendix F, Norman Jans)

Since 1939 the country has become so scrubby that dogs are now needed to find most of the cattle. The wildfire came through the tops of the trees before burning the ground. The 1939 fire went across Bogong in strips; went through woolly butt country and clear grass country too (Appendix F, Bill Hodgkin)

1939 fires: all Victoria was alight, but only patches of the HP's were burned. Seldom that can burn on top as the grass is greener and there is not much heath. In 39 fire ran up the spurs & penetrated parts of the plains. Cobungra station lost 1000 head, some on the tops, but most in timber. Cobungra had plenty of timber country. The spur from Cobungra station to the (St Bernard) Hospice was a good cattle spur; it was burnt. Mt. Bogong was not burnt; fire went

only as far as the timber. The fire was much hotter over Omeo way. (Appendix F, Stewart Hollonds)

Much of the Sallee wood country around Cobungra to Hotham was cleared before 1939; it had the guts burnt out of it and after the fires became a jungle. The fires burnt part of Fitzgerald's BHP's run; a strip was taken on Mt Nelse with the top part burnt & the bottom not; this line was seen for years' after (Appendix F, Brinny Fitzgerald)

The 1939 fires started in the Jamieson – Aberfeldy area. On Little Plain I met Bill Spargo there. He was there during the fires & was lucky. Met him at Mt Loch. The fires burnt the snow gums to points, burned the ground and the rocks red. It was said that the HP's would take 10 years to recover. I think it took longer. (Appendix F, Bill Howard)

1939 fires swept the DHP's – burnt the woodland but not the plains. (Appendix F, Jim Treasure)

Snow grass is good feed and should never be burnt. Before 1939 the snow grass seeded each year; now it doesn't; it waits till it gets older. But it burnt badly in 1939, to the bare ground. Before 1939 the creeks had rope scrub in them; but after the fires it didn't come back to any extent. (Appendix F, Norman Jans)

The wildfires of 1939 were not the only severe bushfires to sweep through the snow country but they are the fires that had the greatest impact on graziers and remained etched in their memories forty years later when I was conducting interviews. Those fires occurred at a time when the number of graziers using the snow country was at its peak, and when the stocking levels were the greatest (refer to earlier chapter). Those fires also heralded the era of government intervention in the management of snow country range lands; in particular, the prohibition of burning by graziers, and limitations placed on stocking of the Bogong High Plains and adjacent mountain tops. Thereafter, graziers had their hands tied – they were no longer able to manage the rangelands in their traditional manner. They witnessed the closing up of the forests and woodlands – as the once grassy understory's became choked with dense post-fire regrowth of shrubs and saplings – and were not able to do anything about it.

After 1939, in the wake of the scorching fires and the subsequent prohibition of burning by graziers, a new regimen of 'control burning' was introduced, the principal aim of which was not management of habitat or pasture, but the prevention and mitigation of wildfire. Burning action shifted from a multitude of local land users to a few government land management agencies: different objectives, different values, perspectives, and motives, and a vastly different impact on the landscape as is evident from the graziers' testimonies.

To sum up, the landscape that greeted the first European graziers in the snow country was a cultural construct that was beginning to fall into disrepair. While the basic structure of alpine meadows above the tree line, snow gum woodland, open grassy snow plains, and taller eucalypt forests around the edge of the normal winter snow line, has remained relatively constant over the last few hundred years, thousands of years of intricate cultural burning had produced a varied pattern of patches and strips at different stages of maturity.

Graziers observed that grass on the treeless areas, particularly the subalpine high plains, tended to become long, heavily matted and dry in areas which had not been recently burnt. In contrast, the unburnt open snow gum woodland had sparse tussock grass cover, some heath, and a lot of leaf and bark litter. In both cases fire was understood to be the fundamental regenerating force.

Under grazing management, the ground cover became less dense and the foliage much younger. Years of accumulated tangled and dry mature tussock grass, together with the detritus of the woodland floor were quickly burnt off to promote tender new shoots for livestock to feed on. And with regular grazing every year thereafter, and periodic regeneration burns, the ground cover was kept in a perpetually youthful state. Rangeland burning was quite different in intention and outcome from cultural burning practised by aboriginal tribes. The aim of the former was to convert more and more ground cover to palatable young grasses – increasing uniformity and carrying capacity. In contrast, the outcome of cultural burning had been an intricate patchwork, to support an abundance of many species. Patches of fresh grass might be maintained to attract kangaroos; more mature grassland managed to maximize seeding would attract emus; and dense matted dry tussock grass at lower elevations was important habitat for birds, insects and small mammals. But the ground cover sculpted by graziers' annual burnings became more uniform, with young foliage predominating.

