

## HFNC weed control report for Nigretta Flora Reserve 2017

In 1975, HFNC requested the Lands Dept to cancel the grazing lease on this Crown Land. HFNC submissions to the LCC were successful and it became a Flora Reserve in 1982. An aggressive new threat, African Weed Orchid (AWO), was found in great numbers on this 12-ha site in 2009.

The rainfall at Hamilton for May-Oct. was 60, 18, 64, 104, 70 & 44 mm, a total of 360 mm, cf. 631 mm in 2016 or the long-term average of 427 mm. The 6-month totals for 2009-2015 were 407, 390, 338, 399, 369, 288 & 254 mm. The winter-spring rainfall for 2017 was, therefore, fairly average.

Sunday 15 Oct. We had only 3 volunteers (RB, DL & PH). Our approach was from the northern side through private property, the river level being too high to cross from the Scenic Reserve. We worked from 10 am to 5.30 pm (total of 21 hrs) and wiped a total of 2,240 AWO with 12.5 L of glyphosate (30 mL/L), metsulfuron methyl (1 g/L), wetter (5 mL/L) and dye (5 mL/L) solution. Cleavers were found near a tree ~ 15 m west from the NE side gate and hand-weeded.

The numbers of AWO were fewer than in 2016 and we scanned most of the area except for the treed mid-western slope. Some small plants were without stem or heads. No AWO were flowering.

Saturday 28 Oct. We approached the reserve from the north because the river level was too high to cross. We had 3 volunteers (RB, PH & RZ) and worked variously from 9.30 am to 4 pm (a total of 9.5 hr) and wiped 1580 AWO with 9.4 L of the herbicide mix. We applied, on average, 5.7 mL of herbicide mix per plant wiped. This is more than in previous years (1.8 mL per plant in 2016) and should ensure that all plants wiped are speedily killed. Most of the AWO had heads and a few were starting to flower. Herbicide application beyond this time is not advised since the poisoned plants might still set some viable seed. At that stage untreated plants need to be dug up or heads pulled.

Spot-spray herbicide of glyphosate (200 mL/10 L) plus pulse (50 mL/10L) and dye was applied to Phalaris clumps at 2 places near the gate on the NE side and also at the NW corner – 10 L applied. The huge Manna Gum at the NW corner has collapsed and that – and the presence of Tree Violet (*Melyctis dentata*) shrubs – has made it hard to control the Cleavers and *Fumaria* there. It may be necessary to prune lower branches from Tree Violet shrubs in order to access the weeds for removal by hand. More Cleavers at the site found earlier at the NE side were found and sprayed.

Wednesday 20 Dec. DL, RB & PH crossed the river from the Scenic Reserve and dug up 680 AWO (9 hr) on the western area (a planned club visit on 18 Nov. was aborted due to the high river level).

Sunday 24 Dec & Monday 15 Jan. RB dug 280 AWO (5 hr) on the central western slope, 185 AWO dug and 105 AWO pulled up from NE strip (5 hr). Seed did not appear to be shedding at this stage.

