

# Preliminary Audit of the Endangered Narrow-leaf Melichrus in Gibberagee SF

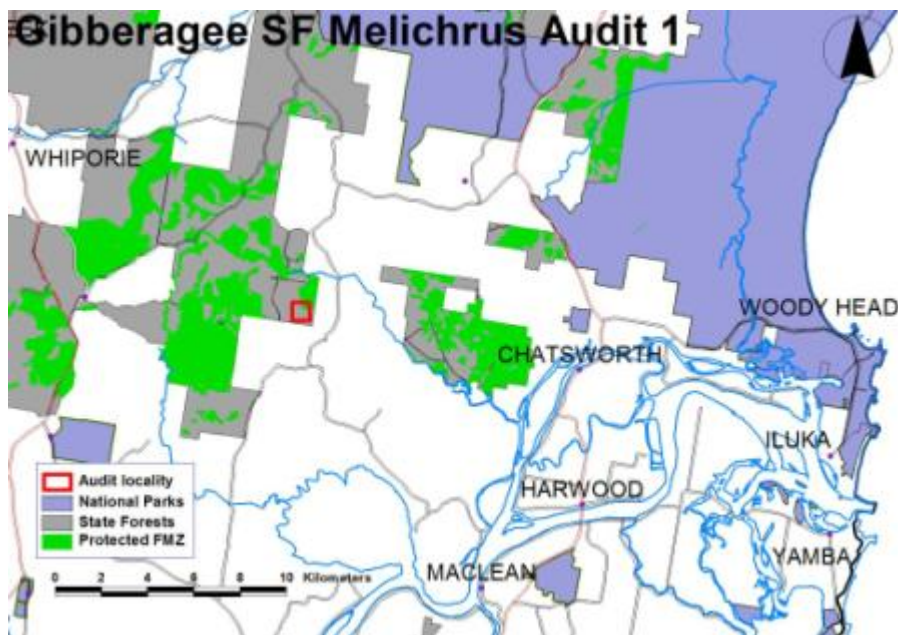
Dailan Pugh, February 2017

This audit covers part of compartment 118 of Gibberagee State Forest, west of Woody Head in the lower Clarence valley. Logging has been underway since October, and is still current.

The Narrow-leaf Melichrus is named *Melichrus sp. gibberagee* as it is yet to be formally described. The existence of this species was discovered during pre-logging surveys brokered by NEFA in 1997. In early 1998, soon after its discovery, State Forests (now Forestry Corporation) bulldozed a road through the heart of an exclusion zone established around the only known population in Gibberagee State Forest, killing dozens and affecting hundreds of individuals. It is now listed as Endangered, both in NSW and Commonwealth legislation.

Narrow-leaf Melichrus is a small shrub, about 1 m tall. It is identified that it is only known from a single population in compartment 118, Gibberagee State Forest, and adjacent private property, about 40 km south of Casino. The entire population occurs over an area of around 1 km<sup>2</sup>.

It was thus decided to undertake an audit of current logging in compartment 118 of Gibberagee SF in the vicinity of the only record of this species given in the harvesting plan. A preliminary assessment for a few hours was made on 6 February and the outcomes are documented herein.



The findings from this initial audit of part of Gibberagee SF are that:

- The Forestry Corporation undertook a pre-logging survey for Melichrus
- The Forestry Corporation failed to establish a legal exclusion zone around the localities of Melichrus.
- The forestry corporation have logged to within 42m of one Melichrus
- The Forestry Corporation have marked and counted habitat trees for retention within what should be an exclusion zone.

- Seven habitat trees (hollow-bearing and recruitment) were identified as being damaged by machinery and tree felling in the small part of the logging area assessed, indicating a continuation of the reckless damage to a high proportion of retained trees documented at Royal Camp and Sugarloaf SFs.
- The Forestry Corporation are logging unmapped streams, without regard to the presence of Oxleyan Pygmy Perch downstream, and in one of the principal catchments of the regionally significant seagrass beds of The Broadwater.

