

LCC SW, District 2 – comment on draft recommendations

HAMILTON FIELD NATURALISTS CLUB

SUBMISSION ON

WANNON RIVER L.C.C. SW-2 PROPOSED RECOMMENDATIONS

(SECTION BETWEEN WANNON FALLS AND CAVENDISH)

1. The recommendations are inadequate because:
 - (a) the high scenic, conservation (and recreation) values are not sufficiently stressed (see appendix for detail),
 - (b) the conflict between continued grazing and proper regeneration of the frontage areas is not stressed (see appendix for detail),
 - (c) recommendations are found in scattered fragments through the report and are not combined in a cohesive whole that emphasises the integrity of the river system,
 - (d) LCC map does not show Crown frontage at:
 - south bank of Wannon at Wannon Falls (c. 7 ha)
 - south bank triangle area below Nigretta extending to the tourist road
 - south bank area upstream from Nigretta Falls and just prior to Reserve on opposite bank
 - east bank upstream from Four Posts, just downstream from Fernhill creek
 - river frontage on west bank from Sawpit creek to Bulart Bridge
 - Public Reserve on west bank at The Rapids.
 - (e) *The Rapids* : The major disappointment in the LCC report for the Wannon river is the failure to recommend a *Flora Reserve* for the Rapids Reserve and Crown frontage either side.

The total area of Crown reserve and frontage is well over 150 ha of prime natural woodland, heath land, thickets and river vegetation. The area involved is actually larger than would appear from inspection of some maps - the river plain upstream from the rhyolite Rapids section is very wide and the stream has often altered course. The result is a wide area of crown land between the surveyed river bank frontage - this is now heath land-sand.

There are at least 173 species of native flora around The Rapids itself and a total of 182 recorded for that area plus the immediate area upstream. Of these species, no fewer than 30 are not found on any Crown frontage or Reserve in the Wannon area. These include *Eriostemon angustifolius* (nearest record Northern Grampians), and *Pimelia stricta* (nearest record Little Desert). Others are *Bossia riparia*, *Pultenea dentata*, *Polypompholyx tenella*, *Pratia platycalyx*, *Myoporum viscosum*, *Acacia verniciflua* (Grampians nearest records). *Dodonea cuneata* (rare on the Wannon) and the *Eriostemon* are conspicuous at The Rapids but have been degraded by grazing cattle.

By contrast the LCC has recommended Flora Reserve status for other areas with intrinsically less claim, e.g. Nigretta with 103 species on both banks. The "18 acre" Reserve at the Wannon has 171 species. (Both areas deserve this status). See attached appendix for further detail.

An inspection of The Rapids area by the committee would substantiate our submission.

- (f) *Public Reserve between Four Posts and Nigretta* : Floristically this Reserve (c. 20 ha) is as significant as the Nigretta west bank. It contains 100 native species, possibly including *Aristida ramosa* (a Mallee

outlier) which occurs on the bank towards Four Posts. The vegetation is mainly heath land species together with riparian species, particularly well represented by *Juncus* spp.

We recommend that this area ^{also} be made a *Flora Reserve*.

2. The following recommendations should be supported:
 - (a) Flora Reserves H8 and H9 ("18 acre reserve", and north of Nigretta Falls)
 - (b) Streamside Reserve K10, grazing not permitted (Four Posts) -(but why not a Flora Reserve?)
 - (c) Scenic Reserves P5, P6 (Wannon Falls south of Highway, Nigretta Falls south of river, emphasising protection of native flora).
3. *The recommendations of the Wannon River should be strengthened and highlighted by the LCC making a new category within its section on Rivers and Streams; that of Scenic River.*

The term "Scenic River" would be applied where the scenic and conservation values of a river makes it imperative that certain land use guidelines be adopted to ensure that these values are maintained, and enhanced if possible.

