



HAMILTON FIELD NATURALISTS CLUB

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Report on Weed Control Work at the Fulham Streamside Reserve in September 2007

Summary

- Activities – the HFNC (11 members) spent 83 person-hours from 13-16 Sept. and 20 Sept. 2007 spraying pest and environmental weeds on floristically-rich parts of the western half of the Fulham Streamside Reserve. We did not spot-spray any weeds beyond a few metres north of the River Track because that part between river and track is so infested with *Sparaxis*, or so degraded by past broad-scale spraying for Cape Tulip, that unfortunately it would largely be futile.
- Herbicides used – metsulfuron methyl (Ally) and glyphosate (Roundup), together with a surfactant (Pulse) and dye marker (purple). Weeds were, wherever practicable, carefully spot-sprayed to achieve little off-target deaths. The objective is to allow adjacent native species to re-colonise the small areas sprayed. We are convinced that is the only way to restore the area to its previous botanic composition and health.
- Weeds controlled – One-leaf Cape Tulip, Halequin Flower, African Weed Orchid, Wild Gladiolus, Bridal Creeper, Perennial Veldt Grass, Toowoomba Canary-grass, Cocksfoot, Yorkshire Fog-grass and Spear Thistle.
- Locations of weed hotspots – most were marked by GPS, to enable follow-up work in later years.
- African Weed Orchid – we saw no plants, possibly because we were too early (some plants have flowered on the rail reserve west of S Reeds Rd near the Wannan in mid-October this year)
- Harlequin Flower – the degree of infestation from *Sparaxis* was greatly reduced in areas spot-sprayed in 2006 but we found many other sites of infestation not sprayed in 2006. Our first efforts went to further work in the sites tackled in 2006. Our efforts were then directed to “new” areas in the western half (see attached map). Principal among these were the western edge along the stream and old railway line; the area between the railway line and the main N-S Entrance Tk; a “new” heavily-infested section of the *Melaleuca neglecta* flat.
- Cape Tulip – this weed was present in appreciable numbers, almost all pre-flowering, usually associated with old tracks but also in discrete patches spread across the landscape. This weed, and that of *Sparaxis*, is readily spread by grader/bulldozer tracks and recreational vehicles, presumably also from seed carried by the vehicles.
- River Track – we propose again that this track be improved (there are several sites that could be made trafficable by building up with sand or gravel) to allow all-year traffic, rather than attempt a seasonal closure – unsupervised closures and absence of fines ensure that signs will always be ignored by 4WD drivers accustomed to doing as they please.
- Iluka’s new bore track – we were dismayed that Iluka was allowed to install a track into the central part of the reserve, thereby ensuring that this area will also be invaded by weeds. Surely a bore could have been sited at a more appropriate position adjacent to an existing track where it would not have compromised the botanic integrity of this reserve? We are alarmed that ParksVictoria did not stress the importance of this area as a biological reserve. We understand that Iluka has undertaken to cease driving on the track but others are doing so out of curiosity and unless the track is permanently closed off and rehabilitated the damage will increase.
- Western-most loop track south off the River Track – we recommend this be permanently closed because it is a danger to the long-term integrity of the vegetation in these valuable marsh areas. We spent much time spot-spraying infestations of *Sparaxis* along and adjacent to this loop track. If the River Track is open there is no reason for the other track to remain open.
- Off-road recreational vehicles constitute a danger to the reserve, through spreading weeds, cutting up fragile areas and risking the spread of Phytophthora. We observed signs of significant vehicle damage adjacent to the Entrance Track, just short of the River Track, where a vehicle had ploughed along an old closed-off track, passing through *Sparaxis* and one of the 3 known clumps of *Pterostylis nutans* in the reserve. **Signs are needed** to remind drivers of their responsibilities. Is it possible to also provide some strategic barriers?
- Status of the reserve – if this reserve had the status of **Flora & Fauna Reserve** would that enable more funding to be available to manage and protect it? Since more than 320 native species have now been found on this reserve, with several rare and endangered, we believe that status is deserved (at least for the portion south of the River Track). HFNC is prepared to advance a case, possibly through VEAC, if that would help.

