1999

Salinity Action Plan : wetland vegetation monitoring, 1998/1999

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Wetland Vegetation Monitoring

1998/1999

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ECOSYSTEM
MANAGEMENT

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1.0 Introduction

1.1 Objectives

This report represents the vegetation component of a project designed to provide on-going monitoring of wetland salinity and biological resources in wetlands of the agricultural zone of south-west Western Australia. Maintenance of wetland biological diversity in the agricultural zone is one of the major objectives of the Salinity Action Plan. Due to their low position in the landscape, wetlands are the habitat most affected by salinisation

The wetland monitoring project has four specific objectives, only one of which is relevant to this report:

1) Analyse and report trends in salinity and depth of agricultural zone wetlands monitored by CALM since 1978.
2) Monitor salinity, depth and nutrient status of a broad range of wetlands.
3) Monitor waterbirds, fish, frogs and aquatic invertebrates in a sub-set of wetlands to measure any changes in fauna of the wetlands.
4) **Monitor floristic composition and tree health in the same sub-set of wetlands to measure any changes in flora occurring in, and around the wetlands.**

Work presented in this document is an integral part of the overall project and will specifically address the fourth objective. Information from other components of the project that address the remaining objectives, will be used to interpret change in the vegetation and the impact this may have on fauna.

Detailed objectives for the monitoring of wetland vegetation are as follows:

1) Establish permanent monitoring transects at a sub-set of wetlands (as determined by the Wetland Monitoring Project Team).
2) Identify native plant species within transects and monitor change in composition, species richness and diversity.
3) Quantify the importance of overstorey and understorey plant species within monitoring transects by assessing density and foliage cover, and monitor change.
4) Identify the physiognomy of wetland plant communities within the transects and monitor change.
5) Categorise wetland tree health within the transects and monitor change.
6) Monitor wetland plant population dynamics within transects by recording seedling recruitment, survival and population age/size class structure.
7) Identify the distribution of wetland plant populations within the transects relative to hydrological regime and salinity status, and monitor change.

1.2 Scope and Approach

The plan for vegetation monitoring involves triennial measurements of relevant parameters. Because of the need to incorporate results from the biological survey when selecting monitoring sites, the monitoring program will be phased in over a three year period. This will allow techniques to be validated and refined, if necessary, on a small set of wetlands in the first year. It is intended for the final set of 25 wetlands to represent a range of salinities and susceptibilities to secondary salinisation. Therefore, the 25 wetlands will consist of 5 categories

with respect to salinity, with 5 representative wetlands (or replicates) in each category. This is summarised in the table below.

Category	Comment	N
Fresh	Freshwater wetlands with no immediate threat	5
Brackish↑ (improving)	'Brackish' wetlands where remedial works likely to improve quality	5
Brackish↓ (declining)	'Brackish' wetlands threatened by increased salinisation	5
2° saline	2° saline wetlands with long history of salinity but further change likely	5
1° saline	Naturally saline or hypersaline wetlands where change may occur	5

During 1998/99, vegetation will be assessed at 9 wetlands (Figure 1.1):

Site	Category
Logue	Fresh
Eganu	2° saline
Lake View	Declining
Walyormouring	2° saline
Dowerin	Fresh
Campion	1° saline
Goonaping	Fresh
Ardath Lake	1° saline
Paperbark	Fresh

The methodology used was specifically designed to address change in wetland vegetation floristics, physiognomy, individual plant vigour and population vigour and dynamics in response to long-term changes in hydrology and salinity. The various components of the methodology are as follows (detailed description of these components is given in the Methods section):

1) Transect establishment.

Between three and six permanently marked transects at each wetland. The location of each transect determined using GPS and marked on maps for future reference. All location markers and tags are metal. Transects made up of contiguous 20 x 20 m quadrats running perpendicular to the shoreline into upland vegetation. Each of the 20 x 20 m quadrats divided into five 4 x 20 m quadrats. Photographs taken each monitoring year from two marked reference points. Site data such as, topographic position, slope, aspect, surface soil characteristics, litter and water depth recorded.

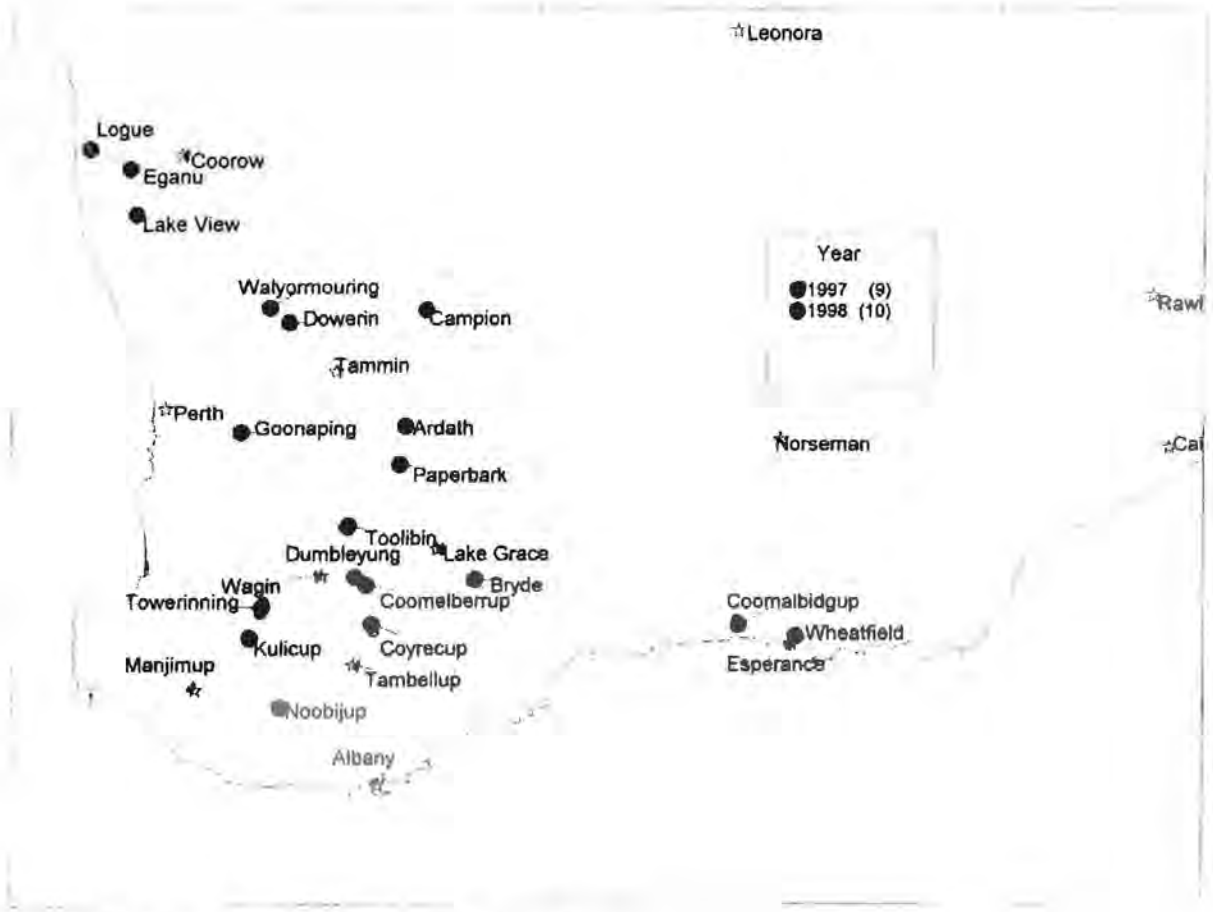


Figure 1.1: Location of wetlands assessed in 1998/99.

2) Floristic composition, species richness and diversity.

Within each 4 x 20 m subplot of each 20 x 20 m quadrat all overstorey species and large understorey species (>1.5 m) identified. All trees tagged and given a unique reference number. Data for each overstorey subplot will be kept distinct to determine gradient transitions. Understorey 4 x 4 m subplots focus on species < 1.5 m. Presence of seedlings of tree and large shrub species recorded in overstorey sub-plots.

3) Density and foliage cover.

Density of overstorey and understorey species determined for each subplot. Percentage foliage cover for each understorey species determined by direct measurement of (two foliage diameter measurements at right angles) each individual within each 4 x 4 m subplot. The foliage cover of understorey species without distinct projected foliage area, such as sedges and rushes, estimated as a percentage of the subplot area. Percentage canopy cover determined for each 20 x 20 m quadrat.

4) Physiognomy.

Height ranges for each vegetation strata measured within quadrats and subplots. Profile diagrams depicting vegetation structure constructed for each transect.

5) Tree vigour.

The vigour of each individual tree within overstorey subplots categorised according to a subjective scale of 1 – 5 based on estimations of proportion of live canopy foliage.

6) Population dynamics.

Size class structure of key tree species determined by measuring height and diameter at breast height (DBH) of each individual in each 20 x 20 m quadrat. Data combined to develop size class frequency plots and illustrate population structure. Seedling recruitment events recorded in the field when found.

7) Distribution of wetland plant communities, populations.

The different structural units of vegetation at each wetland mapped from aerial photography and ground truthing. Historical aerial photographs examined and vegetation units mapped to determine changes in vegetation cover and distribution. At the transect scale, distribution of plant populations or community types is related to hydrology and salinity. The ground level (in relation to the deepest point in the lake) at each end of each 4 x 20 m overstorey subplot is measured using an auto level and staff. These relative levels with be converted to mAHD when the depth gauges at each wetland are surveyed. The elevational gradient along each transect can then be compared to wetland water levels (information from other CALM and WRC SAP projects) and the water regime determined for different positions on the transect. Where available, historical wetland water levels will be related to vegetation distribution to identify past impacts and explain current distributions.

Once sufficient information has been collected, water regime requirements and salinity tolerances of key wetland plant species will be identified and used to predict impacts and restoration criteria.

8) Physico-chemical parameters.

Transects are located adjacent to piezometers (if present) established as part of the Wetland Monitoring Project. Information on groundwater level and salinity is vital to correct interpretation of vegetation change. Surface soil salinities at each transect measured each monitoring year using an EM 38 and validated with limited soil sampling and direct measurement (EC of 1:5 soil:water extracts). Information on water salinity and nutrients from other projects, once available, will be related to vegetation vigour and survival.

9) Database

All data collected as part of the wetland vegetation monitoring project will be databased using Microsoft Excel. Original field record forms will be archived and referenced to the digital database.

1.3 Outcomes

All transects at all 10 (an additional wetland was assessed at the Maisey property) 1998/98 wetlands were established and first assessment completed. The floristic and structure data for the vegetation is complete and has

been databased. As this is the second year of the initial transect establishment phase of the monitoring program, analysis of the data is limited to the first year.

Field work for the 1998/99 assessment was conducted during late spring and over the summer. This is not the proposed or ideal sampling time (which is spring to early summer) however, in some cases, lake water levels had to recede before the full extent of permanent transects could be established.

As this is the first year of the vegetation monitoring at these wetlands, multi-temporal analysis of community and population dynamics was not possible. The focus of work to-date has been on the establishment of transects and development of an appropriate and effective monitoring structure and procedure. Population structure analysis and in particular, seedling establishment monitoring, has begun, however, it will not be complete until assessment of seedling presence and survival is reassessed. It is proposed that this be conducted during the spring of 1999 for transects. Such reassessment before the triennial monitoring is important to tracking survival, rates of establishment and causal factors such as hydrology and soil conditions.

As discussed in the previous report, the analysis of historical air photographs is to be conducted as part of a separate project. Gary Ogden has commenced a PhD study of wetland vegetation dynamics and seedling recruitment and will assess historical air photographs.

The analysis of vegetation interaction with hydrology was not possible as piezometers and depth gauges have not yet been established at all transects/wetlands. The paucity of lake depth records for some of the lakes will make this analysis impossible in the near future.

2.0 Methods

2.1 Transect Site Selection

The number and positioning of transects at each wetland was determined using 1:5000 aerial photographs and preliminary site visits. These sites were selected to be representative of both the vegetation communities and the physical characteristics of each wetland. Sites were generally located around the wetland basin, perpendicular to the water body, extending from the terrestrial vegetation to below the high water mark. Two to four transects were established at each wetland.

2.2 Transect Design

The transects consist of a series of contiguous 20 x 20m quadrats which are marked at each corner with a steel fence post. Tape measures and an optical square were used to ensure all plots were square and of equal size. For the eight wetlands assessed, the transects consist of one to three contiguous plots depending on the width and composition of the vegetation surrounding the wetland, giving transect lengths of 20 to 60m.

The quadrats are further divided into five 4 x 20m plots for assessment of trees and large shrubs. Within each 4 x 20m plot, a 4 x 4m plot is located at either the left or right side for assessment of all understorey plants (Fig 2.1).

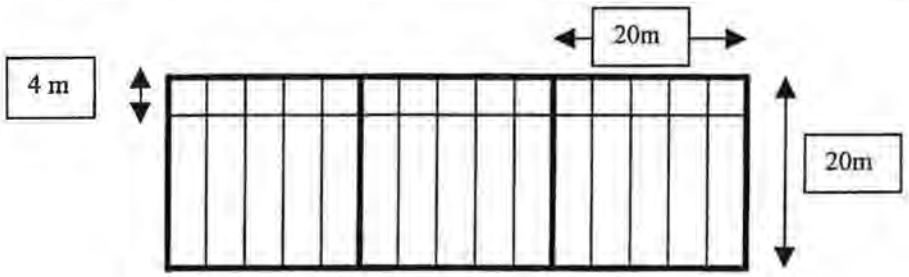


Figure 2.1: Transect Design.

To facilitate accurate re-monitoring of the understorey, a fence spreader is located every 20m along the transect, 4m in from the side where the 4 x 4m sub-plots were established. The 4 x 20m and 4 x 4m plots were not individually marked as it was felt that this made the transects too visible. An aluminium tag was attached to the top left fence post of each transect (furthest from the water body) indicating the transect number. Compass bearings were also taken from this point across and down the transect to enable the transect to be re-estiblished in the event of fence posts being stolen. At lake Ardath, the lowest end of the transect was not staked as this lake is used for water skiing and it was felt that the presence of fence posts in the water could be hazardous. These posts can easily be replaced during monitoring by sighting from the upland plots. GPS readings were recorded for each transect at the tagged fence post.

2.3 Vegetation Monitoring

2.3.1 Tree species

Within the 4 x 20m plots, all trees were tagged with an aluminium tag punched with a unique reference number. Tags were attached at breast height (approx. 1.5m) with a galvanised roofing nail or a large loop of galvanised wire if the stem was too narrow to nail. For each tree within each plot the species, diameter at tag height and crown condition was recorded. Stem diameter was measured directly under the tag if nailed or at breast height if the tag was wired onto the tree unless otherwise noted in the data. In the case of individual trees with multiple stems, all stems were measured at the same height as the position of the tag or at breast height. In addition to tracking growth and vigour of trees in the future, stem diameters also permit size class analysis of the populations. In the case of trees with multiple stems, the largest stem was used for the size class diagrams in this report.

Crown assessment was carried out using a subjective three part scale where a score is recorded for crown density, dead branches and epicormic growth. Using diagrams for comparison, crown density is given a score out of nine, dead branches a score out of nine and epicormic growth a score out of five (Ladd, 1996) (Figure 2.2). The higher the overall score the better the condition of the tree. The number, species and height of tall shrubs (>1.5m) and seedlings of trees were also recorded in the 4 x 20m plots. Vigour of tall shrubs such as *Melaleuca* and *Hakea* species was recorded subjectively as either healthy, slightly stressed or stressed. This technique was adopted in preference to the three part scale of Ladd (1996) which does not translate well to tall shrubs.

2.3.2 Understorey Species

Within the 4 x 4m sub-plots, all understorey plants were identified and percentage foliage cover determined by direct measurement (two foliage measurements at right angles) for species with a distinct foliage area or percentage estimate for rushes and sedges. Height ranges for each species were also recorded.

Samples of each plant species were collected and returned for identification. Difficult to identify species were identified by CALM Woodvale staff. Species which are yet to be acurately identified are noted in the data by a question mark and where necessary, further material will be collected in spring 1998 to assist in identification. Voucher specimens will be lodged with the WA Herbarium.

2.4 Physico-chemical Parameters

Soil properties (field assessment of texture) and litter distribution was subjectively described for each 20 x 20m plot of each transect. Three soil samples were also taken from each plot and analysed in the laboratory for conductivity by 1:5 soil water extraction, adgatated for one hour and measured with a bench conductivity meter for calibration of the EM38.

EM38 measurements, which determines soil conductivity over 1-1.5m depths were taken at three points across each plot, every 4m along the transect. Adequate distance was always allowed when measuring near the fence posts or other metallic objects in the plots. EM38 data was validated against direct conductivity measurement of the soil samples.

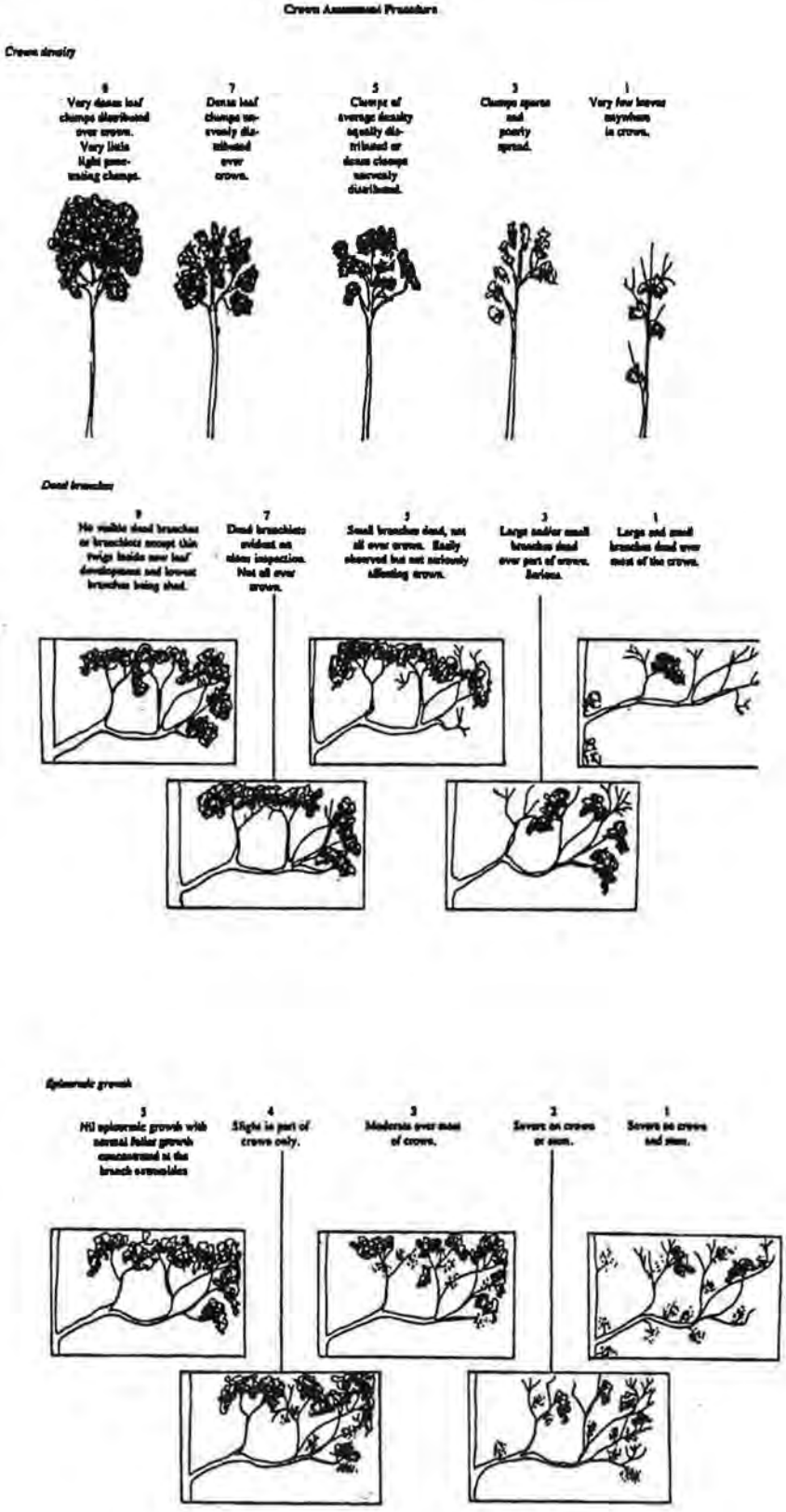


Figure 2.2: Crown Assessment Procedure Diagrams (Ladd, 1996).

2.5 Elevations

The gradient of each monitoring plot was measured using an auto level and staff, with measurements generally being taken every 4m along the transects except in steep areas where a smaller interval was used. If a wetland had a depth guage, each transect was tied into the guage to indicate relative elevation allowing interpretation of the effect of past water levels where these data are available. Elevation data is recorded relative to the lowest point of each plot (lowest point called 0m) where no depth gauge was present or relative to the depth gauge where a depth gauge was accessable.

3.0 Results

3.1 Lake View (Blue Gum Swamp)

3.1.1 Description

Blue Gum Swamp is a small ephemeral wetland situated in a narrow band of remnant vegetation on private farmland 10km North West of Moora (30°35' S, 115°58' E). The Swamp lies in a cleared catchment adjacent to a large chain of seasonal wetlands which receive inflow from the northern waters of the Moore River. The bulk of the water supply for Blue Gum Swamp comes from direct precipitation and runoff. Although there is no direct hydrological interaction between Blue Gum Swamp and the surrounding chain of wetlands, during high rainfall years Blue Gum Swamp interconnects with the series of wetlands via channels and flats forming part of the larger system. This flooding event occurs approximately every 10 years (pers com, John Cusack, 1999) with the latest event occurring in March 1999. Blue Gum Swamp has also been recognised as an important refuge for waterbirds. Grazing history within the surrounding vegetation and on the lake bed itself is unknown, but it seems likely that grazing has occurred.

Two 40 metre transects were established around the main lake area starting from the terrestrial vegetation extending on to the lake bed. Monitoring was undertaken in February 1999.

Transect 1: (GPS: 50 401169 / 6615031) lies directly on the southern bank of the lake, 30 metres east of the main track where the relief is moderate.

Transect 2: (GPS: 50 401274 / 6615328) is located on north eastern side of the lake south of the inflow drain on slight to moderate relief.

3.1.2 Plant Communities

An open woodland of mature *Eucalyptus rudis* and *Casuarina obesa* exists on elevated ridges surrounding the lake (Fig. 3.1.1a and b). Gradual movement downslope sees the replacement of *Eucalyptus rudis* with moderately dense stands of *Melaleuca viminea* and *Casuarina obesa* and associated *Melaleuca strobophylla*. This change is most evident on the southern section of the lake where the elevation gradient is sharp. *Eucalyptus rudis* persists further into the littoral zone on the northern and eastern sections of the lake where the relief is less steep. The understorey was consistent around the lake with small shrub species restricted to the upper ridge under the thin band of *Eucalyptus rudis*, *Casuarina obesa* and *Melaleuca strobophylla* woodland. Common understorey species include *Hakea candollena*, *Jacksonia* sp. and *Scholtzia* sp. with moderately tall dense stands of *Baumea vaginalis* persisting into the lower littoral zone leaving the lake bed void of vegetation. Deaths of *Eucalyptus rudis* and *Casuarina obesa* increase with a decline in elevation. Dead trees were more evident surrounding the inflow drain (transect 2) and the north eastern section of the lake in comparison to the southern and western sides. The littoral zone on the southern and western sides of the lake consisted of scattered *Melaleuca teretifolia*, *Melaleuca strobophylla* and *Casuarina obesa*, with 50 % of the standing trees dead. More deaths were recorded for *Melaleuca teretifolia* and *Casuarina obesa* respectively. Seedling numbers were very low with only one seedling of *Melaleuca teretifolia* recorded. In general the southern and western sides of the lake consisted of a greater proportion of mature trees, with more juveniles of *Eucalyptus rudis* and *Melaleuca strobophylla* recorded near the inflow drain to the north east of the lake.

3.1.3 Population Structure and Tree Vigour

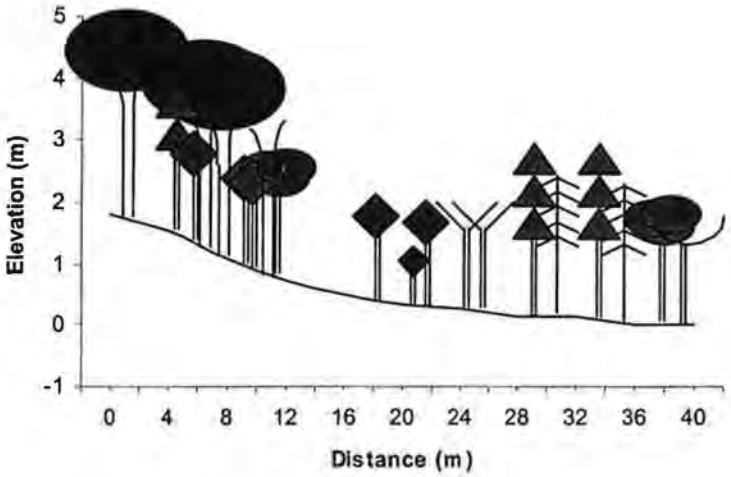
Overall, the tree populations show little evidence of recent successful seedling recruitment (Table 3.1, Fig. 3.1.2). Populations have a moderate to high proportion of adult mortality, particularly *Melaleuca strobophylla*. Tree vigour (as determined by the crown assessment) is poor to moderate.

Table 3.1 : Summary of Lake View Tree Data

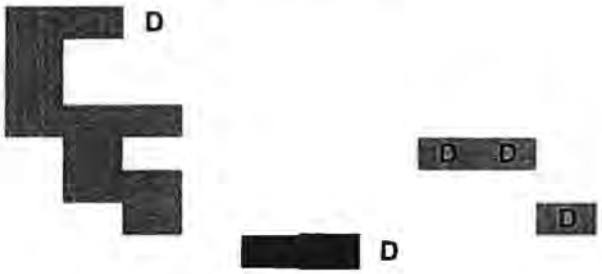
Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Casuarina obesa	23	7	2	0	14.96 (2.45)
Eucalyptus rudis	19	21	2	0	9.33 (3.85)
Melaleuca viminea	9	5	0	0	11.88 (2.47)
Melaleuca strobophylla	8	20	0	0	14.5 (2.56)
Melaleuca teretifolia	1	4	1	1	19.5 (6.36)

3.1.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at both transects. Salinity ranges from approximately 60 to 700 mS/m. Soils are white to brown sand overlying grey silty sand.



Eucalyptus rudis
Hakea candolleana
Jacksonia sp.
Baumea vaginalis
Casuarina obesa
Melaleuca viminea
Melaleuca strobophylla
Melaleuca teretifolia



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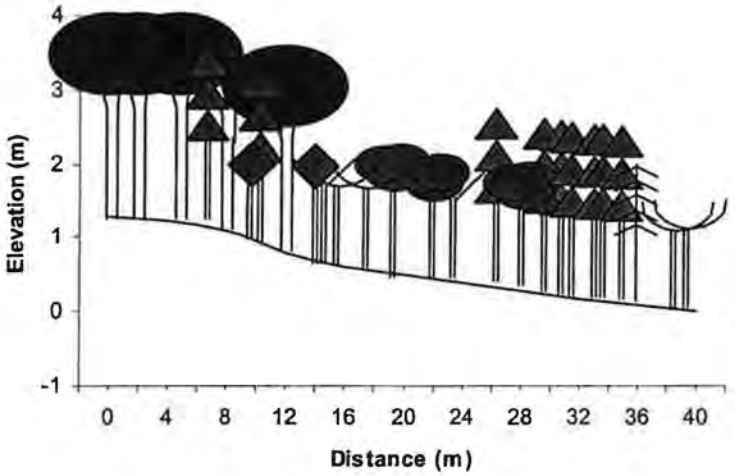
Species Present

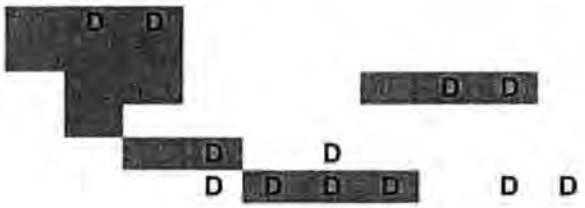
Seedlings

Dead Plants Present D

Figure 3.1.1a: Profile Diagram. Lake View Transect 1



Eucalyptus rudis
Baumea vaginalis
Casuarina obesa
Scholtzia sp.
Melaleuca viminea
Melaleuca strobophylla



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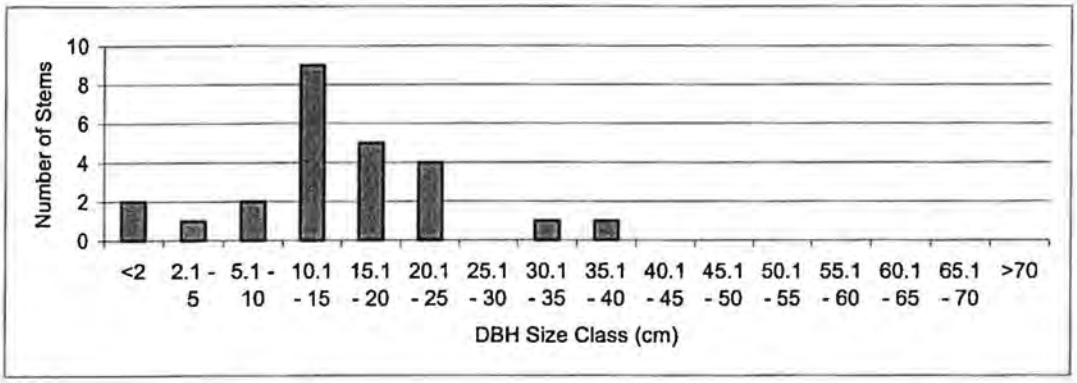
Species Present

Seedlings

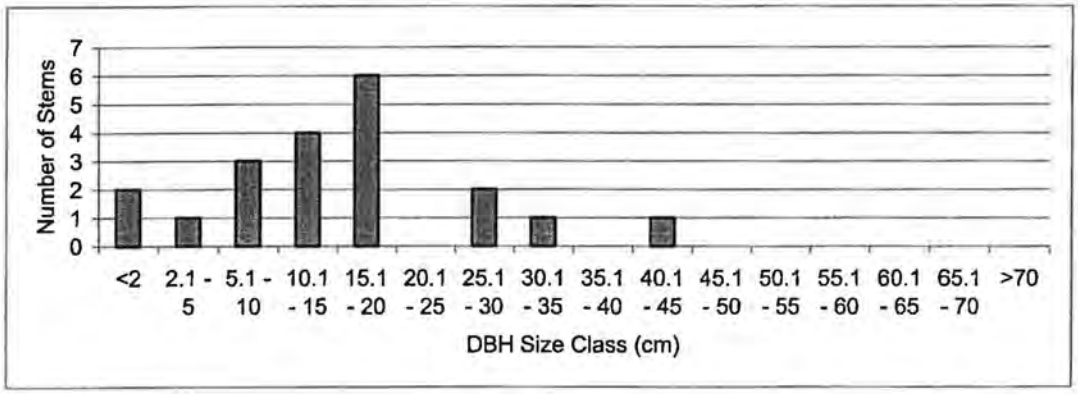
Dead Plants Present D

Figure 3.1.1b: Profile Diagram. Lake View Transect 2

Casuarina obesa



Eucalyptus rudis



Melaleuca viminea

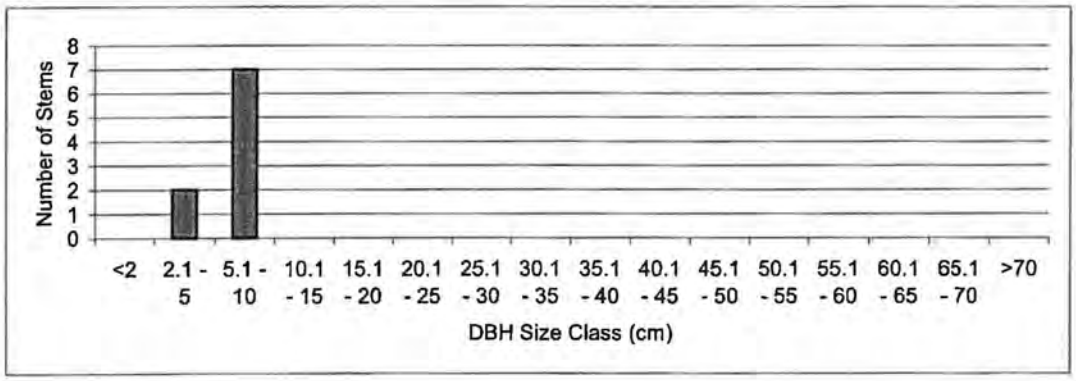
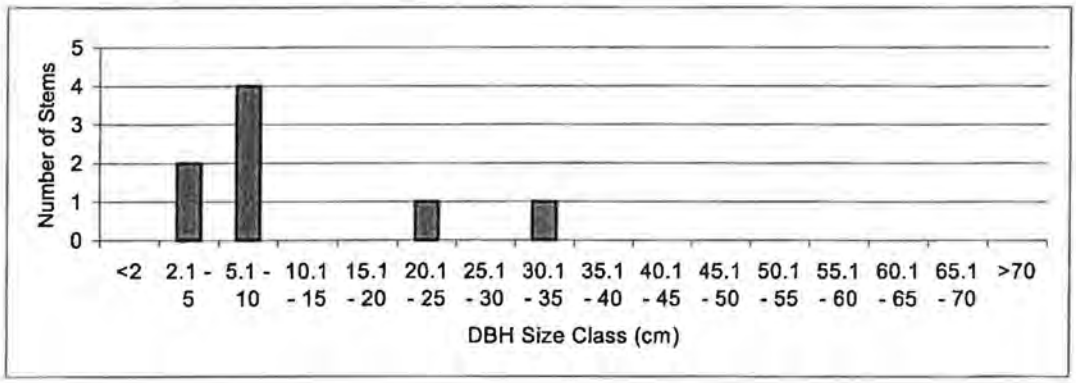


Figure 3.1.2: Size Class Distributions for Tree Species at Lake View.

Melaleuca strobophylla



Melaleuca teretifolia

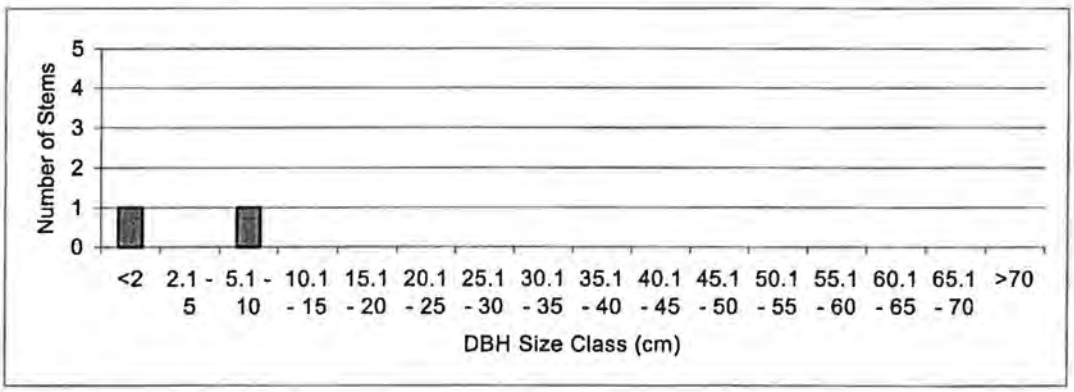


Figure 3.1.2 contin.: Size Class Distributions for Tree Species at Lake View.

3.2 Maisey's Wetland 1

3.2.1 Description

Maisey's wetland is a moderately small ephemeral wetland situated on privately owned farm land (Peter Maisey) east of Lake Dowerin (31°15'S, 117°04'E) and approximately 10km south east of the Dowerin town site. The wetland lies within cleared paddocks apart from a thin band of remnant vegetation remaining on the outer lake perimeter. The wetland is characterised by a short steep bank which moderates on the eastern and northern sides. The wetland historically has been used for grazing, particularly the northern section where grazing occurred until 1993. A number of smaller and lower topographical wetlands surround the main Maisey's lake with scattered dead *Eucalyptus loxophleba* and *Melaleuca strobophylla* presumably from waterlogging (pers com Peter Maisey, 1999). Maisey's wetland is classified as fresh with the majority of the lakes water supply coming from direct precipitation and runoff with little hydrological interaction with the adjacent saline Lake Dowerin.

Two 40 metre transects were established on Maisey's wetland to sample the outer fringing terrestrial vegetation, littoral wetland vegetation and lake bed. Monitoring was undertaken in March 1999.

Transect 1: (GPS: 50 506799 / 6542543) lies centrally on the western side of the lake off the main track.
Transect 2: (GPS: 50 507269 / 6542467) lies on the eastern side of the lake approximately 75 metres south of the inflow channel. Both transects start on the top ridge of the wetland and finish on the lake bed.

3.2.2 Plant Communities

The upper banks of the wetland are fringed by a thin ring of mature *Eucalyptus loxophleba* and scattered *Eucalyptus salmonophloia* forming an open woodland with a moderately dense but species poor understorey of *Sclerolaena* and *Chenopodium* species (Fig. 3.2.1a and b). On the western and southern sections of the wetland a distinct change in the vegetation with movement down the ridge sees the replacement of *Eucalypt* species with dense stands of *Melaleuca strobophylla* and scattered *Casuarina obesa* creating a subtle second vegetation zone. This change in species is not as sharp on the eastern and northern sides of the lake where individuals of *Eucalyptus loxophleba* persist further downslope occurring with *Melaleuca strobophylla* and occasional *Casuarina obesa*. This zone similarly is dominated by an understorey of *Sclerolaena* and *Chenopodium* species with *Atriplex* and *Halosarcia* species evident further onto the lake bed. The majority of the wetland bed and middle to outer edge of the lake is dominated by individuals of *Austrostipa elegantissima* up to 1.5 m in height. Scattered mature *Melaleuca strobophylla* occur across the lake bed.

3.2.3 Population Structure and Tree Vigour

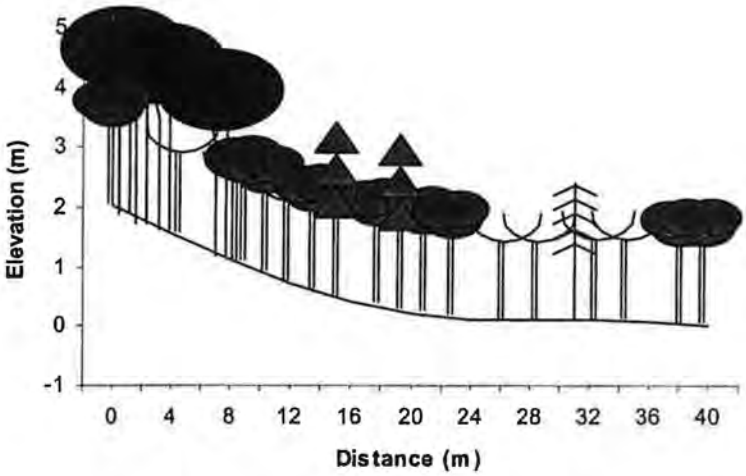
There were moderately healthy populations of tree species at Maisey's wetland 1, except for *Melaleuca strobophylla* which displayed a high proportions of mortality (Table 3.2, Fig. 3.2.2). With the exception of *Eucalyptus loxophleba*, the population size structure showed now evidence of successful tree recruitment in recent years.

Table 3.2: Summary of Maisey's Wetland 1 Tree Data

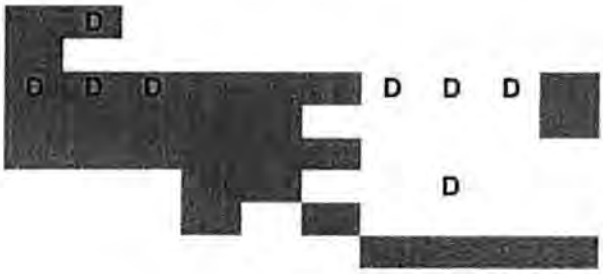
Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Eucalyptus loxophleba	19	0	0	0	12.16 (2.96)
Eucalyptus salmonophloia	3	1	1	0	18 (4.76)
Melaleuca strobophylla	47	25	0	0	12.53 (2.21)
Casuarina obesa	4	2	0	0	13 (5.22)

3.2.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at both transects. Salinity ranges from approximately 27 to 500 mS/m. Soils are white/grey sands to sand over sandy clay.