The Wannon River between the townships of Wannon and Cavendish has these features:

- (a) *Scenic:*
 - (i) river red gum woodland
 - (ii) spectacular steep sided gorges
 - (iii) dense thickets of riparian vegetation
 - (iv) two waterfalls of national significance (Wannon Falls and Nigretta Falls), plus a little known but spectacular section upstream of Four Posts known as The Rapids.

NB. Paintings of the Falls by early Australian landscape artists, in particular Thomas Clark and Louis Buvelot.
- (b) *Conservation:*
 - (i) The densely wooded character of much of the river frontage provides an important migratory corridor
 - (ii) the river valley contains a rich flora - over 330 native species, many of them unknown elsewhere in the Hamilton district.
 - (iii) valuable remnants of the Dundas tableland grasslands
 - (iv) very little Crown land is to be found in the surrounding area
 - (v) birds - 140 species recorded
 - (vi) native mammals:
 1. Definitely recorded: koala, grey kangaroo, feather-tail glider, swamp rat, echidna, sugar glider, platypus, water rat, brush tailed possum, ring tailed possum.
 2. Possible: *Antechinus* spp, shortnosed bandicoot, barred bandicoot.
- (c) *Recreation:*
 - (i) close to a large population centre
 - (ii) popular fishing area
 - (iii) high potential for walking trails
 - (iv) scenic values attract visitors, especially to the two falls
 - (v) both falls are on or close to a major tourist highway (Glenelg Highway).

Proposal:

That those sections of public land from and including the Township of Cavendish to the Township of Wannon that comprise the bed of the Wannon River and its associated frontages, be designated a *Scenic river*, and that all public land water frontage reserves and other unreserved portions of public land not mentioned elsewhere in the recommendations be permanently reserved under section 4 of the Crown Land (Reserves) Act 1978. (Note - The Rapids and nearby river frontage should be reserved as a Flora Reserve).

That public land within the Scenic River be used to:

- (i) protect and conserve native flora and fauna
- (ii) maintain the scenic beauty, character and quality of the landscape
- (iii) provide opportunities for low intensity recreation (e.g. fishing, walking, canoeing, nature study)
- (iv) provide opportunities for education including interpretative services
- (v) protect adjoining land from erosion by the maintenance of adequate vegetation cover
- (vi) permit light intensity grazing and access of stock to water *only in areas where it can be clearly shown that achievement of objectives (i) to (v) above are not impaired by such use.* (This statement is much more positive than that given on page 67 of the report - the single, most damaging agent is grazing in this area).

Recommendations H18, H19, P5 and P6 enhance the Scenic River proposal.

APPENDIX

WANNON RIVER RESERVES

Introduction

The area under consideration extends from the Wannan Falls Public Reserve some 30 km upstream to Bulart Bridge. Substantial Crown Reserves exist at Wannan Falls, Nigretta Falls, midway between Nigretta to Four Posts, Four Posts, "The Rapids" and Bulart Bridge. Between these areas are many smaller Crown frontage lands containing vegetation in a near-natural state - valuable relics of the original flora. As well, there are extensive frontage reserves - often the river gorge is 1 km wide - fenced off and containing native vegetation in a natural state but apparently freehold land. These areas connect the Crown Reserves together. Typical examples are: frontage opposite Hewett Park; West bank downstream from Nigretta; West bank upstream and downstream from Four Posts. According to the provisions of the Water Act, the bed and banks of the river are still Crown land, since in all cases here the river forms the boundary between all allotments sold prior to 1881 (after 1881 Crown frontages exist between sold allotments and the river). There is some doubt as to what constitutes a "bank" - is it the entire gorge? If so the area of Crown frontage is much greater than we have thought - e.g. around Four Posts and The Rapids.

The 1977 report of the Standing Consultative Committee on River Improvement ("Management Strategy for the Wannan River") stresses the importance of retaining and regenerating vegetation on the river banks and controlling grazing on the frontages so that river bank erosion is minimised along the Wannan. In most cases the river banks are long and steep and, due to their inherent infertility, have little grazing value. The frontage owners have mostly recognized this and have fenced the bank high on the top - this has materially prevented gully erosion, although the frontages receive some grazing.

