

DEER CONTROL TRIAL - ALPINE NATIONAL PARK

Project Overview: June 2016



The Alpine National Park contains outstanding mountain landscapes rich in biodiversity and high value natural, cultural and scientific heritage.

Alpine Sphagnum Bogs and Associated Fens (Alpine Peatlands) are listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act and as threatened under Victoria's Flora and Fauna Guarantee Act.

They play an important role in maintaining the healthy functioning of a number of water catchments and provide critical habitat for several rare and threatened flora and fauna species.

Alpine peatlands are a fragile community, highly sensitive to disturbance. Once damaged, they can be very slow to recover, particularly if disturbance continues.

What is going on?

Alpine environments are under increasing pressure from a range of threats, including invasive plants and animals. Parks Victoria is working to improve the condition and resilience of these alpine environments, particularly the high value alpine peatlands, by mitigating the impact of key invasive species.

In this way these special places are more likely to cope with the impacts of fire and climate change.



Sambar deer in an alpine peatland on Bogong High Plains—Alpine National Park

Why deer?

A significant expansion of the population and the area deer occupy has been observed in the Alpine National Park over the past decade.

Increasing signs of deer activity in the alpine treeless area is particularly concerning, as this corresponds with increased impacts to the endangered peatlands.

Deer are therefore one of the key invasive species being targeted by Parks Victoria.

Deer can reduce plant biodiversity through overgrazing and selective browsing. Trampling compacts soil and results in the creation of tracks, antler rubbing and thrashing damages vegetation.

Male deer (stags) wallow in peatlands destroying their structure and integrity, as well as the habitat of the threatened species that rely on them.

DEER CONTROL TRIAL—learning by doing

Why a trial? —2 key questions

Little is known about controlling deer to maintain or improve the condition of alpine peatlands in the Alpine National Park as it has not been attempted before.

To develop a greater understanding of the impacts of deer on alpine peatlands and to determine the best methods of mitigating them, Parks Victoria is implementing a deer control trial.

The trial uses a structured ‘learning by doing’ approach to facilitate an adaptive, evidence-based assessment of options for long-term deer management.

At the conclusion of the trial, the results and lessons learned will be used to provide future directions for ongoing deer control in the park.

Two key questions will be answered by the trial –

- What level of control is required to achieve the conservation goals?
- Which control approaches are the most efficient and effective?

Trial stages

There are 2 trial sites within the Alpine National Park

- Bogong High Plains, near Falls Creek
- Howitt Wellington Plains, north of Licola



Intact peatland

Alpine peatlands are permanently wet, boggy areas characterized by an underlying layer of peat and the presence of Sphagnum.

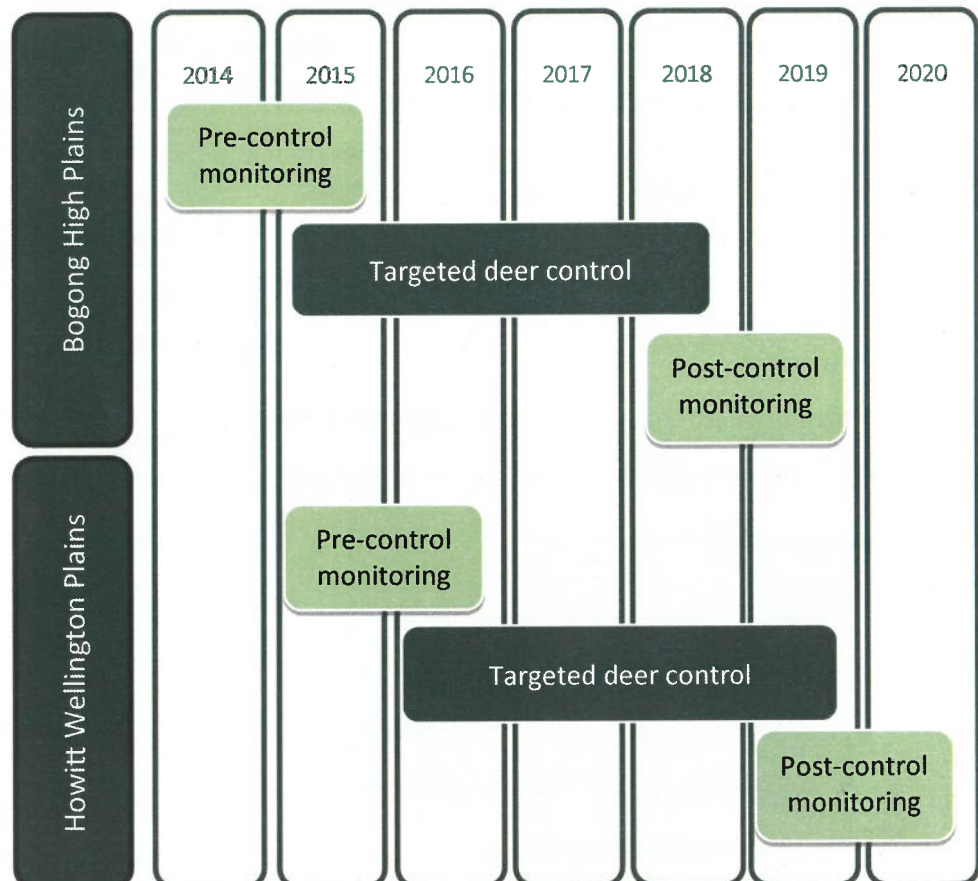
They are restricted to shallow stream headwater basins or seepage areas, typically in alpine, sub-alpine or montane environments.