Eucalyptus loxophleba
Eucalyptus salmonophloia
Melaleuca strobophylla
Sclerolaena sp.
Chenopodium sp.
Casusarina obesa
Halosarcia sp.
Austrostipa elegantissima



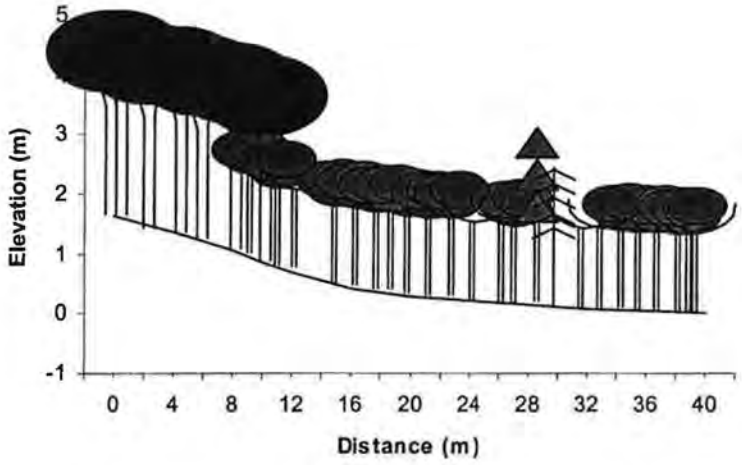
Legend

Species Present

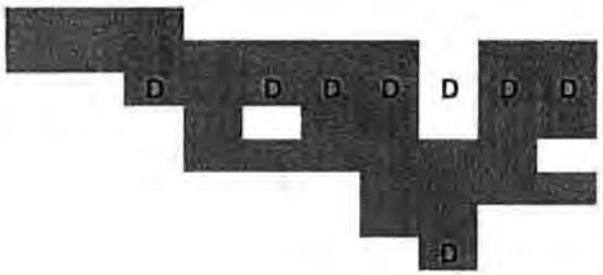
Seedlings

Dead Plants Present D

Figure 3.2.1a: Profile Diagram. Maisey's Wetland 1 Transect 1



Eucalyptus loxophleba
Sclerolaena sp.
Melaleuca strobophylla
Chenopodium sp.
Sclerolaena dicantha
Atriplex sp.
Halosarcia sp.
Casuarina obesa



Legend

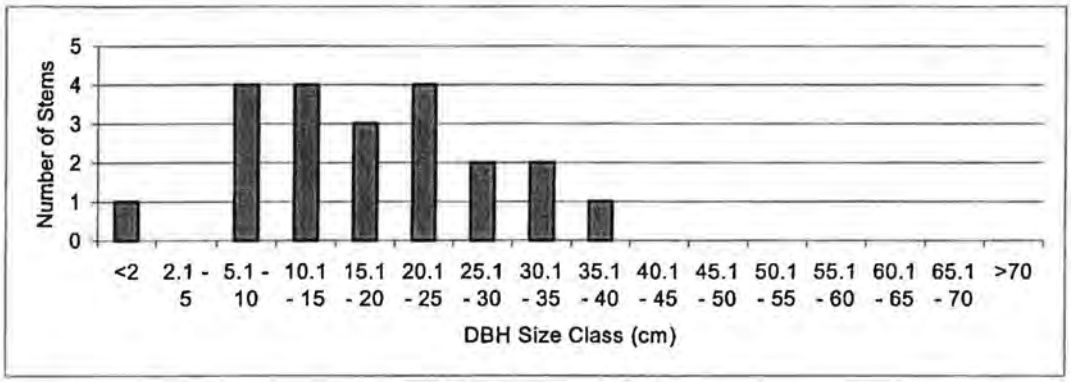
Species Present

Seedlings

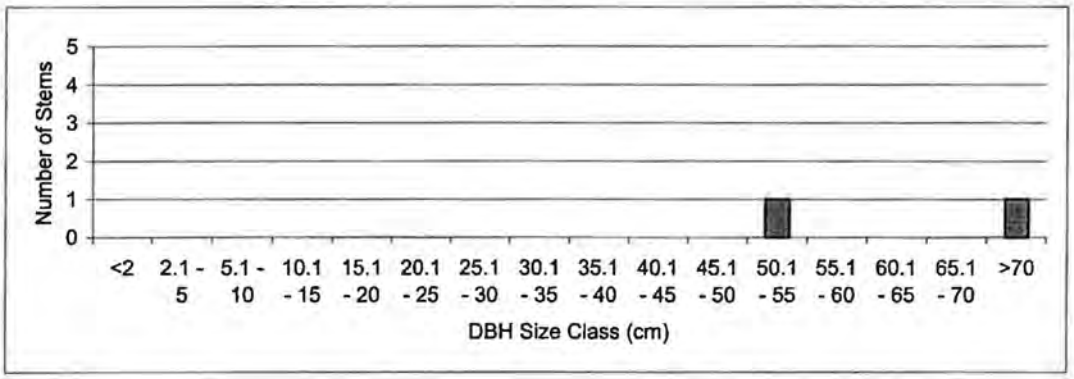
Dead Plants Present D

Figure 3.2.1b: Profile Diagram. Maisey's Wetland 1 Transect 2

Eucalyptus loxophleba



Eucalyptus salmonophloia



Melaleuca strobophylla

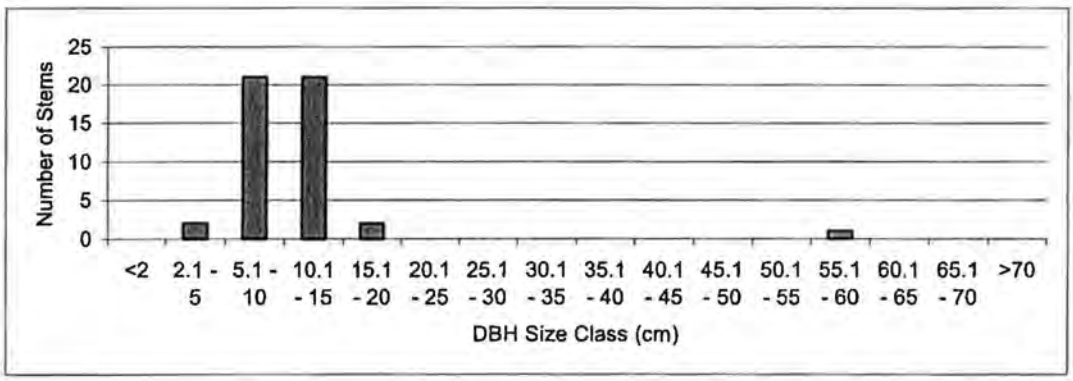


Figure 3.2.2: Size Class Distributions for Tree Species at Maisey's Wetland 1.

Casuarina obesa

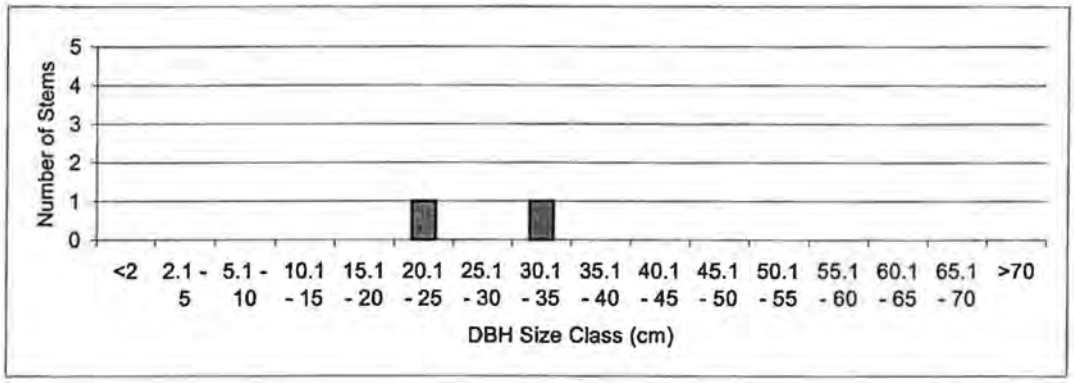


Figure 3.2.2 contin.: Size Class Distributions for Tree Species at Maisey's Wetland 1.

3.3 Maisey's Wetland 2

3.3.1 Description

A second, smaller ephemeral wetland to the north west (approximately 100 m) (31°14' S, 117°03' E) was sampled and has been referred to as Maisey's Wetland 2. Unlike Maisey's wetland (first lake) the surrounding vegetation has been entirely cleared leaving approximately 20 mature *Melaleuca strobophylla* individuals on the lake bed. The shallow banks of the wetland now contain dense stands of seedlings and saplings. The saplings are reported to have germinated following an unusually high rainfall period between 1989 - 1991 (pers com Peter Maisey, 1999). Also noticeable was a number of seedlings which have germinated since this mass recruitment event. The wetland has been fenced since the original germination event effectively precluding grazing. Similarly to the main wetland, Maisey's wetland 2 is fresh with the majority of the lakes water supply coming from direct precipitation and runoff with little hydrological interaction between other wetlands in the vicinity.

Two transects (32 m and 20 m in length) were established on Maisey's Wetland 2 to include a sample of the thick dense regeneration on the fringe of the wetland and the remnant mature trees located on the lake bed. Sampling was undertaken in March 1999.

Transect 1: (GPS: 50 506265 / 6542911) is situated on the south west corner of the wetland in front of the mature stand of *Melaleuca strobophylla.*

Transect 2: (GPS:50 506541 / 6543036) is situated on the eastern side of the wetland within the very dense stand of *Melaleuca strobophylla* saplings. Transect 2 lies approximately 50 metres directly in from the fence.

3.3.2 Plant Communities

The lake bed contains an open woodland of healthy *Melaleuca strobophylla* with an understorey of *Austrostipa elegantissima* up to 1.5 metres in height (Fig. 3.3.1a and b). A thick belt of *Melaleuca strobophylla* saplings dominates the edge of the lake. The density of the stands of *Melaleuca strobophylla* varies around the wetland with the highest density of saplings occurring on the slightly raised peninsula which protrudes into the lake (transect 2). Scattered seedlings were evident on the upper portions of the lake edge. Only a very insignificant percentage of trees were recorded dead or stressed on Maisey's 2 wetland.

3.3.3 Population Structure and Tree Vigour

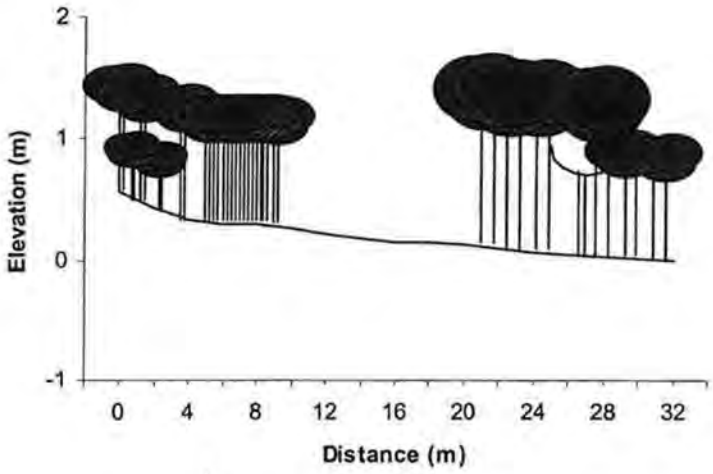
The tree population at this wetland is dominated by a dense stand of young trees around the perimeter (Table 3.3, Fig. 3.3.2). Dead trees are probably the result of self-thinning. Vigour is moderate to healthy. Size structure analysis does not include the majority of plant which were less than 1.5m high.

Table 3.3: Summary of Maisey's Wetland 2 Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Melaleuca strobophylla	611	15	0	5	16.5 (2.77)

3.3.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at both transects. Salinity ranges from approximately 0 to 370 mS/m. Soils are white/grey sands to sand over sandy clay.



Melaleuca strobophylla

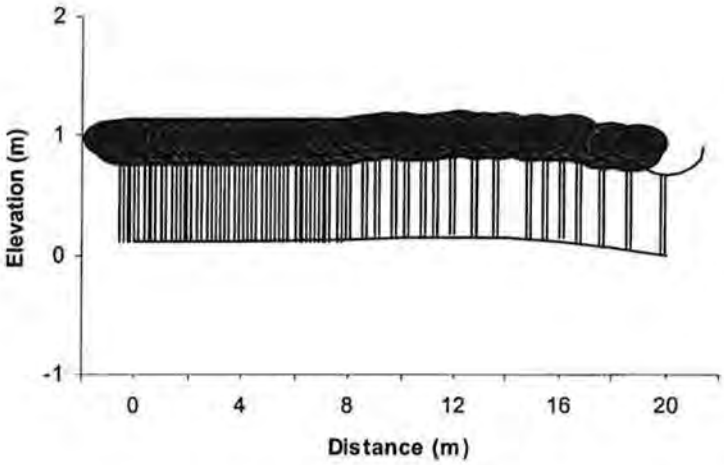
Legend

Species Present

Seedlings

Dead Plants Present **D**

Figure 3.3.1a: Profile Diagram. Maisey's Wetland 2 Transect 1.



Melaleuca strobophylla
Austrostipa elegantissima

Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.3.1b: Profile Diagram. Maisey's Wetland 2 Transect 2.

Melaleuca strobophylla

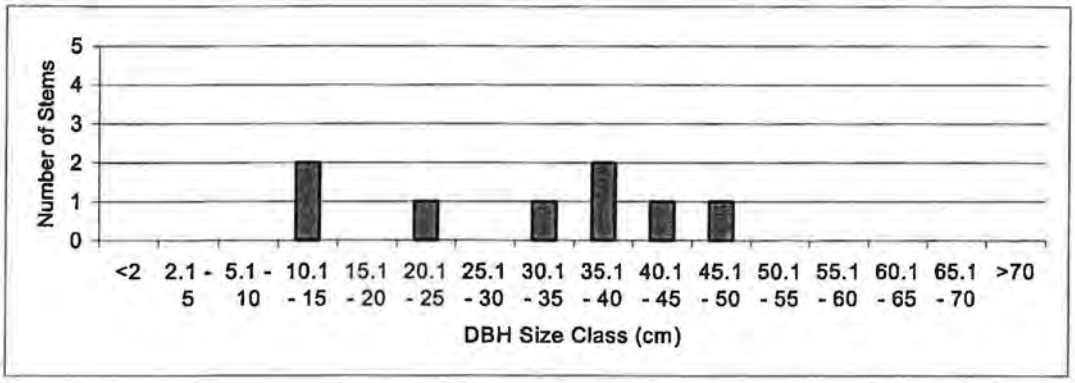


Figure 3.3.2: Size Distribution for Tree Species at Maisey's Wetland 2.

3.4 Lake Logue

3.4.1 Description

Lake Logue is a large, fresh seasonal lake situated 12 km south-west of Eneabba in the Lake Logue Nature Reserve (29073, Class C) (29°51' S, 115°08' E). The total lake area is 424.8 hectares with 74% consisting of open water and 25% vegetation (Halse, Pearson and Patrick, 1993). Lake Logue and nearby Lake Indoon are the largest components of a northerly trending chain of ephemeral wetlands which sit upon extensive aeolian sands. Lake Logue is a broad shallow claypan (composed of grey soils, heavy bluish-grey clays and silty clays) surrounded by dunes of coarse white sand which rise to 5m (Australian Nature Conservation Agency, 1996). Logue is bounded by a white sandy beach except in the west where there is a low limestone cliff. Water is supplied to Lake Logue by direct precipitation, surface runoff and discharges from ephemeral drainages, notably Eneabba Creek from the east (Australian Nature Conservation Agency, 1996). Lake Logue and nearby Lake Indoon are linked by groundwater with flow moving in a north west direction. Lake Logue consists of seasonally waterlogged flats and microscale creeks (Australian Nature Conservation Agency, 1996). The Logue/Indoon area acts as a major feeding stop-over, staging area for dispersal and drought refuge for waterbirds. A population of the declared vulnerable plant *Eremophila microtheca* occurs on seasonally waterlogged flats. Also *Phytophthora cinnamomi* and *Phytophthora citricola* is present at Lake Logue (Australian Nature Conservation Agency, 1996). Wild horses have been identified as a disturbance to the Lake Logue Nature Reserve.

One 60 metre transect and three 40 metre transects were established on Lake Logue to sample the outer fringing wetland vegetation on the lake bed. Monitoring was undertaken in March 1999.

Transect 1: (GPS: 50 319427 / 6695444) is situated on the south west section of the Lake, left off the main access track running from the road in front of the mature stand of *Melaleuca strobophylla* on the lake bed.
Transect 2: (GPS:50 319457 / 6697371) is situated on the far north western side of the Lake in direct line of the major access track around the lake bed (same used to located transect 1). Plot leads into open water.
Transect 3: (GPS: 50 318705 / 6696434) is situated on the middle west side of the lake directly north of the low limestone cliff.
Transect 4: (GPS:50 320027 / 6695072) is situated on the south western side of the wetland near the inflow drain.

All transects are situated on the lake bed. The major access track on the lake bed was used to located all transects. Plot leads into open water.

3.4.2 Plant Communities

The terrestrial elevated areas (dune slopes) of the Lake Logue reserve are dominated by an open woodland of *Banksia prionotes* with an understorey consisting of Myrtaceous shrubs. The lake is fringed by live *Casuarina obesa* and scattered (mostly dead) *Eucalyptus rudis*. *Melaleuca strobophylla* and *Melaleuca rhaphiophylla* occur outside the *Casuarina obesa* zone, as saplings or trees, with an open sparse understorey of *Wilsonia rotundifolia* and *Alyogyne hakeifolia* (Australian Nature Conservation Agency, 1996) (Fig. 3.4.1a-d). This zoning of vegetation is most evident on the southern and eastern sections of the lake where dense communities of

Melaleuca strobophylla preside. *Casuarina obesa* extends further onto the lake bed on the north western section of the lake occurring more predominantly with *Melaleuca strobophylla*. Dense stands of cane grass *Eragrostis curvula* grow on the lake bed of Logue when it is dry and survive on the higher ground when inundated.

3.4.3 Population Structure and Tree Vigour

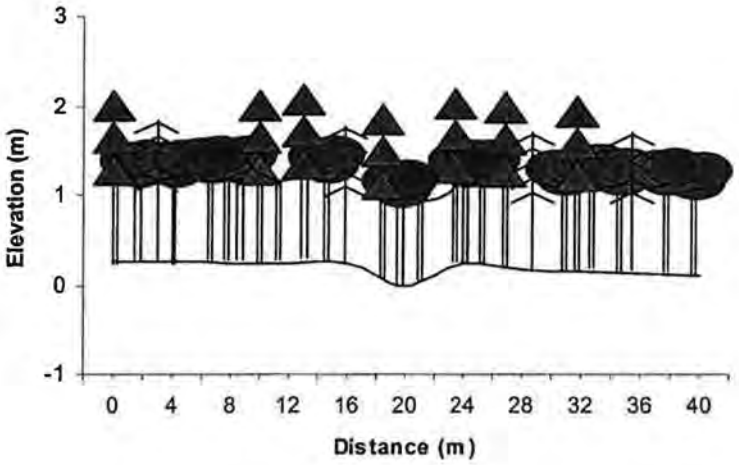
The tree populations displayed moderate health and some evidence of recruitment in recent years, particularly *Melaleuca strobophylla*. There was a high number of dead *M. strobophylla* at some transects, probably due to self-thinning in dense stands. *Casuarina obesa* showed little evidence of recent recruitment (Table 3.4, Fig. 3.4.2)

Table 3.4: Summary of Lake Logue Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Melaleuca strobophylla	262	60	30	0	14.52 (2.73)
Casuarina obesa	51	9	0	1	12.98 (2.81)

3.4.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at all transects. Salinity ranges from approximately 20 to 150 mS/m. Soils are white sands with clay at or near the surface at some areas.



Casuarina obesa
Melaleuca strobophylla

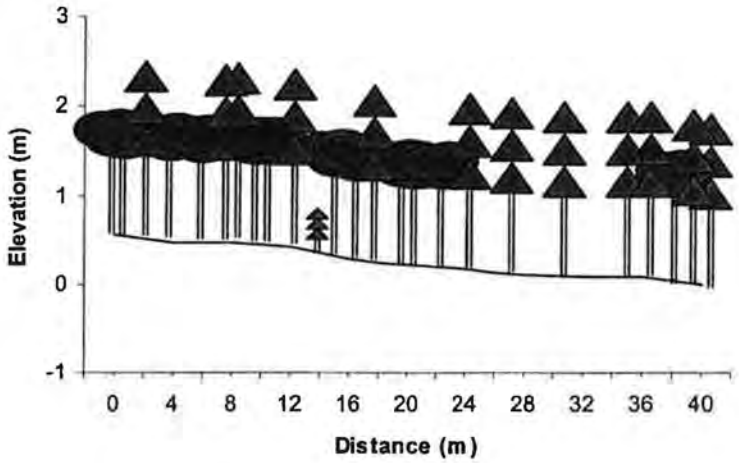
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.4.1a: Profile Diagram. Lake Logue Transect 1.



Casuarina obesa
Melaleuca strobophylla
Wilsonia rotundifolia

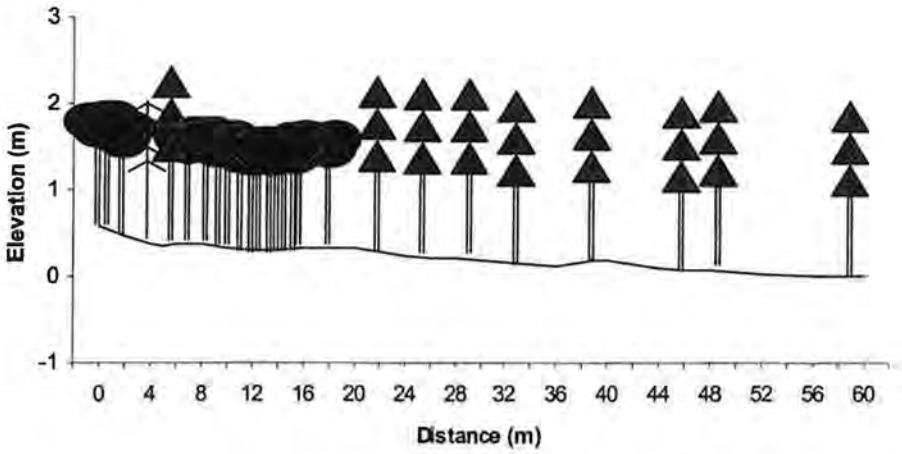
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.4.1b: Profile Diagram. Lake Logue Transect 2.



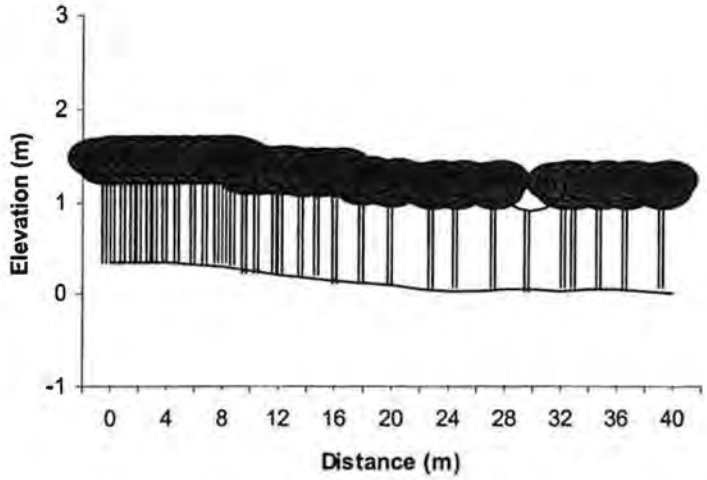
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.4.1c: Profile Diagram. Lake Logue Transect 3.



Melaleuca strobophylla

Legend

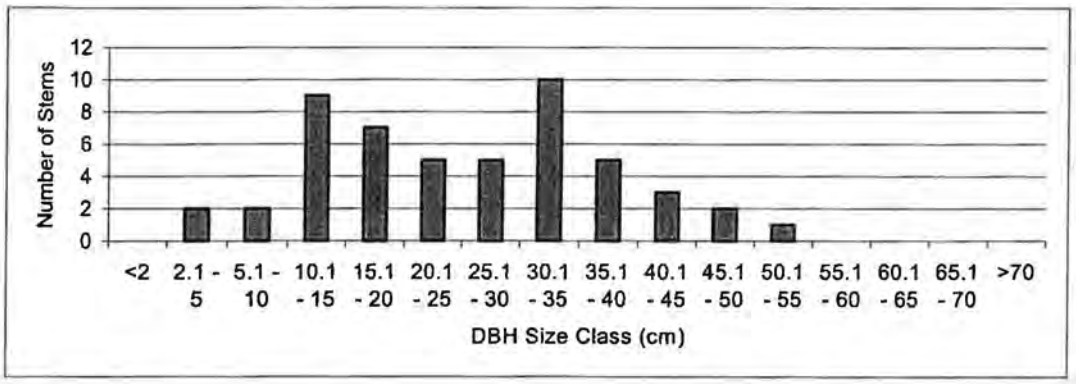
Species Present

Seedlings

Dead Plants Present D

Figure 3.4.1d: Profile Diagram. Lake Logue Transect 4.

Casuarina obesa



Melaleuca strobophylla

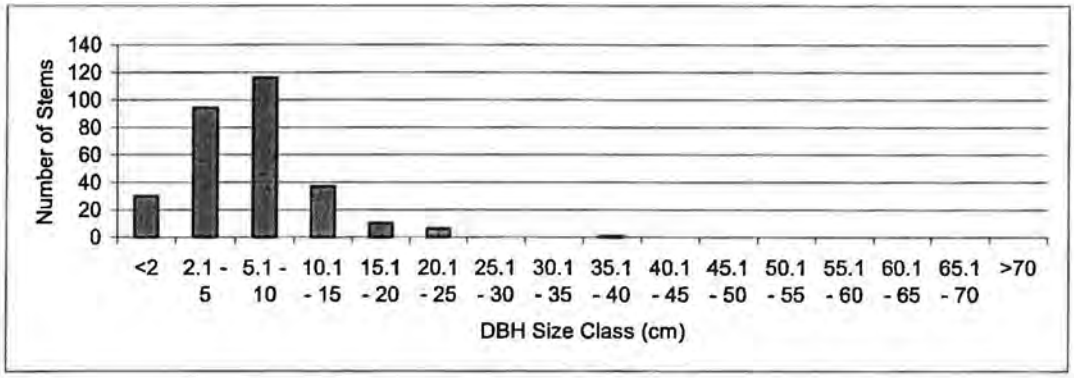


Figure 3.4.2: Size Distribution for Tree Species at Lake Logue.

3.5 Walyormouring Lake

3.5.1 Description

Walyormouring Lake is a large saline seasonal lake situated approximately 25 km north-west of Goomalling in the Walyormouring Nature Reserve (17186) (31°08' S, 116°51' E). The total lake area is 1010.0 hectares with 80% consisting of open water and 19% vegetation (Halse, Pearson and Patrick, 1993). The lake lies upon flat to undulating topography with moderately steep short banks common around the outer lake perimeter, particularly on the south western side. The lake has a main inflow channel at the north western end which may also act as an outflow channel after periods of flooding. The lake can overfill during flooding events but will retain water for extended periods after flooding. Halse, Pearson and Patrick (1993) suggest it is during these periods that the few live saplings of *Casuarina obesa* germinating each year die. The lake is located in a relatively cleared catchment surrounded by farm land with evidence suggesting that areas of the reserve have previously been used for grazing. Walyormouring Lake has had a long history of salinisation and water logging.

One 60 metre plot and one 40 metre plot were established on Walyormouring Lake to sample the mature and regeneration stands of *Casuarina obesa* woodland on the northern section of the lake bed. Monitoring was undertaken in March 1999.

Transect 1: (GPS: 50 488603 / 6554325) is situated on the north side of the Lake, located by the west access track running from the road in front of the Nature Reserve sign.
Transect 2: (GPS:50 488874 / 6554046) is situated approximately 200 metres south east of transect 1 in a dense regeneration stand of *Casuarina obesa*.

3.5.2 Plant Communities

The majority of the live vegetation on Walyormouring Lake is restricted to the elevated north and western sections. The vegetation on the lake bed and littoral zone is primarily dominated by mature dense stands of *Casuarina obesa* with scattered *Melaleuca strobophylla* individuals (Fig. 3.5.1a and b). Stands of varying density and age are noticeable with healthy *Casuarina obesa* individuals in higher parts and dead individuals extending widely across the lake bed. *Halosarcia pergranulata* grows under the dead trees around the shore line and increase in height and density toward the lakes outer perimeter.

3.5.3 Population Structure and Tree Vigour

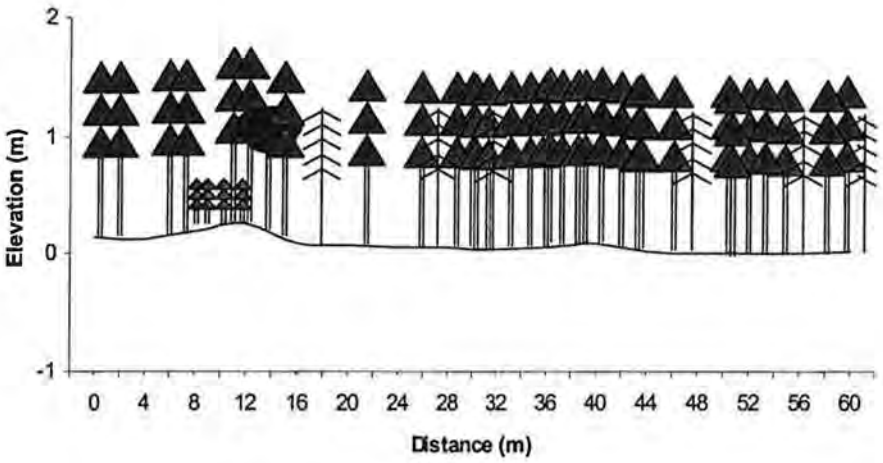
The trees stratum was dominated by *Casuarina obesa* which displayed very poor vigour (Table 3.5, Fig. 3.5.2) for a predominantly younger population. There was a very high proportion of dead adult trees, however, there was also significant evidence of seedling recruitment. Future monitoring will identify the success of this recruitment.

Table 3.5: Summary of Walyormouring Lake Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Casuarina obesa	170	144	16	165	9.53 (4.98)
Melaleuca strobophylla	1	0	0	0	8

3.5.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at all transects. Salinity ranges from approximately 60 to 750 mS/m. Soils are brown/grey silty clay.



Casuarina obesa
Halosarcia sp.
Melaleuca strobophylla

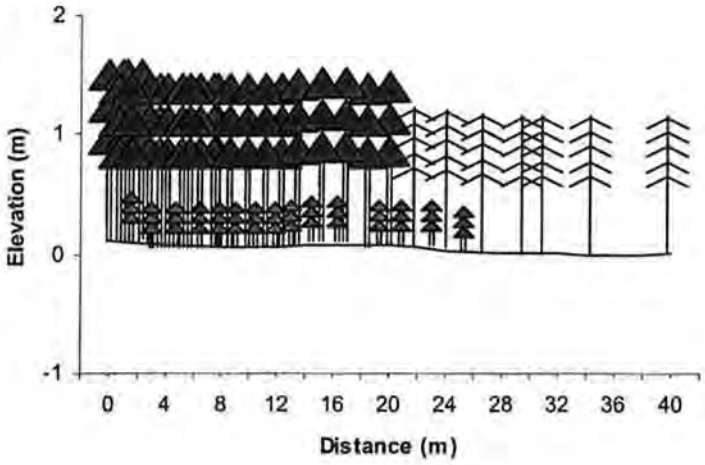
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.5.1a: Profile Diagram. Walyormouring Lake Transect 1.



Legend

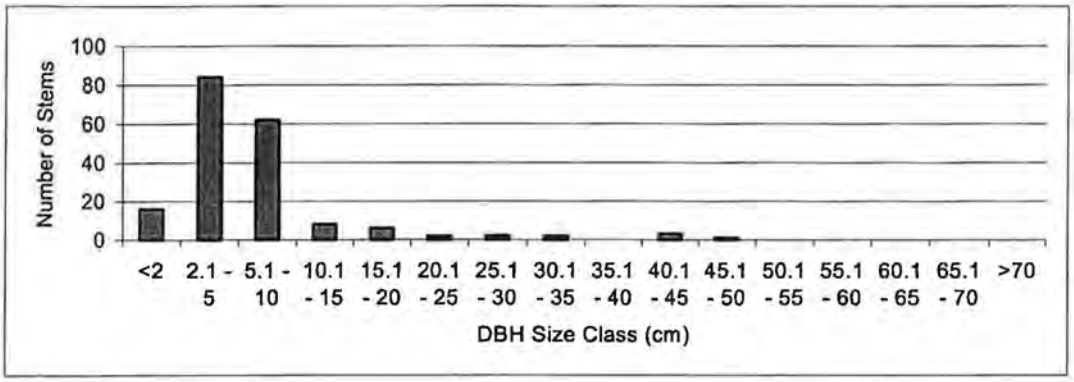
Species Present

Seedlings

Dead Plants Present D

Figure 3.5.1b: Profile Diagram. Walyormouring Lake Transect 2.

Casuarina obesa



Melaleuca strobophylla

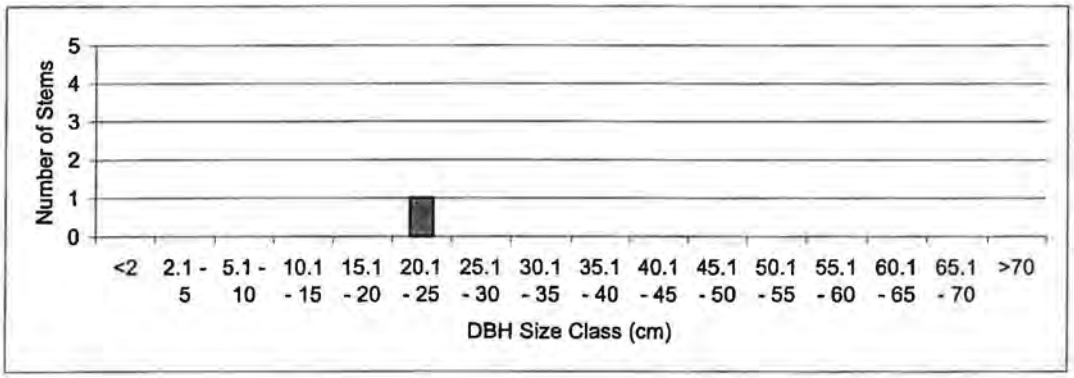


Figure 3.5.2: Size Distribution for Tree Species at Walyormouring Lake.

3.6 Lake Eganu

3.6.1 Description

Lake Eganu is a large semi-permanent saline lake situated approximately 40 km south of Carnamah in the Pinjarrega Nature Reserve (25210) (30°00' S, 115°53' E). The total lake area is 82.2 hectares with 23 % consisting of open water and 76 % vegetation (Halse, Pearson and Patrick, 1993). Lake Eganu is part of a larger system which includes a series of permanent and seasonal swamps with numerous inlet channels and outflow drains. The hydrology of this chain of wetlands is unknown, but the direction of the flow appears to be in a north west direction. The surrounding area is a gently undulating lowland of aeolian quartz sands (Australian Nature Conservation Agency, 1996). Lake Eganu has a long history of water gauging/study and is a major refuge for water birds. Lake Eganu has a long history of salinisation and has declined since the early 1970's.

Three transects were established on Lake Eganu, two 60 metre plots and one 40 metre plot which sampled the upper littoral zone down to the lake bed. Monitoring was undertaken in March 1999.

Transect 1: (GPS: 50 391453 / 6680763) is positioned on the middle east side of the Lake, located by the north western sand track approximately 200 metres west of the bridge off Green Head road.
Transect 2: (GPS: 50 391287 / 6680210) is situated approximately 250 metres south of transect 1starting in a live *Casuarina obesa* woodland and finishing on the lake bed, 30 metres from the water mark.
Transect 3: (GPS: 50 393412 / 6683405) is located in the northern series of wetlands. The access track which leads directly to the plot is located 50 metres before the bridge, heading north.

3.6.2 Plant Communities

The terrestrial vegetation surrounding Lake Eganu on elevated dunes consists of a sparse open overstorey of *Melaleuca* species and *Banksia* species with a dense understorey of Myrtaceous heathland. The vegetation closer to the lake, on the outer wetland fringe consists of an extensive belt of live *Casuarina obesa* and scattered *Eucalyptus rudis* and *Eucalyptus loxophleba* (Fig. 3.6.1a-c). Common understorey species found under this community include *Chenopodium* species, *Sclerolaena dicantha, Enchylaena species* and *Hakea recurva* subsp. *recurva*. *Halosarcia pergranulata* grows in dense stands on the less elevated areas and extends from the belt of live overstorey trees into the dead tree line close to the water mark. Associated with *Halosarcia pergranulata* along the less elevated littoral areas are *Scholtzia* species and *Baumea vaginalis*. The belt of dead *Casuarina obesa* trees extends form the centre of the lake to the lower littoral zone, with some death of species occurring in upland areas. The vegetation surrounding the northern series of lakes and swamps is much healthier with significantly fewer dead trees. A common overstorey consists of *Eucalyptus loxophleba* on higher ground with open woodlands of *Casuarina obesa*, *Melaleuca strobophylla* and *Melaleuca lateriflora* persisting into the water. The understorey was sparse mainly consisting of annual grasses.

3.6.3 Population Structure and Tree Vigour

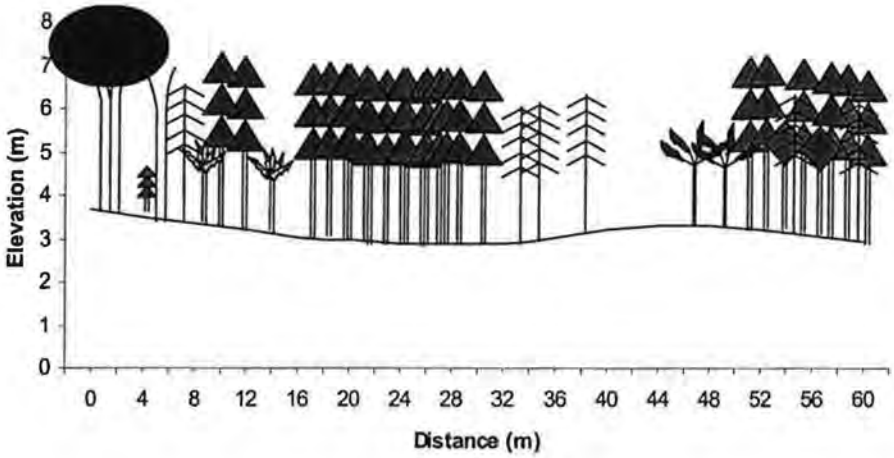
The tree stratum is dominated by *Casuarina obesa* which had low vigour and a high proportion of dead adult trees (Table 3.6, Fig. 3.6.2). There was little evidence of recent seedling recruitment.

Table 3.6: Summary of Lake Eganu Tree Data

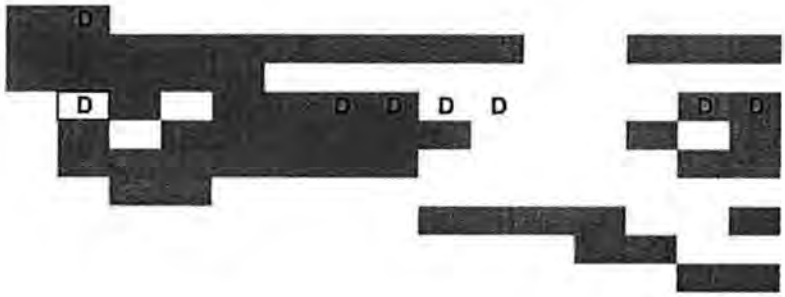
Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Casuarina obesa	155	56	2	1	9.85 (4.25)
Melaleuca strobophylla	15	0	0	0	15.53 (1.92)
Eucalyptus loxophleba	3	2	0	0	14.33 (2.51)
Hakea recurva. Recurva	5	0	0	0	
Scholtzia sp.	4	0	0	0	
Melaleuca viminea	3	0	0	0	
Acacia sp.	2	0	0	0	
Melaleuca lateriflora	1	0	0	0	

3.6.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at all transects. Salinity ranges from approximately 90 to 800 mS/m. Soils are brown/grey sand.