Given that logging is still underway, it is recommended that:

1. a fire and lantana management plan be prepared and implemented for the Narrow-leaf Melichrus occurring in and near compartment 118 of Gibberagee SF as a matter of urgency
2. the EPA ensures the legal identification and marking of exclusion zones for the Narrow-leaf Melichrus
3. the EPA intervene to stop the continuing reckless damage being inflicted on habitat trees.
4. unmapped drainage lines be excluded from logging to protect important downstream habitats, particularly the seagrass beds of The Broadwater.

## 1. Melichrus sp. Gibberagee



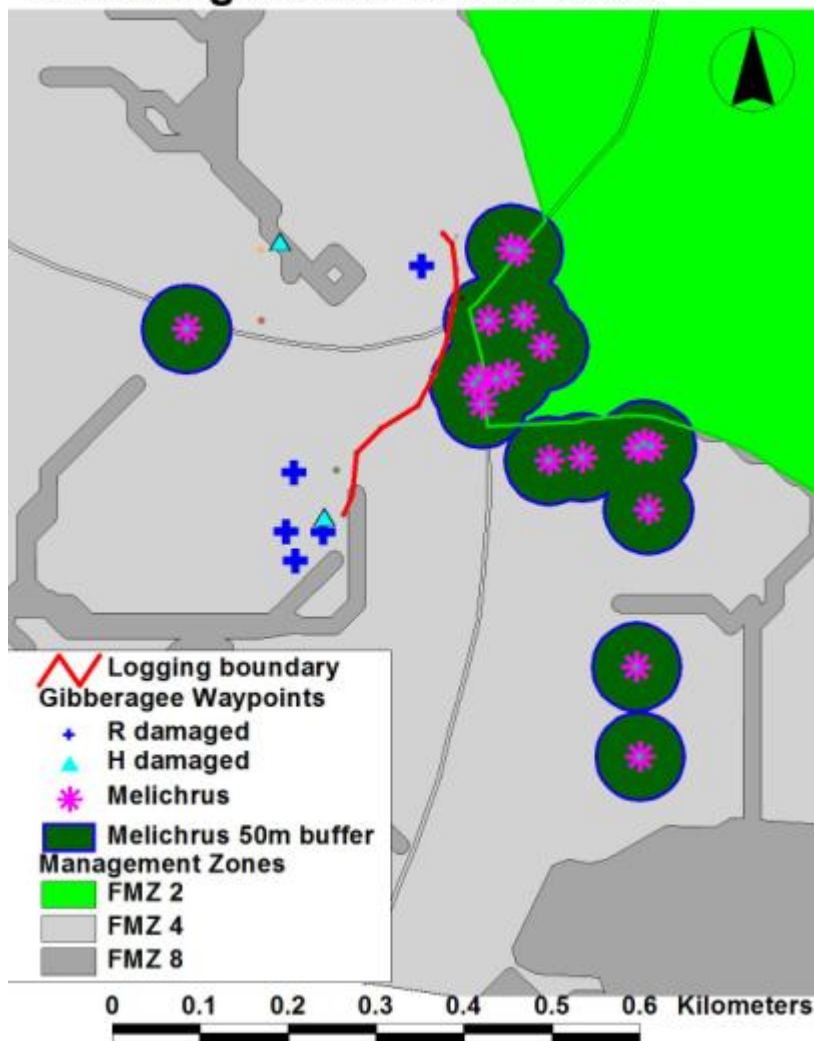
This species was discovered during pre-logging surveys brokered with the Minister for Forests by NEFA in 1997. The Forestry Corporation identified an exclusion zone, included it in a draft harvesting plan, and this was approved by the then Regulatory and Public Interest Committee (RaPIC) subject to the condition "*No new roads/dumps be constructed or reopened within interim exclusion zones for new plant species*".

NEFA attended a site inspection on 17 December 1997 where botanists identified individuals outside the interim exclusion zone which Forestry Corporation agreed to protect. When the Forestry Corporation and NPWS were in the process of developing an agreed management plan in January 1998 the Forestry Corporation used a bulldozer to reopen and widen a track through the middle of their interim exclusion zone for the newly discovered population. resulting in the Forestry Corporation (Doug Binns) admitting 23 Narrow-leaf Melichrus were eliminated by grading, and another 7 plants damaged. NEFA's audit identified an additional 194 individuals that had disturbance (tree heads and machinery disturbance) within 10m (10m buffers were all that was required back then).