Stag wallowing in alpine peatland

The aim of the deer control trial is to:

Investigate whether ground shooting can reduce deer impacts on the alpine peatlands in the Alpine National Park, and if so, what are the most efficient and effective techniques.



DEER CONTROL TRIAL—learning by doing

2 sites—2 treatments —4 treatment areas

Two 'treatments' have been implemented at each of the trial sites.

1. **Targeted deer control** - remove as many deer as possible using several of the lethal control methods available, including stalking, stalking with gundogs and spotlighting, on foot or in a vehicle, using white light, thermal imaging and/or night vision equipment.

The efficiency and effectiveness of each of the methods is being measured and will be used to determine those that should be used as part of any future ongoing deer control program.

2. **Non-treatment control** – no deer control will be undertaken, except recreational hunting where this is already permitted.

These areas will provide an opportunity to assess the effectiveness of targeted deer control because they allow Parks Victoria to compare areas where no targeted deer control is being conducted to areas where it is being carried out.

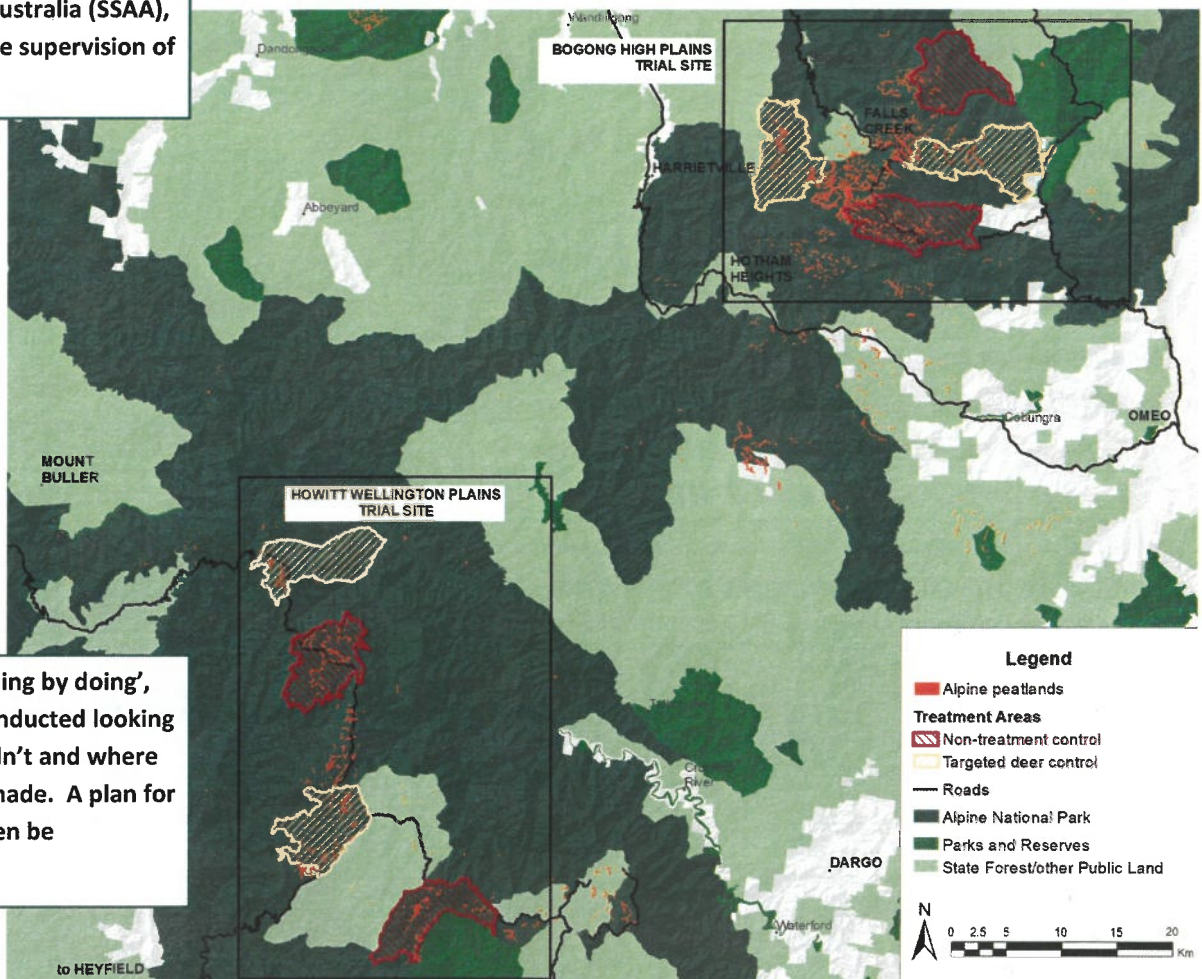
Targeted deer control is being carried out by volunteers from the Australian Deer Association (ADA) and the Sporting Shooters Association of Australia (SSAA), and contractors, under the supervision of PV staff.