Eucalyptus loxophleba
Chenopodium sp.
Sclerolaena dicantha
Casuarina obesa
Halosarcia sp.
Enchylaena sp.
Hakea recurva. recurva
Baumea vaginalis
Scholtzia sp.
Melaleuca viminea



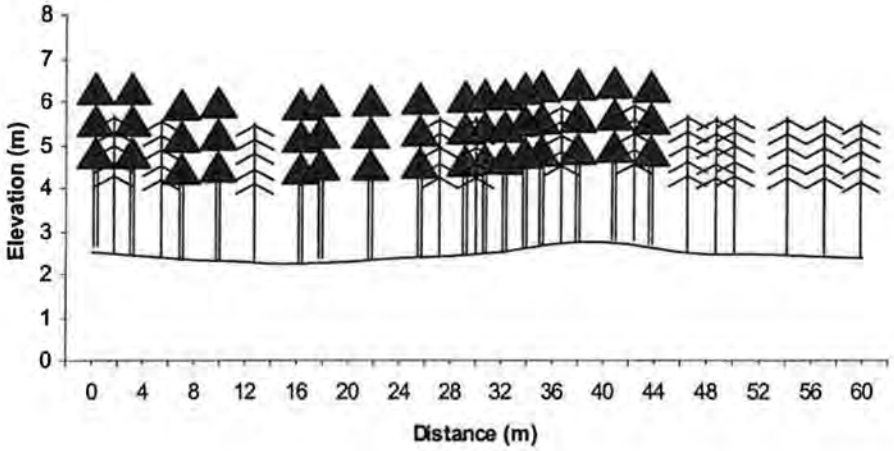
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.6.1a: Profile Diagram. Lake Eganu Transect 1.



Casuarina obesa
Halosarcia sp.

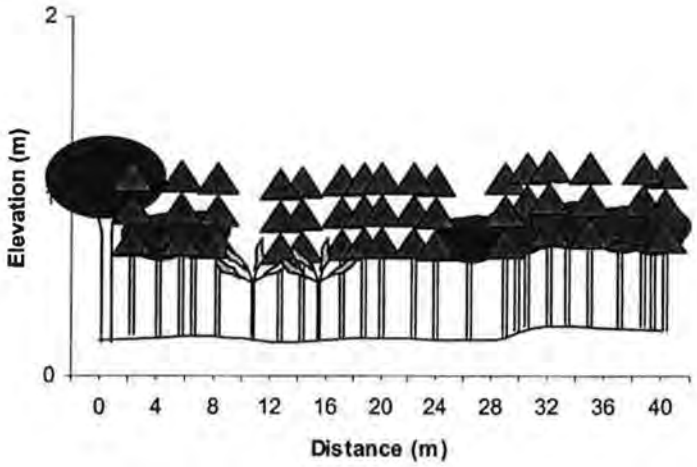
Legend

Species Present

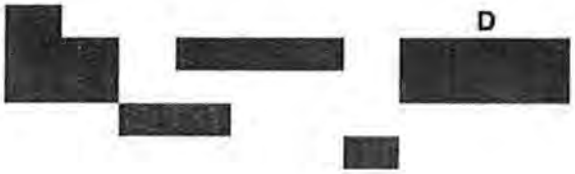
Seedlings

Dead Plants Present D

Figure 3.6.1b: Profile Diagram. Lake Eganu Transect 2.



Eucalyptus loxophleba
Casuarina obesa
Melaleuca strobophylla
Acacia sp.
Melaleuca lateriflora



Legend

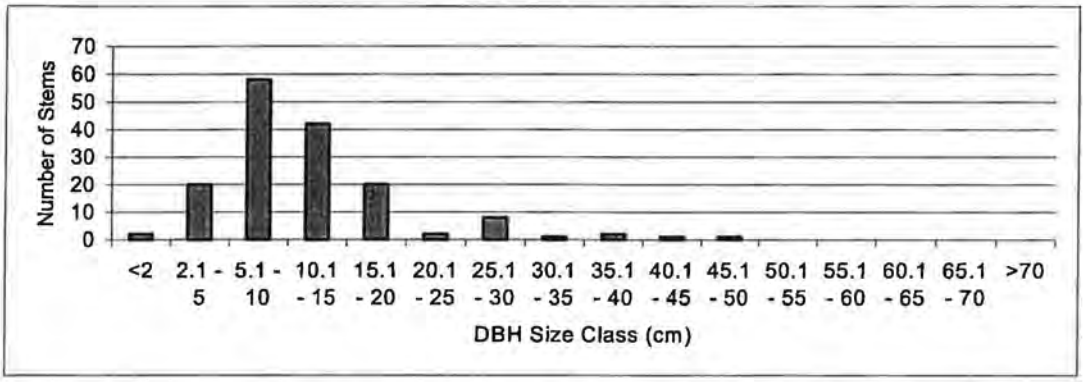
Species Present

Seedlings

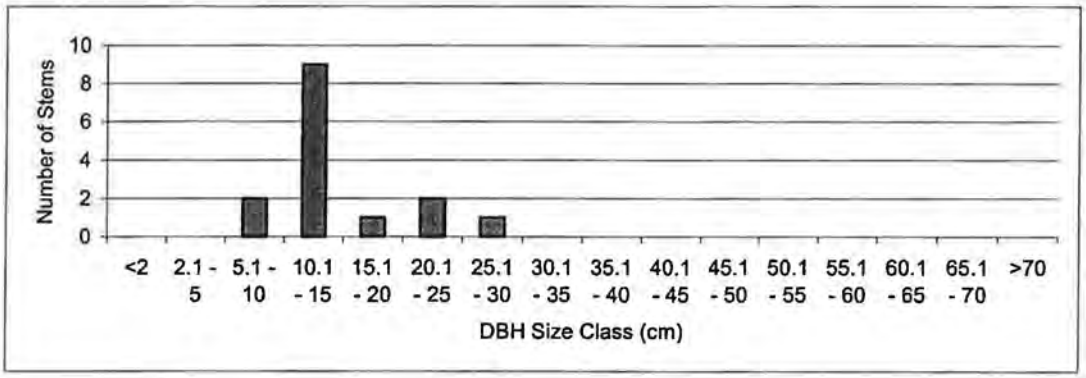
Dead Plants Present D

Figure 3.6.1c: Profile Diagram. Lake Eganu Transect 3.

Casuarina obesa



Melaleuca strobophylla



Eucalyptus loxophleba

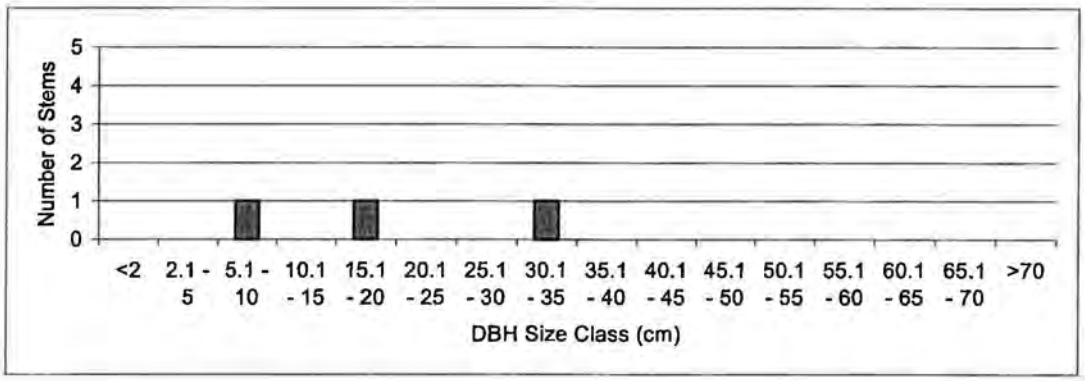


Figure 3.6.2: Size Distribution for the Tree Species at Lake Eganu.

3.7 Ardath Lake

3.7.1 Description

Ardath Lake (32°05' S, 118°09' E) lies in a large block of remnant vegetation vested in the Shire of Bruce Rock. Along with other low lying areas in the surrounding landscape, much of the vegetation of the lake is severely salt affected. Inflow and outflow appears to occur through the channel at the south western end of the lake. A low drainage bund has been constructed across a second channel which lies directly north of the main channel. The bund appears to direct flow into the lake through the main channel and may block outflow into the second channel. These modifications to the drainage may be intended to maintain water levels for recreation (ie. skiing).

Two 40 metre transects were established on this lake in November 1998.

Transect 1: (GPS: 50 608718 / 6448165) is positioned on the western side of the lake, located by the main access track off the sealed rod.

Transect 2: (GPS: 50 608987 / 6447909) is situated on the eastern side of the lake, located by the main access track. Transect 2 finishes in the water. **Note:** the rear of this transect crosses the access track and has no rear right star picket.

3.7.2 Plant Communities

The higher ground to the east of the lake supports an open woodland of *Eucalyptus yilgarnensis* with *Casuarina obesa* becoming dominant nearer to the lake (Fig. 3.7.1a and b). On the heavier soils to the south, *Melaleuca uncinata* occurs as a low open forest giving way to a low shrubland of *Halosarcia* species in and around the drainage channels. The lower ground to the north west of the lake is severely salt affected with much of the *Casuarina obesa* overstorey dead or defoliated. Much of the original understorey of *Melaleuca thyoides* and *Melaleuca lateriflora* is dead or severely stressed with *Halosarcia* species extending throughout the plot.

3.7.3 Population Structure and Tree Vigour

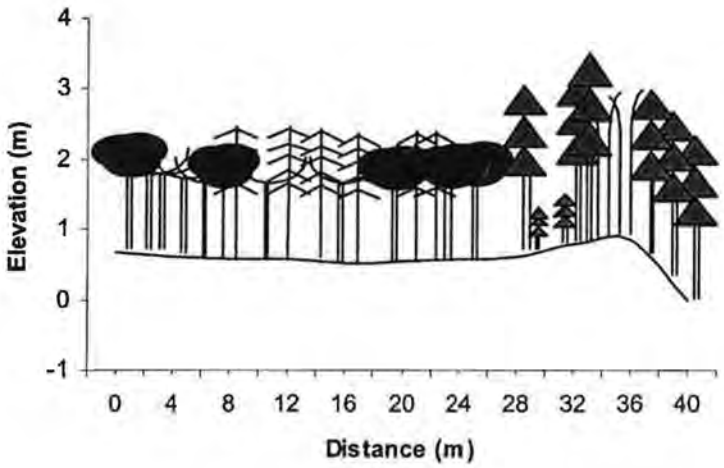
There was a high degree of mortality evident across a number of the tree and large shrub species at Ardath Lake (Table 3.7, Fig. 3.7.2). The majority of the *Melaleuca lateriflora* population was dead. However, there was evidence of seedling recruitment in the *Casuarina obesa* population.

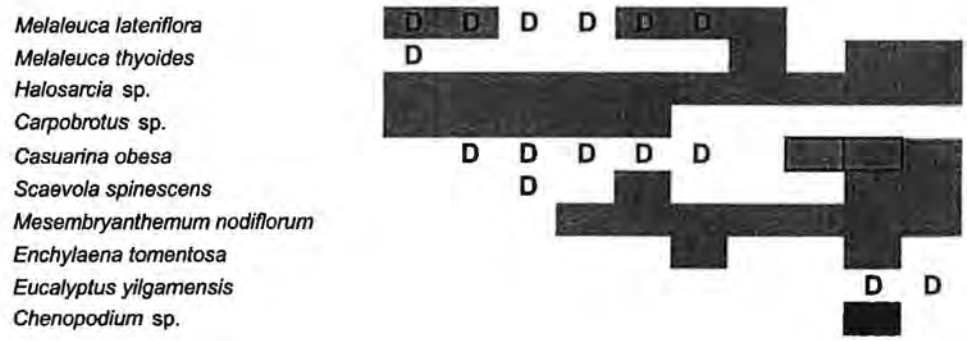
Table 3.7: Summary of Ardath Lake Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Melaleuca lateriflora	9	25	0	0	
Melaleuca thyoides	21	0	0	0	
Casuarina obesa	19	9	5	6	14.08 (2.51)
Eucalyptus yilgarnensis	8	5	0	0	11.12 (4.51)
Scaevola spinescens	4	3	0	0	
Acacia ?rostellifera	1	0	0	0	

3.7.4 Soil Characteristics

The EM38 data (Appendix 1) shows a variable soil salinity along each transect. Salinities are similar at all transects. Salinity ranges from approximately 200 to 800 mS/m. Soils are brown/grey sandy to a sandy loam.





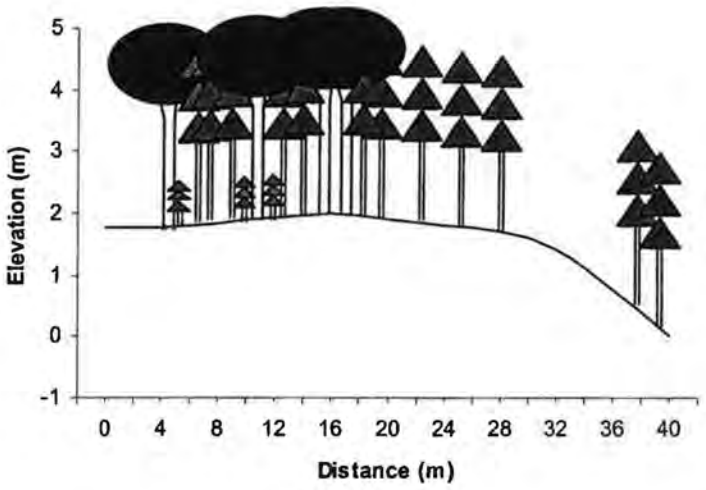
Legend

Species Present

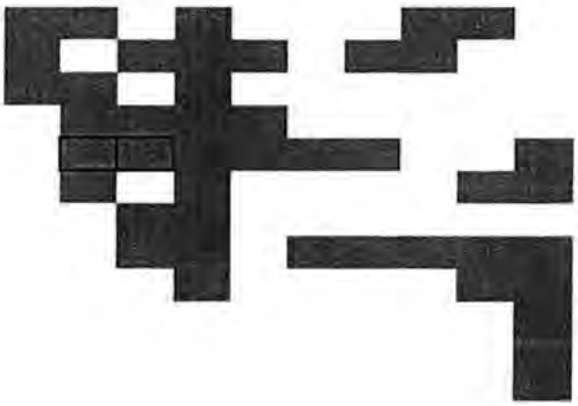
Seedlings

Dead Plants Present D

Figure 3.7.1a: Profile Diagram. Ardath Lake Transect 1.



Olearia pimeleoides
Daviesia sp.
Carpobrotus sp.
Eucalyptus yilgarnensis
Casuarina obesa
Enchylaena tomentosa
Grevillea acuaria
Halosarcia lylei
Chenopodium sp.
Acacia ?rostellifera
Melaleuca thyoides
Alyxia buxifolia



Legend

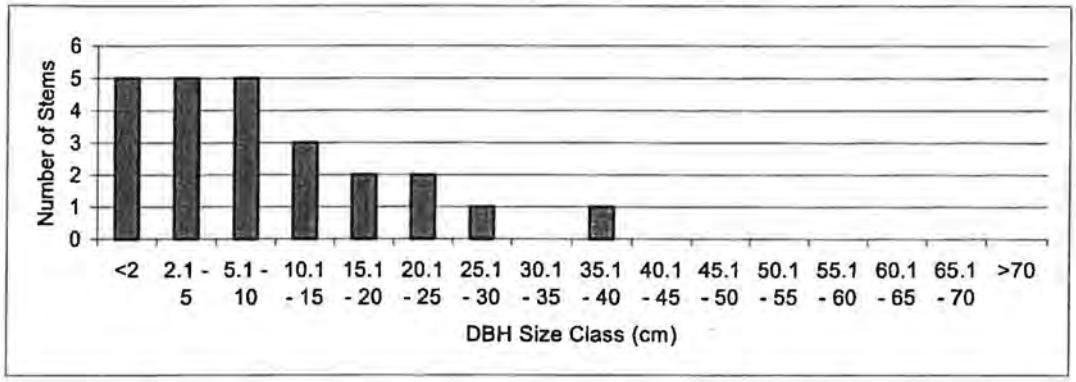
Species Present

Seedlings

Dead Plants Present D

Figure 3.7.1b: Profile Diagram. Ardath Lake Transect 2.

Casuarina obesa



Eucalyptus yilgarnensis

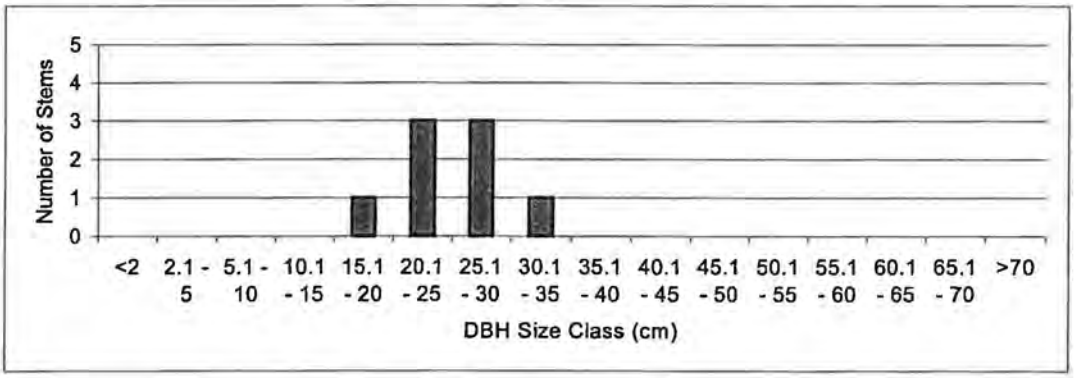


Figure 3.7.2 Size Distribution for the Tree Species at Ardath Lake.

3.8 Lake Campion

3.8.1 Description

Lake Campion is a very large seasonal hypersaline lake situated approximately 40 km north of the Merredin town site in the Campion Nature Reserve (24789) (31°09' S, 118°21' E). The total lake area is 611.2 hectares with 100 % consisting of open water (Halse, Pearson and Patrick, 1993). A series of saline depressions occur in the remnant vegetation to the east and south of the lake along with several small creeks which flow into the lake. A narrow band of remnant vegetation separates the lake from adjoining pasture to the north. The saline nature of the lake has lead to the death of the majority of the littoral vegetation. The lake is used for skiing when water level permits.

Four transects were established on Lake Campion. The plots sampled the upland wetland vegetation through to the *Halosarcia* species on the lake bed. Monitoring was undertaken in November 1998.

Transect 1: (GPS: 50 628235 / 6554923) is situated approximately half way along the western peninsula that crosses Stock Road.

Transect 2: (GPS:50 628044 / 6554508) is located approximately half way along the north western side of the southern section of the lake.

Transect 3: (GPS: 50 628000 / 6553250) is positioned in the middle of the bay to the south east of the carpark/boat ramp.

Transect 4: (GPS:50 629172 / 6554353) is situated approximately half way along the second bay on the south west side of the main lake body.

3.8.2 Plant Communities

The elevated areas of the lake are dominated by open woodlands of mature *Eucalyptus yilgarnensis*, *Eucalyptus loxophleba* and *Callitris glaucophylla* with a variety a tall shrubs including *Eremophila oppositifolia* subsp. *angustifolia*, *Acacia acuminata*, *Acacia prainii*, *Bossiaea rufa*, *Dodonaea filifolia*, and *Hakea recurva* (Fig. 3.8.1a-d). The understorey is in the upland areas is similar around the lake consisting of small shrubs and grasses, with important species including *Enchylaena tomentosa*, *Chenopodium species*, *Gunniopsis glabra*, *Mesembryanthemum nodiflorum*, *Olearia muelleri* and *Austrostipa elegantissima*. The replacement of the *Eucalypt* woodlands with tall shrub *Melaleuca* species and salt tolerant succulent understorey species is evident with movement into the lower littoral zone of the lake. In these less elevated areas, dense stands of live and dead *Melaleuca uncinata* and *Melaleuca pauperiflora* dominate the overstorey, persisting onto the lake bed. The understorey in this zone is comprised mainly of *Carpobrotus*, *Halosarcia*, *Atriplex* and *Frankenia* species.

3.8.3 Population Structure and Tree Vigour

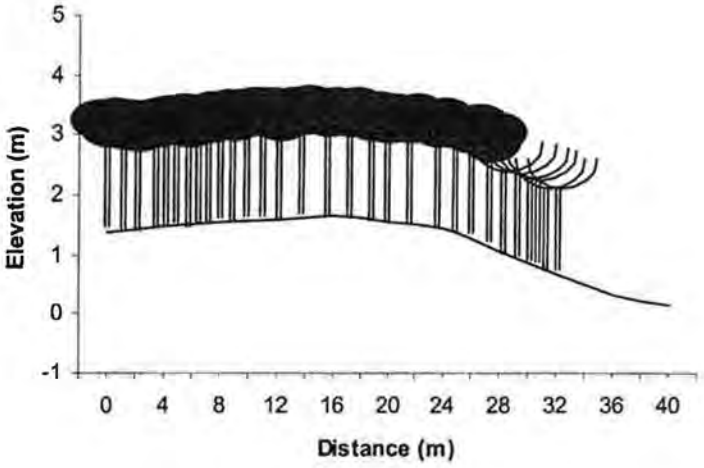
The diverse tree and large shrub community of Lake Campion displayed moderate to high vigour (Table 3.8, Fig. 3.8.2). The only population to exhibit significant mortality was that of *Melaleuca uncinata*. There was little evidence of recruitment in all species except *M. pauperiflora*.

Table 3.8: Summary of Lake Campion Tree Data

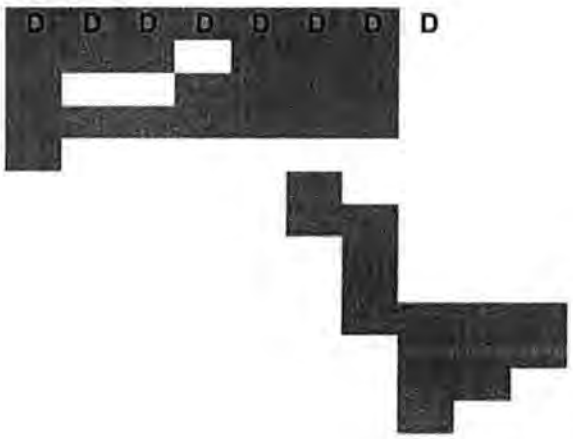
Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Melaleuca uncinata	239	77	0	0	
Eucalyptus yilgarnensis	20	0	0	0	13.75 (4.63)
Eremophila oppositifolia. angustifolia	4	0	1	0	15.5 (2.51)
Acacia acuminata	1	0	1	0	14 (1.41)
Dodonaea filifolia	16	0	1	0	
Callitris glaucophylla	13	0	0	0	15.15 (3.60)
Hakea recurva	6	0	0	0	
Bossiaea ?rufa	8	0	0	0	
Melaleuca pauperiflora	9	0	1	4	11.85 (4.45)
Alyxia buxifolia	2	0	0	0	
Acacia ?prainii	5	0	0	0	
Acacia sp.	11	0	0	0	11.5 (3.41)

3.8.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities were highest at Transect 2. Salinity ranges from approximately 95 to 1500 mS/m. Soils are coarse brown sand, tending to grey at lower elevations with some salt crusting evident near the waters edge.



Melaleuca uncinata
Enchylaena tomentosa
Chenopodium sp.
Gunniopsis glabra
Mesembryanthemum nodiflorum
Dodonaea filifolia
Austrostipa elegantissima
Sclerolaena convexula
Atriplex vesicaria
Halosarcia sp.
Frankenia sp.
Halosarcia pergranulata
Gnephosis tenuissima



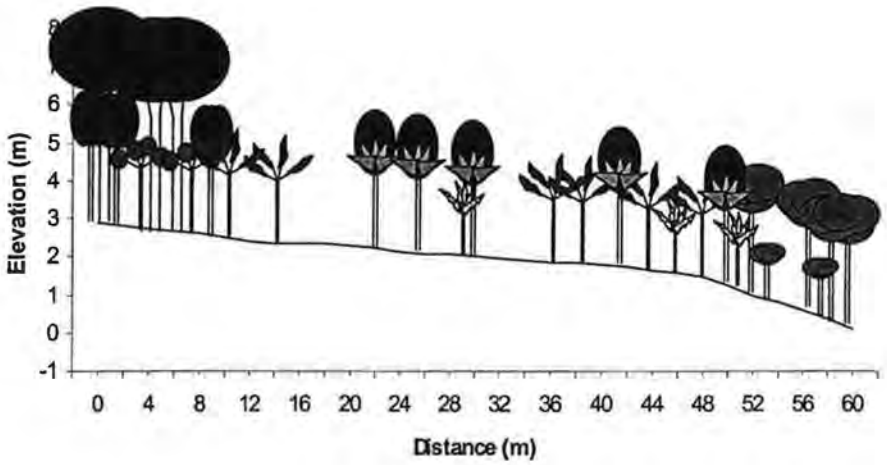
Legend

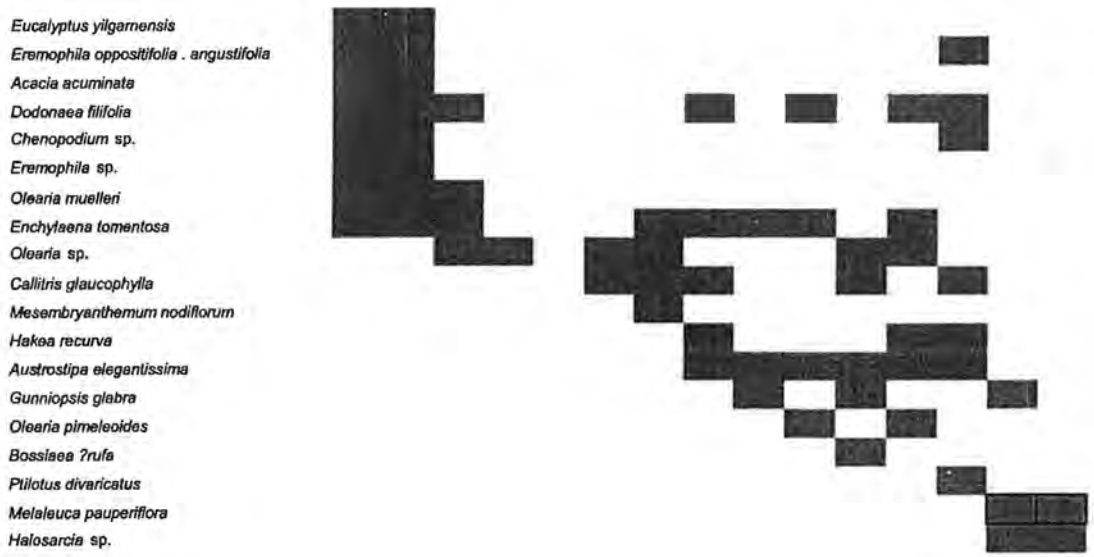
Species Present

Seedlings

Dead Plants Present D

Figure 3.8.1a: Profile Diagram. Lake Campion Transect 1.





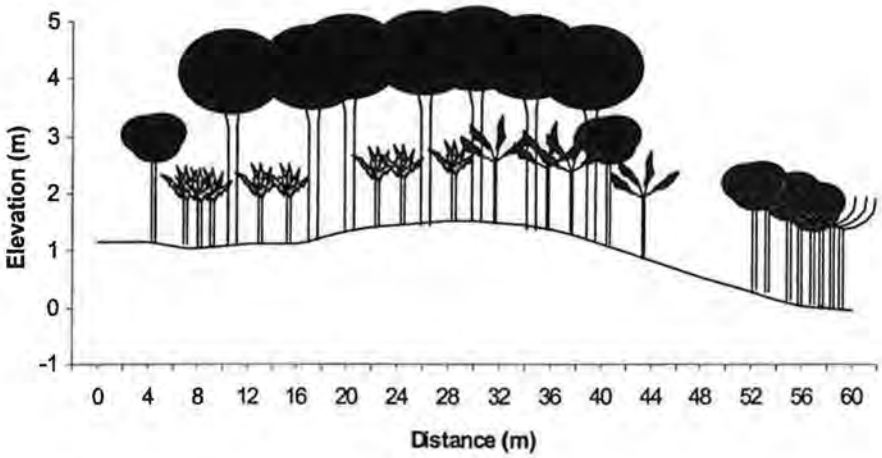
Legend

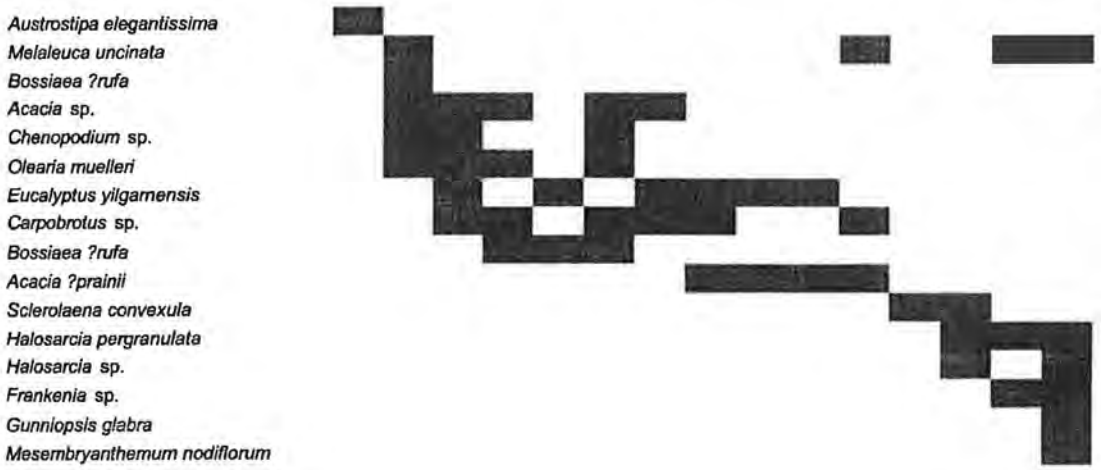
Species Present

Seedlings

Dead Plants Present D

Figure 3.8.1b: Profile Diagram. Lake Campion Transect 2.





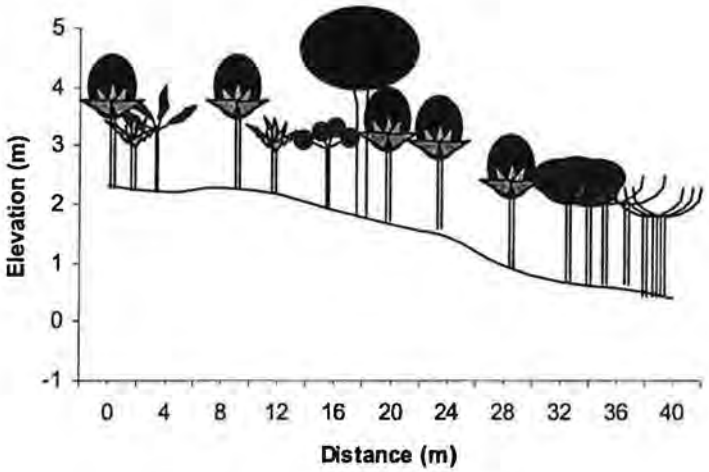
Legend

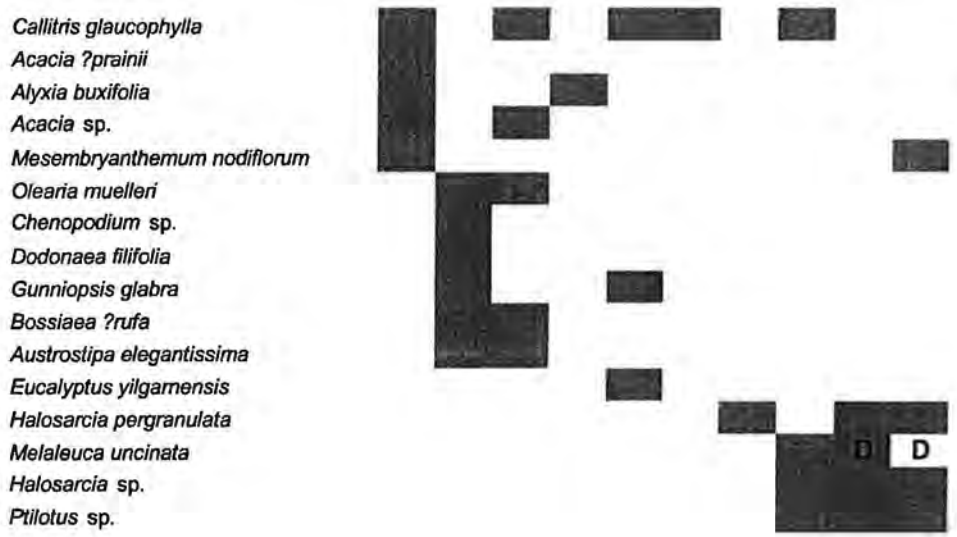
Species Present

Seedlings

Dead Plants Present D

Figure 3.8.1c: Profile Diagram. Lake Campion Transect 3.





Legend

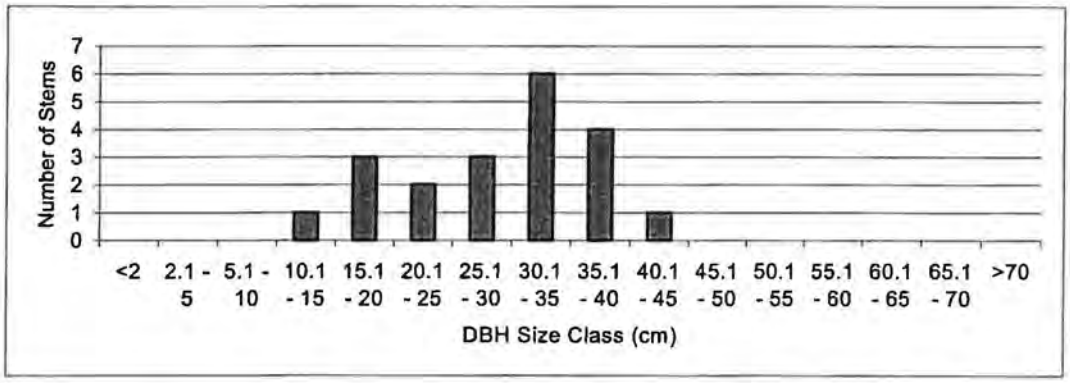
Species Present

Seedlings

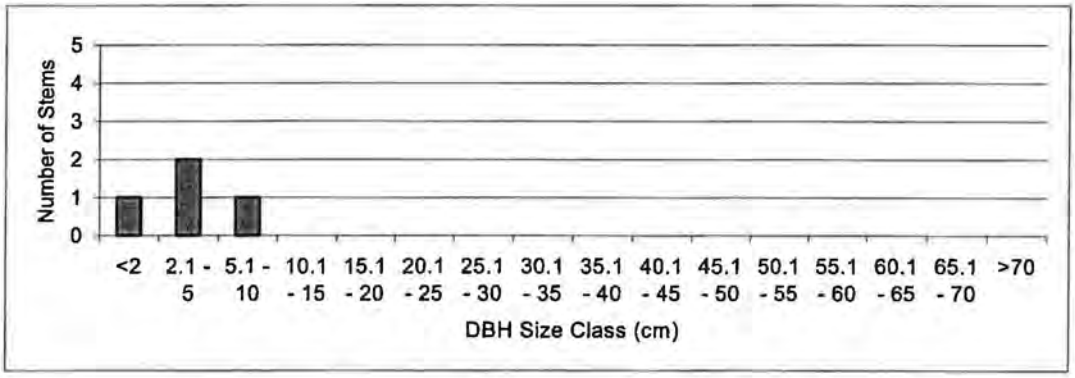
Dead Plants Present D

Figure 3.8.1d: Profile Diagram. Lake Campion Transect 4.

Eucalyptus yilgarnensis



Eremophila oppositifolia subsp. *angustifolia*



Acacia acuminata

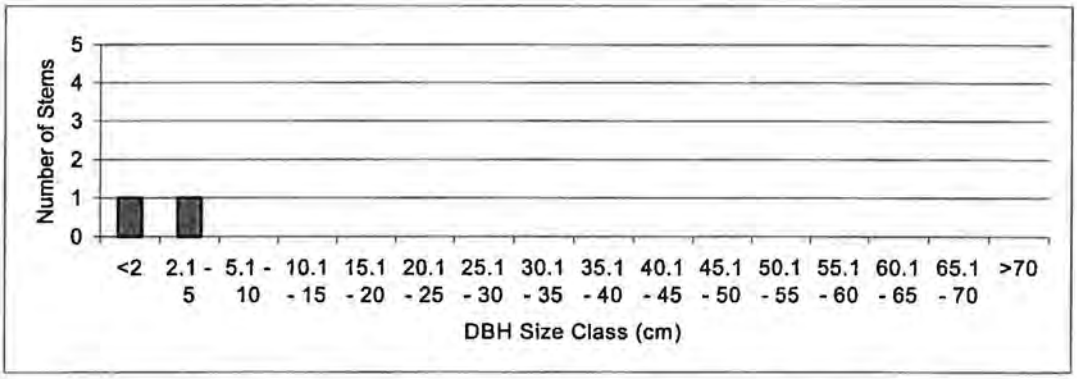
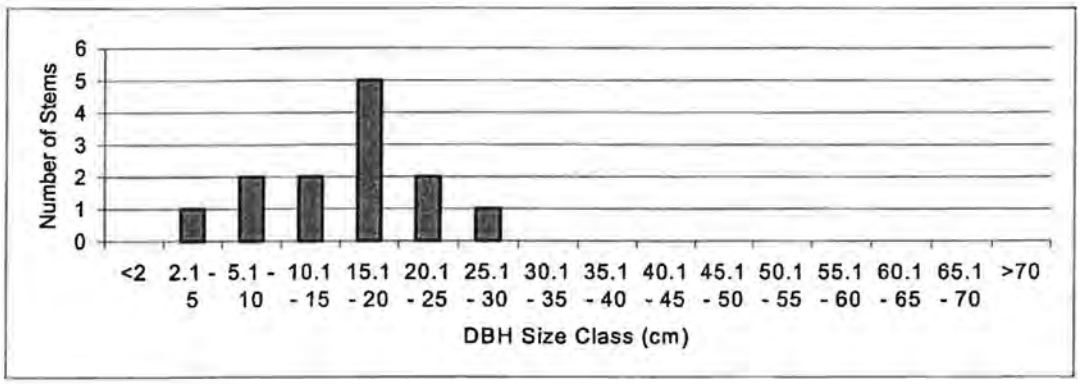
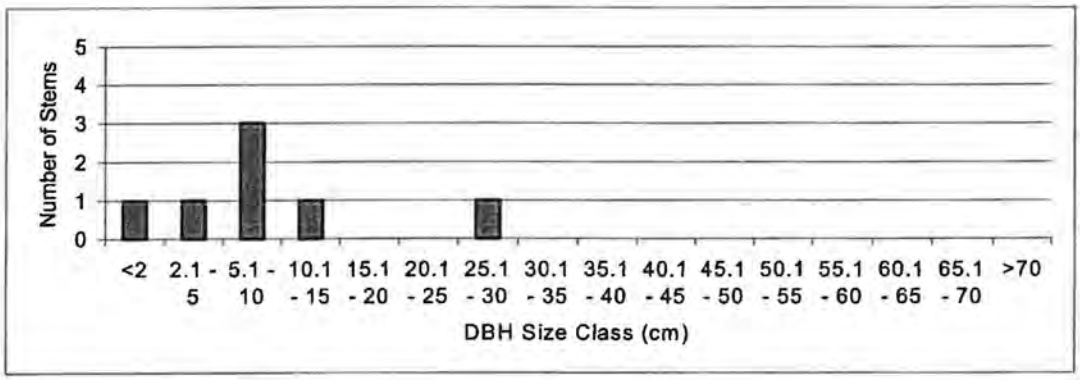


Figure 3.8.2: Size Distribution for Tree Species at Lake Campion.

Callitris glaucophylla



Melaleuca pauperiflora



Acacia ?prainii

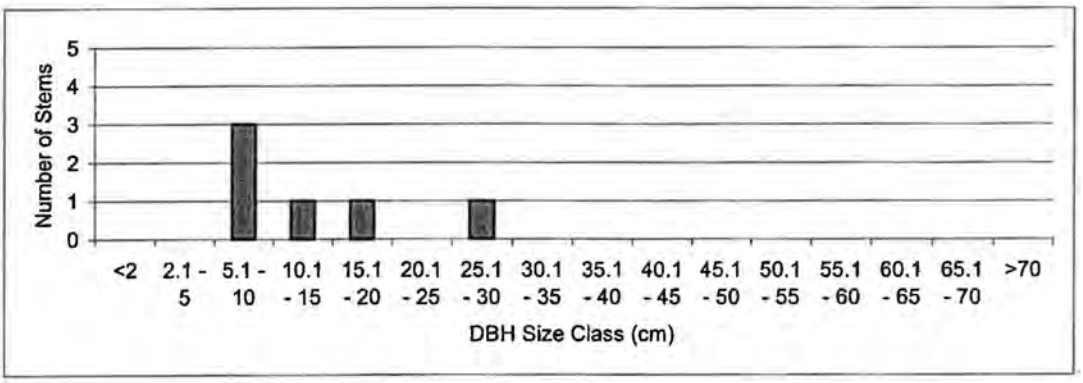


Figure 3.8. contin.: Size Distribution for Tree Species at Lake Campion.

