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FENCES, LAND MANAGEMENT, HISTORIC HERITAGE AND THE FUTURE OF RANGELANDS

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Although fences are ubiquitous in Australian landscapes, they are neglected objects of study. Fences are the basic management tools used to separate property, livestock and crops, and to facilitate management. Consequently, the geographic pattern, age and condition of fences can provide valuable clues about the management history of a region, and form a basis for future management.

In this paper I describe how fences allow us to understand past management, and how fences are vital tools in understanding the impact of landscape changes (erosion and deposition). I briefly consider the problems of conserving fences as important relics of European historic heritage in semi-arid rangelands. Finally, I discuss how fences provide valuable information for the future management of semi-arid rangelands.

FENCES REVEAL PAST MANAGEMENT

The two basic keys to stock management in semi-arid rangelands are fences and watering points. Consequently, both can reveal much about past management. In the late 1890s, Peter Waite, then managing director of The Momba Pastoral Co., introduced a revolutionary system of sheep management. He erected hundreds of kilometres of “lightning” fences on the properties run by the Elder Smith companies in NSW and SA. The pattern of derelict fences from this period record this management innovation. Similarly, derelict sheep fences in the southern Northern Territory provide mute testimony to failed attempts to run sheep without effective dingo control.

FENCES AND LANDSCAPE CHANGE

Fences were both an agent of landscape change, and a way of recognising and quantifying changes in semi-arid landscapes. Before the widespread adoption of steel posts and droppers in fences, all posts and droppers were wood. Almost invariably, the timber was obtained locally off the property, close to the line of the fence. Using annotations on survey plans showing details of fences (panel lengths, etc), it is possible to calculate the numbers of posts used to fence properties. Panels ranged from as wide as 30' to as close as 10', requiring from 110 to 300 posts / km. Moderate-sized properties in the Western Division of NSW required at least 14,000 posts and 3,000 droppers. Extrapolating to the Western Division as a whole, and assuming similar fences, then perhaps 20 million posts were required. As the favoured species were usually Mulga and Gidgee, where only one or perhaps two posts could be obtained per tree, this means that a total of 10-20 million trees was felled solely for fencing.

The introduction of domestic stock to the rangelands very quickly initiated a major episode of surface disturbance, followed by massive erosion. What is less commonly understood is that this eroded material does not simply disappear, it is mostly deposited relatively close nearby. Near White Cliffs, many kilometres of partially buried fences testify to the deposition of sediment eroded from higher in catchments. Knowing the dates of the fences (from old plans) it is possible to calculate overall rates of deposition. These rates are not particularly helpful, as a decade of monitoring reveals that most sedimentation occurs after single isolated intense rainfall. Similar episodes of rapid gully expansion have been recorded at Fowlers Gap Arid Zone Research Station by Fanning.

My field observations during an Australia-wide survey of fences suggest that fence burial is widespread. Thus there is a means to more closely quantify the rates of deposition (and perhaps, erosion) that have taken place since the fences were constructed. In some locations, multiple fences of different ages allow the rates to be partitioned by decades. If such data were linked to historical

stocking rates, and rainfall, then we would be better able to understand the magnitude and rates of changes that have occurred in the landscape.

FENCES AS EUROPEAN HISTORIC HERITAGE

Heritage legislation in most states defines historic heritage as non-Aboriginal material over 50 years old. Whether or not a particular object (e.g. fence) is “significant heritage” requires an assessment using the procedures of the Burra Charter. Given the sheer number of old fences, there is no doubt that most are not particularly significant, but all contain important information on European settlement history.

Close study of fences near White Cliffs shows major changes in fence technology used since the first fences were built in the 1870s. All components have changed: wire from 8G iron to 10G steel to 12G high tensile, posts from wood to various steel sections to the now ubiquitous star post, droppers from local wood to bent sheet steel to modern steel. Also, the structure of the fences has changed to make optimal use of the improved technology: both strains and panels are now longer, and use different combinations of plain and barbed wire. Consequently, old fences record all of these technological changes. The structures also record significant information on legislation, investment, labour, and past aspirations. These are relevant to better understanding landscape changes that followed European pastoralism in the rangelands.

Many pastoralists remove old fences before building a newer replacement, or scavenge the old wood posts for firewood. Many fences are left *in situ*, deteriorating into a tangled mess of broken wires and drunken posts. The decision is entirely up to the landholder. But few landholders recognise the historic heritage value of their fences, and others (with no real cause) fear the intrusion of government-imposed heritage preservation orders. A middle road is possible where landholders are aware of the importance of a particular fence, and while not actively conserving it, at least do not destroy it. Many pastoralists highly value the history of their properties, especially when the family has lived there for several generations. When the history of individual fences is explained, I have always received positive responses from pastoralists.

FENCES HELPING THE FUTURE OF SEMI-ARID RANGELANDS

Recent research on climate changes suggests that Australia is now in the first few years of a 40-year long period of below average rainfall. This poses major problems for both land managers and agencies involved in the rangelands. The last time Australia experienced such a prolonged period of below average rainfall was from about 1910 to about 1947. There are no managers alive today with first-hand experience of managing under such conditions. Indeed, all have only worked in the historically higher rainfall period since the end of World War 2. Historically, this has also been the period of excellent prices. Consequently, managers face the bleak prospect of a return to conditions before World War 2: poor prices (and getting worse), low rainfall, long droughts.

The cause for concern is that too many pastoralists, agency personnel and politicians regard the present conditions (and condition of the rangeland) as “normal” and stable. Even a cursory look at the field evidence contained in fences shows that this is a dangerous delusion. It is a delusion because it is incorrect, and pastoralists and politicians have still not accepted the findings of the Royal Commission of 1901 that drought is the norm. It is dangerous because current management and policies are predicated on flawed memories of historically higher rainfall, and the consequent improvement in landscape condition. But, given that the landscape is currently demonstrably unstable, and degradation is still occurring, then the effect of continuing with current management into decades of lower rainfall will be both environmentally and socially catastrophic.

The record of landscape change contained in fences is quantitative, can be related to individual decades, and is a key approach to better understanding what happened pre-World War 2. Without this vital information, we are doomed to repeat the problems of the past.