According to the ecological understandings and environmental history embedded in the cattlemen's oral tradition, as recorded in Appendix F, grazing of the snow country, over a very long period of time, can be seen to have impacted the landscape at the level of fine detail by 1/ incidental trampling, drying out and accidental burning of peat bogs; and 2/ the wholesale removal on treeless areas (by burning and follow-up grazing) of the thick layer of matted dry tussock grass that had previously protected soils from drying out and eroding.

Another significant and widespread impact of livestock grazing, an awareness of which was not evident in the oral history, is the impact on stream environs – de-vegetation of margins, collapse of stream banks through trampling, and consequent widening and shallowing of channels, opening the flowing waters to direct sunlight. This may be because such impacts are ubiquitous throughout the livestock industry in a country where the landscape evolved in the absence of large, heavy herbivores. Very few well-watered localities have escaped the reach of European livestock.

A relevant contrasting reference point are small isolated patches of snow country that were rarely, if ever, grazed. I stumbled upon one of these while bushwalking in the late 1970's. The walk was from Bryce's Plain on the Snowy Range, across a deep and narrow saddle to the adjacent Mt Darling range, and down a long spur to Wonnangatta Station. On the south-west fall of the range we crossed a small and in my eyes quite unusual looking snow plain. It had a very dense coverage of dry tussocky snow grass, ankle high, interspersed small and woody shrubs, and exhibiting little or no bare ground. A small creek ran across the plain, but it was almost totally obscured by shrubs and tussock grass. We knew it was there because we could hear the bubbling water, but it was very hard to see. Its channel seemed to be very narrow (easy to step over), and apparently quite deep. Later I checked with a former licensee of the Bryce's plain grazing block who confirmed that to his knowledge cattle had been put there only once in the previous 50 years.⁵ Refer to the following photographs. For comparison there is a photo of a similar sized stream (Pieman's Creek) on the nearby Bryce's Plain.

⁵ Appendix F, Interview with Jack Guy

Grazing also played a role in the decline of small ground dwelling indigenous mammals – bandicoots, potoroos, quolls, etc - that relied for shelter on mature tussock grass thickets and forest litter in the open eucalypt forests at lower altitudes below the snow gum woodlands. Of course it is no doubt true, as the oral history indicates, that the 80+ year rabbit plague was the major destructive force that almost completely erased the grassy habitat of these creatures, but it is nevertheless also true that livestock grazing, and associated firing techniques, started the ball rolling.

However, even given these deleterious effects, the accumulated impact of 150+ years of continuous, and largely uncontrolled, summer grazing, has not had devastating or irreparable consequences for the snow country. Rather, the grazing management regime and practices which adapted to the restrictions imposed by the historical tenure framework, have delivered to the present generation a large and essentially intact snow country landscape.



The small un-grazed snow plain on Mt Darling range, (Author, 1977). Hidden stream runs from right to left.



A closer look at the small un-grazed snow plain on Mt Darling range, (Author, 1977). Hidden stream runs from right to left.



The lower end of Pieman's Creek, at the eastern edge of Bryce's Plain, Nov. 1977. (Author)



HOWITT PLAIN, 1915, ABOUT 50 YEARS AFTER THE COMMENCEMENT OF GRAZING.
JIM BARCLAY, MANAGER OF WONNANGATTA STATION, STANDING, SITTING ON HORSE IS ARTHUR
PHILLIPS, CO-OWNER OF WONNANGATTA STATION. MELBOURNE MUSEUM, PHOTOGRAPHIC
NEGATIVE MM 7827 OF MINISTERIAL VISIT TO SNOWY RANGE, COPIED FROM E R MEYER, J H
MEYER, 30 AUG 1990



LOOKING SOUTH FROM MT WELLINGTON, 1915.

MELBOURNE MUSEUM, PHOTOGRAPHIC NEGATIVE MM 7819, OF MINISTERIAL VISIT TO SNOWY RANGE, COPIED FROM E R MEYER, J H MEYER, 30 AUG 1990

