

PROCEEDINGS OF THE AUSTRALIAN RANGELAND SOCIETY BIENNIAL CONFERENCE
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The Australian Rangeland Society

PRACTICAL BIODIVERSITY

Bob Purvis

Woodgreen Station, via Alice Springs NT 0870

I have a few minutes to put to you how we view biodiversity. Is it important or is it an airy-fairy scientist's dream? If you want sustainability then you must biodiversity.

We are constantly told that as pastoralists we must improve production, make more money, join the rat race, the motto being greed and growth. Well there are a few inhibiting factors to this that are ignored and should be taught to all school children. Australia is mostly a big desert with infertile soils, erratic rainfall, where water is precious, and that if you want more production, then there is a fair chance biodiversity will be a casualty to some extent.

Have you noticed that each progressive drought in Australia is considered to be the worst in history? Could it be that the land is over-utilised and is in worse condition as time goes on?

In our case, Woodgreen was taken up around 1920 and stock died in the 1928-30 drought. In the next drought, late 50's and early 60's, almost the whole herd died, and the best land was shockingly eroded. Since then, our aim has been to use the land but not degrade it. But how to measure our progress? It was obvious that there was a connection between the diversity of species of grass and the uses of that grass by cattle, horses, native grazers, birds, insects and so on. So I started to learn the plants and to observe what plants were required for the different animals to be in a healthy state. The next step was to try to adjust the number of animals so those better plants could maintain their health. And not be swayed by the fallacy that more stock means more money, but to touch the resource lightly and live within the constraints imposed by this.

The land on Woodgreen can be graded into three broad types. One, the majority, is where the soil is so infertile that it only grows mainly Acacias and Eremophilas (trees and shrubs) and Aristidas and Eragrostis (grasses), that are food for termites, which are food for lizards, which are food for some birds, with an odd kangaroo, but are of no use for domestic stock. The second type is country that cattle can use with year-round supplementation for breeding, and the third type is land fertile enough to fatten cattle on.

I came up with a simple test to determine the condition of that land. The test can be used anywhere on Woodgreen at any time with the possible exception of a long drought period. If the second-class country has more than seven species of edible grass or small perennial shrubs visible when standing in any one area, it is in good order. If it has five species it is at its lower limit, and if it has three species or less it is a degraded pasture. If the fattening land has ten species or above visible from the one spot, it is in good order. At seven species it is at its lower limit and three or less, it is degraded. My experience is that when both of these usable areas of land are in good order, then other living things are active and healthy.

There were too many kangaroos on Woodgreen and I wondered "why do we shoot and poison dingoes since they are natural predators of kangaroos". A kangaroo population is harder to control than a dingo population. And generally, dingoes will not harm strong cattle. So in the last forty years we have poisoned some dingoes only once, and shot an odd one when their packs number five or more. There are less rabbits now than in the mid 1950s because of the dingo. Domestic dogs gone wild we shoot at all times.

The NT Landrights Act may have been wonderful for lawyers but it was a disaster for the biodiversity of native animals on Woodgreen. A representative of ATSIC explained to me that Aboriginals have the right to kill to extinction. I don't believe this should be so. But in the bad time over ten years ago, they killed to local extinction on Woodgreen the echidna, turkey and emu, and almost removed the

native bee, perentie and the euro. The perentie has regained his previous number, there are several turkey, two emus and a few colonies of native bee, but the echidna is gone. We regard Aboriginal hunting with motor car and rifle and white man's axe as being very destructive. Another disaster is the domestic cat gone wild.

Our records show that we can expect a drought of two years or more approximately every thirty years, and that you can expect two or more consecutive good seasons at roughly the same interval. When the consecutive good years come the pressure is on to run more stock, to make more money, to make up lost ground, to pay for new infrastructure etc. This should be resisted, for that is the time that there is sufficient build-up of litter to easily carry a fire. We are fools if we think that the land doesn't need to be burnt if we wish to be sustainably productive. The difficulty is to know how to achieve the least damage and the best result. If we don't burn then Woodgreen would become a wasteland of dense scrub. The things we have learned are this: frequent fires are a disaster and cool fires are a disaster, for they burn the grass and leave the scrub. Hot fires in general burn only some valuable trees. You may lose some trees with hollows, but fires also make new hollows to suit a range of nests, from pardalotes to major mitchells. The release of nutrients from a fire need not be short lived. The trick is not to use up all the new sweet growth, but to leave a considerable portion of it for the next litter bed for habitat and building of soils. The desirable frequency of fire may be every fifteen to fifty years.

On Woodgreen where there are areas of dense perennial grasses including buffel, growth of scrub is inhibited. We have over the years tried to introduce many species of grass to cover degraded areas but of those, only two varieties of buffel have been successful. Buffel is a real asset on areas where natives have been totally removed and as the condition of those areas improves, we have found that buffel is held in check by the return of native perennials. Dense stands of buffel are not desirable and detract from biodiversity.

We try always to keep a large proportion of the station in reserve and there are no sacrifice areas. Weeds are not a problem as there is always competition from desirable native species and no hay has been used by us for forty years. We use no chemicals and try not to interfere too much with the balance of nature but we also believe that you can run stock sustainably in central Australia.

On Woodgreen we have reduced cattle numbers to match the carrying capacity of the land. We have continued to make a living by continuously improving the quality of our cattle. I believe that biodiversity has benefited as the condition of the land has improved. But what about biodiversity on pastoral land more generally? Improving biodiversity is the responsibility of both land managers and the government. In closing, I would suggest that Lands departments and Land boards have almost always had their priorities slewed. The top priority now is how much can be earned from the land but the top priority should be the health of the land. Governments have paid lip service to this but I have not seen it seriously acted upon and this does not auger well for biodiversity.