3.9 Paperbark Swamp

3.9.1 Description

Paperbark Swamp is a small fresh seasonal wetland which is located approximately 30 km south west of Corrigin in the Paperbark Nature Reserve (32°24' S, 118°, 06' E). The wetland lies within cleared paddocks apart from the vegetation remaining in the reserve. The wetland is characterised by gentle to flat sloping banks near the perimeter to sharp rolling topography toward the centre which is comprised of interconnected depressions, mounds and creeks. A large drainage inlet has been constructed within the southern section of the reserve opposite a paddock with evidence of water logging and erosion. Modification to the drainage of the lake may be causing the vegetation stress noted within the southern portion of the Swamp. Grazing history within the Paperbark Swamp is unknown, but it seems likely that grazing has occurred within the southern sections of the nature reserve.

Three 60 metre transects were established in Paperbark Swamp in February 1999. Transects 1 and 2 sampled the terrestrial vegetation of the reserve and transect 3 sampled the community of *Melaleuca strobophylla* and *Melaleuca phoidophylla* in the centre of the swamp.

Transect 1: (GPS: 50 603653 / 6413122) is situated 50 metres in from the dogleg in the main access track near the property boundary.
Transect 2: (GPS:50 603688 / 6412783) is located approximately 200 metres south from the dogleg in the main track. SSE of transect 1.
Transect 3: (GPS: 50 603221 / 6413036) is positioned approximately 100 metres ENE of the corner drain inlet at the southern end of the reserve. Located in a stand of mature *Melaleuca strobophylla*.

3.9.2 Plant Communities

An open woodland of *Eucalyptus yilgarnensis* and *Eucalyptus loxophleba* dominates the outer boundary of the reserve with *Melaleuca lateriflora* and *Melaleuca phoidophylla* co-dominating but more pronounced with movement further into the lake centre (Fig. 3.9.1a-c). Common understorey species include *Enchylaena tomentosa*, *Atriplex semibaccata*, *Maireana brevifolia*, *Grevillea acuaria*, *Lomandra effusa* and *Chenopodium* species. Towards the centre of the swamp and the southern section of the reserve, mature stands of *Melaleuca strobophylla* dominate forming an open woodland with *Melaleuca phoidophylla*. The understorey is sparse beneath this community which during wetter months, would be inundated. This woodland has declined near the inflow and to the south where waterlogging and possibly salt has affected the vegetation.

3.9.3 Population Structure and Tree Vigour

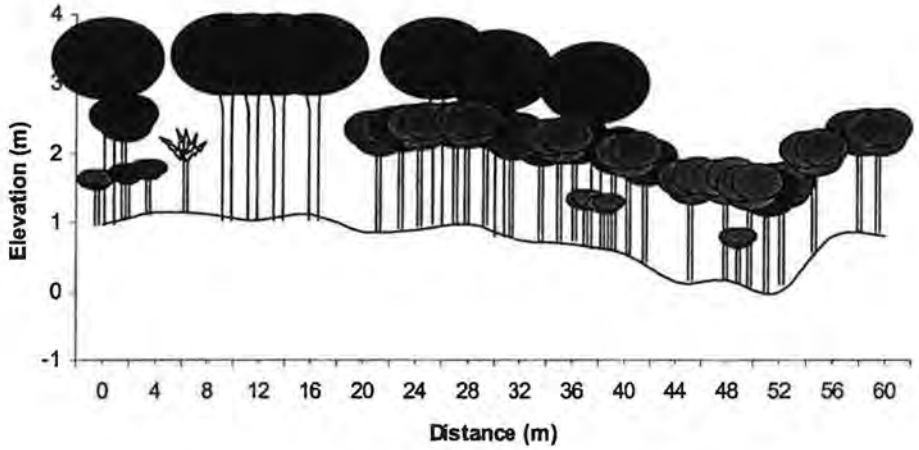
The undulating bed of Paperbark Swamp is dominated by low to moderate vigour stands of *Melaleucas* and *Eucalyptus yilgarnensis* (Table 3.9, Fig. 3.9.2). There was significant mortality and seedling recruitment evident in the populations of *Melaleuca lateriflora* and *M. phoidophylla*. Population structure was typically static except for the two aforementioned *Melaleuca* species.

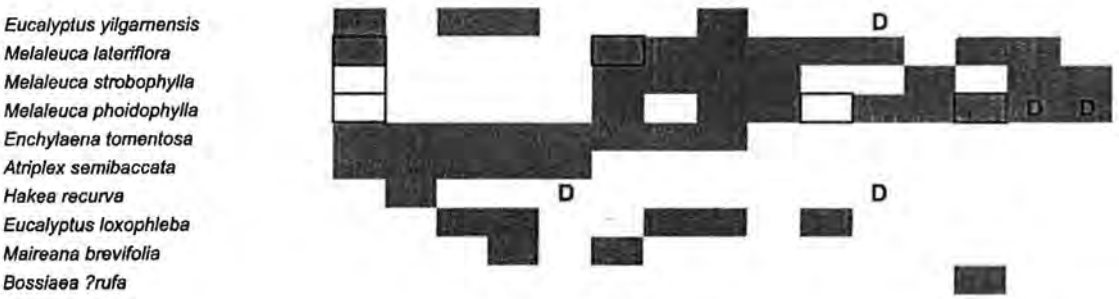
Table 3.9: Summary of Paperbark Swamp Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Eucalyptus yilgarnensis	7	1	0	0	12.85 (3.97)
Melaleuca lateriflora	145	28	4	3	
Melaleuca strobophylla	39	2	1	1	13.7 (2.37)
Melaleuca phoidophylla	123	11	20	8	
Hakea recurva	1	4	0	0	
Eucalyptus loxophleba	9	1	0	0	9 (3.70)
Bossiaea ?rufa	1	0	0	0	

3.9.4 Soil Characteristics

The EM38 data (Appendix 1) shows a variable salinity across the undulating bed. Salinities are similar at all transects. Salinity ranges from approximately 0 to 170 mS/m. Soils are brown-red sands over clay. Clay evident at surface in depressions.





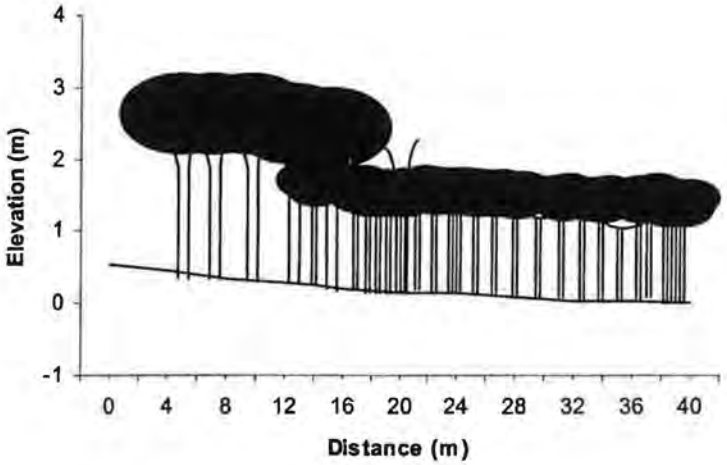
Legend

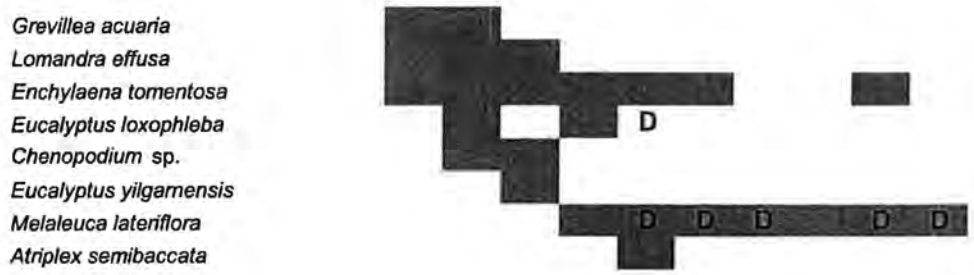
Species Present

Seedlings

Dead Plants Present D

Figure 3.9.1a: Profile Diagram. Paperbark Swamp Transect 1.





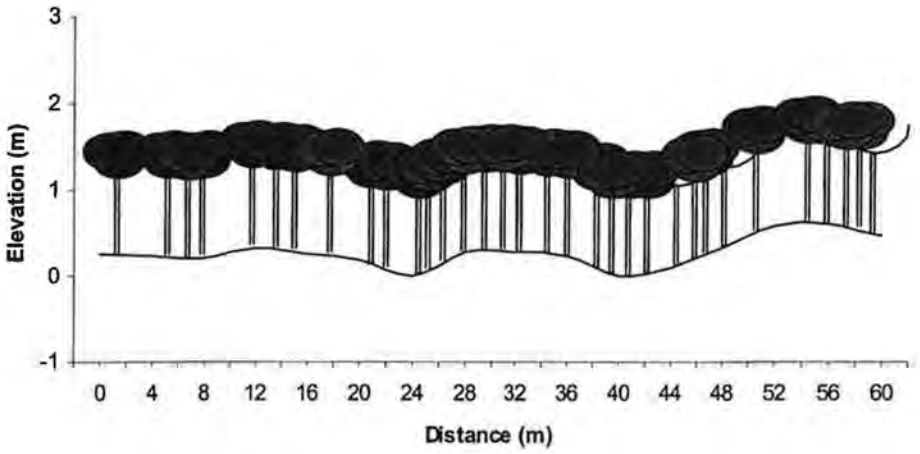
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.9.1b: Profile Diagram. Paperbark Swamp Transect 2.



Melaleuca strobophylla
Melaleuca phoidophylla

Legend

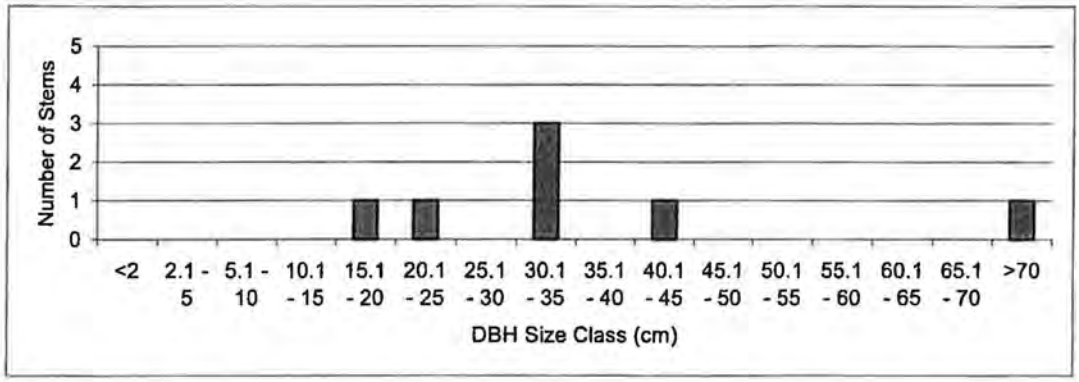
Species Present

Seedlings

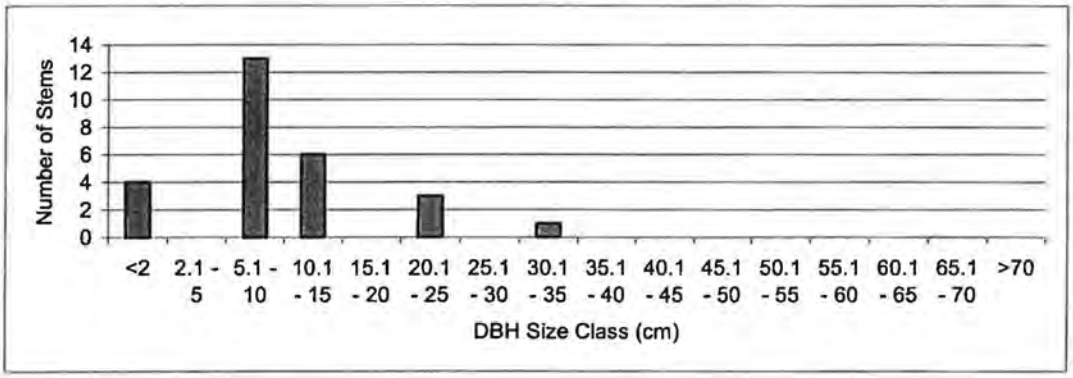
Dead Plants Present D

Figure 3.9.1c: Profile Diagram. Paperbark Swamp Transect 3.

Eucalyptus yilgarnensis



Melaleuca lateriflora



Melaleuca strobophylla

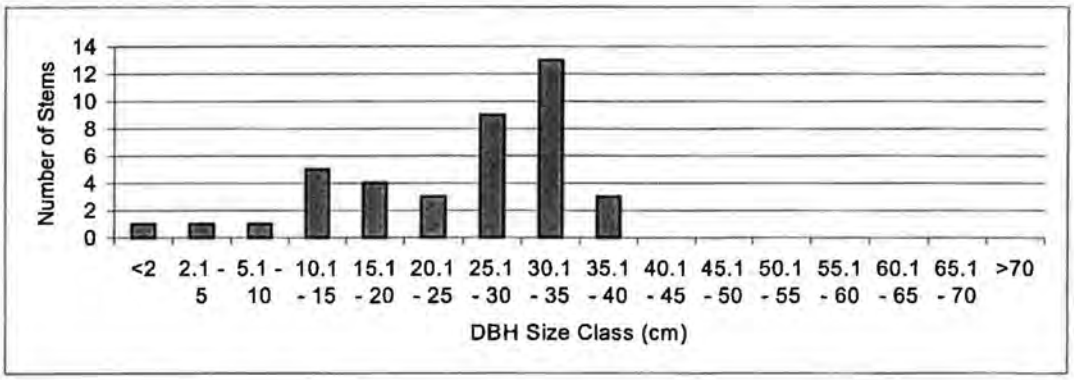
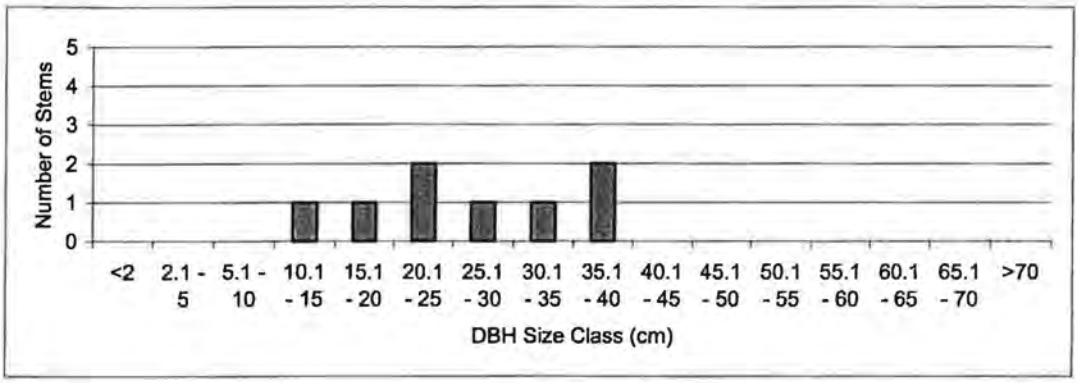


Figure 3.9.2: Size Distribution for Tree Species at Paperbark Swamp.

Eucalyptus loxophleba



Melaleuca phoidophylla

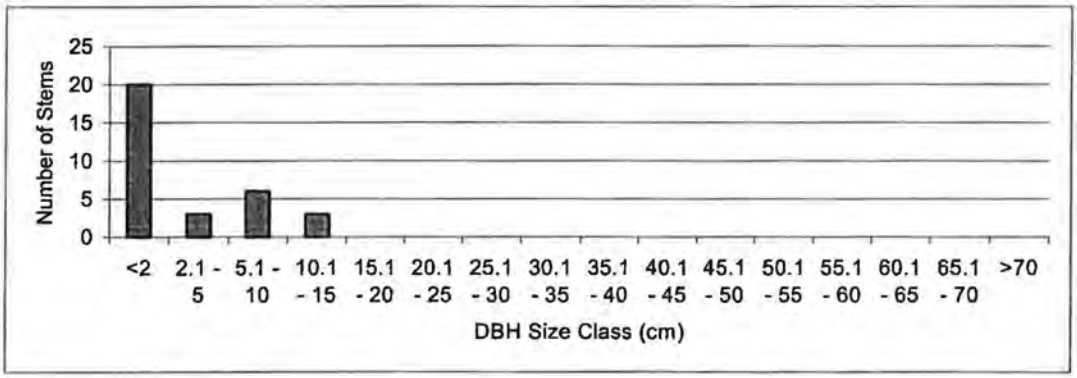


Figure 3.9.2 contin.: Size Distribution for Tree Species at Paperbark Swamp.

3.10 Goonaping Swamp

3.10.1 Description

Goonaping Swamp is a small fresh seasonal wetland which is located approximately 50 km south west of York in the Wandoo Conservation area (32°09' S, 116°, 35' E). The wetland lies within a forest catchment with cleared paddocks adjacent to the north and west of the reserve. The bulk of the water supply for Goonaping Swamp comes from direct precipitation and runoff with inflow occurring in two drains located on the northern and south western edges of the swamp. Outflow is restricted to the south western drain. The Swamp is characterised by moderately steep slopes with a broad shallow lake bed depression. The wetland slopes are comprised of laterite scree and clayey soils primarily supporting *Eucalyptus wandoo* woodlands with scattered *Eucalyptus marginata* and pockets of *Banksia* species occurring on deep sands. The lower slopes and littoral zone consist of sandy to clayey loams of alluvial origin supporting *Melaleuca preissiana* and *Eucalyptus rudis* with wetland communities of *Melaleuca viminea* occurring further downslope (Capill, 1984).

Three 60 metre transects were established on Goonaping Swamp sampling the elevated terrestrial vegetation down into the littoral zone. Monitoring was undertaken in February 1999.

Transect 1: (GPS: 50 461762 / 6442472) is situated on the south eastern side of the swamp approximately 100 metres from the main inflow/outflow drain.

Transect 2: (GPS:50 462309 / 6443399) is located on the north western side of the lake where the elevation is higher. Transect 2 is positioned near the stand of large mature *Eucalyptus rudis*.

Transect 3: (GPS: 50 462417 / 6443260) is positioned on the middle east side of the Swamp approximately 200 metres around from transect 2. Transect 3 can be accessed through the inflow drain near the cleared paddocks off the main track.

3.10.2 Plant Communities

The boundary of the wetland is dominated by open woodlands of *Eucalyptus wandoo* on breakaway slopes with *Eucalyptus marginata*, *Eucalyptus calophylla* and *Banksia* species occurring on upland areas in deep sands (Fig. 3.10.1a-c). *Kunzea ericifolia* is common under the terrestrial communities with understorey species including *Macrozamia riedlei*, *Phlebocarya ciliata*, *Hibbertia subvaginata*, *Patersonia occidentalis* and *Leucopogon* species. The sloping banks on the southern and western sides of the swamp are dominated by *Eucalyptus wandoo*, forming an open woodland with dense stands of *Melaleuca viminea* at lower elevations. The understorey is relatively species poor under these communities, with common species including *Bossiaea spinescens* and *Acacia pulchella*. Vegetation communities dominated by terrestrial species are located predominantly on the northern section of the swamp where the elevation is higher. *Eucalyptus rudis* and *Melaleuca preissiana* are common on lower areas with dense stands of *Melaleuca viminea* occurring in the littoral zone and across the lake bed.

3.10.3 Population Structure and Tree Vigour

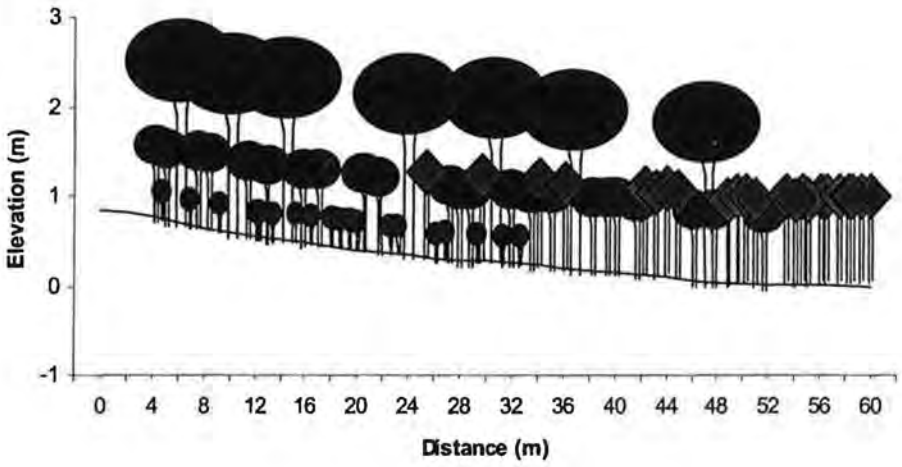
There was significant recruitment evident in the populations of *Eucalyptus wandoo* and *Kunzea ericifolia* (Table 3.10, Fig. 3.10.2). The latter species also exhibited a high proportion of mortality. The population structure of the dominant tree species exhibited a 'dynamic' size distribution dominated by younger individuals and recruitment.

Table 3.10: Summary of Goonaping Swamp Tree Data

Species	No. of live trees	No. of dead trees	No. of saplings	No. of seedlings	Mean Crown Score (S.D)
Eucalyptus wandoo	94	0	20	87	13.71 (3.49)
Melaleuca viminea	465	1	0	16	
Melaleuca preissiana	32	0	3	0	11.48 (2.82)
Regelia ciliata	20	0	0	0	
Eucalyptus rudis	8	0	0	1	15.37 (2.66)
Hakea varia	34	0	0	0	
Kunzea ericifolia	92	12	0	74	
Banksia menziesii	0	0	0	4	
Eucalyptus marginata	3	0	0	0	14.33 (4.50)
Banksia attenuata	0	0	0	1	
Macrozamia riedlei	1	0	0	0	
Jacksonia sp.	2	0	0	0	
Hakea prostrata	1	0	0	0	
Acacia salinga	0	0	0	1	

3.10.4 Soil Characteristics

The EM38 data (Appendix 1) shows an increase in soil salinity with a decrease in elevation. Salinities are similar at all transects. Salinity ranges from approximately 0 to 110 mS/m. Soils are white/grey silty sand.



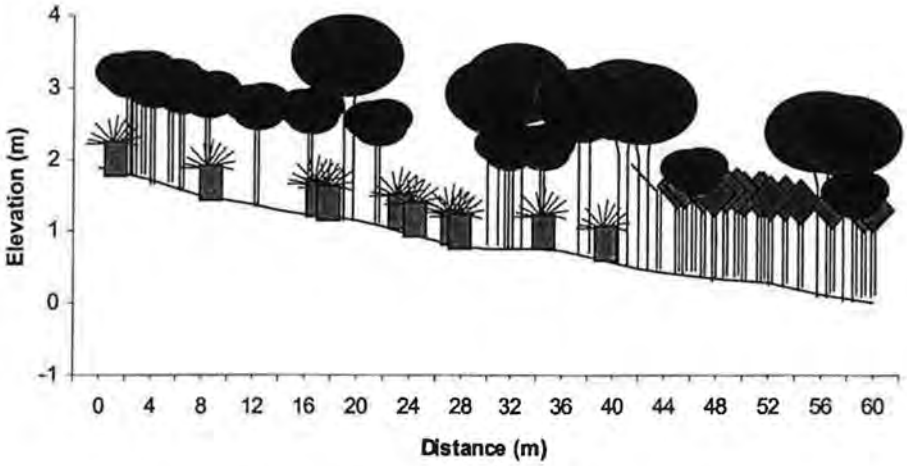
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.10.1a: Profile Diagram. Goonaping Swamp Transect 1.



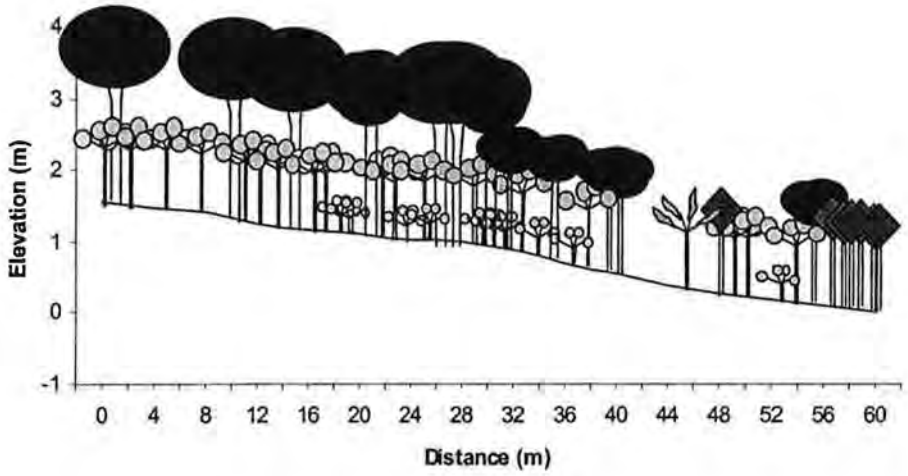
Legend

Species Present

Seedlings

Dead Plants Present D

Figure 3.10.1b: Profile Diagram. Goonaping Swamp Transect 2.



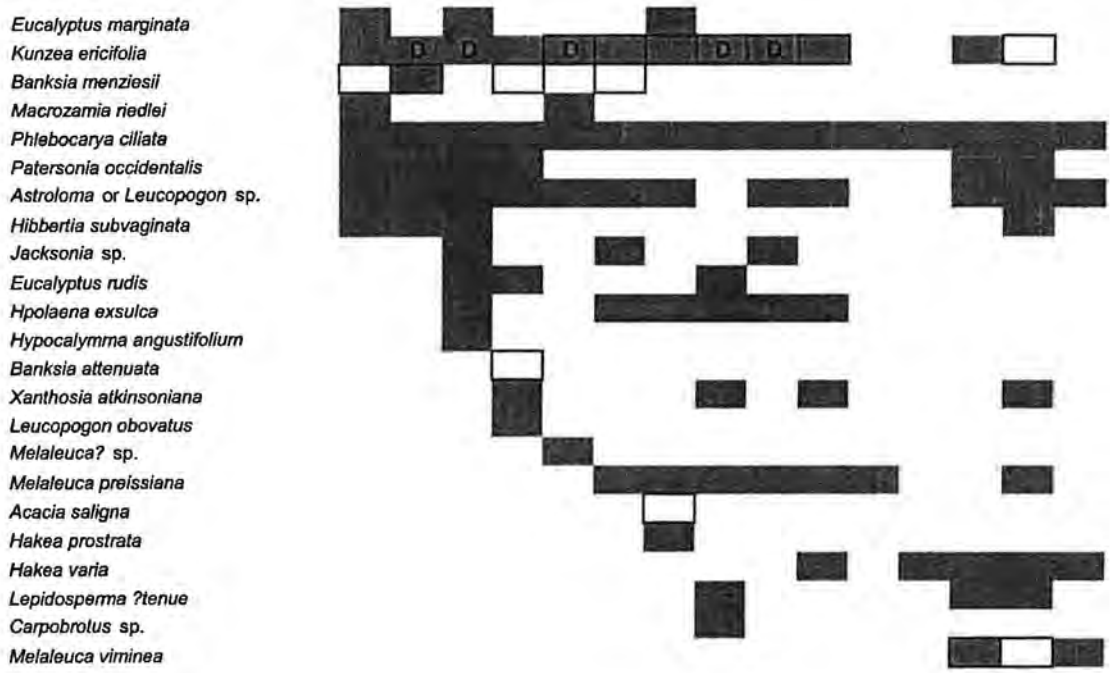
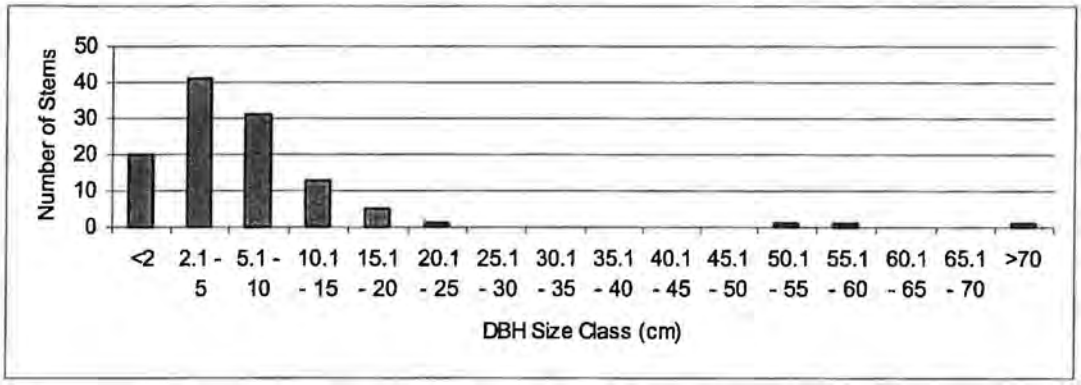
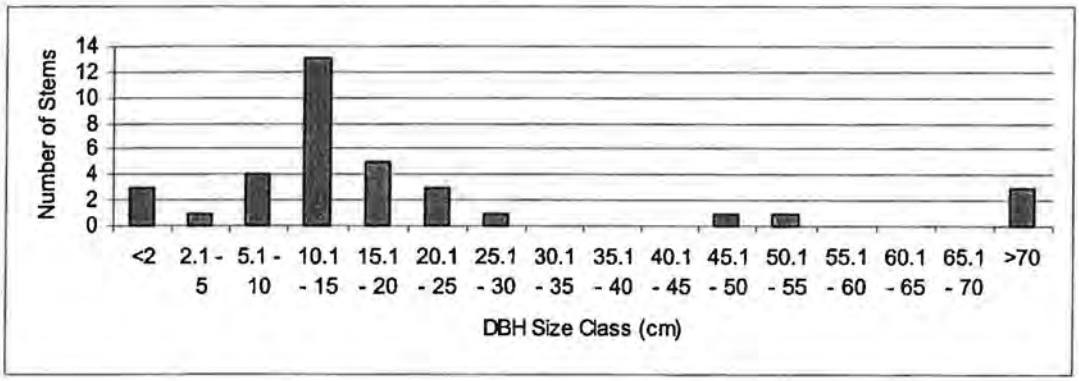


Figure 3.10.1c: Profile Diagram. Goonaping Swamp Transect 3.

Eucalyptus wandoo



Melaleuca preissiana



Eucalyptus rudis

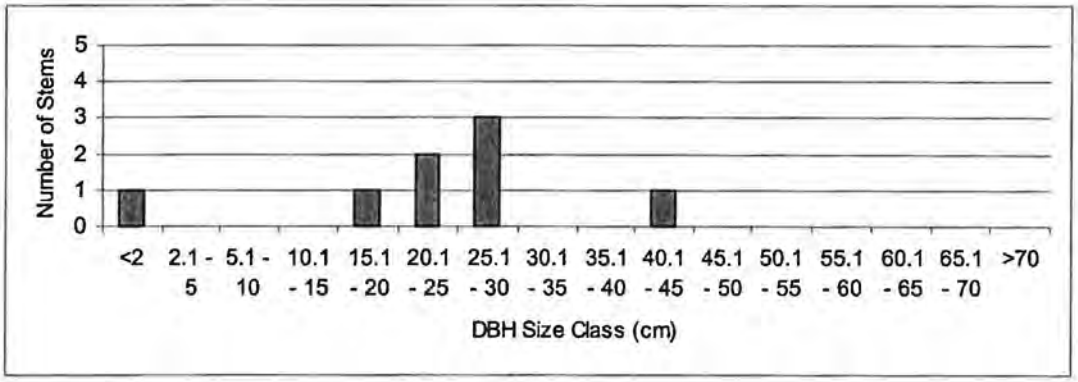


Figure 3.10.2: Size Distribution for Tree Species at Goonaping Swamp.

Eucalyptus marginata

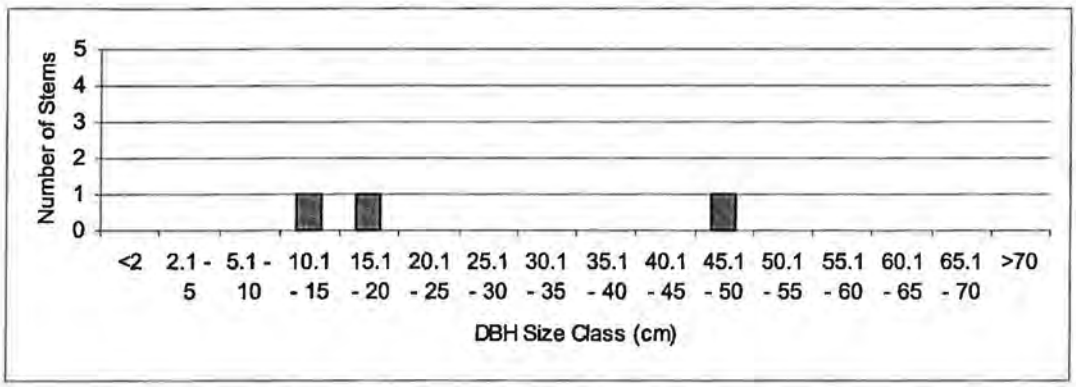


Figure 3.10.2 contin.: Size Distribution for Tree Species at Goonaping Swamp.

4.0 References

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5.0 Appendices

APPENDIX 1

EM 38 Soil Conductivity Data and Soil Field Assessments

EM38 Data

LAKE VIEW - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	150	76	146	85	206	123	
4	146	75	169	97	252	169	
8	181	108	210	126	366	312	Brown sand over
12	233	147	434	400	508	491	grey silty sand
16	330	362	548	662	526	639	
20	417	377	514	462	512	585	
24	473	380	461	487	520	690	
28	513	443	532	482	622	533	Brown sand over
30	556	551	478	420	575	612	grey silty sand
36	520	580	558	556	532	664	
40	522	483	502	658	474	579	
44							
48							
52							
56							
60							

LAKE VIEW - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	159	90	146	82	143	78	
4	206	115	188	107	191	112	
8	319	201	303	182	293	175	White sand over
12	426	288	411	263	471	330	grey silty sand
16	471	352	418	274	466	335	
20	469	374	441	318	446	329	
24	499	392	479	439	492	407	
28	518	421	573	489	568	534	White sand over
32	577	465	602	557	536	467	grey silty sand
36	607	560	621	577	631	657	
40	664	694	678	698	673	697	
44							
48							
52							
56							
60							

EM38 Data

MAISEY'S - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	128	72	97	49	133	66	
4	154	90	135	75	137	75	
8	244	151	239	139	207	119	Light brown sand -
12	316	202	333	217	267	167	white/grey near
16	423	264	393	265	325	208	lake
20	492	354	415	261	392	267	
24	512	354	462	335	459	322	
28	508	370	457	308	454	319	Coarse grey sand
32	475	342	418	275	454	315	over grey sandy
36	504	341	402	278	473	332	clay
40	464	341	424	276	507	373	
44							
48							
52							
56							
60							

MAISEY'S - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	74	29	70	27	77	31	
4	85	35	97	44	106	50	
8	103	46	134	67	134	67	Coarse white/
12	170	72	193	100	204	114	grey sand
16	250	135	288	168	338	198	
20	450	277	352	222	386	222	
24	476	297	421	271	433	301	
28	438	273	434	262	478	312	Grey sandy silt
32	427	262	440	278	456	295	
36	436	279	421	267	443	287	
40	431	271	417	265	433	275	
44							
48							
52							
56							
60							

EM38 Data

MAISEY'S 2 - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	42	11	26	-6	19	-3	
4	86	39	76	37	35	10	
8	139	74	108	55	97	55	White sand
12	193	109	187	112	156	88	
16	230	138	211	126	192	118	
20	227	140	214	124	216	137	Grey sand
24	226	140	216	133	224	138	
28	240	157	237	146	243	146	
30	241	143	319	218	321	224	
36							
40							
44							
48							
52							
56							
60							

MAISEY'S 2 - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	192	114	132	72	99	46	
4	198	118	187	114	138	74	White sand over
8	202	118	204	128	196	120	grey sandy clay
12	212	124	213	136	210	130	
16	222	135	233	146	227	139	Grey sandy clay
20	277	190	290	191	370	260	
24							
28							
32							
36							
40							
44							
48							
52							
56							
60							

EM38 Data

LOGUE - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	54	67	61	71	72	88	
4	54	66	75	91	62	68	
8	48	52	64	71	60	61	White sand
12	54	62	52	52	54	63	
16	61	67	67	79	60	72	
20	51	60	66	75	60	67	
24	53	58	55	57	61	86	
28	53	55	63	77	49	65	White sand
32	51	56	69	70	52	53	
36	45	50	58	66	60	68	
40	44	42	66	72	53	41	
44							
48							
52							
56							
60							

LOGUE - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	89	74	76	76	94	84	
4	96	77	83	79	88	72	
8	79	62	77	59	88	85	White sand
12	82	84	79	81	99	99	
16	82	87	91	106	98	91	
20	76	80	97	108	84	91	
24	81	95	82	108	55	57	
28	68	69	81	83	78	108	White sand
32	63	73	100	108	114	133	
36	86	96	104	145	112	151	
40	water	water	133	141	115	141	
44							
48							
52							
56							
60							

LOGUE - Transect 3

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	22	23	27	25	31	31	
4	37	38	27	26	38	38	
8	34	36	40	42	46	47	Grey sand
12	36	31	54	50	58	66	
16	56	56	61	64	63	62	
20	69	70	59	57	57	59	
24	79	78	76	72	70	67	
28	77	72	81	71	69	59	Grey sand
32	66	61	74	64	71	59	
36	65	61	63	57	46	34	
40	55	46	56	53	54	53	
44	51	46	60	47	50	45	
48	46	44	67	71	57	54	Grey/white sand
52	43	45	54	52	27	59	
56	40	42	52	51	59	70	
60	41	41	52	46	51	53	

LOGUE - Transect 4

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	water	water	114	82	133	115	
4			134	113	136	118	
8			134	106	157	125	White sand/grey
12			120	91	142	119	silty clay in
16			114	118	125	91	depressions
20					105	66	
24							
28							White sand/grey
32							silty clay in
36							depressions
40	water	water	water	water	water	water	
44							
48							
52							
56							
60							

EM38 Data

WALYORMOURING - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	234	177	135	89	133	100	
4	178	122	135	104	131	103	
8	148	113	189	152	102	149	Grey silty clay
12	128	97	149	103	126	121	with some sand
16	135	114	140	96	114	96	
20	118	78	144	118	113	77	
24	116	86	122	121	122	100	
28	98	69	106	79	128	114	Grey silty clay
30	130	82	127	89	126	83	with some sand
36	103	79	115	89	168	159	
40	128	95	130	110	209	176	
44	124	95	119	81	261	237	
48	119	73	154	106	160	96	Grey silty clay
52	145	107	149	106	162	105	with some sand
56	156	115	182	131	168	145	
60	183	145	190	131	192	153	

WALYORMOURING - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	233	161	135	86	140	140	
4	231	179	169	132	157	109	
8	205	141	181	122	158	111	Brown/grey clay
12	180	126	218	177	178	122	
16	305	249	274	204	189	122	
20	382	357	336	235	271	190	
24	522	382	455	402	325	218	
28	605	491	499	320	307	250	Brown/grey clay
32	535	423	625	437	394	300	
36	447	323	585	427	425	379	
40	564	405	747	571	469	358	
44							
48							
52							
56							
60							

EM38 Data

EGANU - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	405	287	435	334	414	287	
4	496	358	466	343	436	298	
8	546	409	478	331	492	331	Brown/grey sand
12	556	366	524	359	535	382	
16	612	442	572	395	535	380	
20	588	426	605	434	605	444	
24	645	487	587	421	606	442	
28	549	392	554	378	602	451	Brown/grey sand
32	520	369	537	367	426	278	
36	449	295	358	232	296	178	
40	306	191	225	128	204	118	
44	207	124	153	83	156	90	
48	167	101	157	84	164	95	White sand
52	185	106	216	126	195	112	
56	231	128	274	162	234	131	
60	293	175	275	161	295	176	

EGANU - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	516	340	552	408	566	438	
4	505	354	643	487	620	535	
8	596	425	659	554	597	459	Brown sand
12	581	393	641	499	754	637	
16	525	374	721	555	water	water	
20	499	361	688	527	828	665	
24	513	345	718	554	786	651	
28	514	376	743	567	771	699	Brown/black
32	521	381	653	506	571	405	sandy loam
36	522	340	526	341	425	265	
40	379	234	432	274	452	294	
44	403	257	500	329	608	470	
48	549	377	689	532	651	507	Brown/black
52	660	464	777	662	751	641	sandy loam -
56	844	737	747	563	792	679	becoming white
60	784	671	704	402	756	651	sand near lake