Collectively these frontages and Reserves should be managed to ensure that they retain and enhance their natural values and to prevent further erosion and siltation of the Wannan. At present neither conservation of the flora or the landscape is being satisfactorily managed - yet this wooded area of the Wannan is all that is left of the river environment. Grazing (licensed and otherwise) occurs on sensitive areas which contain important floristic elements - in particular the West bank of the Nigretta Reserve, the Crownfrontage upstream from Nigretta and The Rapids section. At the Wannan Reserve and Flora Reserve alone there are c. 239 species of flora - and there are many species along the river which have special significance (see later).

The entire frontage has an impressive list of plants (c. 332 native indigenous species) and is a very valuable repository of flora. The Varied habitats along these frontages include: dense Gahnia swamps, thick Poa tussock grassland in swampy areas, Acacia verticillata and woolly tea-tree thickets on seepage areas, bracken dominant slopes under Manna gums, open grasslands dominated by Themeda and Danthonia, sandy heathland with showy tea trees and heath species, Sheoak and Banksia groves, River redgum and Swamp gums lining the water course. The bird list for this frontage area comprises some 138 species. The Wannan valley contains many reptiles but these have not been documented. The very isolation of some beautiful areas is one feature that must be preserved, e.g. the spectacular "Rapids" area which has *Eriostemon angustifolius*, *Myoporum viscosum*, *Dodonea cuneata*, *Pimelea stricta* and *Acacia verniciflua* - outliers of a Mallee-type

vegetation cut-off here on the Wannon is one rocky section. We see the Wannon Falls, Nigretta Falls and Four Posts providing developed facilities, and a gateway for walkers along other parts of the river. The turbulent "Rapids" section is virtually unknown (except to fishermen) and equals that of Nigretta Falls in scenic appeal and flora. Flame heath and Common heath occur upstream along this section of the Wannon - and on one small section of a road verge east of "The Rapids" - but nowhere else near Hamilton.

We believe that the most immediate need for management lies in the termination of grazing licences - a vital concern for the retention of indigenous flora (especially on Areas 2B, 3A, 8B, 10B, 20A, 20B to 23A, 23B) - and the control of vehicles (2A, 8A, 13, 20A) and weeds (2A, 8A) - see map

II. Characteristics of the Wannon Frontage Areas (see also map)

- (A) Wannon Falls Public Reserve (map area 1, 2A, 2B) within the Parish of Wannon and bounded by Redruth (West) and Bochara (East). The reserve is c. 47 ha on East bank (c. 12 ha of *Pinus radiata*), 8 ha Flora reserve (across the road from "Boomerang gate" - acquired about 1960), and 7 ha on West bank across the Falls in the "U" bend of the river. The "18 acre" Flora Reserve has been actively managed by the Hamilton Field Naturalists since 1961. This small Flora reserve contains some 171 species, including a superb grove of Silver banksia. Species not found elsewhere along the Wannon include Prickly cryptandra, Gorse bitter-pea and *Hybanthus floribundus* (shrub violet). *Isopogon ceratophyllus* here is commonplace, but only one other plant of this species has been seen elsewhere along the Wannon (at The Rapids). Orchids are commonplace here as are pea flowers of the *Dillwynia* and *Platylobium* species.

Problems have been referred to earlier, e.g. indigenous flora is gradually being displaced by aliens (*A. longifolia*, *Pinus radiata* seedlings, deciduous suckering trees in the gorge); grazing of the 7 ha area (2B); uncontrolled vehicle movement in the middle sections of 2A. Tree ferns once grazed the spray-zone under the Falls - they were removed years ago. Other ferns too have suffered but several species still survive in isolated and small areas (e.g. *Blechnum* spp. found on the extreme downstream end of 2B; *Pellaea falcata* and *Doodia caudata* near the Falls). Other plants of note here are *Lemma minor* (Common Duckweed) growing in seepage pools behind the waterfall; inland pigface, Austral and Magenta Storks-bill, and nodding saltbush, all on the rock faces; *Dianella tasmanica* (Flax lily), Sweet bursaria, and small-leaf bramble along the water edges. A large area of *Boa* tussocks is also to be found downstream. Higher slopes contain many Helmet orchids and Greenhoods beneath the Manna gums.