State Forests blamed the contractor for not following instructions and suspended him. The contractor in turn claimed he was following State Forests' instructions and, with the backing of the Forest Products Association, commenced legal proceedings to be reinstated. State Forests gave in without a fight, implying they were in the wrong. In March the NPWS approved them to upgrade the illegal road and to log within 10m of Narrow-leaf Melichrus. They got away with it scot free.

Narrow-leaf Melichrus is now listed as Endangered by both NSW and Commonwealth governments, and requires 50m exclusion zones. On this inspection 19 clumps of Narrow-leaf Melichrus were located. Their localities were documented, along with the boundary of the logging area.

### Gibberagee: Melichrus audit 1



The assessment included a rapid assessment of 370m along the logging boundary to locate any Melichrus within 20m either side of the boundary, with a more extensive search in the vicinity of the pre-existing record and a transect through the excluded area. This was not a comprehensive or thorough search. It is apparent that Melichrus is widespread in the general logging area in the vicinity.

It was apparent that surveys for Melichrus had been undertaken by the Forestry Corporation. Those found by us near the logging area had been identified prior to logging, judging by some spray markings and pink tape. It was found that a large area has (so far) had logging excluded.



For some obscure reason, rather than identifying a formal exclusion area around the plants the Forestry Corporation instead decided to mark a boundary with the word "NO". Their harvesting plan states:

*One record of Melichrus sp. gibberagee, is wholly contained within an FMZ 2 exclusion. If additional records identified, mark 50m exclusion around the record.*

This marking is specified to comprise: 3 Machinery (3 bars 2 dots)



**Marking of boundary of Melichrus exclusion "zone".**

The Threatened Species Licence identifies Narrow-leaf Melichrus as one of 6 species occurring on State Forest for which condition 6.22 "***Threatened Flora: 50 metres Exclusion Zone, all individuals***" applies.

The TSL 3a requires that operational maps "*must include showing all exclusion zones*". This (and the additional records) is not shown as an "exclusion zone" on the operational plan available to us, and we wonder whether a revised operational plan has been prepared to show Narrow-leaf Melichrus records and exclusion zones.

The TSL 5.1. states:

*f) All exclusion zone and buffer zone boundaries must be marked in the field, except where specified forestry activities will not come within 50 metres of such boundaries. The outer edge of lines shown on the map is considered to represent the boundary of the mapped feature when marking the feature in the field.*

*i) SFNSW must develop a standard tree marking-up code to apply to all operations, unless specifically excluded, by 30 June 2000. The code must include, but not be limited to, tree marking criteria for the following: exclusion zone boundaries, buffer zone boundaries, hollow-*

*bearing trees, recruitment trees, eucalypt feed trees, Yellow-bellied Glider and Squirrel Glider sap feed trees.*

The making of trees around the boundary of what is required to be an exclusion area with "NO", in contravention of appropriate marking as identified in the harvesting plan, does not satisfy legal requirements and seems to be aimed at not identifying a formal exclusion area.

It was found that trees marked "No" were located at 38m and 43m from Melichrus. The mapped logging boundary came up to 42m and 47m from clumps of Melichrus.

The Department of the Environment and Climate Change lists the following as threats to the species (DECC 2005f):

- Frequent fire
- Clearing or land development
- Timber harvesting activities
- Road-works
- Risk of extinction because populations are small.

The weed Lantana, *Lantana camara*, is an identified threat to the Narrow-leaf Melichrus

It is not known how the Melichrus population was affected by the 1998 logging. It is likely that Lantana would have reacted positively from the reduction in canopy cover in the 1998 logging, and is thus likely to have increased in extent to the detriment of the Melichrus. Records from the 1997-8 surveys should be collated and compared with extant plants to help identify population trends.

