

# An old Aussie battler goes bush

Alan Lauder makes the case for a rough, tough and resilient indigenous survivor from way back



They call him old man saltbush. He's a tough and rugged bushie from way back; a born survivor – and one of the most under-rated plants in the Australian landscape.

Overgrazing and rabbit plague in the nineteenth century nearly wiped out this perennial shrub, but we are now returning to the levels of understanding held by the early settlers. There is growing awareness of the environmental and commercial contribution that old man saltbush has to offer.

In the drought of 1890, the shrub proved a saviour for those fortunate enough to possess it. Now its contribution, directly and indirectly, to increasing landscape carbon levels is being better understood.

In the media, emphasis has been on the greenhouse effect, in which carbon moves from the landscape to the atmosphere. But equally important is the reduced production capacity of soils with lower carbon levels – and the reduced profits of rural producers.

The movement of carbon back from the atmosphere into the landscape is achieved by photosynthesis in plants. Photosynthesis converts carbon dioxide in the air into plant material (carbon compounds). Plants use these compounds above ground, in leaves and stems, and below ground in roots.

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It is through plants that carbon finds its way into the soil. If the plant/soil part of the carbon cycle does not function

correctly, then the carbon levels in the soil fall and slowly the landscape starts to fail.

We have pigeon-holed drought, greenhouse, water quality, biodiversity and salinity as separate issues, but what has really happened is that we have mismanaged the carbon cycle.

Maximising soil carbon is all about trapping sunlight at multiple levels. Planting old man saltbush into grass areas returns one of the vegetation levels. The shrub's significance is that it is edible and so contributes to profit as well as to landscape function.

A correct balance of plants leads to continuing photosynthesis (and therefore carbon storage) under adverse conditions as well as in the changing seasons of summer and winter. Australia has the most unreliable climate in the world – and it is growing worse. Only deep-rooted perennial plants can respond to single isolated falls of rain, and old man saltbush has the added advantage of growing in both summer and winter in many parts of Australia.

Because it has a high water-use efficiency, is drought resistant and can survive in soils with low oxygen levels, it is well suited to regenerating degraded soils that have poor structure. These soils are low in soil carbon. In time the old man builds soil carbon levels and, because of its deep roots, recycles nutrients from depth. As the soil improves, grasses return.

Just as we need balanced vegetation for a functional landscape, so we need

a correct balance of plants if animals are to achieve a balanced diet and maximise production. Like us, their health is dependent on a balanced diet.

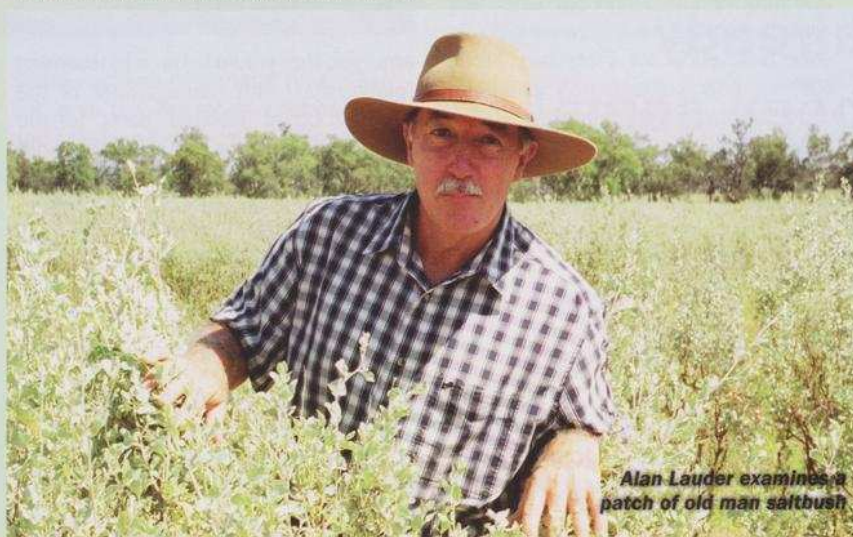
Recent research in Western Australia (by PhD student Kelly Pearce) has revealed high vitamin E levels in the meat of sheep grazed on saltbush. Low vitamin E levels in dry summer feed can lead to nutritional myopathy, a muscle-wasting condition known to exist in the Traprock area of south-east Queensland.

The old man also supplies a continuing source of protein for commercial animals as more palatable grasses fail. When available, saltbush makes it possible for livestock to digest low-quality roughage. It is also a valuable source of sulphur and is preferred by animals to mineral lick blocks.

## Old Man Saltbush

Its name describes its personality: tough and resilient as the original inhabitants of harsh lands and climates that would destroy other species. Old man saltbush (*Atriplex nummularia*) is one of nature's great survivors. Fossilised remains have been found dating back five million years.

Old man saltbush is a long-lived, drought-resistant native fodder plant growing to a height of three and a half metres, with roots plunging four metres into the ground. Its leaves are an attractive grey/blue, covered with tiny hairs and crystals of excreted salt that help reflect heat.



Alan Lauder examines a patch of old man saltbush