Birds seen – 50 species, incl. “new” birds in Flame Robin, Rufous Songlark and Powerful Owl, bringing the total to 93 for this area.

Mammals – Grey Kangaroo & Black Wallaby. In 2006 a Sugar Glider tail was found, while in May 2007 a Birds Australia group saw a Yellow-footed Antechinus sunning in a River Red Gum spout.

Flora – no new species were recorded, the total of native species 323.

Works undertaken in 2007

From 13-16 Sept. 2007 and 20 Sept. 2007 at the Fulham Streamside Reserve, members of Hamilton Field Naturalists Club located and sprayed the noxious and environmental weeds listed below:

- *Moraea flaccida* (One-leaf Cape Tulip)
- *Sparaxis bilbifera* (Halequin Flower)
- *Disa bracteata* (South African Orchid)
- *Gladiolus undulatus* (Wild Gladiolus)
- *Asparagus asparagoides* (Bridal Creeper)
- *Phalaris aquatica* (Toowoomba Canary-grass)
- *Dactylis glomeratum* (Cocksfoot)
- *Holcus lanatus* (Yorkshire Fog-grass)
- *Cirsium vulgare* (Spear Thistle)
- *Ehrharta calycina* (Perennial Veldt Grass)

The general areas spot-sprayed were:

1. **The SW Block** - from entrance at Edgewood Rd, running 1.4 km N along Entrance Tk to the junction with the W track that runs to the old railway bridge, and S along the railway line and creek from 37-09-15.4/141-51-17.5 to the Edgewood Rd. This area was heavily infested with Sparaxis and Cape Tulip on the W edge (the railway area), with many patches near old tracks through the reserve. The edge of Entrance Tk was treated in 2006 and again this year.
2. **The NW Block** - the area N of the track at 1.45 km from the entrance (37-09-13.8/141-51-34.0) W to the river frontage at the most southerly bend, then running N and including all areas W of the Entrance Tk and river as far as the road closure point on the River Tk (37-09-04.2/141-51-46.4). It has some Cape Tulip, Sparaxis, Perennial Veldt Grass and Bridal Creeper but also patches of Red-Beak Orchids.
3. **The Central Block** - large area E of the Entrance Tk from Edgewood Rd (37-09-56.4/141-51-23.2) N to the river, thence E beyond the newly closed section of the old River Tk to its junction with the diversion loop at 37-08-54.8/141-52-59.2, with the area S of the River Tk (especially the *Melaleuca neglecta* swamps) being treated for many infestations of Sparaxis, Wild Gladiolus, Cape Tulip and Phalaris. We were only able to survey and treat the margins (approx. 200 m wide) of this large area and more effort is needed in future years to survey and eliminate any patches of Cape Tulip that may exist in the central parts.

The precise location (**GPS latitude/longitude co-ordinates on Aust 84 datum**) of the infestations are listed below, so that these areas can be re-located next year for follow-up treatment.

