

## HFNC weed control report for *Nigretta Flora Reserve* 2011

African Weed Orchid (AWO) were found on this 12-ha Flora Reserve in 2009 and efforts were immediately made in an effort to control the menace. That work continued in 2010 and this year.

The work this year is presented below. Plants were wiped with Metsulfuron Methyl + Pulse + Dye on 3 days. RB calculated, from work on 2 days, that 230 plants/hr/person were wiped on each day this year and that value was used to estimate the total number of plants treated by other volunteers.

15 October – YI, RZ & BK spent 13.5 hrs (11 am-4 pm) treating AWO. A shower of rain at mid-day might have reduced the effect of the herbicide. We noted later that the impact of the herbicide on these plants was much slower than those treated on 25 Oct.

18 October –RB wiped 1500 AWO in 6.5 hrs. Where plants were missed earlier on the mid-western section they were treated on 18 or 25 Oct.

25 October – RB wiped AWO – 5 hrs and 1150 plants treated, mainly on western side. Some AWO that had apparently been wiped previously (some dye evident), but appeared to have been unaffected, were also re-treated. These were not included in the counts.

13 November - 6 members (RB, DL, JC, GC, RA & RT), spent 2 or 3 hours each [total 14 hrs) pulling up plants that appeared to have been missed on the earlier visits. About 800 plants that appeared to have green heads (although they appeared to have been treated previously) were also pulled. These have not been included in the overall totals of plants treated. Only 15-20% of the 500 ‘new’ plants (about 85) had bulbs attached when pulled, so the majority could sprout again next year, or later.

It was apparent that the metsulfuron methyl chemical takes at least 3-4 weeks to take effect. That could result in the plants setting viable seed before the plant dies. The problem may be solved by adding a small amount of glyphosate to the mixture – enough to burn off the head in 2 weeks but still allow the metsulfuron methyl to penetrate the corm. This would also help to identify untreated plants later. It was also apparent this year that the herbicide applicator should be pushed down firmly to the ground, in order to contact the leaves as well as leaving marker dye on the leaves and old material on the ground. The latter helps to determine whether the plant has been treated.

Volunteers	15Oct	18Oct	25Oct	13Nov	Total for 2011		
					Herbicide-wiped	Pulled (new plants only)	Overall Total (wiped + new)
RB RZ, YI & BK RB, DL, JC, GC, RT, RA	~2,350W	1500W	1150W	1300 total 500 new	2,650 ~2,350	500	(85)
Total					5,000	500	5,500

The 2011 tally is rather better than previous 2 years:

- 2011 – 5,500 plants wiped or pulled from the entire area
- 2010 – 13,720 (10,140 wiped and 3,580 pulled) but far NW and far NE areas not covered
- 2009 – 22,570 (2,290 dug and 20,280 pulled) but far NW corner not covered

There were very few AWO in the areas nearer the river (the lower half of the reserve) where there were once very high numbers and where, in 2009 & 2010, most of our efforts had been concentrated (plants there were mostly dug or wiped). It is possible, however, that seasonal effects may be responsible for the smaller numbers of AWO this year.

We cannot afford to experiment at this site by leaving part of the reserve untreated as a control, since each plant can produce an enormous number of viable seeds that spread easily with the wind. We must continue to do our best and hope that it is possible to stem the tide of alien plants that would degrade this magnificent wildflower reserve.