(B) Frontage from Wannon Falls to 1 km Upstream from Railway Bridge (3)

Parishes of Wannon, Redruth and Bochara - includes a small reserve (c. 2 ha) between the two vehicle bridges and 1½ chain frontage on both banks as far as the boundary of the Wannon township (which is just downstream from the Railway bridge). Upstream the East bank for c. 1 km from the Railway bridge is fenced, with some native vegetation. The other bank is unfenced and grazed. In parts, the 1½ chain frontage has been fenced out (e.g. near the Falls) and elsewhere is grazed under licence by horses and cattle. Exploitation of the area for sand still goes on. On balance, this area has the capacity to regenerate; it still has plentiful taller species such as *Leptospermum*

obovatum, *Acacia verticillata* and *E. camaldulensis*. Bird life here is notable, including the Barking Owl. The total area of this Crown frontage is c. 16 ha.

A point of interest is an area of *Triodia irritans* (Porcupine grass) at the junction of the railway line and the Wannon-Nigretta Road (this is believed to be one of the most southerly occurrences of this species).

(C) Wannon upstream to near Nigretta (4-7)

Parishes of Redruth and Toolka (West bank) and Bochara (East bank).

The drainage Reserve is extensive but unfenced; the River plain has had a drain across the centre put in. There are now two channels (c. 1 km apart) through the silty soil which easily erodes. The area is heavily grazed.

Upstream from the confluence of the channels, the West bank is fenced close to the water, but the East bank has no fence until about 1 km upstream. Here the landowner has fenced close to the water for about 1½ km upstream. Where the fence begins, the Western bank frontage widens to enclose a swamp of impressive nature. This is Crown frontage and the waterfowl there are prolific. This fenced reserve continues up to "Mercer's Jungle" (6B). The West bank is steep and fenced high on the slope leaving a wide strip of well-vegetated bank (up to ¼ mile wide), comprising at least 24 ha.

"Mercer's Jungle" (c. 60 ha) is an arm of *L. lanigerum*-*A. verticillata* along the hill to the North. The swampy valley is fenced on both sides to about ½ km width and includes native grasslands and wooded copses. Kangaroos abound here and shelter in the dense thickets of tea tree and *Gahnia clarkei*. There are at least 152 native flora species, one being *Lycopus australis*, a rare species, but abundant here.

Between "Mercer's Jungle" and Nigretta Falls, the frontage is freehold and fenced high on the bank; the vegetation is in a near natural condition but receives some grazing. An unused road gives access to this area. Some *Banksias* and Sheoak occur along the bank, as do various species of Greenhood orchids.

The Eastern bank has long been cleared of all vegetation other than *E. camaldulensis* of which there are many fine old trees on the river. There is Crown land access to the river (8 chain frontage) opposite "Mercer's Jungle" from the Wannon-Nigretta Road.

The West bank frontage that is freehold is too steep and infertile to be of much use for agriculture, and it is very erosion-prone.

(D) Nigretta Reserve (8A, 8B) - Parishes of Toolka and Bochara.

The West bank (c. 12 ha) is currently leased for grazing. This has aided the incursion of weeds following trampling, pugging, defoliation of seedling trees (esp. *Casuarina* and *Eucalypt*) and camping around trees. Part of the Western fence (c. 150 m) has fallen down and needs repair. This area still contains at least 102 species of flora, including *Clematis*, Helmet orchids, *Brunonia australis* (Blue Pincushions), *Sambucus*, *Diuris longifolia*, *P. nutans*, *P. curta*, *Caladenia carnea* (Pink fingers), *Xanthorrhoea minor*, Hop Goodenia, Cherry ballart, and an excellent copse of silver banksia in the sandy northern stretch of the river (8B).