1. The SW Block

- 1.1 In 2006 an extensive, severe infestation of Sparaxis and the odd Cape Tulip ('CT') occurred along an old track, extending 150 m N and 50 m S of the bulldozed fire line. At the S end, this infestation was ~30 m W of the Entrance Tk but largely confined to and near the old (disused) track. These plants were sprayed in 2006 but the area needed further close attention in 2007 for the plants had invaded native vegetation. Sparaxis along the Entrance Tk N was much reduced from 2006.
- 1.2 From the junction with the W Tk at 1.4 km, many patches of Sparaxis and CT were found S of the West Tk towards the old railway bridge.
- 1.3 "Parking Area" at 37-09-15.4/141-51-17.5, where the West Tk turns N along the railway line to the bridge. This area was blanket-sprayed in years past and new CT given somewhat similar treatment recently. Many plants were missed altogether and it is doubtful whether all those sprayed were actually hit by the spray, since they appeared to be relatively undamaged compared with others. We sprayed along the line N to the bridge and in the area W and S of the old fence line at the parking spot.
- 1.4 Big tree E of creek ~ 100 m from 1.3 (37-09-19.1/141-51-19.6) – big patch of CT.
- 1.5 Area E of 1.3 ~150 m (37-09-18.1/141-51-20.8) – clumps of CT.
- 1.6 W End of fire break (37-09-20.6/141-51-18.3) that runs E to Entrance Tk – an extensive outbreak of Sparaxis and CT on the track and off it.
- 1.7 Area in line with River Red Gum cut for sleepers, E ~ 100 m out from S along creek (37-09-22.3/141-51-19.9) – small patch of CT.
- 1.8 W of 2 cut trees at 37-09-23.1/141-51-18.8) – area of ~5 m² of Sparaxis.
- 1.9 Patch of Sparaxis on old track ~ 50 m E of Site 1.8 (37-09-23.6/141-51-21.2).
- 1.10 ~ 100 m S of 1.8 (37-09-25.1/141-51-19.0) – area of ~5 m²
- 1.11 Between big trees N up railway line (37-09-32.1/141-51-19.7) – patch of CT.
- 1.12 Near big cut River Red Gum (37-09-23/141-51-20.9) and ~70 m S to another cut tree and a patch of CT.
- 1.13 Along the railway line at 37-09-26.0/141-51-18 – this was the S end of Sparaxis infestation along the creek and railway line but CT continued sporadically further S. We sprayed from that point N down the creek towards the bridge (1.3) but the infestation was so extensive that some damage to other vegetation was inevitable.
- 1.14 Further S along old railway line at 37-09-31.3/141-51-18.4 – patches of CT off to E and on the line (good patch of Spider Orchids off to the E).
- 1.15 N of orchid places, ~100 m from railway line, at 37-09-30.1/141-51-21.6 – patch of CT.
- 1.16 Several patches of CT ~100 m from Entrance Tk at 37-09-30.0/141-51-23.4
- 1.17 Sparaxis ~25 m² on an old track ~125 m E from railway line (37-09-25.9/141-51-21.3).
- 1.18 Further S along railway line to a pipe under railway line (37-09-32.1/141-51-19.7) – patch of CT.

2. The NW Block

No particular GPS readings were taken in this area – we sprayed many isolated plants of Bridal Creeper (particularly among trees and shrubs near the river in the N section), Wild Gladiolus and clumps of pasture weeds. CT and Sparaxis were present in the S end along the river.