EGANU - Transect 3

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	250	198	281	231	276	226	
4	279	225	309	263	299	243	
8	309	240	329	266	291	247	Brown sand
12	292	236	323	269	307	236	
16	303	244	281	243	290	246	
20	298	273	293	250	297	247	
24	311	260	337	285	353	286	
28	353	289	372	272	355	297	Brown sand
32	370	295	341	257	320	261	
36	376	318	352	313	334	313	
40	383	331	389	351	369	312	
44							
48							
52							
56							
60							

EM38 Data

ARDATH - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	802	754	744	886	640	739	
4	830	730	840	890	819	871	White/grey
8	725	642	846	752	780	739	sandy loam
12	728	793	734	946	693	894	
16	689	828	788	844	749	907	
20	585	870	633	746	770	914	
24	685	704	530	725	725	725	White/grey
28	685	784	682	771	674	712	sandy loam
32	623	542	641	572	529	476	
36	603	624	597	505	479	459	
40							
44							
48							
52							
56							
60							

ARDATH - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	480	363	442	331	600	434	
4	630	495	411	203	475	330	White/grey
8	440	317	401	295	476	324	sandy loam
12	400	280	416	301	457	318	
16	318	257	414	248	443	343	
20	385	308	417	345	451	342	
24	412	340	392	300	445	356	White/grey
28	410	317	306	216	400	327	sandy loam
32	413	331	444	328	480	399	
36	382	280	720	580	813	853	
40	918	830	960	952	956	1239	
44							
48							
52							
56							
60							

EM38 Data

CAMPION - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	396	266	390	263	466	339	
4	376	257	338	217	354	234	
8	320	203	311	192	326	202	Brown sand
12	287	172	288	178	285	175	
16	255	152	300	188	302	190	
20	282	174	328	201	315	186	
24	305	189	391	258	398	267	Brown sand
28	394	249	620	440	437	292	grading to white
32	543	356	762	527	661	477	
36	965	820	974	772	817	617	Salt crusting
40	1442	1720	870	595	972	760	evident at 35m
44							onwards
48							
52							
56							
60							

CAMPION - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	181	117	154	94	159	102	
4	158	97	138	87	164	103	
8	162	103	149	98	177	114	Brown/red
12	179	110	185	119	203	129	sand
16	158	94	195	123	211	140	
20	184	114	209	130	192	130	
24	205	126	205	126	183	110	
28	206	123	207	135	168	97	Brown coarse
32	224	144	211	138	186	104	sand
36	239	157	230	137	194	118	
40	252	167	226	140	234	150	
44	284	171	301	217	285	210	
48	339	238	332	227	401	265	Coarse brown
52	496	401	541	392	734	535	sand
56	874	988	935	843	890	858	becoming white
60	1147	1483	1082	1685	Water	Water	near water

CAMPION - Transect 3

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	236	133	217	121	248	136	
4	222	126	213	119	261	149	
8	185	103	212	118	273	160	Brown sand
12	168	93	186	105	224	125	
16	136	74	158	85	186	103	
20	112	60	124	67	153	84	
24	106	56	128	65	124	65	
28	106	56	107	58	114	60	White/brown
32	109	57	117	64	117	61	sand
36	117	63	146	78	133	71	
40	147	81	244	137	169	92	
44	275	158	323	187	243	134	
48	371	218	395	235	332	196	White sand
52	534	340	534	347	480	301	
56	719	504	719	507	647	428	
60	1027	928	826	600	809	606	

CAMPION - Transect 4

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	241	157	222	135	223	136	
4	204	117	191	111	191	105	
8	141	73	135	71	151	81	Light brown
12	133	71	120	64	156	83	sand
16	157	85	124	65	195	108	
20	196	108	190	111	246	139	
24	279	162	299	178	330	190	
28	540	350	453	290	468	360	White sand
32	838	617	717	494	753	550	
36	1009	795	961	132	1011	822	
40	1322	1310	1222	1067	1275	1149	
44							
48							
52							
56							
60							

EM38 Data

PAPERBARK - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	80	41	77	45	93	56	
4	84	46	77	42	89	60	
8	96	55	89	54	79	42	Brown sand on
12	94	56	95	54	85	46	mounds - grey
16	100	58	82	42	98	54	clay in depressions
20	94	54	92	50	139	81	
24	82	46	92	47	113	68	
28	107	63	101	57	108	64	Brown sand on
32	104	63	130	72	123	68	mounds - grey
36	86	49	90	51	101	55	clay in depressions
40	90	48	77	43	96	55	
44	85	50	69	39	101	53	
48	73	40	66	33	117	68	Brown sand on
52	71	38	82	48	121	71	mounds - grey
56	73	38	89	48	89	45	clay in depressions
60	85	39	78	41	72	40	

PAPERBARK - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	31	4	35	11	35	9	
4	39	12	48	19	59	26	
8	62	26	74	33	82	38	Red/brown sandy
12	90	44	105	55	118	63	loam
16	113	67	116	67	129	77	
20	123	72	128	80	134	80	
24	129	67	132	77	140	86	
28	126	72	154	94	155	89	Grey/brown sandy
32	169	123	149	87	164	99	clay
36	153	95	122	69	175	99	
40	119	66	136	74	191	104	
44							
48							
52							
56							
60							

PAPERBARK - Transect 3

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	80	35	92	48	63	30	
4	78	36	76	34	73	35	
8	84	39	88	42	68	29	Brown sandy clay
12	72	33	95	46	62	24	on mounds / grey
16	67	27	92	50	83	38	clay in depressions
20	76	33	77	35	80	36	
24	88	41	82	38	83	39	
28	66	28	69	30	112	57	Brown sandy clay
32	72	31	80	42	120	60	on mounds / grey
36	79	39	70	30	112	61	clay in depressions
40	108	53	64	25	90	44	
44	94	46	72	28	68	29	
48	67	30	63	26	62	24	Brown sandy clay
52	55	20	71	31	57	22	on mounds / grey
56	53	19	99	53	72	35	clay in depressions
60	69	28	97	41	60	27	

EM38 Data

GOONAPING - Transect 1

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	32	7	26.4	5.7	26.7	8	
4	27	3	10.1	2.4	23.5	6.2	
8	23	1	18.7	3	22.3	5	Brown sand
12	17.9	2.2	17.6	3.2	20.5	2.8	
16	20.8	6.8	18.1	4.1	17.1	1.5	
20	19.2	3.9	17.7	4.1	16.5	2	
24	33.9	13.7	15.9	2.3	22.3	7.8	
28	42.5	22.1	19.8	8.8	32.2	12.1	Brown sandy silt
30	28.9	12.2	18.4	6.7	38.9	17.4	
36	23.3	8.7	21	6.7	40.7	19.5	
40	32.3	15.5	29.6	12	36.4	18.7	
44	32.5	16.3	29.8	12.5	37.8	18	
48	32.2	16.2	31.9	14.4	33.8	15.2	Grey sandy silt
52	34.5	17.1	30.7	15.7	30.4	14.1	
56	26.6	10.3	26.4	12.4	29.6	14.7	
60	25.4	10.2	25	10.2	29.8	16.3	

GOONAPING - Transect 2

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	9	-3	10	-4	26	4	
4	21	0	21	2	36	9	
8	12	-9	12	-9	33	11	White/grey sand
12	6	-10	6	-9	18	-3	
16	9	-10	6	-9	18	-2	
20	12	-5	11	-7	27	5	
24	20	0	20	-2	37	10	
28	17	-2	25	3	50	17	Grey sand over
32	4	-7	27	7	52	20	sandy silt
36	2	-12	5	-6	33	9	
40	28	0	7	-8	17	-4	
44	45	13	32	7	10	-6	
48	95	42	69	27	38	11	Brown/grey sandy
52	98	54	107	52	67	27	silt
56	27	3	68	37	105	47	
60	20	-1	23	1	143	72	

GOONAPING - Transect 3

	Distance Across (m)						
	0		10		20		
Distance (m)	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Field Texture
0	-17	-20	-19	-23	-20	-23	
4	-17	-21	-17	-21	-19	-23	
8	-17	-22	-16	-21	-18	-21	Coarse grey sand
12	-16	-23	-17	-21	-16	-21	over brown sand
16	-17	-21	-17	-21	-17	-21	
20	-15	-20	-16	-20	-16	-21	
24	-17	-21	-15	-20	-16	-20	
28	-14	-13	-14	-19	-16	-20	Black sandy loam
32	-3	-9	-8	-16	-8	-16	
36	4	-11	1	-11	-4	-13	
40	23	7	23	8	14	1	
44	49	27	41	17	22	4	
48	72	42	34	17	19	4	Yellow/brown
52	66	23	23	7	17	5	sandy silt
56	54	22	24	5	19	2	
60	57	27	40	17	26	5	

APPENDIX 2

Transect Overstorey Data

LAKE VIEW - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	LAK 4	*Eucalyptus rudis*	695	18	10.7	14
1B	LAK 4	*Eucalyptus rudis*	696	18.8	10.2	16
	LAK 4	*Eucalyptus rudis*	697	15.6	7.7	9
		Casuarina obsea	698	3.6	4	17
		Casuarina obsea	699	<2	3	13
	LAK 4	*Eucalyptus rudis*	700	17.5	6	16
	LAK 4	*Eucalyptus rudis*	501	12.6	7.7	14
	LAK 4	*Eucalyptus rudis*	502	14.4	7.7	11
	LAK 4	*Eucalyptus rudis*	503	19.2, 27.5	6.75	6
		Casuarina obsea	504	8.7	5.5	19
	LAK 5	*Melaleuca viminea*	505	7.5, 3.4	3	11
	LAK 5	*Melaleuca viminea*	506	6.8, 6.2, 9.1	4.7	13
	LAK 4	*Eucalyptus rudis*	507	40.2	11.7	9
		Casuarina obsea	517	<2	2.1	13
	LAK 4	*Eucalyptus rudis*	518	18.4	7.2	14
1C	LAK 5	*Melaleuca viminea*	508	8.3, 5.7, 4.2, 6.2, 6, 3.1, 9.3, 6.4, 6	5.5	17
	LAK 5	*Melaleuca viminea*	509	3.4, 3.3, 4.4, <2, <2, <2	4	11
	LAK 6	*Melaleuca strobophylla*	510	33.7, 28.9	10.75	17
	LAK 5	*Melaleuca viminea*	511	6.8, 3.5, 6.3, 2.8	4	13
	LAK 4	*Eucalyptus rudis*		dead (x1)		
1D		NO TRESS				
1E	LAK 7	*Melaleuca teretifolia*	512	2.9, 8.2, 7, 7.1, 3.6, 5, 4.5, 3.7, 3, 3.6	6.75	15
2A	LAK 7	*Melaleuca teretifolia*	513	multiple <2	2	24
	LAK 7	*Melaleuca teretifolia*		seedling (x1)	1.3	Very stressed
2B	LAK 7	*Melaleuca teretifolia*		dead (x4)		
2C		*Casuarina obesa*	514	34.55	10.75	14
		Casuarina obesa		dead (x1)		recently wind thrown
2D		*Casuarina obesa*	515	39.8	14.25	11
		Casuarina obesa		dead (x1)		
2E	LAK 6	*Melaleuca strobophylla*	516	22.9	10.5	11
	LAK 6	*Melaleuca strobophylla*		dead (x1)		

LAKE VIEW - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	LAK 4	*Eucalyptus rudis*	519	3, <2	2.5	10
	LAK 4	*Eucalyptus rudis*	520	15.6, <2	6.75	9
	LAK 4	*Eucalyptus rudis*	521	14.6	6.75	5

	LAK 4	*Eucalyptus rudis*	522	8	6.3	10
	LAK 4	*Eucalyptus rudis*	523	4.35	4.75	10
	LAK 4	*Eucalyptus rudis*	524	31.8	8.75	5
1B		*Casuarina obesa*	525	12.8	6.75	17
	LAK 4	*Eucalyptus rudis*	526	8.9	4.75	9
	LAK 4	*Eucalyptus rudis*	527	12.6	7.75	5
	LAK 4	*Eucalyptus rudis*	528	7.9	4.5	9
	LAK 4	*Eucalyptus rudis*	529	<2 - resprout	2	3
		Casuarina obesa	530	23.5	12.75	19
	LAK 4	*Eucalyptus rudis*		dead (x12)		
1C	LAK 5	*Melaleuca viminea*	531	6.1, 5.6, 5.7, 6.6, 5, 4.2, 3.4, 3.1	6	13
	LAK 4	*Eucalyptus rudis*	532	<2 - resprout	1.65	4
	LAK 4	*Eucalyptus rudis*	533	29.6	11.75	8
	LAK 5	*Melaleuca viminea*	534	3.2, 3.1	3	11
		Casuarina obesa	535	20.8	12.5	17
		Casuarina obesa	536	14	11	17
	LAK 4	*Eucalyptus rudis*		dead (x8)		
1D	LAK 5	*Melaleuca viminea*	537	5.9, 6.3, 9.2	6.25	9
	LAK 5	*Melaleuca viminea*	538	4.5, 6.5, 3.6, 3.7, 3.8, 5.2	4	9
	LAK 5	*Melaleuca viminea*		dead (x4)		
	LAK 6	*Melaleuca strobophylla*		dead (x1)		
1E	LAK 6	*Melaleuca strobophylla*	539	6.6	5.75	15
	LAK 6	*Melaleuca strobophylla*		dead (x4)		
2A	LAK 6	*Melaleuca strobophylla*	540	6.8, 5.5, 5.5	5.25	17
	LAK 6	*Melaleuca strobophylla*	541	8.7	6.95	13
	LAK 6	*Melaleuca strobophylla*	542	5.7	5.3	17
	LAK 6	*Melaleuca strobophylla*		dead (x5)		
	LAK 5	*Melaleuca viminea*		dead (x1)		
2B		*Casuarina obsea*	543	15.9	10.75	17
	LAK 6	*Melaleuca strobophylla*	544	4.8, 4.4	5.25	15
	LAK 6	*Melaleuca strobophylla*	545	3.4	3.5	11
		Casuarina obsea	546	15	10.8	15
		Casuarina obsea	547	23.8	10.75	17
	LAK 6	*Melaleuca strobophylla*		dead (x5)		
2C		*Casuarina obsea*	548	14, 21.8	8	17
		Casuarina obsea	549	19	10.2	8
		Casuarina obsea	550	11.5, 9	8	14
		Casuarina obsea	551	13.5	7.25	13
		Casuarina obsea	552	19.7	9.75	15
		Casuarina obsea	553	12.6	9.75	15
		Casuarina obsea	554	15.1, 13.4	9.75	15
		Casuarina obsea	555	12.3	9.75	15
		Casuarina obsea	556	12.6	9.75	13
		Casuarina obsea		dead (x1)		
2D		*Casuarina obsea*	557	10.9	8.75	15
		Casuarina obsea	558	15	10	14
		Casuarina obsea	559	9.2	9	14
		Casuarina obsea	560	dead	11.5	

	LAK 6	*Casuarina obsea* *Melaleuca strobophylla*		dead (x3) dead (x1)		
2E	LAK 6	*Melaleuca strobophylla*		dead (x3)		

Maisey's - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Eucalyptus loxophleba*	364	38.5	11.75	11
		Eucalyptus salmonophloia	365	54.1	17.5	23
		Eucalyptus loxophleba	366	13	6.1	12
		Eucalyptus salmonophloia	367	71.7	19.75	21
		Melaleuca strobophylla	368	7	3.4	11
		Eucalyptus loxophleba	369	7	3	15
		Eucalyptus loxophleba	370	7.8	5.95	9
		Eucalyptus loxophleba	371	33.3	10.85	9
		Eucalyptus loxophleba	372	25.5, 16.7, 27.6, <2, <2, <2	10.75	11
		Melaleuca strobophylla		dead (x1)		
1B		*Melaleuca strobophylla*	373	11.5, 12.2, 9.9	3.6	11
		Melaleuca strobophylla	374	8.8	4	13
		Eucalyptus loxophleba	375	11.4	7.2	13
		Melaleuca strobophylla	376	4.5, 3.9	3.2	9
		Eucalyptus loxophleba	377	<2, <2, <2, <2, <2, <2, <2	2.1	15
		Melaleuca strobophylla	378	6.9	3.5	13
		Melaleuca strobophylla		dead (x2)		
		Eucalyptus loxophleba		dead (x1)		
1C		*Melaleuca strobophylla*	379	5	3.7	11
		Melaleuca strobophylla	380	6.3	3.7	11
		Melaleuca strobophylla	381	6.2	3.8	11
		Melaleuca strobophylla	382	6.8	4.2	9
		Melaleuca strobophylla	383	5.5, 3.9, 4.6, 4.8	3.4	11
		Melaleuca strobophylla	384	6.4	3.5	11
		Melaleuca strobophylla	385	6.8	3.5	11
		Melaleuca strobophylla		dead (x6)		
1D		*Melaleuca strobophylla*	386	7.3	4.1	13
		Melaleuca strobophylla	387	11.1, 7.5	5	13
		Casuarina obesa	388	23.6, 3, 2.7, 2.5, <2	7.75	6
		Melaleuca strobophylla	389	9.9, 8.6	5.3	11
1E		*Casuarina obesa*	390	21.7	7.75	17
		Melaleuca strobophylla	391	13.7	4.65	15
2A		*Melaleuca strobophylla*	392	11.1, 10.9	6	13
		Melaleuca strobophylla	393	9.6, 6.1, 6.5	5.7	15
		Melaleuca strobophylla	394	6.5, 3.5, 6.5, 7, 4.8	4.65	17
		Melaleuca strobophylla	395	8.5, 8.4	4.95	11
2B		*Melaleuca strobophylla*		dead (x1)		
2C		*Melaleuca strobophylla*		dead (x1)		
		Casuarina obesa		dead (x1)		
2D		*Melaleuca strobophylla*		dead (x4)		
2E		*Melaleuca strobophylla*	396	13.4, 14.5, 13.2	6.5	11
		Melaleuca strobophylla	397	58.9	8.75	15

Maisey's - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Eucalyptus loxophleba*	398	22.8, 11.5, 30.1, 41.9	10.4	16
		Eucalyptus loxophleba	399	18.3, 9.5, 10.7	17.5	10
		Eucalyptus loxophleba	400	14.5, 11.4, 14.6, 17.1, 5.9, 9.4	13.5	14
1B		*Eucalyptus loxophleba*	401	22.1, 17.5	8	10
		Eucalyptus loxophleba	402	29	11	8
		Eucalyptus loxophleba	403	21.2, 21.1, 21, 18.3	7.9	13
		Eucalyptus loxophleba	404	23	9	14
		Eucalyptus loxophleba	405	30.5, 28.4	13.8	16
		Eucalyptus loxophleba	406	12.2	7	15
		Eucalyptus loxophleba	407	7.9	6	6
1C		*Melaleuca strobophylla*	408	7.5, 4.5	4	11
		Melaleuca strobophylla	409	12.8	5.2	13
		Melaleuca strobophylla	410	11.4, 8.5, 8.4	5.1	13
		Melaleuca strobophylla	411	5, 5.6, 5.7	3	9
		Eucalyptus loxophleba	412	13.4	6.5	14
		Eucalyptus loxophleba	413	9.5	7.9	12
		Eucalyptus loxophleba	414	6.7, 10, 16.4	8	16
		Melaleuca strobophylla		dead (x1)		
1D		*Melaleuca strobophylla*	415	6	6	9
		Melaleuca strobophylla	416	9.5	6.1	11
		Melaleuca strobophylla	417	12.1	6.3	15
		Melaleuca strobophylla	418	16.5	6.3	15
1E		*Melaleuca strobophylla*	419	13.1	6.3	15
		Melaleuca strobophylla	420	9	6	11
		Melaleuca strobophylla	421	6.5	5	11
		Melaleuca strobophylla	422	9.1	5.1	11
		Melaleuca strobophylla	423	13.4	6.5	15
		Melaleuca strobophylla		dead (x1)		
2A		*Melaleuca strobophylla*	424	14.4	6.5	9
		Melaleuca strobophylla	425	12.1	6.5	15
		Melaleuca strobophylla		dead (x1)		
2B		*Melaleuca strobophylla*	426	10.7	5.5	13
		Melaleuca strobophylla	427	10.8	6.8	15
		Melaleuca strobophylla		dead (x1)		
2C		*Casuarina obesa*	428	33.3	9.7	12
		Casuarina obesa		dead (x1)		
		Melaleuca strobophylla		dead (x3)		
2D		*Melaleuca strobophylla*	429	14.5, 10.1	6.6	17
		Melaleuca strobophylla	430	10.2, 5.2, 5.5	5	13
		Melaleuca strobophylla	431	15	6.1	17
		Melaleuca strobophylla		dead (x2)		

2E		*Melaleuca strobophylla*	432	16.7	7.3	13
		Melaleuca strobophylla	433	12.3, 4.7	6.4	11
		Melaleuca strobophylla	434	10.2, 7.1	4	13
		Melaleuca strobophylla	435	11.35	6	13
		Melaleuca strobophylla		dead (x1)		

Maisey's (2) - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca strobophylla*	(x6)		2.0 - 2.8	All healthy
		Melaleuca strobophylla		seedling (x5)	0.8 - 1.2	All healthy
		Melaleuca strobophylla		dead seedling (x1)		
1B		*Melaleuca strobophylla*	(x40)		1.8 - 4	All healthy
1C		*Melaleuca strobophylla*	(x1)		2.5	Healthy
1D		NO TREES				
1E		NO TREES				
1F		*Melaleuca strobophylla*	436	23.5, 21, 35.2	Stand height	19
		Melaleuca strobophylla	437	11.7	8.2	11
		Melaleuca strobophylla	438	14.5, 12.1, 11, 14.4		15
		Melaleuca strobophylla	439	40.9		19
		Melaleuca strobophylla	440	16.5, 15.6, 23.6		15
		Melaleuca strobophylla	441	36.1, 30		17
		Melaleuca strobophylla	442	49.4		17
		Melaleuca strobophylla	443	33, 29.6		19
		Melaleuca strobophylla		dead (x1)		

Maisey's (2) - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca strobophylla*	(x181)		1 - 2.7	All healthy
		Melaleuca strobophylla		dead (x4)		
1B		*Melaleuca strobophylla*	(x253)		1 - 2.8	All healthy
		Melaleuca strobophylla		dead (x7)		
1C		*Melaleuca strobophylla*	(x97)		1 - 2.8	All healthy
		Melaleuca strobophylla		dead (x2)		
1D		*Melaleuca strobophylla*	(x22)		1.6 - 2.4	All healthy
		Melaleuca strobophylla		dead (x1)		
1E		*Melaleuca strobophylla*	(x3)		2	All healthy

LOGUE - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Casuarina obesa*	560	30.1, 33.4	12.7	10
		Melaleuca strobophylla	561	8.9, 6.1, 3.2, 3.5, 2.6	6.75	13
		Melaleuca strobophylla	562	7.4, 6.7	6.7	15
		Melaleuca strobophylla	563	12.2	7	17
		Casuarina obesa	564	22.9, 18.9, 21.9	10.7	11
		Casuarina obesa		dead (x1)		
1B		*Melaleuca strobophylla*	565	5.8, 3.4, 3.6, <2	4.2	15
		Melaleuca strobophylla	566	7.5	5.7	15
		Melaleuca strobophylla	567	7.8, 5.3, 2.5	5.7	11
		Melaleuca strobophylla	568	12.7, 15.3	8	19
		Melaleuca strobophylla	569	3.6, 4.6, 3	4.8	10
		Melaleuca strobophylla		dead (x3)		
		Casuarina obesa		dead (x1)		
1C		*Casuarina obesa*	570	31.1	11.75	8
		Melaleuca strobophylla	571	6.3, 4, 4, 3.5	4.75	17
		Casuarina obesa	572	51.7	12.75	10
		Melaleuca strobophylla		dead (x5)		
1D		*Casuarina obesa*	573	32.6	11.75	11
		Melaleuca strobophylla	574	6.5, 3.3, 2.8, 2.5	4.2	13
		Melaleuca strobophylla	575	6.7, 6.4, 5.2	5.75	13
		Melaleuca strobophylla	576	8.8, 3.9, 3, 2.5, 3.3, 4	5.1	13
		Casuarina obesa	577	34.1	8.75	10
		Casuarina obesa		dead (x2)		
1E		*Melaleuca strobophylla*	578	8.8	5.75	13
		Melaleuca strobophylla	579	5.4, 4.9, 4.6, 2.8	5.6	15
		Casuarina obesa	580	28.9, 32.1	10.75	12
		Melaleuca strobophylla	581	12.5, 4.8	5.65	17
		Melaleuca strobophylla		dead (x2)		
2A		*Casuarina obesa*	582	38.7	13.75	10
		Melaleuca strobophylla	583	13.7	7.1	17
		Melaleuca strobophylla	584	8.3	4.85	15
		Melaleuca strobophylla	585	6, 4	4.1	13
		Melaleuca strobophylla	590	7, 4.1, 3.3, 6, 5, 7.2, 4.8, 10.1	6.75	15
		Melaleuca strobophylla		dead (x1)		
		Casuarina obesa		dead (x1)		
2B		*Casuarina obesa*	586	33.6	10.25	10
		Melaleuca strobophylla	587	9.2	6	17
		Melaleuca strobophylla	588	<2	2.65	9
		Melaleuca strobophylla	591	3.1	3.5	11
		Casuarina obesa	592	31.3	11.5	11
		Melaleuca strobophylla	589	4.4	4	11
		Melaleuca strobophylla		dead (x1)		
		Casuarina obesa		dead (x2)		

2C		*Casuarina obesa*	593	39	11.75	14
		Casuarina obesa	594	29.7, 27, 21.7	12.75	15
		Melaleuca strobophylla	595	4	5	15
		Melaleuca strobophylla	596	2	2.65	13
		Melaleuca strobophylla	597	2.5	2.75	15
		Melaleuca strobophylla	598	2.7	2.75	15
		Melaleuca strobophylla	599	2.2	2.85	11
		Melaleuca strobophylla	600	<2	1.95	11
		Melaleuca strobophylla	701	2.2, <2, <2, <2	2.35	11
		Melaleuca strobophylla	702	<2	2.15	11
		Melaleuca strobophylla	703	10.1, 5.5, <2	6.75	17
		Melaleuca strobophylla	704	10, 10.8	6.75	19
2D		*Melaleuca strobophylla*	705	4.8	3.1	15
		Melaleuca strobophylla	706	<2, <2	2.95	15
		Melaleuca strobophylla	707	3.7, <2, <2	3.6	17
		Melaleuca strobophylla	708	<2	2.1	11
		Melaleuca strobophylla	709	2.4	3.5	11
		Melaleuca strobophylla	710	19.9	7.75	19
		Melaleuca strobophylla	711	6.7, <2, 2.8, 2.5, <2	6	13
		Casuarina obesa		dead (x1)		
2E		*Melaleuca strobophylla*	713	16.4, 2.9	5.75	17
		Melaleuca strobophylla	714	<2	2	13
		Melaleuca strobophylla	715	2.3	2.5	11

LOGUE - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca strobophylla*	716	10.9	4.75	19
		Melaleuca strobophylla	717	3.7	4.75	15
		Casuarina obesa	718	11.4, 7.5	10.25	12
		Melaleuca strobophylla	719	5.9, 5.2, 3.8, <2, <2, <2	4.75	17
		Melaleuca strobophylla	720	4.4, 3.4, 2.2, <2	3.8	13
		Melaleuca strobophylla	721	4.5, 4.6	4.3	15
		Melaleuca strobophylla	722	2.1	3.75	13
		Melaleuca strobophylla	723	4.4, 4.4, 2.4, <2	4.35	15
		Melaleuca strobophylla	724	5.2, 2.7, <2	4.2	17
		Melaleuca strobophylla	725	3.3, 4, <2, <2, <2	3.75	15
		Melaleuca strobophylla	726	5.5	3.75	15
1B		*Melaleuca strobophylla*	727	11.1	5.75	17
		Melaleuca strobophylla	728	8.3, 8.2, 3.3, 2.9, <2	5.75	13
		Casuarina obesa	729	13.3, 8.5	8.75	13
		Casuarina obesa	730	13.4	9	15
		Melaleuca strobophylla	731	6.9, 4.4	4.7	15
		Melaleuca strobophylla	732	3.3, <2, <2	4.7	11
		Melaleuca strobophylla	733	4.7, 4.6, 3.1, 3.7, 5.1	5.25	17
		Melaleuca strobophylla	734	3.9, 4.7	4	15
		Melaleuca strobophylla	735	3.3, 3.7, <2	4.75	13

		Casuarina obesa	736	41.1	10.75	10
		Melaleuca strobophylla	737	6.5, 2.8	3.75	15
1C		*Melaleuca strobophylla*	738	4.9, 2.9, 3.2, <2, <2	4.75	15
		Melaleuca strobophylla	739	4.8, 4.4	5.5	13
		Melaleuca strobophylla	740	7.9	5.5	15
		Melaleuca strobophylla	741	2.4	2.45	11
		Melaleuca strobophylla	742	6.1	5	15
1D		*Casuarina obesa*	743	14.5, 9.2, 9.4, 9, 4.6	11	17
		Melaleuca strobophylla	744	8.6	4.75	15
		Melaleuca strobophylla	745	6.5, 2.6, 2.9	4.75	15
		Melaleuca strobophylla	746	5.2, 3.2, 3.6, <2	4.75	15
		Casuarina obesa		seedling (x1)	0.7	stressed
1E		*Melaleuca strobophylla*	747	7.2, 6.7, 13, 7.7, 5.7, 7.3	6.5	19
		Casuarina obesa	748	10.2, 10.9, 10, 5.3, 3, 2.8	9.75	17
		Melaleuca strobophylla	749	7.7, 3.8	5.75	15
		Casuarina obesa	750	14.4, 9.6	11.75	13
		Casuarina obesa	751	18.1	12.95	15
		Casuarina obesa	752	9.5	9.5	15
		Casuarina obesa	753	8	10.5	13
		Casuarina obesa	754	13.1	10.5	13
		Melaleuca strobophylla	755	10.1, 2.6	6	17
		Melaleuca strobophylla	756	8, 4.3	6	15
		Melaleuca strobophylla	757	4.1, 4.2	5.5	15
		Melaleuca strobophylla	758	7.9, 4.5	6.1	15
		Melaleuca strobophylla	759	4.9	5.5	13
		Melaleuca strobophylla	760	9.9, 5.2, 5.3	5.85	13
		Melaleuca strobophylla	761	4.8, 4.4	5.5	15
		Melaleuca strobophylla	762	5.5	6.1	17
		Melaleuca strobophylla	763	6.2, 2.1	6.1	15
		Melaleuca strobophylla	764	4	5.1	11
		Melaleuca strobophylla	765	4, 4.2, 2.4	5.1	15
		Melaleuca strobophylla	766	9.8	5.9	15
2A		*Casuarina obesa*	767	29.8	11.75	13
		Casuarina obesa	768	13.5, 12.8, 23.1, 12.4	11	13
		Casuarina obesa	769	14.2	12	13
		Melaleuca strobophylla	770	7.9, 6.5, 7.3, 9.3, 8.1	6.25	15
		Casuarina obesa	771	15.1	8.25	15
		Melaleuca strobophylla	772	6.7, 5.5, 4, 2.4, 2.1, 3.7, 10.9	4.75	17
		Melaleuca strobophylla	773	6.6, 2, 5.2	5.75	15
2B		*Casuarina obesa*	774	19, 17.2	12	15
2C		*Casuarina obesa*	775	22.9	12.75	13
		Casuarina obesa	776	23.8	12.75	14
2D		*Casuarina obesa*	777	35.8	12	17
2E		*Casuarina obesa*	778	33.6, 16	12.75	16
		Melaleuca strobophylla	779	13.6, 5.6, 12.5	7.1	15
		Casuarina obesa	780	15.2, 7.8	12.75	15
		Casuarina obesa	781	19.3	12.75	13
		Casuarina obesa	782	14.7, 14.8	12.75	15

		Casuarina obesa	783	16.9, 13.1	12.25	14
		Casuarina obesa	784	17.4, 15	12.25	14
		Casuarina obesa	785	22.5	12.25	14
		Melaleuca strobophylla	786	16.9	6.75	17

LOGUE - Transect 3

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca strobophylla*	787	8.7	5.9	13
		Melaleuca strobophylla	788	14.7, 7.2, <2	5.9	17
		Melaleuca strobophylla	789	10.9, 10.7	5.5	15
		Melaleuca strobophylla		dead (x2)		
		Casuarina obesa		dead (x1)		
1B		*Melaleuca strobophylla*	790	6.2, 8.3	5.9	11
		Casuarina obesa	791	3.5	5	14
		Melaleuca strobophylla	792	8.2	5.5	11
		Melaleuca strobophylla	793	3.8	4.25	13
		Melaleuca strobophylla	794	5.3	4.2	13
		Casuarina obesa	795	2.2, <2	2.65	3
		Melaleuca strobophylla	796	6.4	5.5	13
		Melaleuca strobophylla	797	7.9, 13.2	6	17
		Melaleuca strobophylla	798	7.7, 10.9	5.95	15
		Melaleuca strobophylla		dead (x19)		
1C		*Melaleuca strobophylla*	799	5.5	4.25	11
		Melaleuca strobophylla	800	4.7	4.25	11
		Melaleuca strobophylla	801	3	2.25	7
		Melaleuca strobophylla	802	6.5, 5.6, 8.7	5.65	17
		Melaleuca strobophylla	803	2.3, <2	2.2	9
		Melaleuca strobophylla	804	4.5, 2	5.95	13
		Melaleuca strobophylla	805	5.4	5.7	15
		Melaleuca strobophylla	806	9.9, 3.5	5.6	15
		Melaleuca strobophylla	807	4	4.8	11
		Melaleuca strobophylla	808	3.5	4.05	13
		Melaleuca strobophylla	809	7.5, 6.3	6.7	17
		Melaleuca strobophylla	810	5.2	5.85	13
		Melaleuca strobophylla	811	4.6	5.85	11
		Melaleuca strobophylla	812	5	4.5	11
		Melaleuca strobophylla	813	6.9	5.75	15
		Melaleuca strobophylla	814	4.6	3.5	11
		Melaleuca strobophylla	815	3.1, 2.3, 2.2	3.5	11
		Melaleuca strobophylla	816	<2	2.2	9
		Melaleuca strobophylla	817	9.7	5.9	17
		Melaleuca strobophylla	818	3.5	4.8	7
		Melaleuca strobophylla	819	9.4, 4.2	5.2	19
		Melaleuca strobophylla	820	5.2	5.2	15
		Melaleuca strobophylla	821	6, 5	5.2	15
		Melaleuca strobophylla	822	8.9, 4.9, 6.7, 2.5, 2.9	6.75	17
		Melaleuca strobophylla		dead (x19)		

1D		*Melaleuca strobophylla*	823	6.9, 4.8, 2.8, 5	5	19
		Melaleuca strobophylla	824	9.5, 10.1	7.1	17
		Melaleuca strobophylla	825	9.8	7	15
		Melaleuca strobophylla	826	4.8, 5, 4.1	7.1	13
		Melaleuca strobophylla	827	6.9, 2.5, <2	6.9	13
		Melaleuca strobophylla	828	<2	2	9
		Melaleuca strobophylla	829	6.5, 5.8	6.4	13
		Melaleuca strobophylla	830	4.3	6.5	11
		Melaleuca strobophylla	831	7.9, 9.9	7	17
		Melaleuca strobophylla	832	2.8, 2.1, 2.7	3	15
		Melaleuca strobophylla	833	8.2	6.25	15
		Melaleuca strobophylla	834	5.1, 8.5, 3.9	6.75	17
		Melaleuca strobophylla	835	7.5	6.75	15
		Melaleuca strobophylla	836	7.6, 7.4	6.8	15
		Melaleuca strobophylla	837	5.5, 4.1	5.25	15
		Melaleuca strobophylla	838	5.2	5.5	15
		Melaleuca strobophylla	839	6.1, 3.5	4.95	15
		Melaleuca strobophylla	840	7.6, 3.2, 4.8, 3.5, 2.7, 5.7	5.5	17
		Melaleuca strobophylla	841	2.5, 2.5	2.5	11
		Melaleuca strobophylla	842	7.2, 4, 3.5	6.5	15
		Melaleuca strobophylla		dead (x2)		
1E		*Melaleuca strobophylla*	843	3.9, 4	3.45	11
2A		*Casuarina obesa*	844	30	7.95	7
2B		*Casuarina obesa*	845	35.9, 19.3	11.75	9
		Casuarina obesa	846	32.5	11.75	14
		Casuarina obesa	847	41.2	11.5	16
2C		*Casuarina obesa*	848	28.7, 22.6	11.5	10
		Casuarina obesa	849	42.8, 49.4	14	16
2D		NO TREES				
2E		*Casuarina obesa*	850	41.8	14.5	13
3A		NO TREES				
3B		*Casuarina obesa*	851	31	14.5	16
		Casuarina obesa	852	35.7	14.25	17
		Casuarina obesa	853	27.8	9.5	14
	3C - 3D	NO TREES				
3E		*Casuarina obesa*	354	48	13	14

LOGUE - Transect 4

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca strobophylla*	855	7.7	6.6	15
		Melaleuca strobophylla	856	6.9, 8	6.5	11
		Melaleuca strobophylla	857	5, 2.4, 6	5.2	15
		Melaleuca strobophylla	858	5.4, 6	6.1	11
		Melaleuca strobophylla	859	6.7, 3.4, 8	6.45	15
		Melaleuca strobophylla	860	3.8, 3.6	4.5	15
		Melaleuca strobophylla	861	7.8	5.5	13
		Melaleuca strobophylla	862	2.4, 5.5, 4.5, 6	6.3	15
		Melaleuca strobophylla	863	3.5, 2.5, 5	5.7	13
		Melaleuca strobophylla	864	5.4	6.5	11
		Melaleuca strobophylla	865	13, 5.5	6.9	17
		Melaleuca strobophylla	866	11.5	6.9	17
		Melaleuca strobophylla	867	11	6.9	15
		Melaleuca strobophylla	868	14.6	6.9	19
		Melaleuca strobophylla	869	14.4	6.9	19
		Melaleuca strobophylla	870	8	6.3	13
		Melaleuca strobophylla	871	<2	2.3	11
		Melaleuca strobophylla	872	<2	2.5	11
		Melaleuca strobophylla	873	9.7	5.5	13
		Melaleuca strobophylla	874	7.9, 9.9	5.8	17
		Melaleuca strobophylla	875	5.4	5.5	13
		Melaleuca strobophylla	876	<2	3.5	11
		Melaleuca strobophylla	877	<2	1.8	11
		Melaleuca strobophylla	878	15, <2	5.5	17
		Melaleuca strobophylla	879	2	3.8	11
		Melaleuca strobophylla	880	4.5, 4.8, 3.8, 2.8, 5.9, 5.4, 4.8	4.8	15
		Melaleuca strobophylla	881	8	1.7	11
		Melaleuca strobophylla	882	3.5, <2	5	15
		Melaleuca strobophylla	883	2.3	4	13
		Melaleuca strobophylla	884	2.4	4.5	15
		Melaleuca strobophylla	885	3.5	4.1	15
		Melaleuca strobophylla	886	4	4.2	19
		Melaleuca strobophylla	887	4.4, 3.9	4.2	15
		Melaleuca strobophylla	888	<2	2.3	13
		Melaleuca strobophylla	889	21	5.5	17
		Melaleuca strobophylla		dead (x1)		
1B		*Melaleuca strobophylla*	890	7.4, 6.3, 4.1	6	17
		Melaleuca strobophylla	891	7.1, 2.6, 3.8	4.8	15
		Melaleuca strobophylla	892	7.2, 4.5, 3.2, 3.9	4.8	17
		Melaleuca strobophylla	893	7	3.8	11
		Melaleuca strobophylla	894	8.6, 2.9	5.2	15
		Melaleuca strobophylla	895	4.7	3.8	13
		Melaleuca strobophylla	896	3	3.4	15
		Melaleuca strobophylla	897	4.4, 3.1, 2.1	3.8	15
		Melaleuca strobophylla	898	3.5	3.8	15
		Melaleuca strobophylla	899	8.9, 11.6, 4.3, 6.8, 8.5, 7.1, 4.1, 3.1	6.4	19
		Melaleuca strobophylla	900	8.6	6.2	15
		Melaleuca strobophylla	902	8.5	6.2	15
		Melaleuca strobophylla	903	4.9	6.2	11
		Melaleuca strobophylla	904	6, 4.1	5.2	13