The area provides one of the last large areas of native grasslands in this part of the Western District. The relative freedom from visitor pressure (the Wannon makes an effective barrier), makes the prospect of rehabilitation attractive.

Only in very recent time (1974) has grazing been barred in the reserve and only now is the benefit showing with the grassland flora (chocolate lily, *Thelymitra pauciflora*, Running Postman, *Convolvulus erubescens*, Onion Orchid, etc.) much in evidence in spring. A serious weed problem exists due to past history of management. Unregulated vehicle movements are another problem, causing compaction of the soil and erosion over a large area near the river. The other major problem lies in the suckers from deciduous trees and the continued planting of trees not endemic to the area.

Plants of note in the Eastern bank of the Reserve are *Ptilotus macrocephalus*, *Mimulus repens* (Creeping Monkey Face) on the salty beds, *Dillwynia hispida* (Showy Parrot Pea) near the Falls, *Casuarina stricta*, *Goodenia pinnatifida* and *Goodenia humilis* below the Falls. *Goodenia ovata* on the face of the Falls; magnificent red gums below.

(E) River frontage between Nigretta and Four Posts (9-12)
Parishes of Toolka and Bochara

The 1½ chain Crown frontage on the East bank starts about 30 chains upstream from Nigretta Reserve and extends about 50 chains further upstream (portion of original Reserve). This section is fenced but leased for grazing. The river is no barrier to cattle in summer, and these utilize the opposite bank - parts of which form a large Crown frontage. Evidence of their damage is extensive and regrettable. The solutions must be to ban stock on all fenced sections of the river in an effort to conserve the natural beauty and life of this area.

The West bank is fenced from Nigretta through to Four Posts bridge. At least the central section is reserved - about 55 chains long and up to 10 chains wide, about 20 ha. It runs into similar fenced areas on each side (presumably freehold) but there are no fences running down to the river to delineate boundaries or to control stock. This bank has a wealth of native flora (116 species), including Tree Everlasting, *Bossiaea prostrata*, *Bossiaea riparia*, and much of the Wannon 18 acres Reserve flora. The bird life too is varied, the *Leptospermum* thickets harbour kangaroos, and the water the platypus and water rat. *Aristida ramosa* grassland occurs on freehold land towards Four Posts (11B) - this may be the most southerly occurrence of this Mallee species in Victoria.

The Eastern bank is fenced along the northern sections as far as the old Hamilton City quarry (12A), apart from isolated stock watering 'inlets'.

(F) Four Posts Reserve and Crown Frontage (13, 14B)
Parishes of Toolka and Bochara

The East bank Reserve of around 5 ha extends from the bridge to Kerr's bluestone quarry upstream. It contains a fine stand of Drooping Sheoak, a few specimens of *Astroloma conostephioides* (Flame heath), *D. sulphurea*, *Thelymitra pauciflora*, *T. rubra*, *T. ixioides*, and many other native species. The Flame heath record appears to be the nearest yet found to Hamilton. The bank there is steep, infertile and dominated by grassland flora, notably *Themeda*. It is not grazed.

The West bank contains a narrow Reserve frontage between the road and Hewett Park (ex Reserve, ex quarry) and a wide Crown frontage around Hewett Park (c. 20 ha). The area contains *Brunonia australis*, *Dondonea cuneata* (Hop bush), *Senecio* spp., *Goodia medicaginea* and a host of other shrubs and, when Hewett Park recovers from gravel stripping, the whole area will, to some extent at least, regain its former significance. Regeneration of Redgum, Swamp gum, Acacia, Banksia and tea tree is substantial.

Current problems are unmanaged tourism, rubbish dumping, sand removal, trail bike riding on the steep banks and vandalism to trees.

(G) River frontage opposite Hewett Park (14A, 15A) - Parish of Bochara.