The habitat that the Melichrus was identified in has extensive areas of blady grass indicating both a previous history of frequent burning and a potentially high fire intensity. There are extensive areas of Lantana which can grow over and smother the Melichrus, and Lantana is likely already affecting the population. There are also logging debris remaining from the 1998 logging.

It is clear that there is the potential for a hot burn, either post-logging or as a wildfire, fed by the recent logging debris and the abundance of blady grass amongst some plants. A fire management plan needs to be prepared by relevant experts to ensure appropriate burning of the Melichrus exclusion zone. It is also evident that Lantana in the vicinity of Melichrus needs to be appropriately removed as it is a direct and present threat to the population.

## 2. Habitat Trees

Incidental breaches of habitat tree retention requirements in proximity to the logging boundary were identified.

In general, there is a low number of large old hollow bearing trees from the original forest left scattered around the logging area. Indicating the past grandeur of the forest and emphasising that the few hollow-bearing trees left need to be protected. There are also a low number of the large healthy mature trees required as recruitment trees.

In these forests up to 5 hollow bearing (H) trees per hectare are required to be protected, along with a mature and healthy recruitment (R) tree for each H tree retained.

Numerous marked hollow-bearing (H) and recruitment (R) trees were identified within what should have been the Melichrus exclusion zone. These are not allowed to count towards retention requirements and should not have been identified and counted.

Only a small number of habitat trees were assessed in the vicinity of the logging boundary. A high proportion of these were damaged in the logging operation, indicating that the widespread and frequent damage to marked H and R trees documented at Cherry Tree SF and Sugarloaf SF is continuing here. The practice of marking hollow-bearing trees and suppressed trees as recruitment trees also continues.

Seven habitat trees were identified as being damaged in the small part of the logging area assessed in the vicinity of the logging boundary (this is a significant percentage of habitat trees within the inspected area):

- One marked ancient hollow-bearing (H) tree had machinery driven up to its base, damaging its roots.
- one unmarked H tree (possibly in a stream buffer) had machinery driven up to its base, damaging its roots and butt at soil level.
- one marked recruitment (R) tree had root and trunk damage from a machine driving next to the trunk.
- two marked R trees had major branches broken off in their canopies from falling trees.
- two marked R trees had trunk damage, likely from falling trees or being bumped.

Two of the marked R trees had senescing canopies, with possible small hollows, and should have been considered as H trees.



H tree. Grey Gum. Note machinery was driven up to base, damaging the butt and roots. This tree was not marked and may have been in a riparian exclusion area. (6753477 511092)





LEFT: H tree. Gey Gum. note machinery use up to base (6753163 511142) RIGHT: R tree. Bloodwood, note trunk damage (6753114 511110)



R tree. Spotted Gum. Note damage to base and use of machinery up to tree. (6753449 511253)





R tree. Grey Gum, note broken branches (6753214 511108)



R tree, stringybark, note trunk damage and senescent crown indicating presence of hollows. (6753147 511099)





R Tree, Grey Gum, Canopy damage, broken branches. Note senescent crown indicating presence of hollows. High Koala use. (6753146 511141)

Other tree damage was found to be widespread. Numerous trees essential as either the sawlogs or habitat trees of the future are also recklessly being damaged, as these few examples show:

