



Climate change adaptation in the Midlands

Protection of natural bushland and climate change

Case study – Chauncy Vale Wildlife Sanctuary

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Chauncy Vale bushland – photo: Graham Green

In this article I take a look at the importance in maintaining remnant bushland because of its role in combatting greenhouse gas emissions, with particular focus on one of our local reserves Chauncy Vale Wildlife Sanctuary. I look at the initial reasons Chauncy Vale was reserved and the emerging recognition of its significance for carbon storage and role in regulation of atmospheric carbon concentrations.

This is important because global heating is currently escalating and is not under control. 2020 was tied with 2016 as the hottest year globally on record. The past decade (2011-2020) was the hottest on record at 0.82°C above the 20th century average. Right now, we have surpassed 1°C of global heating. We can expect the heating trend to continue until serious and significant cuts to emissions are made. Preserving and managing large areas of natural bushland is an important part of the solution.

Chauncy Vale Reserve context

Chauncy Vale is a place for wildlife conservation and education. Thanks to the vision of the Chauncy family it was declared a Sanctuary in 1946, primarily for flora and fauna preservation. By 1947 the Chauncy's began to welcome visitors to the sanctuary and were particularly encouraging of organisations interested in scientific study of the natural values. This extended to scouts, guides and schools. In 1947, the Hutchins School built 'Alameda' at Chauncy Vale, a base from which students could explore the sanctuary and study birds and animals.

This vision for the Sanctuary continues until the present day, still under the guidance and input of the Chauncy family but also incorporating a broad range of reserve management expertise from the Parks and Wildlife Service, Southern Midlands Council, Tasmanian Land Conservancy and the community. This committee manage the sanctuary according to a statutory management plan. With increasing recognition of the importance of protecting as much remaining natural bushland as possible, the Chauncy Vale Management Committee members were involved in negotiating extensions to the reserved land surrounding Chauncy Vale. In 2006 Flat Rock Reserve, owned by the Tasmanian Land Conservancy, was created and is now co-managed with Chauncy Vale. The combined reserves cover an area of 870 hectares, and significantly connect through to Alpha Pinnacle Conservation Area to the north.

Climate change significance – carbon sequestration at Chauncy Vale

The role of reserve management has now taken on a new dimension. Natural forests play a critical role in regulating greenhouse gas concentrations in the atmosphere as they continuously draw carbon from the atmosphere. This carbon is stored in both the vegetation and soils with soil carbon in the form of humus or peat being a particularly stable form of stored carbon.

According to a study by Mackey et al 2008¹, the stock of carbon for intact natural forests of south-eastern Australia is about 640 tonnes of carbon per hectare. There is of course a large standard deviation associated with this number because different forest types vary considerably in their productivity and capacity to accumulate and store carbon. The average net primary productivity of south-east Australian forests is 12 tonnes of carbon per hectare per year. Based upon these figures the natural forest at Chauncy Vale and Flat Rock Reserve has a current stock of stored carbon of approximately 557 000 tonnes and a net carbon draw down rate of approximately 10 440 tonnes of carbon from the atmosphere every year.

These numbers give me a significant appreciation of the environmental service that the reserved forests at Chauncy Vale and surrounds provide. As a community we are greatly indebted to the Chauncy family for acquiring this country and setting it aside for its environmental and educational benefits. The role of the forests at Chauncy Vale in climate change mitigation would not have been foreseen at the time. The Chauncy's were however motivated to protect as much country within

¹ Mackey, Keith, Berry & Lindenmeyer (2008): Green Carbon, The Role of Natural Forests in Carbon Storage. Australian National University.

their means due to the emerging environmental problems that they were aware of at the time. We continue to reap the positive benefits of their actions today and will do for the foreseeable future.

Chauncy Vale of course is not just about the standing forests, it's a thriving ecosystem, including habitat for over 70 species of birds, six species of frogs, and healthy populations of Tasmanian devils, wombats and quolls. Climate change is placing stress on all natural systems, hence there's never been a more important time to ensure within the best of our ability that there are large expanses of diverse natural habitats available enabling scope for wildlife to adequately adjust to changing environmental conditions.

Recent environmental management work at Chauncy Vale

Reserve management is rarely a passive exercise. Issues such as environmental weeds, pests and maintaining appropriate fire regimes are important considerations in order to keep natural areas healthy and to maintain natural recruitment, regeneration and species diversity. Resources for the management of Chauncy Vale are provided by Southern Midlands Council, through grant funds from government, and from donations. Decision making is guided by the expertise brought to the table by the Management Committee members.

2020 was a big year for conservation management work at Chauncy Vale with the following achieved:

- planting of 1000 native trees, shrubs and grasses to increase habitat, increase plant diversity, and to sequester carbon;
- installation of 'check dams' to halt legacy erosion in Day Dawn Creek;
- continued work to control Scotch and Californian thistles; and
- patch burning to reduce the threat and impact of wildfire and to stimulate native plant regeneration.

The other component of management at Chauncy Vale is visitor services. Access to the reserve for appreciation and study of the natural values is of great significance to the Chauncy family who are represented today by Heather Chauncy, daughter of Nan and Anton.

The Management Committee are always attempting to make the visitor experience at Chauncy Vale safer and more enjoyable. Safe and suitable access to the land for nature based education has been continually improved over the years in line with the Chauncy's vision. Recent works provide year round access to sites of significance in the reserve for all age groups. In 2020 the following projects were undertaken:

- Pedestrian bridges were installed on the popular Caves Loop Track to ensure visitor safety and access to popular walks when the rivers are flowing. River crossings previously presented a hazard, particularly to younger and older visitors;
- The track to Browns Caves was upgraded to improve alignment, clarify the route, and stabilise eroding edges;
- A 'wombat sculpture installation' was commenced to extend the 'education ethos' of Chauncy Vale to a younger audience.
- Behind the scenes, a lot of work is required to keep tracks clear of fallen branches and trees. A freak low level snowfall in 2020 made the track network in the reserve impassable and weeks of work was required to restore access.

As each year goes by the gift of Chauncy Vale to our community by the Chauncy Family becomes more significant, not just for its ongoing function in nature conservation but as a place for the local

community to connect with nature, explore the natural features on offer and to learn about our rich local cultural heritage. Very significantly now the reserve is working away quietly on our behalf assisting with the job of dealing with our carbon emissions.

Further information about Chauncy Vale is available on the web site www.chauncyvale.com

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