Volunteer deer control operation briefing (above) & deer stalking (below)



Each trial site has 4 different treatment areas 2 of each treatment



As the trial is about 'learning by doing', annual reviews will be conducted looking at what worked, what didn't and where improvements could be made. A plan for the following year will then be developed.

DEER CONTROL TRIAL—learning by doing

'Before and after' monitoring – is the control working?

Before and after monitoring of deer abundance and density and deer impacts on alpine peatlands will be conducted in all treatment areas. This will help determine whether deer control activities are having the desired effect.



Deer wallow

Have deer numbers been reduced? If so, which techniques are the best?

To answer these questions, deer abundance, density and habitat use are being monitored before and after control, and 'catch per unit effort data' is being collected, using a number of techniques including:

- remote infrared-triggered camera traps;
- faecal pellet counts (or FAR—faecal accumulation rate);
- recording of the locations, date and time of all deer seen and killed; and
- collection of GPS track logs by hunters while undertaking control operations.



Monitoring changes to wallow size

Are the peatlands recovering?

Deer impacts are being monitored using 'peatland impact surveys' that measure :

- the severity and density of pugging, deer trails and wallows; and
- changes to the vegetation structure at browse height.

Targeted wallow and natural pool surveys will also be undertaken.

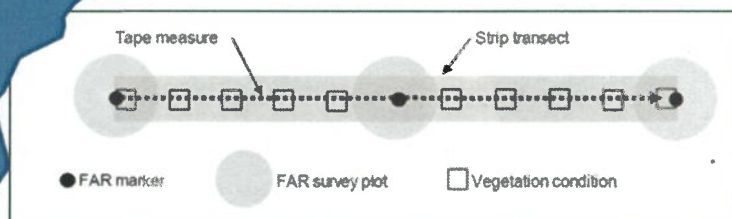
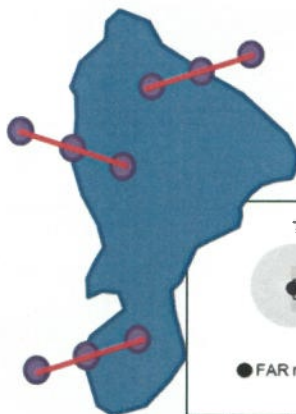


Diagram of peatland and placement of peatland impact survey transects



The Victorian Alpine Peatland Protection Program is an initiative jointly funded through Parks Victoria, the West Gippsland Catchment Management Authority, the Australian Government's National Landcare Programme (via North East, West Gippsland and East Gippsland Catchment Management Authorities) and the Victorian Government through the Alps Intensive Management Program.

For further information:

Manager
Regional Operations (Eastern Victoria)
13 1963