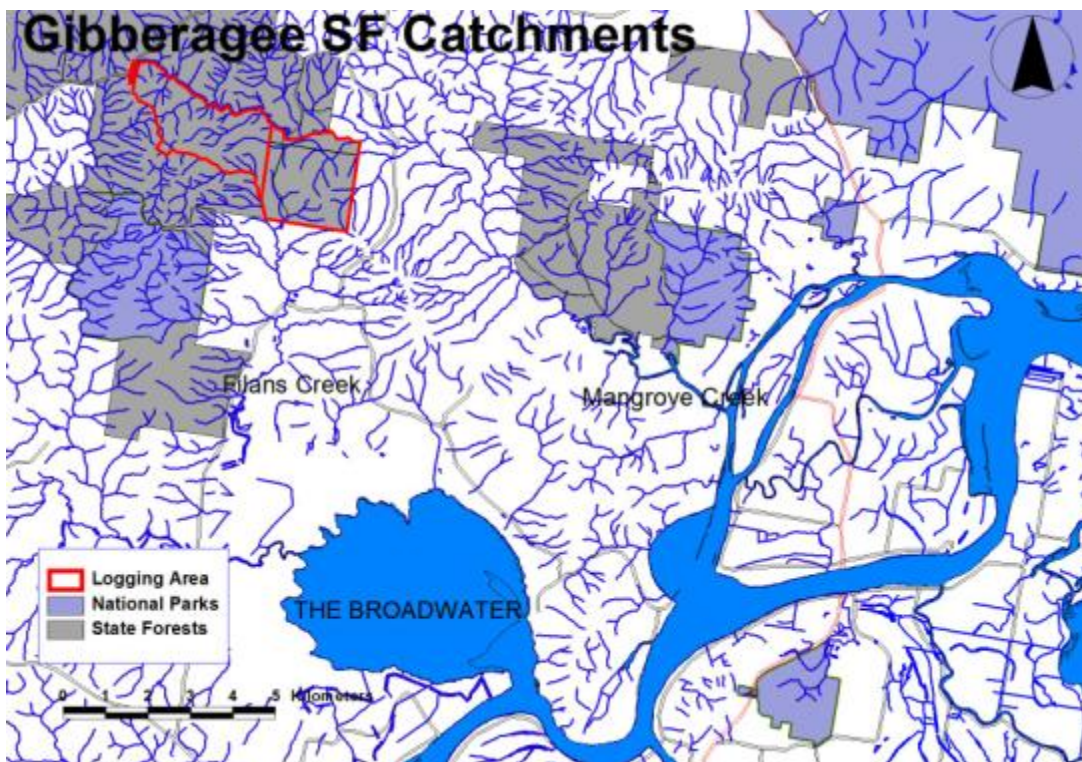






### 3. Riparian Protection

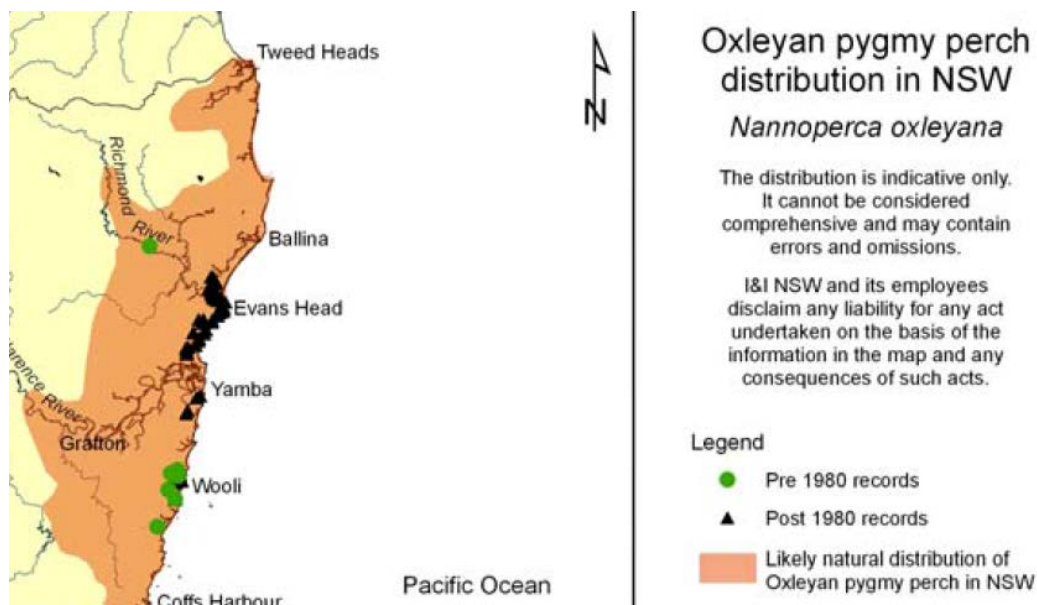
The logging area is drained by Mangrove Creek directly into the Clarence River Back Channel some 16km downstream, where it travels to the North Arm at the mouth of the Esk River and then into the mouth of the Clarence River, and by Filans Creek directly into the largest seagrass beds on the north coast in The Broadwater.