This bank (East) is part of the deep gorge of the Wannon and consequently the depth of the fenced portion is up to 400 m. There are two large creeks entering the river, one through a rhyolite "fall".

The area contains a relatively undisturbed flora, notably with a large grove of Silver Banksia and heath vegetation in patches, Woolly tea tree along the river, grassland in other areas. The area is fenced down to the river some distance upstream from Hewett Park and the total area is c. 40 ha. The area may be freehold title, but if not, it should be made a priority for purchase. Like the area across the Falls at Nigretta, it will be a most valuable - and naturally protected - flora and fauna reserve. Currently it receives sporadic grazing by sheep, but there is little grazing value on these infertile soils.

(H) River frontage from Hewett Park to Horseshoe Bend (15-17)
Parishes of Toolka (West) and Jerrywarook (East).

The river banks on both sides as far as the Horseshoe Bend may be freehold, but they are fenced along the top of the bank and contain natural vegetation. Because of the steepness of the valley, a considerable area of bank surface is involved (c. 80 ha). *Eryngium vesiculosum* (Prickfoot) occurs near the Horseshoe Bend.

The East bank (riverflat - sandy) of the Horseshoe Bend is Crown frontage (c. 16 ha), the notable shrub species being *Leptospermum myrsinoides* (Silky tea tree), *Dillwynia hispida*, *D. glaberrima*, *Thelymitra ixioides*, *Bossiaea riparia*, *Brachyloma*, Flame heath, and associated heath vegetation. Potato orchid (*Gastrodia sesamoides*), *Comesperma volubile* (Love creeper), and many-stemmed form of *Stackhousia monogyna* (Candles) also occur here. This is one of the few areas of undisturbed sandy heath left on the Wannon and must be preserved. It is fenced at present, but has been grazed.

The opposite bank of the Horseshoe contains Redgum, Manna gum, some Banksia, Tree Violet, *Bursaria* and one of the few occurrences of *Goodenia ovata* on the Wannon.

(I) River frontage and Reserves between Horseshoe Bend and The Rapids (18-20)
Parishes of Toolka, Bulart and Jerrywarook.

The East bank (18A) is virtually cleared and grazed to the water's edge from Horseshoe Bend to Fern Hill creek. Crown frontage begins (fenced) a little upstream and leads up to "The Rapids". Notable flora on this bank are *Acacia verniciflua* ("Casterton" variety of Varnish wattle, not found elsewhere in our region), Flame heath, Hop

bush, Blue pincushions, *Pimelea humilis* as well as *P. stricta* and *Eriostemon angustifolius* (Wax flower). The latter two species are unknown elsewhere in our area and their presence here is most interesting. The nearest occurrence is Northern Grampians and Little Desert. The shrubs grow amidst the rhyolite rocks of the Rapid's banks, as also does *Myoporum viscosum* (Sticky boobialla) and *Dianella tasmanica*.

The West bank is fenced throughout and in places very broad with islands, pools, and towards the Rapids, steep banks with magnificent scenic appeal. In the solitude of these places there is the feeling of a primeval world. The shaded pools are frequented by Sacred Kingfishers, and Kangaroos inhabit the thickets of Cherry Ballart, Redgum, Swamp gum, tangled Dodder Laurel, and tea tree over which one may gaze from the steeper Western bank. *Banksia* groves, Austral bugles (*Ajuga australis*), *Pratia*, *Lobelia* and *Mimulus repens* occur along these reaches. The smallest flowering plants in the world, *Wolffia australiana* and *Lemna trisulca* are found here in summer in pools amidst tall bulrush.

At "The Rapids", the river in full flood creates a spectacle that rivals the Nigretta Falls as it crashes through a narrow gap in the rhyolite lava barrier that has partly blocked the river. The rocky section extends for c. 1 km, and is noted for the ground flora species, particularly orchids. Regrettably, grazing by sheep and pugging by cattle has already caused damage along this section. Vehicles on 20A have created a proliferation of tracks. Access to the area may be made via an unused road reserve from the West.