		Melaleuca strobophylla	905	9.4, 11.5	6.2	15
		Melaleuca strobophylla	906	9	6.2	15
		Melaleuca strobophylla	907	8.5	6.2	15
		Melaleuca strobophylla	908	<2	3	11
		Melaleuca strobophylla	909	2.7	3.7	13
		Melaleuca strobophylla	910	<2	2.8	11
		Melaleuca strobophylla	911	<2	2.1	11
		Melaleuca strobophylla	912	3.6	4.8	11
		Melaleuca strobophylla	913	<2	1.8	13
		Melaleuca strobophylla	914	<2	2.6	11
		Melaleuca strobophylla	915	<2	3.1	11
		Melaleuca strobophylla	916	2.8	3.6	15
		Melaleuca strobophylla	917	18.7	6.3	19
		Melaleuca strobophylla	918	2.2	3.9	13
		Melaleuca strobophylla	919	<2	3.9	11
		Melaleuca strobophylla	920	2	3.9	13
		Melaleuca strobophylla	921	<2	2.5	11
		Melaleuca strobophylla	922	<2	2.7	11
		Melaleuca strobophylla	923	2.4	3.8	13
		Melaleuca strobophylla	924	3.1	4	11
		Melaleuca strobophylla	925	4.4	4.1	15
		Melaleuca strobophylla	926	5.1, <2	4.5	11
		Melaleuca strobophylla	927	<2	2.5	11
		Melaleuca strobophylla	928	3.2, <2, <2	3.9	15
		Melaleuca strobophylla	929	<2	2.1	11
		Melaleuca strobophylla	930	4.6	4.3	11
		Melaleuca strobophylla	931	<2	1.6	9
		Melaleuca strobophylla	932	6, 2.3, 3.1, 5.7, 3.3, 5.6, 2.2	4.5	15
		Melaleuca strobophylla	933	4, 2.7	5.65	15
1C		*Melaleuca strobophylla*	934	9.2, 7.3, 3.3, 10.8, 5.6, 12, 6.6, 4.4, <2, 2.3, 3, 3.7, 2.5, 8, 13.2, 4, 11.5, 4.4, 5.8, 2.7, 5, 4.4	7.75	21
		Melaleuca strobophylla	935	4.6, 3.6, <2, <2, <2	4.8	17
		Melaleuca strobophylla	936	2.8	3.9	13
		Melaleuca strobophylla	937	<2	2	13
		Melaleuca strobophylla	938	18, 6.7	6.4	17
		Melaleuca strobophylla	939	8.5	6.4	15
		Melaleuca strobophylla	940	4.4, 4.3, 3.3, <2, 3.3	5.6	19
		Melaleuca strobophylla	941	3.3, <2	5.7	13
		Melaleuca strobophylla	942	2.6	5.4	15
		Melaleuca strobophylla	943	<2	1.85	13
		Melaleuca strobophylla	944	2.2	3	15
		Melaleuca strobophylla	945	2.5	4.2	15
		Melaleuca strobophylla	946	3.9	3.05	15
		Melaleuca strobophylla	947	<2	2.7	11
		Melaleuca strobophylla	948	<2	2.7	11
		Melaleuca strobophylla	949	3.6	4	15
		Melaleuca strobophylla	950	2.6, <2	3.7	15
		Melaleuca strobophylla	951	2.1	3	11
		Melaleuca strobophylla	952	5, 4.1	3.95	17
		Melaleuca strobophylla	953	4.1	4.15	13
		Melaleuca strobophylla	954	3.1, 3.8, <2	3.95	15
		Melaleuca strobophylla	955	3.4	3.15	15
		Melaleuca strobophylla	956	4	6	13
		Melaleuca strobophylla	957	5.7	6.05	15

		Melaleuca strobophylla	958	6.1	5	15
		Melaleuca strobophylla	959	<2	1.75	11
		Melaleuca strobophylla	960	6.1, 5.9, 3	6.05	15
		Melaleuca strobophylla	961	5.8, 4.5, 2, 4.2, 3.8, 3.8	4.95	17
		Melaleuca strobophylla	962	7, 4, 5.6	4.5	17
		Melaleuca strobophylla	963	2.5	3.65	11
1D		*Melaleuca strobophylla*	964	7.7, 6.1, 5.6, 2.9, 7.8, 6.4, 2.8, 5.3, 5.5	5.75	19
		Melaleuca strobophylla	965	6.7, 4.2, 11.3, 4, 3	5.8	19
		Melaleuca strobophylla	966	10	5.8	17
		Melaleuca strobophylla	967	8.2	5.85	15
		Melaleuca strobophylla	968	5.8	5.7	15
		Melaleuca strobophylla	969	5.4	5.95	15
		Melaleuca strobophylla	970	5.4, 3.6, 8.3, <2	5.8	15
		Melaleuca strobophylla	971	6.2, 3.1, 4.3, 2.6, <2, <2, <2	3.5	17
1E		*Melaleuca strobophylla*	972	23.5	10.75	21
		Melaleuca strobophylla	973	6.1, 10, 6.7, 3.2, 4.3	5.75	19
		Melaleuca strobophylla	974	4.7	5.8	15
		Melaleuca strobophylla	975	5.7, 2.5, 6.1, 6.6	5.7	17
		Melaleuca strobophylla	976	7.9	5.9	17
		Melaleuca strobophylla	977	6.3	5.85	15
		Melaleuca strobophylla	978	6.6	5.95	17
		Melaleuca strobophylla	979	4.3	5.75	13
		Melaleuca strobophylla	980	12.5, 5.7, 8	5.85	17
		Melaleuca strobophylla	981	20.9	6.35	19
		Melaleuca strobophylla	982	19.6	6	19
2A		*Melaleuca strobophylla*	983	11.7, 7.8, 8	5.2	19
		Melaleuca strobophylla	984	5.7, 5.6, 5.5	4.75	17
		Melaleuca strobophylla	985	10.7	5.85	17
		Melaleuca strobophylla		dead (x4)		
2B		*Melaleuca strobophylla*	986	38	10.25	23
2C		*Melaleuca strobophylla*		dead (x1)		
2D		*Melaleuca strobophylla*	987	14.7, 10.5, 7	6.5	21
		Melaleuca strobophylla	988	23	7	17
		Melaleuca strobophylla	989	12.5, 9.3, 8.3	7	15
		Melaleuca strobophylla	990	18.6	7.05	19
		Melaleuca strobophylla	991	7.9	4.75	13
		Melaleuca strobophylla	992	11.5	7.1	13
		Melaleuca strobophylla	993	2.9	3	13
		Melaleuca strobophylla	994	12.3, 4.2, 3, 6.2	6.4	17
		Melaleuca strobophylla	995	23.8	7.1	19
2E		*Melaleuca strobophylla*	996	11.4, 21.1, 9.3	7.1	19
		Melaleuca strobophylla	997	9.7	7	15
		Melaleuca strobophylla	998	12.9, 11.3	7.05	21
		Melaleuca strobophylla	999	19.7, 11.9	7.1	19
		Melaleuca strobophylla	1000	13.4	7.3	15
		Melaleuca strobophylla	1	11, 13.5	7.2	17
		Melaleuca strobophylla	2	13, 11.1	7	15
		Melaleuca strobophylla	3	14.1	7.1	19
		Melaleuca strobophylla	4	16, 15, 9.1, 12.6	7.2	21

Walyormouring - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Casuarina obesa*	444	48.8	14.5	10
		Casuarina obesa	445	44.9	12.5	10
		Casuarina obesa		dead (x2)		
1B		*Casuarina obesa*	446	27.8, 27.2	13.3	14
		Casuarina obesa	447	30.8	12.6	5
		Casuarina obesa		dead (x7)		
1C		*Casuarina obesa*	448	19.5	6.75	13
		Melaleuca strobophylla	449	22.3, 21.3	8	8
		Casuarina obesa		seedling (x13)	0.5 - 1.5	
		Casuarina obesa		dead (x1)		
1D		*Casuarina obesa*	450	41.1	6.75	4
1E		*Casuarina obesa*		dead (x1)		
2A		*Casuarina obesa*	451	34, 4.5, <2, <2, <2	6.25	19 (main stem dead)
2B		*Casuarina obesa*	452	3.7	3.4	11
2C		*Casuarina obesa*	453	8.2	9.25	9
		Casuarina obesa	454	8.4	7.4	9
		Casuarina obesa	455	9.5	6.8	14
		Casuarina obesa	456	7.25	5.05	16
		Casuarina obesa	457	<2	1.8	8
		Casuarina obesa	458	<2	2	3
		Casuarina obesa		dead (x2)		
2D		*Casuarina obesa*	459	7.4	7.8	10
		Casuarina obesa	460	<2, <2	2.3	3
		Casuarina obesa	461	6.7	5.9	11
		Casuarina obesa	462	8.8	6.3	9
		Casuarina obesa	463	3.8	4.75	10
		Casuarina obesa	464	4.9	6	9
		Casuarina obesa	465	4.8, 6.7, 5.9	6.95	9
		Casuarina obesa	466	3	3.1	14
		Casuarina obesa	467	<2	1.9	5
2E		*Casuarina obesa*	468	3.3	3.15	8
		Casuarina obesa	469	4.2	5	13
		Casuarina obesa	470	11.9, 4.6	9.8	7
		Casuarina obesa	471	8.9, 3, 4.2	6.8	12
		Casuarina obesa	472	<2, <2	2.3	8
		Casuarina obesa	473	3.5	4.7	12
		Casuarina obesa	474	<2	2.05	12
		Casuarina obesa	475	<2	2.15	9
		Casuarina obesa	476	3.7	4.8	4
		Casuarina obesa	477	4.2	5.5	9
		Casuarina obesa	478	2.7	4.2	6
		Casuarina obesa	479	<2	2.1	6
		Casuarina obesa	481	5.8, 3	6.5	12

		Casuarina obesa	482	<2	2.1	11
		Casuarina obesa	483	3.4	5.6	10
		Casuarina obesa	484	3, <2	5	3
		Casuarina obesa	485	3.1	4	10
		Casuarina obesa	486	2.5	3.1	7
		Casuarina obesa	487	4.05, 3.8	5.8	10
		Casuarina obesa	488	4.5	6	6
		Casuarina obesa	489	3.9	5	7
		Casuarina obesa	490	3.7	5.4	7
		Casuarina obesa	491	6.3, 2.8, <2	6.3	10
		Casuarina obesa		dead (x1)		
3A		*Casuarina obesa*	480	4.8, 2.7	3.65	7
		Casuarina obesa	492	2.2, <2	2.4	10
		Casuarina obesa	493	<2	2.4	11
		Casuarina obesa	494	4.9, 2.8	5.55	12
		Casuarina obesa	495	<2	2.4	3
		Casuarina obesa	496	2.5, <2	3	7
		Casuarina obesa	497	7.1, 2.1	6.9	9
		Casuarina obesa	498	4.05	5.3	9
		Casuarina obesa	499	2.8, <2	3.15	12
		Casuarina obesa		dead seedling (x1)		
3B		*Casuarina obesa*	500	4.9, <2	5.9	12
		Casuarina obesa		dead (x1)		
3C		*Casuarina obesa*	565	5.4	4.5	5
		Casuarina obesa	566	2.5	3.2	7
		Casuarina obesa	567	4.25	7	3
		Casuarina obesa	568	<2	1.75	11
		Casuarina obesa	569	5.9	6.8	3
		Casuarina obesa	570	<2	2.35	6
		Casuarina obesa	571	2.8, 2.2	3.05	12
		Casuarina obesa	572	2.3, 2.1	3.35	9
		Casuarina obesa	573	6.7	6.75	4
		Casuarina obesa	574	6, 6.4, 4.7	7	10
		Casuarina obesa		dead (x1)		
		Casuarina obesa		dead seedling (x1)		
3D		*Casuarina obesa*	575	7, 5.3, 7.5	7.75	9
		Casuarina obesa	576	8.3	9.75	6
		Casuarina obesa	577	<2	2.05	5
		Casuarina obesa	578	2.5	2.65	6
		Casuarina obesa	579	9.1	7.75	11
		Casuarina obesa	580	7.7, 3.7	7.7	9
		Casuarina obesa	581	7.6, 3.5	5.75	11
		Casuarina obesa	582	7.8, 3.8	5.65	11
		Casuarina obesa	583	3.6	3.25	9
		Casuarina obesa	584	4.5	6.75	7
		Casuarina obesa	585	7.2	6.5	12
		Casuarina obesa	586	3.5	4.35	9
		Casuarina obesa	587	4.4	4.3	10
		Casuarina obesa	588	3.7, 3.8	4.2	15
		Casuarina obesa	589	5.5	5.5	12
		Casuarina obesa		dead (x2)		

3E		*Casuarina obesa*	590	9.5, 8.2	9.55	9
		Casuarina obesa	591	4.25	4.75	8
		Casuarina obesa	592	8.3	6.5	9
		Casuarina obesa	593	5.5, 6.5	5.85	14
		Casuarina obesa		dead (x1)		

Walyormouring - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Casuarina obesa*	594	7.4	stand height	9
		Casuarina obesa	595	2.55	between	7
		Casuarina obesa	596	4.5	8.0 - 10.0	14
		Casuarina obesa	597	3.05		3
		Casuarina obesa	598	4.1		12
		Casuarina obesa	599	2.6		8
		Casuarina obesa	600	9.1		9
		Casuarina obesa	601	4.6		11
		Casuarina obesa	602	5.2		9
		Casuarina obesa	603	5.6		13
		Casuarina obesa	604	3.7		9
		Casuarina obesa	605	2.7		9
		Casuarina obesa	606	2.3		7
		Casuarina obesa	607	7.3		12
		Casuarina obesa	608	6.2		9
		Casuarina obesa	609	5.2		14
		Casuarina obesa	610	4.5		9
		Casuarina obesa	611	4.3		14
		Casuarina obesa	612	4.8		12
		Casuarina obesa	613	5.8, 6.1		10
		Casuarina obesa	614	5.1		9
		Casuarina obesa	615	6.9		12
		Casuarina obesa	616	3.8, <2		9
		Casuarina obesa	617	8.7		12
		Casuarina obesa	618	3.95		11
		Casuarina obesa	619	4.1		9
		Casuarina obesa	620	4.9		12
		Casuarina obesa	621	4.9		9
		Casuarina obesa	622	3.35		4
		Casuarina obesa	623	6.3		14
		Casuarina obesa	624	3.8		4
		Casuarina obesa	625	4.5		6
		Casuarina obesa	626	7		12
		Casuarina obesa	627	6.2		9
		Casuarina obesa	628	2.6, <2		9
		Casuarina obesa	629	4		8
		Casuarina obesa	630	6.5		13
		Casuarina obesa	631	3.3		8
		Casuarina obesa	632	2		13
		Casuarina obesa	633	5.9		4
		Casuarina obesa	634	3.95		11

		Casuarina obesa	635	6.8		8
		Casuarina obesa	636	4.9		14
		Casuarina obesa	637	9.35		3
		Casuarina obesa	638	2.7		10
		Casuarina obesa	639	6.5		9
		Casuarina obesa	640	7.9		9
		Casuarina obesa	641	7.5		14
		Casuarina obesa	642	5.5		16
		Casuarina obesa	643	4.6		15
		Casuarina obesa	644	7.3		14
		Casuarina obesa	645	27.1		14
		Casuarina obesa	646	5.7		3
		Casuarina obesa	647	3.9		13
		Casuarina obesa	648	6.1		9
		Casuarina obesa	649	5.7		10
		Casuarina obesa	650	6.7		9
		Casuarina obesa		seedling (x8)	1.8 - 2	All healthy
		Casuarina obesa		dead (x14)		
1B		*Casuarina obesa*	651	5.95	7	12
		Casuarina obesa	652	5.8	7.5	10
		Casuarina obesa	653	7.9	8	14
		Casuarina obesa	654	4.6	5.5	7
		Casuarina obesa	655	2.8	3.8	11
		Casuarina obesa	656	24.6	10	6
		Casuarina obesa	657	5.9, 3.1	7.5	9
		Casuarina obesa	658	<2, <2	2.4	4
		Casuarina obesa	659	2.4	4.5	9
		Casuarina obesa	660	2.4	4.5	9
		Casuarina obesa	661	2.6	4.5	7
		Casuarina obesa	662	2.7	4	10
		Casuarina obesa	663	8.3, 10.3	8.5	11
		Casuarina obesa	664	8.3	8.5	10
		Casuarina obesa	665	9.65	10	7
		Casuarina obesa	666	2.9	3.2	15
		Casuarina obesa	667	43.1	10	6
		Casuarina obesa	668	<2	3.3	14
		Casuarina obesa	669	4.6, 6, 6	7	14
		Casuarina obesa		seedling (x24)	1.8 - 2.2	20 Healthy, 4 stressed
		Casuarina obesa		dead (x8)		
1C		*Casuarina obesa*	670	7.7	8	12
		Casuarina obesa	671	10.15	8	10
		Casuarina obesa	672	2.2, <2	4	4
		Casuarina obesa	673	3.25	4.4	11
		Casuarina obesa	674	2.6	3.8	6
		Casuarina obesa	675	2.5	3.8	6
		Casuarina obesa	690	3.3	4.1	7
		Casuarina obesa		seedling (x56)	1.8 - 2.4	47 Healthy, 9 stressed
		Casuarina obesa		dead (x6)		
1D		*Casuarina obesa*	676	10.9	6.8	9
		Casuarina obesa	677	16.9	8.5	5
		Casuarina obesa	678	17.3	7.8	4
		Casuarina obesa	679	18.55	8.3	10
		Casuarina obesa	680	16.4	7	8

		Casuarina obesa	681	11.5	7	4
		Casuarina obesa	682	20.1	7	9
		Casuarina obesa	683	13.2	7.7	3
		Casuarina obesa	684	2.6	2.8	9
		Casuarina obesa	685	4.5	4.1	15
		Casuarina obesa	686	2.2	3.3	14
		Casuarina obesa		seedling (x56)	1.5 - 2.5	51 Healthy, 5 stressed
		Casuarina obesa		dead (x11)		
1E		*Casuarina obesa*	687	3.3	3.7	9
		Casuarina obesa	688	3.4	3.9	11
		Casuarina obesa	689	3.2	3.7	9
		Casuarina obesa	691	3.4	3.7	9
		Casuarina obesa	692	9.6, 11, 10.5	8.4	9
		Casuarina obesa	693	16.1, 10.4	8	11
		Casuarina obesa	694	13.4	7.1	3
		Casuarina obesa		seedling (x3)	1.0 - 1.8	All healthy
		Casuarina obesa		dead (x21)		
2A		*Casuarina obesa*		seedling (x4)	1 - 1.6	All stressed
		Casuarina obesa		dead (x8)		
2B		*Casuarina obesa*		seedling (x1)	2	Very stressed
		Casuarina obesa		dead (x10)		
2C		*Casuarina obesa*		dead (x13)		
2D		*Casuarina obesa*		dead (x17)		
2E		*Casuarina obesa*		dead (x18)		

EGANU - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	EGA 6	*Eucalyptus loxophleba*	5	15.6, <2	5.7	14
	EGA 6	*Eucalyptus loxophleba*	6	9.2	6.8	17
1B	EGA 6	*Eucalyptus loxophleba*		dead (x1)		
		Casuarina obesa		dead (x1)		
		Casuarina obesa		seedling (x1)	1.3	Stressed
1C		*Casuarina obesa*	7	11.5	8.5	16
		Casuarina obesa	8	35.9	11.4	9
	EGA 8	*Hakea recurva. recurva*	(x3)		3 - 4.4	2 Healthy, 1 slightly stressed
1D	EGA 8	*Hakea recurva. recurva*	(x2)		2.6 - 3.8	All stresssed
1E		*Casuarina obesa*	9	8.5	9.4	6
		Casuarina obesa	10	13.8	10.2	12
		Casuarina obesa	11	4.15, <2, <2	4.5	9
		Casuarina obesa	12	6.1	7.5	12
		Casuarina obesa	13	8.1	6.5	9
		Casuarina obesa	14	16.8	12.5	12
		Casuarina obesa	15	12.6	7.5	10
		Casuarina obesa	16	4.6	6	15
		Casuarina obesa	17	12.6, 12.5, 8.4	7.5	9
		Casuarina obesa	18	4.7, <2	5.5	4
2A		*Casuarina obesa*	19	10.6	Large trees	7
		Casuarina obesa	20	8.7	8.5 - 10.5	4
		Casuarina obesa	21	9.3		3
		Casuarina obesa	22	10.5	Small trees	7
		Casuarina obesa	23	6.4	5.0 - 7.0	6
		Casuarina obesa	24	5.5		5
		Casuarina obesa	25	5		7
		Casuarina obesa	26	13.5		10
		Casuarina obesa	27	11.2		11
		Casuarina obesa	28	9.05		9
		Casuarina obesa	29	6		10
		Casuarina obesa	30	13.6		11
		Casuarina obesa	31	6.7		7
		Casuarina obesa	32	14.2		12
		Casuarina obesa	33	5.5		3
		Casuarina obesa	34	3.2		8
		Casuarina obesa	35	12.9		11
		Casuarina obesa	36	4.9		4
		Casuarina obesa	37	6.1, 5.4, <2		9
		Casuarina obesa	38	10.05		9
		Casuarina obesa	39	13.3		5
		Casuarina obesa	40	10.3		13
		Casuarina obesa	41	7.4		7
		Casuarina obesa	42	5.1		4
		Casuarina obesa	43	3.95		3
		Casuarina obesa	44	3		3
		Casuarina obesa	45	8.7		9

		Casuarina obesa	46	5.9		6
		Casuarina obesa	47	6.9		6
		Casuarina obesa	48	11.3		9
		Casuarina obesa	49	5		4
		Casuarina obesa	50	8.5		9
		Casuarina obesa	51	8.4		9
		Casuarina obesa	52	6		10
		Casuarina obesa	53	4.2		6
		Casuarina obesa	54	4.2		3
		Casuarina obesa	55	3.7		6
		Casuarina obesa	56	5.5		6
		Casuarina obesa	57	8.8		6
		Casuarina obesa	58	15.5		10
2B		*Casuarina obesa*	59	16.1	Stand height	14
		Casuarina obesa	60	2.5	4.5	9
		Casuarina obesa	61	4.7		8
		Casuarina obesa	62	10.5		11
		Casuarina obesa	63	7.2		9
		Casuarina obesa	64	12.25		11
		Casuarina obesa	65	9		8
		Casuarina obesa	66	16.3		11
		Casuarina obesa	67	5.2		6
		Casuarina obesa	68	7.3		6
		Casuarina obesa	69	8.1		8
		Casuarina obesa	70	17.2		7
		Casuarina obesa	71	8		11
		Casuarina obesa	72	7.9		6
		Casuarina obesa	73	2.8, <2, <2		6
		Casuarina obesa	74	2.3		6
		Casuarina obesa	75	8		13
		Casuarina obesa	76	6		9
		Casuarina obesa	77	18.7		14
		Casuarina obesa	78	3.8		11
		Casuarina obesa	79	3.9		10
		Casuarina obesa	80	9		9
		Casuarina obesa	81	10.1		9
		Casuarina obesa	82	6.1		3
		Casuarina obesa	83	13.4		3
		Casuarina obesa	84	7.1		3
		Casuarina obesa	85	9.1		5
		Casuarina obesa	86	14		5
		Casuarina obesa		dead (x2)		
2C		*Casuarina obesa*	87	6	Stand height	4
		Casuarina obesa	88	5.8	4.5 - 4.8	8
		Casuarina obesa	89	12.7		8
		Casuarina obesa	90	14.35		13
		Casuarina obesa	91	12.4		10
		Casuarina obesa	92	13.3, 13.8		8
		Casuarina obesa	93	15.6		9
		Casuarina obesa	94	18.4		9
		Casuarina obesa	95	9		7
		Casuarina obesa	96	10.7		11
		Casuarina obesa	97	11.6		6
		Casuarina obesa		dead (x11)		

2D		*Casuarina obesa*		dead (x3)		
2E		*Casuarina obesa*		dead (x1)		
3A		NO TREES				
3B	EGA 7	*Scholtzia* sp.	(x3)		1.7	All healthy
3C	EGA 7	*Scholtzia* sp.	(x1)		1.6	Healthy
3D		*Casuarina obesa*	98	11.1, 12.4, 11.9	7.8	17
		Casuarina obesa	99	31.2	13	10
		Casuarina obesa	100	27.6, 17.5, 13.6	11	15
	EGA 10	*Melaleuca viminea*	(x2)		2.5	2 Slightly stressed
		Casuarina obesa		dead (x3)		
3E		*Casuarina obesa*	101	15.5	11.5	12
		Casuarina obesa	102	<2	2.1	15
		Casuarina obesa	103	<2	1.8	15
	EGA 10	*Melaleuca viminea*	(x1)		2.8	Slightly stressed
		Casuarina obesa		dead (x2)		

EGANU - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Casuarina obesa*	104	12	6	15
		Casuarina obesa	105	28.2	10.5	15
		Casuarina obesa	106	29.5	10	12
		Casuarina obesa		dead (x2)		
1B		*Casuarina obesa*	107	17.1	9.7	17
		Casuarina obesa	108	8.4	6.7	10
		Casuarina obesa		dead (x1)		
1C		*Casuarina obesa*	109	48.3	13.8	9
		Casuarina obesa	110	4.7	5.8	13
		Casuarina obesa		dead (x1)		
1D		*Casuarina obesa*		dead (x1)		
1E		*Casuarina obesa*	111	28	11.2	9
		Casuarina obesa	112	17.2	10.8	15
		Casuarina obesa	113	13	10.2	9
		Casuarina obesa	114	14	10.8	11
2A		*Casuarina obesa*	115	19.8	10.1	3
		Casuarina obesa	116	12.1	10.1	10
2B		*Casuarina obesa*	117	29.4	9	4
		Casuarina obesa		dead (x1)		

2C		*Casuarina obesa*	118	26	9.1	3
		Casuarina obesa	119	25.7, 26.8	11	3
		Casuarina obesa		dead (x3)		
2D		*Casuarina obesa*	120	6.2	7	9
		Casuarina obesa	121	6	5.5	7
		Casuarina obesa	122	5.7	6.7	7
		Casuarina obesa	123	6.1	6.7	8
		Casuarina obesa	124	6.5	7	6
		Casuarina obesa	125	8.5	6.7	10
		Casuarina obesa	126	8.6	6	3
		Casuarina obesa	127	5.7	5.5	9
		Casuarina obesa	128	8.5, 7.8	8	9
		Casuarina obesa		dead (x2)		
2E		*Casuarina obesa*	129	9.1	8	11
		Casuarina obesa	130	10.9	8	8
		Casuarina obesa		dead (x2)		
3A		*Casuarina obesa*	131	14.9	7	6
		Casuarina obesa		dead (x5)		
3B		*Casuarina obesa*		dead (x7)		
3C		*Casuarina obesa*		dead (x4)		
3D		*Casuarina obesa*		dead (x2)		
3E		*Casuarina obesa*		dead (x2)		

EGANU - Transect 3

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	EGA 6	*Eucalyptus loxophleba*	132	20.6, 31.3, 12.5	6.5	12
		Casuarina obesa	133	17.6	12.5	15
		Melaleuca strobophylla	134	20.1, 12.7, 9.5, 13.2	9.3	15
1B		*Casuarina obesa*	135	13.2, 10.2	8.8	13
		Casuarina obesa	136	40	11	17
		Casuarina obesa	137	7, 8.3	8.5	15
		Melaleuca strobophylla	138	8, 22.9	7.5	15
1C	EGA 11	*Acacia* sp.	(x1)		3.2	Healthy
1D		*Casuarina obesa*	139	19	9.5	17
		Casuarina obesa	140	12.4, 12.9	9.8	15
		Casuarina obesa	141	18.3, 10.5	9.5	15
	EGA 11	*Acacia* sp.	(x1)		3	Healthy

1E		*Casuarina obesa*	142	15.75	10.5	11
		Casuarina obesa	143	11, 7.05	8.9	14
		Casuarina obesa	144	9.4	9	15
		Casuarina obesa	145	17.85	10.5	19
		Casuarina obesa	146	28.4	14	13
2A		*Casuarina obesa*	147	10.4	9.5	15
		Casuarina obesa	148	14, 10.5	10	15
		Casuarina obesa	150	16.1	9.5	19
		Casuarina obesa	151	16, 40.9, 21	11.5	19
		Casuarina obesa	152	22.5	13.5	17
2B	EGA 12	*Melaleuca lateriflora*	(x1)		4.5	Healthy
2C		*Casuarina obesa*	153	22.3	13.5	17
		Casuarina obesa	154	10.25	8.5	11
		Melaleuca strobophylla	155	9.6, 10.1, 10.2, 9.7, 10, 10.5	6.3	15
		Casuarina obesa	156	9.3	7.7	15
		Casuarina obesa	157	5.5	7.5	4
		Casuarina obesa	158	13.4	10.5	14
		Casuarina obesa	159	7.2	10.5	13
		Casuarina obesa	160	14.5	9.8	15
		Casuarina obesa	161	18.4	10	15
2D		*Casuarina obesa*	162	9	9.4	17
		Melaleuca strobophylla	163	11.9, 13	6.5	13
		Casuarina obesa	164	10.4	7.8	11
		Melaleuca strobophylla	165	28.2, 10, 16.2	8.7	19
		Casuarina obesa	166	4.9	6.5	15
		Melaleuca strobophylla	167	14, 18.5	8.1	13
		Melaleuca strobophylla	168	10.2, 5.5	7.6	13
		Melaleuca strobophylla	169	7.7	8	15
		Casuarina obesa	170	17.1, 14	9	19
		Melaleuca strobophylla	171	12, 9, 11.4, 10.1, 9.6	8.7	17
	EGA 6	*Eucalyptus loxophleba*		dead (x1)		
2E		*Melaleuca strobophylla*	172	6.6, 8	6.5	15
		Casuarina obesa	173	10	9.5	15
		Melaleuca strobophylla	174	10.8, 13.2, 13.6	8.8	17
		Casuarina obesa	175	6.7	9	15
		Melaleuca strobophylla	176	11.1, 12.5, 14.9	8.8	19
		Casuarina obesa	177	9	9.5	19
		Melaleuca strobophylla	178	12.4, 12.5	8.4	15
		Melaleuca strobophylla	179	13.5, 8.8, 8	9	15
		Melaleuca strobophylla	180	11, 14.9, 10.7	9	17

ARDATH - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca lateriflora*	(x1)		2	Very stressed
		Melaleuca lateriflora		dead (x4)		
	ARD 1	*Melaleuca thyoides*		dead (x1)		
1B		*Melaleuca lateriflora*	(x3)		2.4 - 2.6	1 Stressed, 2 very stressed
		Melaleuca lateriflora		dead (x3)		
		Casuarina obesa		dead (x1)		
1C		*Melaleuca lateriflora*		dead (x7)		
	ARD 2	*Scaevola spinescens*		dead (x3)		
		Casuarina obesa		dead (x1)		
1D		*Melaleuca lateriflora*		dead (x6)		
		Casuarina obesa		dead (x1)		
1E		*Melaleuca lateriflora*	(x2)		2.4 - 2.5	1 Very stressed, 1 stressed
		Casuarina obesa		dead (x1)		
		Melaleuca lateriflora		dead (x3)		
2A		*Melaleuca lateriflora*	(x1)		2.8	Very stressed
		Melaleuca lateriflora		dead (x2)		
		Casuarina obesa		dead (x5)		
2B		*Melaleuca lateriflora*	(x2)		2.7 - 2.9	1 Healthy, 1 stressed
	ARD 1	*Melaleuca thyoides*	(x2)		2.4	All very stressed
2C		*Casuarina obesa*	1	7, 6.4	4.9	19
		Casuarina obesa		seedling (x1)	1.5	Healthy
2D		*Casuarina obesa*	2	9.1, 12.5, 5.7	6.5	15
	ARD 2	*Scaevola spinescens*	(x3)		1.5	All healthy
	ARD 1	*Melaleuca thyoides*	(x8)		1.5 - 2.4	All healthy
		Casuarina obesa		seedling (x1)	1.7	Healthy
		Eucalyptus yilgarnensis		dead (x2)		
2E		*Casuarina obesa*	3	3.2, 8.7, 6.1	4.6	13
		Casuarina obesa	4	9.6, 6, 3.8	5	11
		Casuarina obesa	5	3.2, 3.5, 3.8	4	17
		Casuarina obesa	6	14.7	6.4	11
		Casuarina obesa	7	11, 6.5	6.4	13
		Casuarina obesa	8	10, 6.4	6.4	9
	ARD 1	*Melaleuca thyoides*	(x8)		1.8 - 3.5	All healthy
	ARD 2	*Scaevola spinescens*	(x1)		1.5	Stressed
		Eucalyptus yilgarnensis		dead (x3)		

ARDATH - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		NO TREES				
1B		*Eucalyptus yilgarnensis*	9	31.2	13.7	11
		Casuarina obesa	10	<2	1.7	15
		Casuarina obesa	11	<2	1.7	13
		Casuarina obesa	12	<2	1.8	13
		Casuarina obesa	13	<2	1.8	15
		Eucalyptus yilgarnensis	14	21.2, 17.9	11	8
		Casuarina obesa		seedling (x1)	1.4	
1C		*Eucalyptus yilgarnensis*	15	23.5	10.7	7
		Casuarina obesa	16	7.9	5.8	19
		Eucalyptus yilgarnensis	17	29.7	13.7	15
		Eucalyptus yilgarnensis	18	27	11.7	4
		Casuarina obesa		seedling (x3)	1.2 - 1.5	
1D		*Casuarina obesa*	19	2.5, 2.3, <2	3.8	15
		Casuarina obesa	20	4.1	4	13
		Eucalyptus yilgarnensis	21	19.4	9.9	14
		Casuarina obesa	22	<2	1.6	17
		Eucalyptus yilgarnensis	26	28.6	11.5	9
1E		*Eucalyptus yilgarnensis*	23	22.7, 7	9.7	11
		Casuarina obesa	24	5	4	17
2A		*Casuarina obesa*	25	4.3	3.6	15
		Casuarina obesa	27	35.7	7.5	15
2B		*Casuarina obesa*	28	27.8	6.7	13
		Casuarina obesa	29	9.7, 7.5	6.3	11
		Casuarina obesa	30	13.8, 11.1, 19.4	6.3	15
		Casuarina obesa	31	13.4, 23.1, 7.2, 6.1	6.5	12
	2C - 2D	NO TREES				
2E		*Casuarina obesa*	32	17.1, 16.7, 4.2, 6, 19.5, 5.8 7.5, 4.8, 11.3, 11	9	10
		Casuarina obesa	33	20.5, 11.7	8	11
	ARD 12	*Acacia ?rostellifera*	(x1)		1.5	Healthy
	ARD 1	*Melaleuca thyoides*	(x3)		1.8 - 2.1	All healthy

Campion - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Melaleuca uncinata*	(x46)		2.6 - 4.1	40 Healthy, 6 stressed
		Melaleuca uncinata		dead (x6)		
1B		*Melaleuca uncinata*	(x42)		3.0 - 4.1	36 Healthy, 6 stressed
		Melaleuca uncinata		dead (x7)		
1C		*Melaleuca uncinata*	(x34)		2.7 - 4.3	30 Healthy, 4 stressed
		Melaleuca uncinata		dead (x2)		
1D		*Melaleuca uncinata*	(x18)		3.5 - 4.4	15 Healthy, 3 stressed
		Melaleuca uncinata		dead (x1)		
1E		*Melaleuca uncinata*	(x20)		2.6 - 4.3	All healthy
		Melaleuca uncinata		dead (x1)		
2A		*Melaleuca uncinata*	(x29)		2.4 - 4.7	20 Healthy, 9 stressed
		Melaleuca uncinata		dead (x4)		
2B		*Melaleuca uncinata*	(x15)		3.7 - 5.1	10 Healthy, 5 stressed
		Melaleuca uncinata		dead (x6)		
2C		*Melaleuca uncinata*		dead (x2)		
	2D - 2E	NO TREES				

Campion - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Eucalyptus yilgarnensis*	34	34.9, 26.7	14	18
	CAM 14	*Eremophila oppositifolia . angustifolia*	35	multiple <2	2	19
	CAM 14	*Eremophila oppositifolia . angustifolia*	36	3.3, 3.2, 3.4, 5.2, 4.7, <2, <2, <2, <2	2.2	15
		Eucalyptus yilgarnensis	37	36.4	15	17
	CAM 15	*Acacia acuminata*	38	<2, <2	2.4	15
		Eucalyptus yilgarnensis	39	21.2	13.6	15
		Eucalyptus yilgarnensis	40	38.3	14.8	17
	CAM 14	*Eremophila oppositifolia . angustifolia*	41	3.2, 4.5, 3.9, 3.1, <2, <2, <2, <2, <2, <2, <2	2.5	15
	CAM 5	*Dodonaea filifolia*	(x2)		1.5 - 1.8	All healthy
1B	CAM 15	*Acacia acuminata*	42	2.2	2.1	13
		Eucalyptus yilgarnensis	43	21.5, 20.9	14.5	12
	CAM 5	*Dodonaea filifolia*	44	<2	2.5	Healthy
		Eucalyptus yilgarnensis	45	31.8, 36.7	13.9	21
		Eucalyptus yilgarnensis	46	32.5, 29.4	14.8	17
		Eucalyptus yilgarnensis	47	36.4	15	15
		Eucalyptus yilgarnensis	48	32	14.2	16
		Eucalyptus yilgarnensis	49	30.9	14.6	17

	CAM 14	*Eremophila oppositifolia . angustifolia*	50	3.3, <2	2.6	13
	CAM 5	*Dodonaea filifolia*	(x3)		1.7 - 2.1	All healthy
1C	CAM 5	*Dodonaea filifolia*	(x1)		1.8	Healthy
	1D - 1E	NO TREES				
2A	CAM 18	*Callitris glaucophylla*	51	24.1		15
	CAM 18	*Callitris glaucophylla*	52	16.1		9
2B	CAM 18	*Callitris glaucophylla*	53	6.6, 6.5		17
2C	CAM 18	*Callitris glaucophylla*	54	13.8, 9.7, 7.9, 8.2		19
	CAM 19	*Hakea recurva*	(x1)		1.7	Stressed
2D		NO TREES				
2E	CAM 5	*Dodonaea filifolia*	55	3.5, 2.5		11
	CAM 5	*Dodonaea filifolia*	(x4)		1.5 - 2.0	1 Healthy, 3 stressed
3A	CAM 20	*Bossiaea ?rufa*	56	7.3, 10.5, 8.5	3.9	11
	CAM 18	*Callitris glaucophylla*	57	16.5		17
	CAM 18	*Callitris glaucophylla*	58	19.1		15
3B	CAM19	*Hakea recurva*	(x2)		1.8	All healthy
	CAM 5	*Dodonaea filifolia*	(x2)		1.6 - 2.1	All healthy
3C	CAM 18	*Callitris glaucophylla*	59	3.5	2.6	19
	CAM19	*Hakea recurva*	(x3)		1.5 - 1.8	All healthy
	CAM 14	*Eremophila oppositifolia . angustifolia*	(x1)		2	Healthy
	CAM 5	*Dodonaea filifolia*	(x3)		1.6 - 1.8	All healthy
3D	CAM 21	*Melaleuca pauperiflora*	60	25.3		15
	CAM 21	*Melaleuca pauperiflora*	(x3)		1.2 - 1.6	All healthy
	CAM 21	*Melaleuca pauperiflora*		seedling (x2)	0.5	All healthy
3E	CAM 21	*Melaleuca pauperiflora*	61	12.6	3.2	17
	CAM 21	*Melaleuca pauperiflora*	62	7.7, 3.6	2.1	13
	CAM 21	*Melaleuca pauperiflora*	63	4.3, 3.9, 3.0, 2.7	2.3	13
	CAM 21	*Melaleuca pauperiflora*	64	7.3	1.9	3
	CAM 21	*Melaleuca pauperiflora*	65	6.6, 7.1	2.2	11
	CAM 21	*Melaleuca pauperiflora*	66	<2 x 6	2.3	11
	CAM 21	*Melaleuca pauperiflora*		seedling (x2)	0.4	All healthy