The Harvesting Plan states " No fisheries licence conditions apply". and identifies that "Unmapped drainage Line harvesting" is "Permitted". In general 24-50% of first order streams remain unmapped. meaning large areas of what should be riparian buffers are available for logging.

The Oxleyan Pygmy Perch is identified as Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the NSW *Fisheries Management Act 1994*. Threats to this species include runoff and sediment from stream crossings, logging operations and post-logging burns. The Fisheries Licence was specifically intended to protect this species when it was issued in 1999.



Map of likely natural distribution (orange colour) of Oxylean Pygmy Perch, covering the Giberagee area (Fisheries NSW 2010).



Map of proposed critical habitat (orange colour, restricted to public land) of Oxylean Pygmy Perch (Fisheries NSW 2010).

It is 28 km downstream along Mangrove Creek from the logging area to the mapped critical habitat of Oxleyan Pygmy Perch identified around the mouth of the Esk River. The headwaters of Mangrove and Filans Creeks are also within the likely natural distribution of Oxleyan Pygmy Perch. In the absence of surveys to establish the status of the species within these headwaters they should be treated as Class 2 habitat.

Since 2010 NEFA have been complaining about the Forestry Corporation's refusal to recognise the presence of Oxleyan Pygmy Perch within 100km downstream of a variety of logging operations, and therefore recognise the harvesting areas as Class 2 habitat, which would have the effect of protecting 10m exclusion zones around unmapped streams,

NEFA have documented this problem in our audits of Doubleduke SF (2010), Wedding Bells SF (2011) and Royal Camp SF (2012). The 2004/5 RFA report identified that "*distribution data for the Oxleyan pygmy perch ... is complete. [the] species could be affected by forestry operations and the distribution data is expected to be provided to Forests NSW shortly*". Fisheries NSW told us they had provided available information on Oxleyan Pygmy Perch to the Forestry Corporation after our Doubleduke complaint in 2010. The Forestry Corporation continued to ignore the presence of Oxleyan Pygmy Perch, telling NEFA (J. Murray pers. com., November 2010) that they didn't need to consider the species because Fisheries NSW had not provided them with the required information

NEFA's audit of Wedding Bells SF (Pugh 2011b) found that Forestry Corporation had again failed to prepare Pre-Logging and Pre-Roading Aquatic Habitat Assessments within the catchment of known and potential habitat for the endangered Oxleyan Pygmy Perch in the catchment of the Corindi River, and failed to exclude unmapped drainage lines from logging and roading to protect downstream habitat of the Oxleyan Pygmy Perch as required by the FL. Fisheries NSW investigated the breaches we reported in Wedding Bells SF, confirming numerous instances of logging of unmapped drainage lines within 100km of downstream records and identified habitat of Oxleyan Pygmy Perch, though refused to do anything about it on the grounds that the agencies agreed interpretation of the Fisheries Licence is that until Fisheries NSW provided records and distributional information to the Forestry Corporation then they are not required to do anything to protect Oxleyan Pygmy Perch.

Since then our repeated requests to Fisheries NSW to provide the legally required distribution maps for Oxleyan Pygmy Perch have been dismissed, as Fisheries NSW refuse to activate the Fisheries Licence for Oxleyan Pygmy Perch by providing the required maps.

Forestry Corporation and NSW Fisheries have colluded for over a decade to avoid preparing Aquatic Habitat Assessments and to not take any action to implement legal requirements to protect a number of Endangered fish on the pretext that the Fisheries NSW have not provided the required data to Forestry Corporation. Fisheries NSW have also allowed unqualified people to prepare the few AHAs that have been done and failed to critically review Forestry Corporation's deficient assessments.

Irrespective of Fisheries NSW's ongoing refusal to require the Forestry Corporation to protect unmapped streams for the Oxleyan Pygmy Perch, it is the height of irresponsibility to allow the logging of unmapped streams in the catchment of the regionally significant seagrass beds of The Broadwater, particularly given their susceptibility to smothering by sediments.