The area around the Rapids itself is a Reserve of considerable size (c. 40 ha) but it is not delineated in any way from contiguous frontage areas. The frontage areas in both directions along the river are Crown land and of considerable width, with many pools and bends, and flora in near natural condition. The Reserve appears to have been encroached on the West (20B) by farmland, but there appears to have been some compensation made by fencing the frontage downstream fairly high on the hill. The present fenced boundaries should be ratified to avoid future argument.

(J) River frontage between Rapids and Ballintubber (21-22)
Parishes of Bulart and Jerrywarook.

The whole of this region is fenced on both banks and contains river-flats, pools, islands and thickets of *L. myrsinoides* interspersed with grasslands. It is a superb area of natural bushland and is Crown frontage of c. 80 ha. In some instances (West bank) some additional farmland (c. 20 ha) appears also to have recently been fenced into the Crown frontage area. If this is so the correct boundary should be established - or the land acquired for inclusion into the Reserve.

There is much evidence of grazing activity by cattle. Portion of the East bank (21A) has been encroached upon. Access is gained along an unused road from Ballintubber (down the creek).

Due to its isolation, this area contains quite a number of kangaroos that frequent the thickets of tea tree and *Poa* tussocks. It is possible that the bandicoot and *Antechinus* spp. occur here.

The river plain here is very wide, with numerous islands, and the Crown land water area is large. Huge old regums are found along the river.

Notable flora include a few *Epacris impressa*, *Astroloma conostephioides*, *Pterostylis nutans*, *P. pedunculata*, *Corybas dilatatus*, *Pultenea dentata* (rare).

(K) River frontage from Ballintubber to Swapit Creek (23)
Parishes of Bulart and Jerrywarook.

There is a Crown frontage on both banks (c. 16 ha). On the Eastern and wider bank (23A) notable species include a large relic stand of *Epacris impressa* (White form) together with Flame heath, Beard heath and Cranberry heath. Orchids, too, are in evidence. Towards Sawpit Creek, a few *Banksia marginata* occur. The rocky section near the creek has been fenced out and grazed. This is a pity since it is a particularly attractive area. Stock could be given access to the river over a much smaller frontage area than is presently used. The frontage at Swapit Creek is freehold.

(L) River frontage from Sawpit Creek to Bulart Bridge (24)
Parishes of Bulart and Jerrywarook.

There is a Crown frontage of 1½ chains only on the West bank (24B). In most of the course up to the Reserve at Bulart Bridge, the frontage has been encroached upon by farming, but much natural vegetation remains.

(M) Bulart Reserve and Crown frontage upstream to "U" Bend (25A, 26)
Parishes of Bulart and Jerrywarook.

There is Crown frontage on both banks upstream from the bridge and contain both swampy and well-drained ground which is fairly well wooded but heavily grazed. The Eastern bank reserve has been alienated to some extent by cultivation and grazing, but regeneration of prickly tea tree is prolific. This side is not now fenced, although it appears to have once been fenced. The total area involved on both banks is c. 40 ha. Notable species here include *Mimulus repens*, tall Spike rush (*Eleocharis sphacelata*), Feather heads (*Ptilotus macrocephalus*), *Dianella tasmanica* and *D. laevis* (unusual occurrence in this district).

These areas should be adequately fenced and have sheep and cattle excluded, even if only to protect the river from incipient erosion problems.

There is also a small reserve on the East bank (25A) downstream and at the bridge.

WANNON RIVER FLORA SURVEY

1975 - 1991

R.R. Bird

Legend

- roads
- ... unused roads
- + railway
- ~ river
- ▨ Crown frontage fenced or Reserve fenced
- ▨ fenced frontage in "natural" state
- flora survey boundaries
- Falls or Rapids
- ≡ unfenced frontage or Crown Reserve
- swamp
- bridge
- ▭ fenced frontage cleared