Campion - Transect 3

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		NO TRESS				
1B		*Melaleuca uncinata*	67	10.9, 9.2, 10	6.1	17
	CAM 20	*Bossiaea ?rufa*	(x1)		2	Healthy
	CAM 32	*Acacia* sp.	(x1)		2.5	Healthy
1C	CAM 32	*Acacia* sp.	68	6.6, 4.4	2.5	13
	CAM 32	*Acacia* sp.	69	6.8	2.5	7
		Eucalyptus yilgarnensis	70	29.5	12.6	15
1D	CAM 32	*Acacia* sp.	85	6.7	2.4	11
	CAM 20	*Bossiaea ?rufa*	(x1)		1.7	Healthy
	CAM 32	*Acacia* sp.	(x1)		1.6	Healthy
1E		*Eucalyptus yilgarnensis*	71	15.9	11.9	6
		Eucalyptus yilgarnensis	72	27.6, 40.9	13.5	15
	CAM 20	*Bossiaea ?rufa*	(x2)		1.9 - 2.2	All healthy
2A	CAM 20	*Bossiaea ?rufa*	(x2)		1.5 - 1.9	All healthy
	CAM 32	*Acacia* sp.	(x1)		1.8	Healthy
2B		*Eucalyptus yilgarnensis*	73	14.9	9.8	4
		Eucalyptus yilgarnensis	74	15.8	7.8	7
	CAM 32	*Acacia* sp.	86	6.9	1.8	15
2C	CAM 31	*Acacia ?prainii*	76	7.2, 5.2, 3.8	3.6	9
		Eucalyptus yilgarnensis	75	25.3	12.5	11
		Eucalyptus yilgarnensis	77	19, 31	11.9	15
	CAM 31	*Acacia ?prainii*	(x1)		<1.5	Stressed
2D	CAM 31	*Acacia ?prainii*	78	16.2	2.4	9
	CAM 31	*Acacia ?prainii*	79	11.1, 9.2, 9.8	2.1	15
		Eucalyptus yilgarnensis	80	15, 30.5, 33.3	12.4	17
2E		*Eucalyptus yilgarnensis*	81	17.7	8	6
	CAM 31	*Acacia ?prainii*	82	7.2, 6.9	2.8	11
3A	CAM 31	*Acacia ?prainii*	83	9.2, 8.1, 7.4, 8.7	3	11
		Melaleuca uncinata	84	7.8, 5.8, 5.5, 6.4, 6.1	6.6	15
	3B - 3C	NO TREES				
3D		*Melaleuca uncinata*	(x13)		1.5 - 2.8	All healthy
		Melaleuca uncinata		dead (x25)		
3E		*Melaleuca uncinata*	(x2)		2.5	All healthy
		Melaleuca uncinata		dead (x9)		

Campion - Transect 4

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	CAM 18	*Callitris glaucophylla*	87	21.7, 11.8, 12	7.8	13
	CAM 31	*Acacia ?prainii*	(x1)		1.7	Healthy
	CAM 30	*Alyxia buxifolia*	(x1)		1.6	Stressed
	CAM 32	*Acacia* sp.	(x1)		1.7	Healthy
1B		NO TREES				
1C	CAM 18	*Callitris glaucophylla*	88	26.3	10.1	19
	CAM 32	*Acacia* sp.	(x1)		2.2	Healthy
	CAM 20	*Bossiaea ?rufa*	(x1)		1.6	Stressed
1D	CAM 30	*Alyxia buxifolia*	89	11.2	2.4	13
1E		*Eucalyptus yilarnensis*	90	29.1	9.5	14
	CAM 18	*Callitris glaucophylla*	92	11.2	3.8	17
2A	CAM 18	*Callitris glaucophylla*	91	17.8, 11.8, 14.3, 6.8, 7.9, 7	6.6	17
2B		NO TREES				
2C	CAM 18	*Callitris glaucophylla*	93	6.2, 9.5	4	11
	CAM 18	*Callitris glaucophylla*	94	16.4, 11.3	3.8	9
		Melaleuca uncinata	(x11)		2.2 - 8	All healthy
2D		*Melaleuca uncinata*	(x7)		2.2 - 3.5	All healthy
		Melaleuca uncinata		dead (x3)		
2E		*Melaleuca uncinata*		dead (x11)		

PAPERBARK - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	PAP D	*Eucalyptus yilgarnensis*	95	39, 74.4	18.7	15
		Melaleuca lateriflora	96	19.4, 20.5	4.4	Healthy
	PAP A	*Melaleuca strobophylla*		seedling (x1)	1	Healthy
		Melaleuca lateriflora		seedling (x2)	1.5	All healthy
	PAP C	*Melaleuca phoidophylla*		seedling (x2)	1.6	1 Healthy, 1 stressed
1B	PAP B	*Hakea recurva*	(x1)		2.4	Healthy
1C	PAP E	*Eucalyptus loxophleba*	97	39.9	6.9	4
	PAP D	*Eucalyptus yilgarnensis*	98	41.8, 43.7	15.5	16
1D	PAP E	*Eucalyptus loxophleba*	99	18.2, 11.4	9.5	11
	PAP D	*Eucalyptus yilgarnensis*	100	16.6, 14.1	10.9	17
1E	PAP B	*Hakea recurva*		dead (x3)	1.6 - 2	
2A		*Melaleuca lateriflora*	101	21.9	5.2	Stressed
	PAP C	*Melaleuca phoidophylla*	102	multiple <2	2	Healthy
	PAP A	*Melaleuca strobophylla*	103	3.5, 3, 3.8	3.1	17
		Melaleuca lateriflora	104	10.5	6.1	Stressed
	PAP C	*Melaleuca phoidophylla*	105	7.8, 4.1, 5.6, 6.2, <2	3.6	Stressed
		Melaleuca lateriflora	106	10, 11.5, 6.7, 11.6, 9.8, 6.5, 9.4, 8.5	5.5	Stressed
		Melaleuca lateriflora	107	multiple <2	3.2	Healthy
		Melaleuca lateriflora		seedling (x1)	0.5	Healthy
2B	PAP E	*Eucalyptus loxophleba*	108	20.7, 9.8, 37.1	8.2	7
	PAP C	*Melaleuca phoidophylla*	(x1)	<2	1.8	Healthy
		Melaleuca lateriflora	(x1)	<2	1.5	Healthy
2C	PAP A	*Melaleuca strobophylla*	109	21.6	8.5	13
	PAP A	*Melaleuca strobophylla*	110	10.2	6.4	11
		Melaleuca lateriflora	111	7, 9	5.1	5
		Melaleuca lateriflora	112	8, 7.9	6.4	Slightly stressed
	PAP C	*Melaleuca phoidophylla*	113	4.5, 3.1	3.6	Stressed
	PAP C	*Melaleuca phoidophylla*	114	6.3, 4.9, 6.9	3	Slightly stressed
	PAP E	*Eucalyptus loxophleba*	115	13.5, 13.1	8.8	4
		Melaleuca lateriflora	116	7.9, 6.6, 7.2, 3.6, 6, 8.5, 4.7, 5.2, 4 3.5, 4.5, 4	5.4	Healthy
		Melaleuca lateriflora		<2	1.7	Healthy
	PAP D	*Eucalyptus yilgarnensis*	117	28.8, 30.3, 28	12.9	10
2D	PAP C	*Melaleuca phoidophylla*	118	2.4, 4.9, 5.3, 4.5	5	Healthy
	PAP C	*Melaleuca phoidophylla*	119	3.7, 3, 4.7, 4, 3.1, 3, <2, <2, <2, <2	4.6	Slightly stressed
		Melaleuca lateriflora	120	9.4, 8.5, 10.9	5.9	Healthy
		Melaleuca lateriflora	121	32.1, 14.3	7.7	Healthy
	PAP A	*Melaleuca strobophylla*	122	<2	2.3	21
2E		*Melaleuca lateriflora*	123	10.9, 12	5.4	Healthy
		Melaleuca lateriflora	124	22.3, 9.5	5.7	Healthy
		Melaleuca lateriflora	125	6.1, 2.9, 3.5, 4, 2.9, 3	5	Slightly stressed
		Melaleuca lateriflora	126	4.8, 3.3, 6.3, 3.5, 5.5, 6.2, 4.2, 2.8, 8.5 7, 4, 6.7, 5.7, 7.8	5.7	Healthy

	PAP E	*Eucalyptus loxophleba*	127	20.1, 12.4, 10	8.4	9
	PAP C	*Melaleuca phoidophylla*		seedling (x5)	1 - 2.2	4 Healthy, 1 stressed
3A	PAP C	*Melaleuca phoidophylla*	128	13.9	3.75	Healthy
	PAP C	*Melaleuca phoidophylla*	129	multiple <2	2.7	Slightly stressed
		Melaleuca lateriflora	130	6.7, 6.5, 5.1, 4.5, 3.3, 3.7	4.9	Slightly stressed
		Melaleuca lateriflora	131	5.6, 3.6	4.6	Stressed
	PAP C	*Melaleuca phoidophylla*	132	multiple <2	2.6	Healthy
	PAP C	*Melaleuca phoidophylla*	133	multiple <2	3	Healthy
	PAP C	*Melaleuca phoidophylla*	134	multiple <2	3	Healthy
	PAP C	*Melaleuca phoidophylla*	135	multiple <2	2.6	Healthy
	PAP C	*Melaleuca phoidophylla*	136	multiple <2	3	Healthy
	PAP C	*Melaleuca phoidophylla*	137	multiple <2	2.4	Healthy
		Melaleuca lateriflora	138	multiple <2	2.7	Healthy
	PAP C	*Melaleuca phoidophylla*		<2	1.1	Healthy
	PAP C	*Melaleuca phoidophylla*	139	multiple <2	2	Healthy
	PAP D	*Eucalyptus yilgarnensis*	(x1)	dead		
	PAP B	*Hakea recurva*	(x1)	dead		
3B	PAP A	*Melaleuca strobophylla*	140	12.1, 13, 6	6.7	13
	PAP C	*Melaleuca phoidophylla*	141	10.7, 12.4	4.7	Stressed
	PAP C	*Melaleuca phoidophylla*	142	7.8, 4.4, 5.8, 5, 4.2	4.7	Stressed
	PAP C	*Melaleuca phoidophylla*	143	multiple <2	1.85	Healthy
	PAP C	*Melaleuca phoidophylla*	144	multiple <2	3	Healthy
	PAP C	*Melaleuca phoidophylla*	145	multiple <2	3	Healthy
	PAP C	*Melaleuca phoidophylla*	146	multiple <2	2.5	Healthy
	PAP C	*Melaleuca phoidophylla*	147	multiple <2	2.4	Healthy
3C		*Melaleuca lateriflora*	148	12.6, 8.3	3.6	Slightly stressed
	PAP C	*Melaleuca phoidophylla*	149	4.1, 3.3, 4.3	4.5	Healthy
		Melaleuca lateriflora	150	7.6	4.7	Stressed
		Melaleuca lateriflora	151	7.3, 5.1	4.55	Slightly stressed
		Melaleuca lateriflora	152	11.1, 6.7	4.9	Healthy
	PAP C	*Melaleuca phoidophylla*	153	7.1, 4.2, 5.6, 5.4, 4.5	4.2	Healthy
		Melaleuca lateriflora	154	8.6, 4.9, 8.5	3.2	Healthy
		Melaleuca lateriflora	155	6.7, 6.2	6.1	Stressed
		Melaleuca lateriflora	156	12, 8.7, 9.5, 6.1	6	Slightly stressed
	PAP C	*Melaleuca phoidophylla*	157	multiple <2	1.9	Healthy
	PAP C	*Melaleuca phoidophylla*	158	multiple <2	1.9	Healthy
	PAP C	*Melaleuca phoidophylla*	159	multiple <2	1.9	Healthy
	PAP C	*Melaleuca phoidophylla*	160	multiple <2	2.3	Healthy
	PAP A	*Melaleuca strobophylla*	161	24.1	6.5	13
	PAP F	*Bossiaea ?rufa*	(x1)		2.2	Healthy
	PAP C	*Melaleuca phoidophylla*		seedling (x1)	1.4	Healthy
3D	PAP C	*Melaleuca phoidophylla*	162	6.6, 4, 4.5, 4, 4.5, 4, 3.4, 4, 4.1	2.7	Stressed
	PAP A	*Melaleuca strobophylla*	163	5.6	4.3	11
	PAP A	*Melaleuca strobophylla*	164	15.5, 6.9	6.3	13
	PAP A	*Melaleuca strobophylla*	165	18.6	6.5	13
	PAP A	*Melaleuca strobophylla*	166	16.5	6.7	15
		Melaleuca lateriflora	(x3)		1.8 - 4	All healthy
	PAP C	*Melaleuca phoidophylla*	(x13)		4 - 4.4	All healthy
	PAP C	*Melaleuca phoidophylla*		dead (x3)		

3E	PAP A PAP C PAP C	*Melaleuca strobophylla* *Melaleuca phoidophylla* *Melaleuca phoidophylla*	167 (x24)	10.8 dead (x6)	6.5 2.3 - 4.6	15 4 Stressed, 10 slightly stressed, 10 healthy

PAPERBARK - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		NO TREES				
1B	PAP E PAP E PAP E	*Eucalyptus loxophleba* *Eucalyptus loxophleba* *Eucalyptus loxophleba*	168 169 170	23, 17.6 30.5 27.7, 24.9	13.3 14 9.8	13 13 13
1C	PAP D PAP D PAP D	*Eucalyptus yilgarnensis* *Eucalyptus yilgarnensis* *Eucalyptus yilgarnensis*	171 172 173	22.5 34.8 34.4	10 12.1 12.8	6 15 11
1D	PAP E	*Eucalyptus loxophleba* *Melaleuca lateriflora*	174 (x4)	16	8.5 4 - 4.4	7 2 Healthy, 1 slightly stressed, 1 stressed
1E	 PAP E	*Melaleuca lateriflora* *Melaleuca lateriflora* *Melaleuca lateriflora* *Eucalyptus loxophleba*	(x23)	 dead (x2) dead (x1)	5	17 Healthy, 4 slightly stressed, 2 stressed
2A		*Melaleuca lateriflora* *Melaleuca lateriflora* *Melaleuca lateriflora*	(x28)	 dead (x12)	4.6 - 5.1	15 Healthy, 5 slightly stressed, 8 stressed
2B		*Melaleuca lateriflora* *Melaleuca lateriflora* *Melaleuca lateriflora*	(x29)	 dead (x7)	4.3 - 6	21 Healthy, 7 slightly stressed, 1 stressed
2C		*Melaleuca lateriflora*	(x3)		4 - 4.2	2 Healthy, 1 stressed
2D		*Melaleuca lateriflora* *Melaleuca lateriflora* *Melaleuca lateriflora*	(x8)	 dead (x1)	4.2 - 5.8	4 Healthy, 4 slightly stressed
2E		*Melaleuca lateriflora* *Melaleuca lateriflora* *Melaleuca lateriflora*	(x25)	 dead (x6)	6.2 - 5.8	14 Healthy, 7 slightly stressed, 4 stressed

PAPERBARK - Transect 3

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	PAP A	*Melaleuca strobophylla*	175	39.6	9.8	17
1B	PAP A	*Melaleuca strobophylla*	176	27.6	5.5	17
		Melaleuca strobophylla	177	29.9, 17.4	9.5	11
		Melaleuca strobophylla	178	28.5	8.7	13
		Melaleuca strobophylla	179	34.5	6.7	17
	PAP C	*Melaleuca phoidophylla*	(x3)		3.4 - 4.2	2 Healthy, 1 stressed
1C	PAP A	*Melaleuca strobophylla*	180	27	7.3	13
	PAP C	*Melaleuca phoidophylla*	(x5)		3.6 - 4.6	4 Slightly stressed, 1 stressed
1D	PAP A	*Melaleuca strobophylla*	181	24.9	8.9	15
	PAP A	*Melaleuca strobophylla*	182	36.9	8.6	11
	PAP A	*Melaleuca strobophylla*	183	31.7	8.5	13
	PAP A	*Melaleuca strobophylla*	184	33.2	8.4	13
	PAP C	*Melaleuca phoidophylla*	(x2)		3 - 4.4	1 Slightly stressed, 1 Sressed
1E	PAP C	*Melaleuca phoidophylla*	(x1)		4.7	Slightly stressed
2A	PAP A	*Melaleuca strobophylla*	185	30.8	6.6	13
	PAP A	*Melaleuca strobophylla*	186	26	5.4	11
	PAP A	*Melaleuca strobophylla*	187	32.5	8.5	17
	PAP C	*Melaleuca phoidophylla*	(x2)		3.6 - 3.8	1 Slightly stressed, 1 stressed
2B	PAP A	*Melaleuca strobophylla*	188	32.8	8.8	11
	PAP A	*Melaleuca strobophylla*	189	33.1	8.95	13
	PAP A	*Melaleuca strobophylla*	190	32	8.9	13
	PAP A	*Melaleuca strobophylla*	191	29.9	8.95	15
	PAP A	*Melaleuca strobophylla*	192	29.7	8.75	11
	PAP C	*Melaleuca phoidophylla*	(x6)		1.5 - 4	3 Stressed, 3 slightly stressed
2C	PAP A	*Melaleuca strobophylla*	193	20	4.7	11
	PAP C	*Melaleuca phoidophylla*	(x2)		4.2	All stressed
2D	PAP A	*Melaleuca strobophylla*	194	31.2	6.1	11
	PAP A	*Melaleuca strobophylla*	195	33.7	8.7	15
	PAP A	*Melaleuca strobophylla*	196	37.8	8.6	13
	PAP C	*Melaleuca phoidophylla*	(x1)		2.1	Slightly stressed
2E	PAP A	*Melaleuca strobophylla*	197	32.2	8	15
	PAP C	*Melaleuca phoidophylla*	(x5)		2.4 - 5	3 Stressed, 2 slightly stressed
3A	PAP A	*Melaleuca strobophylla*	198	29.6	8.8	13
	PAP A	*Melaleuca strobophylla*	199	13.2, 9.9, 7	6.5	13
	PAP C	*Melaleuca phoidophylla*	(x5)		3.6 - 4	All stressed
	PAP A	*Melaleuca strobophylla*		dead (x1)		

3B	PAP A PAP C PAP C	*Melaleuca strobophylla* *Melaleuca phoidophylla* *Melaleuca phoidophylla*	200 (x8)	32.8 dead (x1)	7.1 4.5	13 All stressed
3C	PAP C PAP A PAP C	*Melaleuca phoidophylla* *Melaleuca strobophylla* *Melaleuca phoidophylla*	(x20)	 dead (x1) dead (x1)	3.5 - 4.5	All stressed
3D	PAP A PAP A PAP A PAP C	*Melaleuca strobophylla* *Melaleuca strobophylla* *Melaleuca strobophylla* *Melaleuca phoidophylla*	201 202 203 (x6)	34.4 27.3, 26.1 14.5, 10.4	8.7 8 6.25 3.15	17 17 11 2 Slightly stressed, 4 stressed
3E	PAP C PAP C	*Melaleuca phoidophylla* *Melaleuca phoidophylla*	(x9)	 dead (x1)	3.6 - 4.5	7 Stressed, 2 slightly stressed

GOONAPING - Transect 1

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		NO TREES				
1B		*Eucalyptus wandoo*	204	<2	1.8	19
		Eucalyptus wandoo	205	2.5	2.8	17
		Eucalyptus wandoo	206	3.5	3.3	19
		Eucalyptus wandoo	207	6.8	4	21
		Eucalyptus wandoo	208	59.9	22.4	14
		Eucalyptus wandoo	209	77.5	22.2	14
		Eucalyptus wandoo		seedling (x12)	0.5 - 1.5	All healthy
1C		*Eucalyptus wandoo*	210	2.3	2.4	15
		Eucalyptus wandoo	211	4.6	4.4	21
		Eucalyptus wandoo	212	2.7, <2	2.7	15
		Eucalyptus wandoo	213	13.2	6.5	13
		Eucalyptus wandoo	214	<2	2.1	15
		Eucalyptus wandoo	215	3.9	3.6	17
		Eucalyptus wandoo	216	<2	1.9	13
		Eucalyptus wandoo	217	<2	1.9	13
		Eucalyptus wandoo	218	<2, <2, <2	2.3	17
		Eucalyptus wandoo	219	3.4	2.2	17
		Eucalyptus wandoo	220	<2	2.4	15
		Eucalyptus wandoo	221	3.5	4	17
		Eucalyptus wandoo	222	4.5	4	17
		Eucalyptus wandoo	223	4.9	4.5	17
		Eucalyptus wandoo	224	4.9	3.8	19
		Eucalyptus wandoo	225	3.9, 2.1	3.2	17
		Eucalyptus wandoo	226	2.2	2.5	15
		Eucalyptus wandoo		seedling (x25)	0.4 - 1.5	All healthy
1D		*Eucalyptus wandoo*	227	14.5, 13.5	11.5	17
		Eucalyptus wandoo	228	2.4	3	13
		Eucalyptus wandoo	229	<2	2	11
		Eucalyptus wandoo	230	<2	1.8	15
		Eucalyptus wandoo	231	4.7	4.5	15
		Eucalyptus wandoo	232	<2	2.2	15
		Eucalyptus wandoo	233	2.2, 3	3.3	17
		Eucalyptus wandoo	234	<2	2.1	13
		Eucalyptus wandoo	235	3.5	3.7	19
		Eucalyptus wandoo	236	4.1	5	19
		Eucalyptus wandoo	237	4.3	4.5	17
		Eucalyptus wandoo	238	3.2	3.8	15
		Eucalyptus wandoo	239	<2	1.8	15
		Eucalyptus wandoo	240	3.2	3.2	19
		Eucalyptus wandoo	241	4.6	3.5	17
		Eucalyptus wandoo	242	3.7, <2	3.1	15
		Eucalyptus wandoo	243	2.5	3	13
		Eucalyptus wandoo	244	3.7	3.5	13
		Eucalyptus wandoo	245	<2	2.1	13
		Eucalyptus wandoo	246	<2	2.2	15
		Eucalyptus wandoo		seedling (x21)	0.4 - 1.5	All healthy
1E		*Eucalyptus wandoo*	247	15.4, 17.5, 5.8 (coppice)	11.6	19
		Eucalyptus wandoo	248	11.8	6.8	15
		Eucalyptus wandoo	249	<2	2	15
		Eucalyptus wandoo	250	4.8	3.8	19
		Eucalyptus wandoo	251	<2	1.9	13
		Eucalyptus wandoo		seedling (x8)	0.6 - 1.5	All healthy

2A		*Eucalyptus wandoo*	252	19.6	11.6	17
		Eucalyptus wandoo	253	5.5	5	11
		Eucalyptus wandoo	254	11.5	9.5	17
		Eucalyptus wandoo	255	11	8.2	15
		Eucalyptus wandoo	256	10.7	7.9	17
		Eucalyptus wandoo	257	7.5	7.3	15
		Eucalyptus wandoo	258	4.4	4.2	15
		Eucalyptus wandoo	259	8.2	8.2	13
		Eucalyptus wandoo		seedling (x4)	0.4 - 0.9	All healthy
2B		*Eucalyptus wandoo*	260	7.4	5.9	13
		Eucalyptus wandoo	261	5.3	4.2	13
		Eucalyptus wandoo	262	<2	2	11
		Eucalyptus wandoo	263	8	7	13
		Eucalyptus wandoo	264	4.15	3.9	11
		Eucalyptus wandoo	265	9.7	8.2	15
		Eucalyptus wandoo	266	10.5	8.6	17
		Eucalyptus wandoo	267	7.4	6.1	15
		Eucalyptus wandoo	268	12.8, 10.9	9.3	17
		Eucalyptus wandoo	269	7.8	6.1	13
		Eucalyptus wandoo	270	15.5	11.5	19
		Eucalyptus wandoo	271	5.4	4.2	11
		Eucalyptus wandoo	272	2.8	2.2	4
		Eucalyptus wandoo		seedling (x7)	0.5 - 1.5	All healthy
	GOO 4	*Melaleuca viminea*	(x3)		2	2 Healthy, 1 stressed
2C		*Eucalyptus wandoo*	273	5.4	4.2	11
		Eucalyptus wandoo	274	12.1	10	15
		Eucalyptus wandoo	275	5.1	4	11
		Eucalyptus wandoo	276	6.3	7.5	13
		Eucalyptus wandoo	277	<2	1.9	8
		Eucalyptus wandoo	278	3.6	3	11
		Eucalyptus wandoo	279	4.65	3.7	11
		Eucalyptus wandoo	280	9.7	9.4	15
		Eucalyptus wandoo	281	13.2	10.5	15
		Eucalyptus wandoo	282	6.2	6	13
		Eucalyptus wandoo	283	5.6	5	9
		Eucalyptus wandoo		seedling (x2)	1.5	All healthy
	GOO 4	*Melaleuca viminea*	(x5)		1.2 - 3	All healthy
2D		*Eucalyptus wandoo*	284	8.3, 7.9, 8.5, 5.7, 10.2	10.7	14
		Eucalyptus wandoo	285	18.3, 16.7, 18.3	14.9	9
		Eucalyptus wandoo	286	<2, <2	2.9	8
		Eucalyptus wandoo	287	<2, <2	2	11
		Eucalyptus wandoo	288	4.1	4.2	13
		Eucalyptus wandoo	289	12.5	12.5	15
		Eucalyptus wandoo		seedling (x4)	0.4 - 1	1 Healthy, 3 stressed
	GOO 4	*Melaleuca viminea*	(x4)		2.8 - 3.4	All healthy
2E		*Eucalyptus wandoo*	290	4.9	4.5	11
		Eucalyptus wandoo	291	9.2	7	15
		Eucalyptus wandoo	292	5.3	5.2	10
		Eucalyptus wandoo	293	11.8	6.8	17
		Eucalyptus wandoo	294	2.4	2.5	5
		Eucalyptus wandoo	295	<2	2	8
		Eucalyptus wandoo	296	5.8	6	10
		Eucalyptus wandoo	297	2.2	2.1	11
		Eucalyptus wandoo	298	2.4	2.1	10
		Eucalyptus wandoo	299	5.1	5.8	5
		Eucalyptus wandoo	300	4.4, <2	5.8	11
		Eucalyptus wandoo	301	3.3	4.3	8
		Eucalyptus wandoo	302	7.6	5.5	13

		Eucalyptus wandoo	303	5.6	5.35	13
		Eucalyptus wandoo	304	8.4	6.8	15
		Eucalyptus wandoo	305	8.2	7.1	11
		Eucalyptus wandoo	306	6.4	6.8	12
		Eucalyptus wandoo		seedling (x4)	1 - 1.5	2 Stressed, 2 healthy
	GOO 4	*Melaleuca viminea*	(x8)		2.1 - 4	All healthy
3A		*Eucalyptus wandoo*	307	7	8	15
		Eucalyptus wandoo	308	6.5	6	12
		Eucalyptus wandoo	309	3.1	3.5	7
	GOO 4	*Melaleuca viminea*	(x15)		1.3 - 3.2	All healthy
3B		*Eucalyptus wandoo*	310	9.3	5.7	13
		Eucalyptus wandoo	311	6.6	7	15
		Eucalyptus wandoo	312	3.9	5	11
		Eucalyptus wandoo	313	7.4	6.2	12
		Eucalyptus wandoo	314	10.55, 7.55, 12.3, 16.9, 14.1, 9.4, 11.5	10.75	13
		Eucalyptus wandoo	315	10, 8.8, 22.5	8.5	7
		Eucalyptus wandoo	316	3, <2	2.2	4
	GOO 4	*Melaleuca viminea*	(x39)		1.4 - 4	35 Healthy, 4 s. stressed
3C		*Eucalyptus wandoo*	317	53.1	15.5	11
	GOO 4	*Melaleuca viminea*	(x103)		0.5 - 3.6	All healthy
3D	GOO 4	*Melaleuca viminea*	(x84)		1.5 - 3.2	All healthy
3E	GOO 4	*Melaleuca viminea*	(x76)		1.8 - 4	All healthy

GOONAPING - Transect 2

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A	GOO 8	*Melaleuca preissiana*	318	<2, <2, <2, <2	1.9	11 - resprout
	GOO 8	*Melaleuca preissiana*	319	13.1, 7, 9.4	2.4	9 - resprout
	GOO 8	*Melaleuca preissiana*	320	11.3	2.4	5 - resprout
	GOO 8	*Melaleuca preissiana*	321	<2, <2, <2	1.9	10 - resprout
	GOO 8	*Melaleuca preissiana*	322	25.9	2.5	5 - resprout
	GOO 13	*Xanthorrhoea preissii*	(x3)		1.5 - 2.0	All healthy
	GOO 9	*Regelia ciliata*	(x13)		1.8 - 2.5	All healthy
1B	GOO 8	*Melaleuca preissiana*	323	3, 2.5, <2, <2, <2, <2	2	10 - resprout
	GOO 8	*Melaleuca preissiana*	324	6.4, 2.8, 21.2, 6.3	2.6	11 - resprout
	GOO 8	*Melaleuca preissiana*	325	6.3, 10.9, 9.4, 6.2, 11.4, 6.5, 6.5, 4.2, 3, 5.3, 4.7, 4.9	3	14 - resprout
	GOO 8	*Melaleuca preissiana*	326	10.1, 9.7, 10.5, 3.7, 4.7	3.6	12 - resprout
	GOO 8	*Melaleuca preissiana*	327	6.8, 2.5	2.9	8 - resprout
	GOO 8	*Melaleuca preissiana*	328	8	3.3	10 - resprout
	GOO 8	*Melaleuca preissiana*	329	multiple <2	2.1	16 - resprout
	GOO 8	*Melaleuca preissiana*	330	7.9, 8.2, 8, 15.7	3.5	12 - resprout
	GOO 9	*Regelia ciliata*	(x7)		1.8 - 2.5	All healthy
	GOO 13	*Xanthorrhoea preissii*	(x4)		1.5 - 2.5	All healthy
1C	GOO 8	*Melaleuca preissiana*	331	13.7, 6.3, <2	3.5	14 - resprout
	GOO 13	*Xanthorrhoea preissii*	(x4)		1.0 - 1.8	All healthy
1D	GOO 13	*Xanthorrhoea preissii*	(x4)		0.5 - 1.8	All healthy

1E	GOO 8	*Melaleuca preissiana*	332	11.8, 7.8, 10.7	4.5	11 - resprout
	GOO 7	*Eucalyptus rudis*	333	25.9, 21.4, 18.2, 22.8, 13.8, 8.1, 6.5, 10, 25.7	9.5	19 - resprout
	GOO 13	*Xanthorrhoea preissii*	(x5)		1.5 - 2.4	All healthy
2A	GOO 8	*Melaleuca preissiana*	334	19.6, 6, 12, 2.5, 8.8, 13.8, 11	4.5	14 - resprout
	GOO 27	*Hakea varia*	(x2)		1.5 - 1.8	All slightly stressed
	GOO 13	*Xanthorrhoea preissii*	(x2)		1.5 - 2.0	All healthy
2B	GOO 13	*Xanthorrhoea preissii*	(x3)		1.0 - 1.5	All healthy
2C	GOO 27	*Hakea varia*	(x1)		1.5	Slightly stressed
	GOO 13	*Xanthorrhoea preissii*	(x10)		0.5 - 1.5	All healthy
2D	GOO 8	*Melaleuca preissiana*	335	6.1, 9.3, 4.9, 3.5, 4.1, 5.6, 6, 5.6, 16.7, 5.9, 9.4, 2.5, 7.7, 7.4, 4.4, 12.5, 5.3, 10.2, 8.4, 9.0, 5.2, 10.1, 6.9, 11.0, 12.5	11.5	9 - large main stem, multiple sprouts at base
	GOO 7	*Eucalyptus rudis*	336	42.1	12.7	15
	GOO 8	*Melaleuca preissiana*	337	8.3, 7.1	3.4	14
	GOO 8	*Melaleuca preissiana*	338	12, 4, 4.9, 2.6, 6.6	4	15
	GOO 27	*Hakea varia*	(x2)		2	1 Healthy, 1 s. stressed
	GOO 13	*Xanthorrhoea preissii*	(x9)		0.5 - 2	All healthy
2E	GOO 8	*Melaleuca preissiana*	339	126.7	16.5	17
	GOO 13	*Xanthorrhoea preissii*	(x12)		1 - 2.5	All healthy
3A	GOO 7	*Eucalyptus rudis*	340	<2	1.9	17
	GOO 7	*Eucalyptus rudis*	341	20.3, 16.5, 16, 9.5, 5.9, 16.6, 17.2	9.4	12
	GOO 27	*Hakea varia*	(x4)		1.4 - 1.8	All healthy
	GOO 4	*Melaleuca viminea*		dead (x1)		
3B	GOO 8	*Melaleuca preissiana*	342	11.6, 10.3, 8.1, 10.2, 14.8, 8.1, 8, 8.3 5.8, 2.5	4.6	12 - resprout
	GOO 4	*Melaleuca viminea*	(x6)		1.5 - 2.8	All healthy
	GOO 27	*Hakea varia*	(x1)		1.8	Healthy
	GOO 13	*Xanthorrhoea preissii*	(x2)		1	All healthy
3C	GOO 4	*Melaleuca viminea*	(x43)		1.5 - 2.5	All healthy
3D	GOO 4	*Melaleuca viminea*	(x34)		1 - 3.8	32 healthy, 2 stressed
	GOO 27	*Hakea varia*	(x2)		1.5	All healthy
3E	GOO 8	*Melaleuca preissiana*	343	6.2, 11.5, 5.7, 7.6, 4.2, 5.9, 10.9	3.2	15
	GOO 7	*Eucalyptus rudis*	344	6.9, 20.9, 21.3, 22.7, 24.3, 25.1	12.5	14
	GOO 7	*Eucalyptus rudis*		seedling (x1)	1	Healthy
	GOO 4	*Melaleuca viminea*	(x9)		2.0 - 3.8	Healthy
	GOO 27	*Hakea varia*	(x1)		1.5	Healthy

GOONAPING - Transect 3

Plot	Species #	Species	Tag #	DBH (cm) (1998)	Height(m)	Crown (1999)
1A		*Eucalyptus marginata*	345	19.6, 18.8, 7.5	9.5	19
	GOO 34	*Kunzea ericifolia*	(x5)		2.0 - 3.7	All healthy
		Banksia menziesii		seedling (x1)	0.6	Healthy
1B	GOO 34	*Kunzea ericifolia*	(x5)		3.0 - 4.0	All healthy
	GOO 34	*Kunzea ericifolia*		dead (x1)		
		Banksia menziesii		seedling (x1)	1	
1C		*Eucalyptus marginata*	346	47.6, 40.9, 8, 19.3, 13, 13.9	11	10
	GOO 7	*Eucalyptus rudis*	347	23.8	14.6	13
	GOO 34	*Kunzea ericifolia*	(x10)		1.7 - 3.8	All healthy
	GOO 34	*Kunzea ericifolia*		dead (x1)		
		Jacksonia sp.	(x1)		1.5	Healthy
1D	GOO 7	*Eucalyptus rudis*	348	25.4, 18.2	12.5	14
		Banksia attenuata		seedling (x1)	0.8	Healthy
		Banksia menziesii		seedling (x1)	0.4	Healthy
	GOO 34	*Kunzea ericifolia*	(x2)		3.8	All healthy
1E	GOO 34	*Kunzea ericifolia*	(x1)		1.5	Healthy
	GOO 34	*Kunzea ericifolia*		seedling (x5)	0.2 - 0.4	All healthy
	GOO 34	*Kunzea ericifolia*		dead (x3)		
	GOO 2	*Macrozamia riedlei*	(x1)		1.6	Healthy
2A	GOO 8	*Melaleuca preissiana*	349	98.04	14.5	10
	GOO 34	*Kunzea ericifolia*	(x11)		1.5 - 3.8	Healthy
	GOO 34	*Kunzea ericifolia*		seedling (x18)	0.2 - 0.6	Healthy
		Jacksonia sp.	(x1)		1.8	Healthy
		Banksia menziesii		seedling (x1)	1.4	Healthy
2B		*Eucalyptus marginata*	350	13.5, 11.2	7.5	14
	GOO 34	*Kunzea ericifolia*	(x13)		1.5 - 4.0	11 Healthy, 2 stressed
	GOO 34	*Kunzea ericifolia*		seedling (x14)	0.2 - 1.5	Healthy
		Acacia saligna		seedling (x1)	0.6	Healthy
		Hakea prostrata	(x1)		2.6	Slightly stressed
2C	GOO 8	*Melaleuca preissiana*	351	13.0, 128.56	14.8	14
	GOO 8	*Melaleuca preissiana*	352	13, 14.8, 14.4	5.1	10
	GOO 8	*Melaleuca preissiana*	353	9.7, 11.1	4.3	10
	GOO 7	*Eucalyptus rudis*	354	11.5, 12.6, 6.3, 11.3, 14.8, 16.7, 10.5	10.5	19
	GOO 34	*Kunzea ericifolia*	(x19)		1.5 - 2.4	Healthy
	GOO 34	*Kunzea ericifolia*		seedling (x15)	0.2 - 1.4	Healthy
	GOO 34	*Kunzea ericifolia*		dead (x4)		
2D	GOO 8	*Melaleuca preissiana*	355	21.2, 14.5, 18	6.5	12
	GOO 8	*Melaleuca preissiana*	356	21.9, 23.6, 15.1, 6.3	7.5	9
	GOO 8	*Melaleuca preissiana*	357	6.5, 14.1, 16.6, 7.2, 6.4, 17	6	13
	GOO 34	*Kunzea ericifolia*	(x18)		1.5 - 3.8	Healthy
	GOO 34	*Kunzea ericifolia*		seedling (x15)	0.1 - 1.5	Healthy
	GOO 34	*Kunzea ericifolia*		dead (x3)		
		Jacksonia sp.	(x1)		1.5	Healthy
2E	GOO 8	*Melaleuca preissiana*	358	50.6	8.8	12
	GOO 8	*Melaleuca preissiana*	359	18.6, 8.9, 3.5, 2.6, 16, 3.9, 19.4, 13.3, 10.1, 4.6, 14.1, 8.2	7.4	9
	GOO 8	*Melaleuca preissiana*	360	5.8, 3.4	2.4	9
	GOO 8	*Melaleuca preissiana*	361	11.6, 4.3, 8.8, <2, 10.8, 4.6, 2.6, <2, <2, <2, <2, <2, <2	4.2	15
	GOO 34	*Kunzea ericifolia*	(x5)		1.5 - 1.8	All healthy

	GOO 34	*Kunzea ericifolia*		seedling (x6)	0.3 - 1.0	All healthy
	GOO 27	*Hakea varia*	(x1)		1.5	Healthy
3A	GOO 8	*Melaleuca preissiana*	362	14	4	11
3B	GOO 27	*Hakea varia*	(x3)		1.8 - 2	All healthy
3C	GOO 27	*Hakea varia*	(x6)		1.5 - 2	All healthy
	GOO 4	*Melaleuca viminea*	(x1)		1.6	Healthy
	GOO 4	*Melaleuca viminea*		seedling (x1)	0.7	Healthy
	GOO 34	*Kunzea ericifolia*	(x3)		0.8 - 1.4	All healthy
3D	GOO 8	*Melaleuca preissiana*	363	49.9	9.5	14
		Hakea varia	(x7)		1.1 - 2	All healthy
	GOO 4	*Melaleuca viminea*		seedling (x1)	0.7	Healthy
	GOO 34	*Kunzea ericifolia*		seedling (x1)	0.7	Healthy
	GOO 4	*Melaleuca viminea*		seedling (x14)	0.3 - 0.6	All healthy
3E	GOO 27	*Hakea varia*	(x4)		0.7 - 2	All healthy
	GOO 4	*Melaleuca viminea*	(x29)		2.0 - 5.5	All healthy
	GOO 4	*Melaleuca viminea*	(x6)		2.0 - 5.5	All stressed

APPENDIX 3

Transect Understorey Data

LAKE VIEW - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	LAK 1	*Hakea candolleana*	1	0.31	0.2	
	LAK 2	*Jacksonia* sp.	2	7.9	0.45	
	LAK 3	*Baumea vaginalis*		70	0.5	
1B	LAK 3	*Baumea vaginalis*		55	0.45	
1C	LAK 3	*Baumea vaginalis*		5	0.2 - 0.45	
	1D - 2E	NO UNDERSTOREY				

LAKE VIEW - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	LAK 3	*Baumea vaginalis*		85	0.4 - 0.55	
1B	LAK 3	*Baumea vaginalis*		40	0.3 - 0.5	
	LAK 8	*Scholtzia* sp.	1	0.125	0.4	
1C	LAK 3	*Baumea vaginalis*		5	0.2 - 0.45	
	1D - 2E	NO UNDERSTOREY				

