

FIRE ON HINEWAI RESERVE

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Hinewai Reserve, Akaroa

Hinewai Reserve, 1240 hectares of regenerating native forest owned by the Maurice White Native Forest Trust to the east of Akaroa, safeguarded in perpetuity by a Protected Private Land Covenant, suffered a major fire in July 2011.

Early in the afternoon of 12 July a brief unforecast thunderstorm passed over the southeast corner of Banks Peninsula. There were only four or five bolts of lightning, but one scored a direct hit on Stony Bay Ridge, where gorse exploded into flame. A few hesitant spots of hail ceased. The cloud cleared abruptly, the wind swung from cool southwest to northwest gale, and suddenly Hinewai was burning.

Despite a swift and impressive fire-fighting response, the fire burned for 27 hours, affecting 300 hectares, about one quarter of the reserve (Fig. 1).

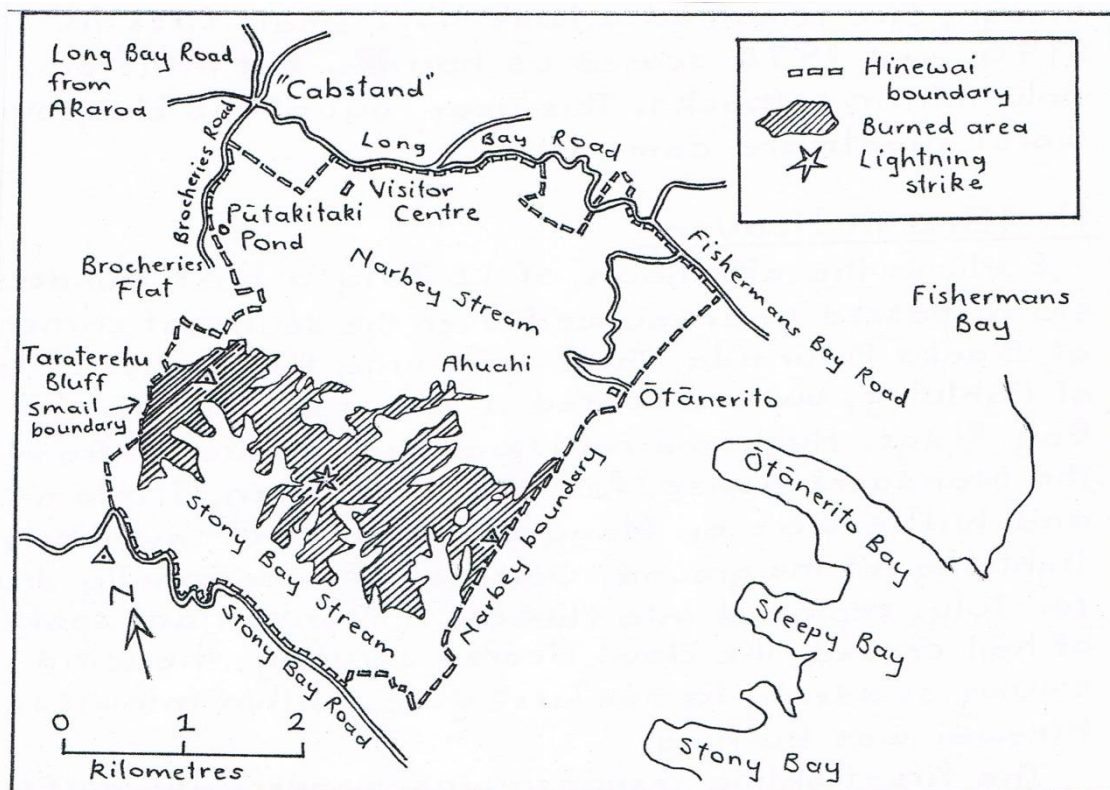


Figure 1 Map of Hinewai Reserve showing the extent of the July 2011 fire.

It all seemed seriously unlucky! Electrical storms are rare on Banks Peninsula. On average we experience half a dozen a year, nearly always accompanied by rain or hail, and almost never in winter. When the “dry lightning” struck, the reserve was bizarrely dry for midwinter. For the 7½

months from 1 January to 13 July, 2011 set the record for 24 years of recording at Hinewai Reserve HQ – 530.2 mm. The average is 832.8 mm. The wettest is 1247.7 mm (1995).

Fourteen months later we are feeling a little less hard done by. The fire burned mostly across land that was still predominantly under gorse canopy. Most of the fire fronts had burned out against green forest margins. Big swathes of land that had been gorse until recently, but had transformed into verdant canopies of māhoe (*Melicytus ramiflorus*) and kōtukutuku (*Fuchsia excorticata*), simply put the fire out at their edges. Even kānuka, one of the most flammable of native trees, failed to carry fire. (A summer fire may have told a different story). Very little old-growth forest or advanced forest regeneration was harmed at all, although what losses we did suffer were sad enough.

By the following January, most of the burned ground was draped in a giant green surgical dressing of ferns (especially bracken [*Pteridium*], *Histiopteris* and *Hypolepis*), grasses (*Holcus lanatus* was abundant), fireweeds (native *Senecio minimus* and *S. glomeratus* and naturalised *S. sylvaticus*) and poroporo (*Solanum laciniatum* and *S. aviculare*). Charred young māhoe, fuchsia and wineberry (*Aristotelia serrata*) were beginning to sprout from their bases. So was gorse of course. By April, however, quadrillions of poroporo bushes a metre tall, flowering and fruiting, attracting squadrons of kererū, bellbirds and silvereyes, were shading and debilitating the light-demanding alien *Ulex europaeus*. Along scorched front ranks of beech trees (*Nothofagus fusca* and *N. solandri*), twigs were bravely leafing up again.

Did the fire eliminate any species from Hinewai's rich flora? Almost certainly not. Somehow the gully on Taraterehu / Stony Bay Peak that holds the only known local population of creeping māpou (*Myrsine nummularia*) [a single plant is also recorded from Flag Peak a little to the south] escaped the holocaust. Only a week after the fire we found lots of Peninsula sun hebe (*Heliohebe lavaudiana*) miraculously alive along the fire-ravaged crest of The Stones. Akaroa daisy (*Celmisia mackaui*) resprouted strongly after burning, along with mountain flax (*Phormium cookianum*), spaniard (*Aciphylla aurea*) and snow tussock (*Chionochloa rigida*). We lost a lot of *Dracophyllum acerosum* up high, but in the long-term this is a post-fire increaser, and the best areas of *Dracophyllum* regeneration, on North and South Hioi above Stony Bay Saddle, escaped the fire altogether – as did three quarters of the total reserve.

A long-term view is that the fire simply contributes to the mosaic of differently aged forest that will characterise Hinewai for the foreseeable future, perhaps forever.