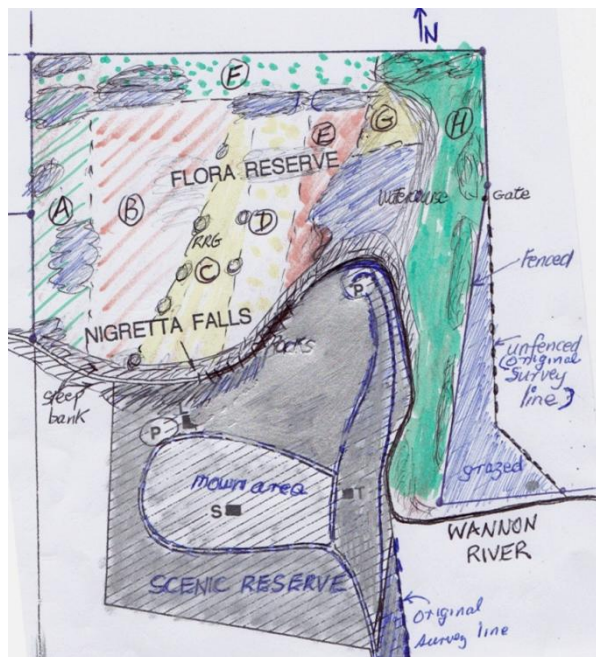


## HFNC weed control report for Nigretta Flora Reserve 2014

In 1975, HFNC requested the Lands Dept to cancel the grazing lease. HFNC submissions to the LCC were successful and it became a Flora Reserve in 1982. This reserve has over 200 native plant species. An aggressive new threat, African Weed Orchid (AWO), was found in great numbers on this 12-ha site in 2009 and we have worked since to control it. Control is difficult; the plant reproduces from fine seed and corms.



Of 40 plants wiped in Oct 2013 and dug in Feb 2014, 18 had no corms, 7 had dead corms. A herbicide effect? On 18 Sep 2014 plants were allocated in 3 'blocks' to examine the effects of herbicide and time of application.

Herbicide-wipe Treatments (the solutions all contained wetter and marker dye, each 5 mL/L):

1. Control (no treatment)
2. Glyphosate (60 mL/L of wipe solution)
3. Metsulfuron methyl (3 g/L wipe solution)
4. Glyphosate + Metsulfuron Methyl (as above)

Time of application:

1. 21 Sept (before flower stalks arise)
2. 10 Oct (stalks emerged & heads developing)

14 plants formed each treatment at each time (4 or 5 plants/treatment in each block). A wire pin was placed about 5 cm on the south side of each treated plant. The plants will be dug in Spring 2015 to check for corms.

Sunday 21 Sep – Working Bee: the river level was low and we were able to cross on the rocks from the Scenic Reserve. The first period of herbicide treatments were applied (see above). Then RB, DL, PH & KS wiped 1200 AWO (and a few dozen Wild Gladiolus on the river edge), variously from 9.45 am to about 4 pm (total of 18 work hours). We covered areas B, C, D & E but found it hard to locate the AWO which were mostly very small and none had a flower stalk or head.

Sunday 12 Oct – Working Bee: the second period of herbicide treatments were applied (see above). RB & PH then wiped 1785 AWO in about 10 hrs from the areas C & D. Some clumps of Phalaris were also wiped. The AWO were mostly small and most had flower stalks but the heads, where present, had not commenced flowering. Some small plants appeared to have withered and died off as a result of the warm dry spring.

Tuesday 21 Oct – RB wiped 1750 AWO in areas E, F, G and H. Time taken was 7 hrs, using 4.5 L of wipe solution (approx. 390 plants/L or 250 plants/hr).

Saturday 25 Oct – RB wiped 1930 AWO in 8 hrs, using 4.5 L of herbicide solution. That was approx. 430 plants/L applied, or roughly 240 plants wiped per hour (that will vary with the density of plants and thus the amount of walking involved). There were many very small AWO, these apparently having emerged after September. A small percentage of the larger plants had a few anthers showing. The areas worked were A, B, C, D, E, F, G & H (G was poorly covered). A significant number of AWO have had heads grazed.

Saturday 8 Nov – Working Bee: RB, DL, JS & RZ dug up and removed from the site 1220 AWO. RT had dug 90 on 2 Nov so the total was 1310 plants in 22 work hrs. We covered the entire site (A-H). Most of the plants had not been wiped with herbicide in October. Many AWO were flowering but there were also many small plants that had only recently emerged and these had developed heads. We also found many tiny plants without flower stalks alongside the large plants which we dug up. Those plants often were attached to very large corms. One plant had 5 corms attached, whereas the usual is 1 or two (plus the decayed old corm).

The 2014 tally is similar to last year. We were thorough in both years. An approximate 'infestation count' for the site in 2014(see map) is A 340, B 510, C 1910, D 1490, E 2250, F 450, G 200, H 820. The 6 years:

- 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 & 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); far 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].