3. The Central Block

- 3.1 N side of River Tk from end of Entrance Tk to Chain Lock on River Track – Sparaxis along the bank.
- 3.2 S side of River Tk to Chain Lock on River Tk – Sparaxis, Cocksfoot and Phalaris clumps.
- 3.3 Patch of CT ~ 70 m SW of Chain Lock at 37-09-06.0/141-51-44.3 – this site rutted recently by a 4WD.
- 3.4 Along River Tk to Melaleuca Flat – main area of CT (~100 plants) started at 37-09-06.3/141-51-49.4.
- 3.5 Near new drain running N to the river, near edge of Melaleuca Flat 37-09-05.9/141-51-54.4 – patch of ~50 CT
- 3.6 Corner of old Loop Tk that skirts the W edge of main boggy area of Melaleuca Flat (37-09-05.9/141-51-56.8) – 100s of Sparaxis along old track and off the edges, with 4-5 patches of CT ~50 m S in the melaleuca.
- 3.7 E edge of Melaleuca Flat at 37-09-04.8/141-52-04.2 – a big patch of CT and Sparaxis near the River Tk and along the old track S along the E edge of the swamp (see also Site 3.19)
- 3.8 Between 3.6 & 3.7 a lot of Sparaxis in Poa tussocks and on the saline flat spreading out from the River Tk. This area messed up by 4WDs and a bulldozer putting in a drain off the track. Big holes here in the track. Ally without glyphosate used among the tussocks, in an effort to retain the grass.
- 3.9 E edge of Melaleuca Flat 37-09-10.9/141-51-59.2, ~100 m x 50 m of CT in the sedge.
- 3.10 Further E, edge of Melaleuca Flat in sedge and bare saline area 37-09-11.7/141-52-00.9
- 3.11 A large patch of CT (~40 m²) and 3-4 other patches to N
- 3.12 A small patch of Sparaxis & CT ~40 m (37-09-11.1/141-52-01.4) from 2nd Diversion Tk
- 3.13 2nd Diversion Tk from River Tk – Sparaxis & CT – small spot ~2 m² on edge of Tk on W side at 37-09-11.7/141-52-03.7 and a large patch of CT 20 m SW. Also, 3-4 small patches of Sparaxis (2 ~1 m² & 1 m²) along the W edge of the Tk further S.
- 3.14 S side of Diversion Tk at 37-09-13.6/141-52-05.8, an area of Sparaxis 20 m x 3 m. This outbreak needs a particular watch.
- 3.15 Rubbish heap in an old tree at 37-09-07.6/141-52-11.9. A few Sparaxis nearby on bulldozed Tk.
- 3.16 N end of bulldozed fire line at 37-09-08/141-52-10.3 on SE end of Melaleuca Flat – a large area ~10 m x 3 m of Sparaxis there. **Much of the bare area here is due to past blanket-spraying of CT and not salinity.**
- 3.17 E side of Melaleuca Flat ~ 250 m S from River Tk at 37-09-07.6/141-52-09.8. This was an area of some 50 m x 30 m and a very significant infestation of Sparaxis and some CT in 6-8 patches of 2-3 m².
- 3.18 E side of Melaleuca Flat near an old River Red Gum stump (37-09-06.4/141-52-06.7) ~ 100 m S of River Tk – an area of 25 m² CT. Some individuals further along an old track N towards River Tk.
- 3.19 E edge of Melaleuca Flat on River Tk at 37-09-05.1/141-52-04.3, ~20 m E of the culvert. Used Ally alone at this spot to spray Sparaxis among the tussocks in the margin along the E flank of the swamp.
- 3.20 On 2nd creek, on the now blocked section of the River Rd (37-08-59.1/141-52-45.5) – 2 patches of CT on N side and Sparaxis on the track and on N side. A patch of Sparaxis of ~10 m x 6 m occur on S side plus 2 patches of CT ~15 m S of the track, E of the creek.
- 3.21 2 patches of CT each side of the log across the track at 37-08-58.3/141-52-48.4, ~70 m E of 3.20.
- 3.22 A patch of CT on N side of track at 37-08-57.4/141-52-49.5, ~70 m E of 3.21.
- 3.23 Further E on the track, a large patch of CT on S of track at 37-08-57.4/141-52-52.2. This is an area of old blanket-spray that has obliterated other vegetation. Another area of CT occurs near a trench and big old stump and several patches of CT further S.
- 3.24 Junction of close part of old River Tk with diversion now being the new part of the River Tk (37-08-54.8/141-52-59.2) – sprayed Sparaxis on N edge of this junction.

We had no time to check areas further E along River Track, to the culvert at 37-08-53.4/141-53-10.3, the eastern end of the area we checked in 2006. Nor did we check the creek and its tributaries running from Edgewood Rd through the reserve to this point on the River Track. Also, the areas noted along Edgewood Rd were not checked in 2007. These areas, detailed in the 2006 report, need to be checked in 2008 in order to mop up remaining plants.

Works

Thursday 13 Sept 2007- RB 6 hr

Friday 14 Sept 2007 – RB 4 hr

Saturday 15 Sept 2007 – RB 7 hr; RZ & DL each 6 hr; JX, JC & GC each 6 hr; KG, JG, JH, DM & LM each 5hr

Sunday 16 Sept 2007 – RB, RZ, DL, JX, JC, GC each 3 hr

Thurs 20 Sept 2007 – RB 8 hr

Total 83 hours

Chemicals

Spray applied Thurs 20 L, Fri 20 L, Sat ~75L, Sun ~30 L, Thurs 15 L = 160 L

Glyphosate 240 mL, Ally 48 g, Pulse 480 mL, colour 640 mL.

