

HFNC Weed Control Report for Nigretta Falls Scenic Reserve 2022

Rod Bird

African Weed Orchid (AWO)

Disa bracteata is a serious environmental pest that was found on this reserve in 2009. Work by members of HFNC to control it and other weeds has continued annually in Spring. The history of attempts to control this pest plant and some others on this reserve has been given in previous reports.

Roger Thompson has attacked this pest plant on 4 occasions across the site in 2022:

- 15 Oct. – dug 160 AWO
- 30 Oct. – dug 200 AWO
- 24 Nov – wiped 162 AWO
- 06 Dec – wiped 212 AWO

The tally (734 AWO) is consistent with results in the previous 4 years but disappointing in that we are not going to eradicate the weed.

Roger dug up some wiped plants a few weeks later and could see no evidence that the herbicide had killed the tubers. That is a little surprising because our research in 2014-15 on the Nigretta Flora Res had shown that, when dug up a full year after treating with either Ally or Glyphosate or both, there was almost zero survival of plants or tubers. Almost all of the control (untreated) plants had tubers. As indicated below, we hope that the nil effect seen by Roger is only a result of insufficient time for the herbicide to act. A summary of the 2014-15 research is given below.

In 2014 we established a trial to assess the effectiveness of *Metsulfuron methyl* and *Glyphosate* in killing the plants and tubers. We set up 3 blocks (replicates) of 4 herbicides with 2 times of application (21 Sept. 2014 before flower heads developed & 10 Oct. 2014, before flowering). In each block there were 4 or 5 plants per treatment. Plants were marked with a tagged pin 5 cm away on the Sth side:

1. Control (no treatment) – total of 29 plants
2. Glyphosate (60 mL/L of wipe solution) – total of 29 plants wiped
3. Metsulfuron methyl (1 g/L wipe solution) – total of 29 plants wiped
4. Glyphosate + Metsulfuron methyl (as above) – total of 29 plants wiped

The results in 21 October 2015 when plots were inspected (and soil near the pins dug up) were:

1. Control (untreated) plots – of 29 plots, 25 had plants present and 28 had viable tubers.
2. Glyphosate plots – of 26 plots none had plants or tubers (3 pins could not be found)
3. Metsulfuron plots – of 29 plots none had plants but 6 had tubers that were a little shrivelled
4. Glyphosate + metsulfuron plots – of 28 plots 3 had small, dead plants and 4 had shrivelled tubers (1 pin could not be found)

Works to control AWO on this reserve since 2009:

- 2022 – 734 AWO dug or wiped
- 2021 – 300 AWO dug or wiped (7.75 hrs)
- 2020 – 1004 AWO dug or wiped (15.1 hrs) and clumps of *Ixia* spot-sprayed (0.3 hr)
- 2019 – 806 AWO dug or wiped (10.2 hrs)
- 2018 – 725 AWO dug or wiped (approx. 9 hrs)
- 2017 – 603 AWO dug (22.5 hr)
- 2016 – 1618 AWO dug (20.7 hr), incl. 244 in early Jan. 2017
- 2015 – 276 AWO dug (5 hr)
- 2014 – 787 AWO dug and 15 plants pulled (15 hrs) – 38 of those were dug in Feb 2015
- 2013 – 230 AWO dug (2 hr)
- 2012 – 70 AWO, 220 Wild Gladiolus, 50 Grevillea and dozens of *Ixia* pulled (2.3 hrs)
- 2011 – 50 AWO dug and 12 Grevillea plants pulled (4 hr)
- 2010 – 180 AWO dug; 615 AWO, 450 Wild Gladiolus, 70 *Ixia* & 87 Grevillea pulled (12 hr)
- 2009 – 217 AWO dug and 104 AWO and 10 *Grevillea rosmarinifolia* pulled (6 hrs)