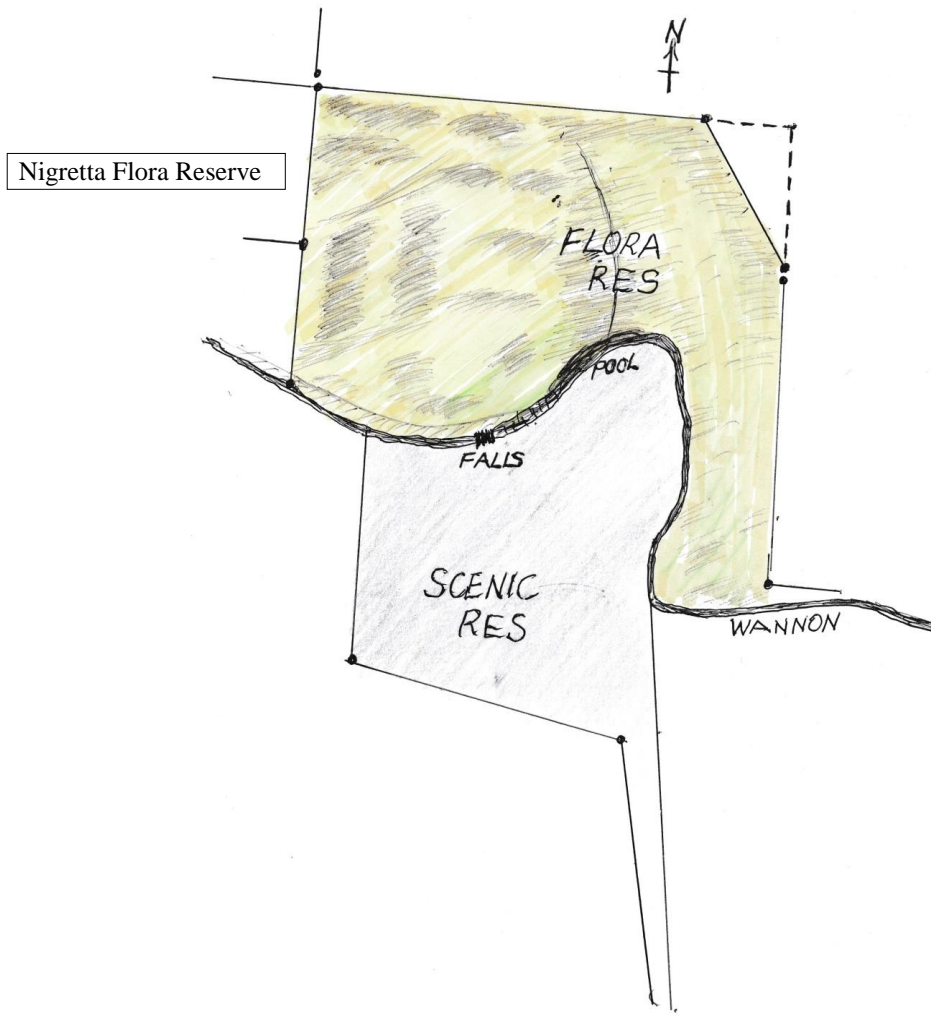
Sunday 31 Dec & Mon 01 Jan. PH dug 117 (2 hr) and 280 AWO (5 hr) on mid-western area

The number of AWO in 2017 is less than in previous years and our effort to remove AWO this year has been extensive. Whether that will be reflected in reduced numbers in 2018 remains to be seen.

One new flora species has been detected in 2017: *Thelymitra flexuosa* (Twisted Sun-orchid) x *rubra*. The number of native vascular flora on the Nigretta Flora Reserve is now 211 species. Several alien *Acacia longifolia* seen at the Banksia grove on the riverside at the NE end should be removed.

Summary of works since 2009:

- 2017 – 5,190 AWO wiped (3,820 plants), dug (1,265 plants) or pulled (105 plants) [57 hr]
- 2016 – 16,100 AWO wiped (13,625 plants) or dug (2,480 plants) plus 2,665 plants pulled [93 hr]
- 2015 – 4,045 AWO wiped (3,215 plants) or dug (830 plants) over the entire site [46 hr]
- 2014 – 7,975 AWO wiped (6,665 plants) or dug (1,310 plants) over the entire site [65 hr].
- 2013 – 8,275 AWO wiped or dug (8,125 plants) or pulled to remove heads (150 plants) [71 hr].
- 2012 – 6,900 AWO wiped or dug (6,800 plants) or pulled to remove heads (100 plants) [46 hr].
- 2011 – 5,500 AWO wiped (5,000 plants) or pulled to remove heads (500 plants) [39 hr].
- 2010 – 13,720 AWO wiped (10,140 plants) or pulled (3,580 plants); NW & NE not done [27 hr].
- 2009 – 22,500 AWO dug (2,290 plants) or pulled (20,280 plants) but NW area not done [68 hr].



*Thelymitra flexuosa* x hybrid DL Oct 2017