MAISEY'S - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	MAI 1	*Sclerolaena* sp.	17	15	0.2	
	MAI 2	*Chenopodium* sp.	10	45	0.15 - 0.70	
1B	MAI 1	*Sclerolaena* sp.	12	5	0.1 - 0.35	
	MAI 2	*Chenopodium* sp.	20	50	0.15 - 0.75	
1C	MAI 1	*Sclerolaena* sp.	12	5	0.1 - 0.35	
	MAI 2	*Chenopodium* sp.	20	75	0.15 - 0.85	
1D	MAI 2	*Chenopodium* sp.	15	12.5	0.2 - 0.4	
	MAI 4	*Halosarcia* sp.	1	0.03	0.2	
	MAI 3	*Chenopodium* sp.	4	1.56	0.125	
	MAI 1	*Sclerolaena* sp.	7	5	0.05 - 0.1	
1E	MAI 3	*Chenopodium* sp.	10	7.6	0.125	
	MAI 1	*Sclerolaena* sp.	1	0.125	0.2	
2A	MAI 3	*Chenopodium* sp.	3	5.53	0.16	
	MAI 2	*Chenopodium* sp.	1	3.125	0.45	
	MAI 4	*Halosarcia* sp.	1	0.03	0.3	
2B	MAI 5	*Austrostipa elegantissima*	7	36.8	1.52	
2C	MAI 5	*Austrostipa elegantissima*	14	64	1.36	
2D	MAI 5	*Austrostipa elegantissima*	8	37.5	1.43	
2E	MAI 5	*Austrostipa elegantissima*	13	11.06	1.58	
	MAI 1	*Sclerolaena* sp.	1	0.09	0.25	

MAISEY'S - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	MAI 1	*Sclerolaena* sp.	5	4.23	0.16	
1B	MAI 1	*Sclerolaena* sp.	5	2.76	0.2	
1C	MAI 1	*Sclerolaena* sp.	6	8.6	0.21	
1D	MAI 1	*Sclerolaena* sp.	11	10.9	0.21	
	MAI 3	*Chenopodium* sp.	9	2.58	0.23	
	MAI 6	*Sclerolaena diacantha*	1	0.47	0.2	
1E	MAI 1	*Sclerolaena* sp.	22	8.76	0.21	
	MAI 6	*Sclerolaena diacantha*	2	1.09	0.225	

2A	MAI 1	*Sclerolaena* sp.	8	5.5	0.22	
	MAI 3	*Chenopodium* sp.	7	1.56	0.14	
	MAI 6	*Sclerolaena diacantha*	11	3.28	0.12	
2B	MAI 1	*Sclerolaena* sp.	5	2.59	0.25	
	MAI 3	*Chenopodium* sp.	3	1.06	0.16	
	MAI 7	*Atriplex* sp.	12	3.03	0.11	
	MAI 6	*Sclerolaena diacantha*	3	0.53	0.1	
	MAI 4	*Halosarcia* sp.	1	0.28	0.2	
2C	MAI 6	*Sclerolaena diacantha*	4	0.56	0.1	
	MAI 7	*Atriplex* sp.	16	3.98	0.125	
	MAI 4	*Halosarcia* sp.	1	0.375	0.4	
2D	MAI 7	*Atriplex* sp.	15	2.42	0.125	
	MAI 6	*Sclerolaena diacantha*	3	0.22	0.12	
	MAI 1	*Sclerolaena* sp.	2	0.28	0.2	
	MAI 3	*Chenopodium* sp.	6	3.72	0.175	
2E	MAI 7	*Atriplex* sp.	14	6.14	0.15	
	MAI 3	*Chenopodium* sp.	2	0.15	0.125	
	MAI 1	*Sclerolaena* sp.	1	0.06	0.1	
	MAI 2	*Chenopodium* sp.	5	1.875	0.24	

MAISEY'S (2) - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 1F	NO UNDERSTOREY				

MAISEY'S (2) - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 1C	NO UNDERSTOREY				
1D	MAI 5	*Austrostipa elegantissima*		12	0.55 - 0.65	
1E	MAI 5	*Austrostipa elegantissima*		100	0.5 - 0.65	

LOGUE - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 2E	NO UNDERSTOREY				

LOGUE - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 1B	NO UNDERSTOREY				
1C	LOG 1	*Wilsonia rotundifolia*		0.1	0.01	
	1D - 2A	NO UNDERSTOREY				
2B	LOG 1	*Wilsonia rotundifolia*		0.5	0.01	
2C	LOG 1	*Wilsonia rotundifolia*		0.1	0.01	
2D	LOG 1	*Wilsonia rotundifolia*		0.5	0.01	
2E	LOG 1	*Wilsonia rotundifolia*		1	0.01	

LOGUE - Transect 3

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 3E	NO UNDERSTOREY				

LOGUE - Transect 4

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 2E	NO UNDERSTOREY				

WALYORMOURING - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	WAL 1	*Halosarcia* sp.		50	0.15 - 0.8	
1B	WAL 1	*Halosarcia* sp.		10	0.1 - 0.6	
1C	WAL 1	*Halosarcia* sp.		60	0.05 - 0.55	
1D	WAL 1	*Halosarcia* sp.		40	0.05 - 0.3	
1E	WAL 1	*Halosarcia* sp.		45	0.05 - 0.3	
2A	WAL 1	*Halosarcia* sp.		55	0.1 - 0.28	
2B	WAL 1	*Halosarcia* sp.		60	0.05 - 0.3	
2C	WAL 1	*Halosarcia* sp.		60	0.05 - 0.5	
2D	WAL 1	*Halosarcia* sp.		65	0.05 - 0.4	
2E	WAL 1	*Halosarcia* sp.		45	0.05 - 0.3	
3A	WAL 1	*Halosarcia* sp.		60	0.05 - 0.28	
3B	WAL 1	*Halosarcia* sp.		75	0.1 - 0.4	
3C	WAL 1	*Halosarcia* sp.		70	0.05 - 0.4	
3D	WAL 1	*Halosarcia* sp.		70	0.05 - 0.3	
3E	WAL 1	*Halosarcia* sp.		60	0.05 - 0.42	

WALYORMOURING - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	WAL 1	*Halosarcia* sp.		45	0.05 - 0.35	
1B	WAL 1	*Halosarcia* sp.		85	0.15 - 0.4	
1C	WAL 1	*Halosarcia* sp.		85	0.05 - 0.35	
1D	WAL 1	*Halosarcia* sp.		85	0.05 - 0.3	
1E	WAL 1	*Halosarcia* sp.		65	0.05 - 0.35	
2A	WAL 1	*Halosarcia* sp.		50	0.1 - 0.35	
2B	WAL 1	*Halosarcia* sp.		40	0.05 - 0.2	

2C	WAL 1	*Halosarcia* sp.		30	0.1 - 0.25	
2D	WAL 1	*Halosarcia* sp.		65	0.1 - 0.2	
2E	WAL 1	*Halosarcia* sp.		70	0.1 - 0.3	

EGANU - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	EGA 1	*Chenopodium* sp.	1	3.28	0.4	
	EGA 2	*Chenopodium* sp.	1	21.25	0.75	
	EGA 3	*Sclerolaena diacantha*	9	0.31	0.075	
1B	EGA 2	*Chenopodium* sp.	1	0.44	0.3	
	EGA 4	*Halosarcia* sp.	6	5.81	0.38	
	EGA 3	*Sclerolaena diacantha*	4	0.17	0.075	
	EGA 5	*Enchylaena* sp.	2	0.22	0.175	
1C	EGA 2	*Chenopodium* sp.	1	3.125	0.45	
	EGA 3	*Sclerolaena diacantha*	2	0.0125	0.065	
	EGA 8	*Hakea recurva. recurva*	1	0.06	0.45	
	EGA 5	*Enchylaena* sp.	1	0.03	0.08	
1D	EGA 5	*Enchylaena* sp.	4	0.15	0.06	
	EGA 3	*Sclerolaena diacantha*	4	0.07	0.05	
	EGA 4	*Halosarcia* sp.	9	7.22	0.3	
	EGA 2	*Chenopodium* sp.	2	7	0.4	
1E	EGA 4	*Halosarcia* sp.	32	6.81	0.2	
	EGA 1	*Chenopodium* sp.	6	29.31	0.375	
	EGA 3	*Sclerolaena diacantha*	3	0.14	0.1	
	EGA 5	*Enchylaena* sp.	3	0.5	0.15	
2A	EGA 1	*Chenopodium* sp.	12	3.63	0.21	
	EGA 4	*Halosarcia* sp.	25	0.782	0.15	
	EGA 5	*Enchylaena* sp.	1	0.375	0.05	
2B	EGA 4	*Halosarcia* sp.	35	6.28	0.18	
	EGA 1	*Chenopodium* sp.	35	13.67	0.22	
	EGA 5	*Enchylaena* sp.	17	0.39	0.1	
2C	EGA 1	*Chenopodium* sp.	9	5.88	0.19	
	EGA 4	*Halosarcia* sp.	62	6	0.15	
	EGA 5	*Enchylaena* sp.	20	1.41	0.125	
2D	EGA 4	*Halosarcia* sp.	10	2.78	0.21	
	EGA 1	*Chenopodium* sp.	1	11.25	0.75	
	EGA 9	*Baumea vaginalis*		2.5	0.45	
2E	EGA 9	*Baumea vaginalis*		17.5	0.35	
	EGA 1	*Chenopodium* sp.	1	15.94	0.7	
3A	EGA 9	*Baumea vaginalis*		2	0.1 - 0.5	
3B	EGA 7	*Scholtzia* sp.	2	48.38	1.25	
	EGA 9	*Baumea vaginalis*		0.5	0.25 - 0.4	
3C	EGA 2	*Chenopodium* sp.	2	0.1	0.075	
	EGA 1	*Chenopodium* sp.	2	0.22	0.125	
	EGA 4	*Halosarcia* sp.	1	0.09	0.1	

3D	EGA 1	*Chenopodium* sp.	32	8.65	0.125	
	EGA 5	*Enchylaena* sp.	4	0.19	0.125	
	EGA 2	*Chenopodium* sp.	1	0.125	0.25	
3E	EGA 9	*Baumea vaginalis*		2.5	0.4	
	EGA 1	*Chenopodium* sp.	2	5.81	0.325	
	EGA 4	*Halosarcia* sp.	10	5.48	0.22	
	EGA 5	*Enchylaena* sp.	1	0.28	0.2	

EGANU - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	EGA 4	*Halosarcia* sp.		10	0.2 - 0.4	
1B	EGA 4	*Halosarcia* sp.		70	0.15 - 0.3	
1C	EGA 4	*Halosarcia* sp.		40	0.15 - 0.25	
1D	EGA 4	*Halosarcia* sp.		65	0.1 - 0.35	
1E	EGA 4	*Halosarcia* sp.		60	0.15 - 0.3	
2A	EGA 4	*Halosarcia* sp.		70	0.1 - 0.4	
2B	EGA 4	*Halosarcia* sp.		45	0.15 - 0.4	
2C	EGA 4	*Halosarcia* sp.		80	0.2 - 0.45	
2D	EGA 4	*Halosarcia* sp.		35	0.05 - 0.45	
2E	EGA 4	*Halosarcia* sp.		75	0.3 - 0.5	
3A	EGA 4	*Halosarcia* sp.		75	0.3 - 0.5	
3B	EGA 4	*Halosarcia* sp.		20	0.1 - 0.4	
3C	EGA 4	*Halosarcia* sp.		50	0.1 - 0.4	
3D	EGA 4	*Halosarcia* sp.		75	0.1 - 0.3	
3E	EGA 4	*Halosarcia* sp.		80	0.1 - 0.35	

EGANU - Transect 3

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 2E	NO UNDERSTOREY				

ARDATH - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A		*Halosarcia* sp.	13	21.2	0.59	
	ARD 3	*Carpobrotus* sp.		1	0.1	
1B		*Halosarcia* sp.	14	49.29	0.44	
	ARD 3	*Carpobrotus* sp.		10	0.05	
1C		*Halosarcia* sp.	16	29.28	0.38	
	ARD 3	*Carpobrotus* sp.		5	0.05	
1D		*Halosarcia* sp.	14	39.32	0.48	
	ARD 3	*Carpobrotus* sp.		0.05	0.1	
	ARD 4	*Mesembryanthemum nodiflorum*		10	0.15	
1E		*Halosarcia* sp.	11	29.86	0.55	
	ARD 2	*Scaevola spinescens*	1	0.75	0.5	
	ARD 4	*Mesembryanthemum nodiflorum*		1	0.05	
	ARD 3	*Carpobrotus* sp.		1	0.15	
2A		*Halosarcia* sp.	9	47.2	0.56	
	ARD 4	*Mesembryanthemum nodiflorum*		10	0.15	
	ARD 5	*Enchylaena tomentosa*	1	0.75	0.28	
2B		*Halosarcia* sp.	8	40.04	0.45	
	ARD 4	*Mesembryanthemum nodiflorum*		5	0.1	
2C		*Halosarcia* sp.	2	12.13	0.325	
	ARD 4	*Mesembryanthemum nodiflorum*		5	0.15	
2D		*Halosarcia* sp.	12	17.27	0.41	
	ARD 4	*Mesembryanthemum nodiflorum*		25	0.1	
	ARD 5	*Enchylaena tomentosa*		0.5	0.15	
	ARD 6	*Chenopodium* sp.	1	2.33	0.8	
2E		*Halosarcia* sp.	9	14.01	0.4	
	ARD 4	*Mesembryanthemum nodiflorum*		10	0.15	

ARDATH - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	ARD 8	*Olearia pimeleoides*	1	1.37	0.28	
	ARD 9	*Daviesia* sp.	1	0.28	0.45	
	ARD 3	*Carpobrotus* sp.		0.1	0.05	
1B	ARD 3	*Carpobrotus* sp.		0.1	0.08	
	ARD 5	*Enchylaena tomentosa*	1	0.075	0.08	
	ARD 8	*Olearia pimeleoides*	1	1.67	0.38	

1C	ARD 9	*Daviesia* sp.	3	10.12	0.96	
	ARD 10	*Grevillea acuaria*	1	23.63	0.9	
	ARD 11	*Halosarcia lylei*	1	1.77	1	
1D	ARD 9	*Daviesia* sp.	2	7.12	0.87	
	ARD 10	*Grevillea acuaria*	1	0.88	0.7	
	ARD 6	*Chenopodium* sp.	2	1.57	0.25	
	ARD 11	*Halosarcia lylei*	3	8.77	1.07	
	ARD 8	*Olearia pimeleoides*	2	3.75	0.25	
	ARD 3	*Carpobrotus* sp.		1	0.05	
	ARD 5	*Enchylaena tomentosa*	1	0.075	0.08	
1E	ARD 9	*Daviesia* sp.	2	2.1	0.5	
2A	ARD 11	*Halosarcia lylei*	2	24.72	1.025	
2B	ARD 11	*Halosarcia lylei*	2	31.53	0.625	
	ARD 9	*Daviesia* sp.	1	0.4	0.35	
2C	ARD 11	*Halosarcia lylei*	1	5.97	1	
	ARD 8	*Olearia pimeleoides*	1	1.26	0.5	
	ARD 9	*Daviesia* sp.	1	4.5	0.5	
2D	ARD 6	*Chenopodium* sp.	2	1.99	0.75	
	ARD 11	*Halosarcia lylei*	2	14.8	0.85	
	ARD 5	*Enchylaena tomentosa*	2	1.88	0.35	
	ARD 8	*Olearia pimeleoides*	2	0.86	0.3	
2E	ARD 12	*Acacia ?rostellifera*	1	0.39	0.6	
	ARD 13	*Alyxia buxifolia*	1	1.05	1.5	
	ARD 5	*Enchylaena tomentosa*	1	0.344	0.1	
	ARD 6	*Chenopodium* sp.	2	2.75	0.4	
	ARD 11	*Halosarcia lylei*	1	8.44	0.6	

CAMPION - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	CAMP 1	*Enchylaena tomentosa*	3	1.54	0.55	
	CAMP 2	*Chenopodium* sp.	1	3.25	0.2	
	CAMP 3	*Gunniopsis glabra*		6	0.3	
	CAMP 4	*Mesembryanthemum nodiflorum*		0.5	0.07	
1B	CAMP 1	*Enchylaena tomentosa*	1	2.05	0.3	
	CAMP 3	*Gunniopsis glabra*		3	0.25	
1C	CAMP 3	*Gunniopsis glabra*		1	0.2	
	CAMP 1	*Enchylaena tomentosa*	1	0.3	0.4	
1D	CAMP 2	*Chenopodium* sp.	1	0.71	0.1	
	CAMP 3	*Gunniopsis glabra*		0.5	0.35	
1E	CAMP 2	*Chenopodium* sp.	4	3.11	0.25	
	CAMP 1	*Enchylaena tomentosa*	3	2.1	0.4	
	CAMP 3	*Gunniopsis glabra*		5	0.4	
2A	CAMP 1	*Enchylaena tomentosa*	5	18.46	1	
	CAMP 2	*Chenopodium* sp.	14	36.85	0.46	
	CAMP 5	*Dodonaea filifolia*		0.1	0.2	
	CAMP 3	*Gunniopsis glabra*		15	0.35	
	CAMP 6	*Austrostipa elegantissima*		1	0.4	
2B	CAMP 2	*Chenopodium* sp.	5	4.67	0.47	
	CAMP 1	*Enchylaena tomentosa*	1	0.76	0.2	
	CAMP 7	*Sclerolaena convexula*	1	0.17	0.1	
	CAMP 8	*Atriplex vesicaria*	1	4.24	0.91	
	CAMP 3	*Gunniopsis glabra*		10	0.1 - 0.2	
	CAMP 9	*Halosarcia* sp.	2	0.93	0.385	
	CAMP 6	*Austrostipa elegantissima*		0.5	0.4	
2C	CAMP 9	*Halosarcia* sp.	18	9.83	0.36	
	CAMP 10	*Frankenia* sp.	1	0.27	0.1	
	CAMP 11	*Halosarcia pergranulata*	2	0.39	0.125	
	CAMP 12	*Gnephosis tenuissima*		0.5	0.1	
2D	CAMP 9	*Halosarcia* sp.	6	0.94	0.23	
	CAMP 11	*Halosarcia pergranulata*	1	0.64	0.23	
	CAMP 10	*Frankenia* sp.		5	0.15	
2E	CAMP 9	*Halosarcia* sp.	11	3.2	0.2	
	CAMP 10	*Frankenia* sp.		50	0.1 - 0.2	

CAMPION - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	CAMP 2	*Chenopodium* sp.	1	18	0.25	
	CAMP 13	*Eremophila* sp.	3	10.35	1.23	
	CAMP 16	*Olearia muelleri*	6	11.23	0.44	
	CAMP 1	*Enchylaena tomentosa*	4	0.45	0.125	
1B	CAMP 16	*Olearia muelleri*	5	7.42	0.41	
	CAMP 13	*Eremophila* sp.	3	17.96	1.56	
	CAMP 5	*Dodonaea filifolia*	3	3.76	0.53	
	CAMP 2	*Chenopodium* sp.	4	2.78	0.27	
	CAMP 1	*Enchylaena tomentosa*	2	0.35	0.13	
1C	CAMP 16	*Olearia muelleri*	3	13.09	0.61	
	CAMP 1	*Enchylaena tomentosa*	7	2.33	0.11	
	CAMP 17	*Olearia* sp.	1	2.11	0.65	
1D	CAMP 17	*Olearia* sp.	1	6.12	0.76	
1E		NO UNDERSTOREY				
2A	CAMP 17	*Olearia* sp.	1	4.85	0.68	
2B	CAMP 1	*Enchylaena tomentosa*	1	3.47	2	climbing vine
	CAMP 17	*Olearia* sp.	1	2.44	0.56	
	CAMP 4	*Mesembryanthemum nodiflorum*		0.1	0.01	
2C	CAMP 5	*Dodonaea filifolia*	1	0.01	0.07	
	CAMP 1	*Enchylaena tomentosa*	3	5.05	0.61	
	CAMP 6	*Austrostipa elegantissima*	1	1.67	0.42	
2D	CAMP 6	*Austrostipa elegantissima*	2	2.12	0.41	
	CAMP 1	*Enchylaena tomentosa*	2	3.23	0.45	
	CAMP 3	*Gunniopsis glabra*		0.2	0.01	
2E	CAMP 1	*Enchylaena tomentosa*	1	11.13	0.72	
	CAMP 6	*Austrostipa elegantissima*		0.2	0.4	
	CAMP 22	*Olearia pimeleoides*	1	2.88	0.47	
3A	CAMP 17	*Olearia* sp.	1	1.63	0.6	
	CAMP 3	*Gunniopsis glabra*		0.01	0.03	
	CAMP 6	*Austrostipa elegantissima*		0.5	0.3	
3B	CAMP 17	*Olearia* sp.	1	0.7	0.43	
	CAMP 1	*Enchylaena tomentosa*	3	7.71	1.26	
	CAMP 22	*Olearia pimeleoides*	3	17.7	0.98	
	CAMP 6	*Austrostipa elegantissima*		3	0.5	
	CAMP 19	*Hakea recurva*	1	12.22	1.85	
3C	CAMP 19	*Hakea recurva*	2	38.81	1.78	
	CAMP 6	*Austrostipa elegantissima*		5	0.45	
	CAMP 2	*Chenopodium* sp.	1	8.625	0.57	
	CAMP 23	*Ptilotus divaricatus*		5	0.4	
	CAMP 19	*Hakea recurva*	1	4.51	1.1	

3D	CAMP 9	*Halosarcia* sp.	19	9.45	0.27	
	CAMP 21	*Melaleuca pauperiflora*	1	13.58	1.18	
	CAMP 3	*Gunniopsis glabra*		0.1	0.25	
3E	CAMP 9	*Halosarcia* sp.	13	15.19	0.23	
	CAMP 21	*Melaleuca pauperiflora*	1	0.9	0.44	

CAMPION - Transect 3

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	CAMP 6	*Austrostipa elegantissima*		10	1.2	
1B	CAMP 2	*Chenopodium* sp.	6	9.8	0.7	
	CAMP 16	*Olearia muelleri*	1	0.51	0.2	
1C	CAMP 2	*Chenopodium* sp.	7	18.47	0.4	
	CAMP 16	*Olearia muelleri*	3	1.42	0.25	
		Carpobrotus sp.		0.5	0.08	
1D	CAMP 16	*Olearia muelleri*	2	0.81	0.4	
		Carpobrotus sp.		0.5	0.1	
1E		NO UNDERSTOREY				
2A	CAMP 20	*Bossiaea ?rufa*	1	27.5	1.7	
	CAMP 2	*Chenopodium* sp.	2	2	0.3	
	CAMP 16	*Olearia muelleri*	1	1.22	0.8	
		Carpobrotus sp.		0.01	0.1	
2B		*Carpobrotus* sp.		1	0.2	
2C		*Carpobrotus* sp.		0.05	0.1	
	2D - 2E	NO UNDERSTOREY				
3A		*Carpobrotus* sp.		0.5	0.2	
3B	CAMP 7	*Sclerolaena convexula*	2	2.62	0.325	
3C	CAMP 7	*Sclerolaena convexula*	3	15.9	0.35	
		Halosarcia pergranulata		2	0.2	
		Halosarcia sp.	2	0.96	0.15	
3D		*Halosarcia pergranulata*		18	0.1 - 0.4	
	CAMP 10	*Frankenia* sp.	1	1.35	0.3	
3E		*Halosarcia pergranulata*		22	0.1 - 0.5	
	CAMP 3	*Gunniopsis glabra*		0.01	0.1	
		Halosarcia sp.	2	2.67	0.35	
	CAMP 4	*Mesembryanthemum nodiflorum*		3	0.05	
	CAMP 10	*Frankenia* sp.	3	4.16	0.25	

CAMPION - Transect 4

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	CAMP 4	*Mesembryanthemum nodiflorum*		2	0.01	
1B	CAMP 16	*Olearia muelleri*	3	12.71	0.43	
	CAMP 2	*Chenopodium* sp.	3	2.2	0.3	
	CAMP 5	*Dodonaea filifolia*		4	0.2	
	CAMP 3	*Gunniopsis glabra*		0.05	0.2	
	CAMP 20	*Bossiaea ?rufa*	1	13.125	1.3	
	CAMP 6	*Austrostipa elegantissima*		0.05	1	
1C	CAMP 32	*Acacia* sp.	1	3.98	1	
	CAMP 20	*Bossiaea ?rufa*	1	8.84	1.6	
	CAMP 16	*Olearia muelleri*	1	1.27	0.5	
	CAMP 32	*Acacia* sp.		0.01	0.01	
	CAMP 6	*Austrostipa elegantissima*		0.01	0.4	
1D		NO UNDERSTOREY				
1E	CAMP 3	*Gunniopsis glabra*		0.01	0.01	
2A		NO UNDERSTOREY				
2B		*Halosarcia pergranulata*	2	0.7	0.15	
2C		*Halosarcia* sp.	2	0.84	0.225	
	CAMP 33	*Ptilotus* sp.		10	0.2 - 0.3	
2D		*Halosarcia* sp.		5	0.2	
		Halosarcia pergranulata		5	0.2 - 0.03	
	CAMP 33	*Ptilotus* sp.		20	0.2	
2E		*Halosarcia* sp.		10	0.2	
		Halosarcia pergranulata		5	0.2 - 0.3	
	CAMP 33	*Ptilotus* sp.		25	0.2	
	CAMP 4	*Mesembryanthemum nodiflorum*		0.01	0.01	

PAPERBARK - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	PAP 1	*Enchylaena tomentosa*	19	4.12	0.15	
	PAP 2	*Atriplex semibaccata*	12	0.61	0.08	
1B	PAP 1	*Enchylaena tomentosa*	13	4.39	0.13	
	PAP 2	*Atriplex semibaccata*	2	0.1	0.075	
1C	PAP 2	*Atriplex semibaccata*	4	0.78	0.11	
	PAP 1	*Enchylaena tomentosa*	9	0.36	0.09	
1D	PAP 1	*Enchylaena tomentosa*	7	4.62	0.19	
	PAP 2	*Atriplex semibaccata*	2	0.095	0.065	
	PAP 4	*Maireana brevifolia*	2	1.725	0.55	
1E	PAP 1	*Enchylaena tomentosa*	7	2.31	0.17	
	PAP 2	*Atriplex semibaccata*	1	0.375	0.15	
2A	PAP 1	*Enchylaena tomentosa*	1	0.34	0.1	
	PAP 4	*Maireana brevifolia*	1	1.69	0.67	
2B	PAP 1	*Enchylaena tomentosa*	1	5.5	0.22	
2C	PAP 1	*Enchylaena tomentosa*	5	2.1	0.15	
	2D - 3E	NO UNDERSTOREY				

PAPERBARK - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	PAP 5	*Grevillea acuaria*	3	4.61	0.82	
	PAP 6	*Lomandra effusa*		5	0.3	
	PAP 1	*Enchylaena tomentosa*	5	0.82	0.15	
1B	PAP 6	*Lomandra effusa*		20	0.35	
	PAP 5	*Grevillea acuaria*	1	2.85	1	
	PAP 1	*Enchylaena tomentosa*	5	0.66	0.16	
	PAP 7	*Chenopodium* sp.	1	5.3	0.7	
1C	PAP 6	*Lomandra effusa*		5	0.3	
	PAP 7	*Chenopodium* sp.	2	1.13	0.21	
	PAP 1	*Enchylaena tomentosa*	7	1.42	0.13	
1D	PAP 1	*Enchylaena tomentosa*	1	0.19	0.18	
1E	PAP 1	*Enchylaena tomentosa*	1	0.75	0.15	
	PAP 2	*Atriplex semibaccata*	1	1.25	0.35	

2A	PAP 1	*Enchylaena tomentosa*	1	0.875	0.15	
	2B - 2C	NO UNDERSTOREY				
2D	PAP 1	*Enchylaena tomentosa*	3	0.21	0.12	
2E		NO UNDERSTOREY				

PAPERBARK - Transect 3

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
	1A - 3E	NO UNDERSTOREY				

GOONAPING - Transect 1

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	GOO 1	*Bossiaea spinescens*	11	27	0.81	
	GOO 2	*Macrozamia riedlei*	1	0.19	6	
1B	GOO 3	*Acacia pulchella*	1	3.3	1.3	
1C	GOO 3	*Acacia pulchella*	1	1.5	0.85	
	GOO 1	*Bossiaea spinescens*	9	4.67	0.35	
1D	GOO 1	*Bossiaea spinescens*	6	8.75	0.69	
	GOO 4	*Melaleuca viminea*	1	0.18	1.6	
1E	GOO 1	*Bossiaea spinescens*	10	32.6	1.18	
2A	GOO 1	*Bossiaea spinescens*	9	19.8	0.99	
2B	GOO 1	*Bossiaea spinescens*	2	0.2	0.23	
	GOO 3	*Acacia pulchella*	4	1.7	0.33	
2C	GOO 4	*Melaleuca viminea*	1	0.75	1.8	
	GOO 3	*Acacia pulchella*	1	0.63	0.45	
2D	GOO 3	*Acacia pulchella*	5	0.92	0.29	
2E	GOO 3	*Acacia pulchella*	8	4.6	0.34	
	GOO 4	*Melaleuca viminea*	1	5	1.6	
3A	GOO 3	*Acacia pulchella*	3	1.3	0.25	
	GOO 4	*Melaleuca viminea*	2	2.2	1.23	
3B	GOO 3	*Acacia pulchella*	9	8	0.31	
3C	GOO 3	*Acacia pulchella*	7	1.6	0.2	
	GOO 4	*Melaleuca viminea*	1	3.25	1.2	
3D	GOO 3	*Acacia pulchella*	7	1.72	0.18	
3E	GOO 3	*Acacia pulchella*	3	0.88	0.25	

GOONAPING - Transect 2

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	GOO 10	*Hibbertia subvaginata*	14	2.56	0.34	
	GOO 11	*Hypolaena exsulca*		32	0.3	
	GOO 12	*Lepidosperma ?tenue*	1	1.31	0.5	
	GOO 13	*Xanthorrhoea preissii*	4	47	1.68	
	GOO 14	*Amphipogon turbinatus*		5	0.05	
	GOO 15	*Aotus* sp.	3	0.04	0.08	

	GOO 16	*Eremaea pauciflora*	4	31.1	0.68	
	GOO 17	*Phlebocarya ciliata*		1	0.5	
1B	GOO 19	*Patersonia occidentalis*		2	0.55	
	GOO 11	*Hypolaena exsulca*		12.5	0.15	
	GOO 16	*Eremaea pauciflora*	2	6.9	0.5	
	GOO 10	*Hibbertia subvaginata*	8	2	0.18	
	GOO 28	*Hypocalymma angustifolium*	2	4.68	0.35	
	GOO 13	*Xanthorrhoea preissii*	1	22.5	1.8	
1C	GOO 21	*Dryandra nivea*		2	0.3	
	GOO 17	*Phlebocarya ciliata*		15	0.4	
	GOO 11	*Hypolaena exsulca*		7.5	0.15	
	GOO 14	*Amphipogon turbinatus*		1	0.05	
	GOO 13	*Xanthorrhoea preissii*	1	19.7	1.5	
	GOO 12	*Lepidosperma ?tenue*		2	0.45	
	GOO 22	*Pericalymma ellipticum*	2	9.67	0.93	
	GOO 10	*Hibbertia subvaginata*	2	0.16	0.23	
	GOO 8	*Melaleuca preissiana*	2	10.6	0.95	
1D	GOO 13	*Xanthorrhoea preissii*	4	51.3	1.55	
	GOO 11	*Hypolaena exsulca*		30	0.25	
	GOO 19	*Patersonia occidentalis*		2	0.5	
1E	GOO 13	*Xanthorrhoea preissii*	4	40.5	1.38	
	GOO 8	*Melaleuca preissiana*	1	0.8	0.6	
	GOO 16	*Eremaea pauciflora*	1	0.38	0.4	
	GOO 11	*Hypolaena exsulca*		27	0.175	
	GOO 14	*Amphipogon turbinatus*		5	0.05	
	GOO 25	*Desmocladus fasciculatus*		15	0.1	
	GOO 26	*Daviesia* sp.	2	0.94	0.43	
2A	GOO 11	*Hypolaena exsulca*		45	0.4	
	GOO 16	*Eremaea pauciflora*	2	13.44	0.6	
	GOO 10	*Hibbertia subvaginata*	2	1.22	0.33	
	GOO 28	*Hypocalymma angustifolium*	1	0.31	0.25	
	GOO 8	*Melaleuca preissiana*	1	0.19	0.3	
2B	GOO 10	*Hibbertia subvaginata*	2	0.56	0.28	
	GOO 13	*Xanthorrhoea preissii*	1	8.94	1.55	
	GOO 19	*Patersonia occidentalis*		2	0.2	
	GOO 11	*Hypolaena exsulca*		60	0.45	
	GOO 12	*Lepidosperma ?tenue*		30	0.5	
	GOO 28	*Hypocalymma angustifolium*		25	0.4	
2C	GOO 28	*Hypocalymma angustifolium*		80	0.45	
	GOO 10	*Hibbertia subvaginata*	1	0.19	0.25	
	GOO 12	*Lepidosperma ?tenue*		40	0.55	
	GOO 11	*Hypolaena exsulca*		50	0.4	
	GOO 19	*Patersonia occidentalis*		2	0.35	
	GOO 27	*Hakea varia*	1	8.44	1.6	
2D	GOO 13	*Xanthorrhoea preissii*	1	12.19	1.7	
	GOO 28	*Hypocalymma angustifolium*		50	0.45	
	GOO 12	*Lepidosperma ?tenue*		25	0.55	
	GOO 11	*Hypolaena exsulca*		60	0.4	

	GOO 22	*Pericalymma ellipticum*	1	0.05	0.3	
2E	GOO 12	*Lepidosperma ?tenue*		40	0.6	
	GOO 28	*Hypocalymma angustifolium*		50	0.45	
	GOO 13	*Xanthorrhoea preissii*	1	0.38	1.5	
	GOO 19	*Patersonia occidentalis*		2	0.3	
	GOO 22	*Pericalymma ellipticum*	1	1.69	0.5	
3A	GOO 13	*Xanthorrhoea preissii*	6	80.16	1.52	
	GOO 12	*Lepidosperma ?tenue*		20	0.6	
	GOO 17	*Phlebocarya ciliata*		10	0.45	
	GOO 11	*Hypolaena exsulca*		25	0.35	
	GOO 28	*Hypocalymma angustifolium*		47.5	0.6	
	GOO 19	*Patersonia occidentalis*	2	0.41	0.2	
	GOO 11	*Hypolaena exsulca*		5	0.1	
3B	GOO 19	*Patersonia occidentalis*	6	2.88	0.19	
	GOO 17	*Phlebocarya ciliata*		15	0.4	
	GOO 28	*Hypocalymma angustifolium*		35	0.5	
	GOO 11	*Hypolaena exsulca*		25	0.35	
	GOO 13	*Xanthorrhoea preissii*	1	19.1	1.55	
	GOO 27	*Hakea varia*	1	0.88	0.65	
3C	GOO 17	*Phlebocarya ciliata*		50	0.5	
	GOO 12	*Lepidosperma ?tenue*		35	0.4	
	GOO 28	*Hypocalymma angustifolium*		30	0.5	
	GOO 19	*Patersonia occidentalis*		10	0.3	
	GOO 14	*Amphipogon turbinatus*		3	0.05	
	GOO 8	*Melaleuca preissiana*	1	0.09	0.2	
	GOO 11	*Hypolaena exsulca*		30	0.25	
	GOO 29	*Nemcia capitata*	1	3.13	1.2	
	GOO 30	*Acacia incurva*	1	2.25	1.2	
3D	GOO 17	*Phlebocarya ciliata*		40	0.5	
	GOO 11	*Hypolaena exsulca*		30	0.35	
	GOO 27	*Hakea varia*	2	5	0.325	
	GOO 28	*Hypocalymma angustifolium*		10	0.3	
	GOO 19	*Patersonia occidentalis*		5	0.3	
3E	GOO 14	*Amphipogon turbinatus*		10	0.1	
	GOO 17	*Phlebocarya ciliata*		40	0.5	
	GOO 11	*Hypolaena exsulca*		20	0.3	
	GOO 12	*Lepidosperma ?tenue*		30	0.4	
	GOO 30	*Acacia incurva*	3	3.75	0.38	
	GOO 31	*Lepyrodia* sp.		25	0.6	

GOONAPING - Transect 3

Plot	Species #	Species	Number	% Cover	Mean height (m)	Notes
1A	GOO 2	*Macrozamia riedlei*	1	2.19	0.5	
	GOO 17	*Phlebocarya ciliata*		5	0.3	
	GOO 19	*Patersonia occidentalis*		1	0.2	

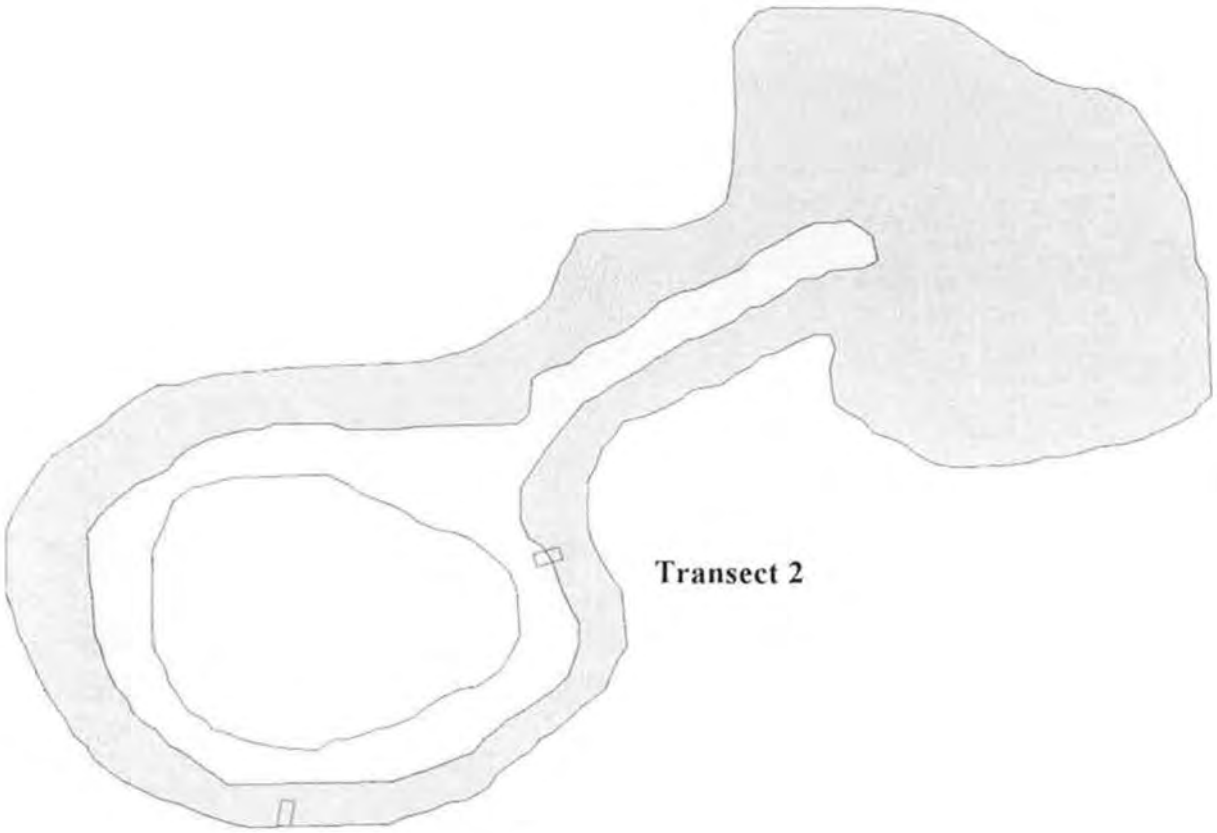
	GOO 32	*Astroloma* or *Leucopogon* sp.	2	7	0.425	
	GOO 10	*Hibbertia subvaginata*	6	2.5	0.29	
1B	GOO 19	*Patersonia occidentalis*		2	0.25	
	GOO 17	*Phlebocarya ciliata*		5	0.35	
	GOO 34	*Kunzea ericifolia*	1	0.23	0.15	
	GOO 10	*Hibbertia subvaginata*	3	0.875	0.2	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	0.125	0.2	
		Banksia menziesii	1	3.94	0.8	seedling
1C	GOO 17	*Phlebocarya ciliata*		1	0.15	
	GOO 19	*Patersonia occidentalis*		2.5	0.65	
	GOO 32	*Astroloma* or *Leucopogon* sp.	4	1.02	0.14	
	GOO 10	*Hibbertia subvaginata*	3	1.22	0.25	
	GOO 34	*Kunzea ericifolia*	7	6.36	0.45	
	GOO 11	*Hypolaena exsulca*		2.5	0.25	
	GOO 28	*Hypocalymma angustifolium*	1	1.09	0.3	
1D	GOO 17	*Phlebocarya ciliata*		1	0.1	
	GOO 19	*Patersonia occidentalis*		2.5	0.3	
	GOO 32	*Astroloma* or *Leucopogon* sp.	2	5.44	0.35	
	GOO 35	*Xanthosia atkinsoniana*		0.01	0.05	
	GOO 23	*Leucopogon obovatus*	1	0.06	0.15	
1E	GOO 32	*Astroloma* or *Leucopogon* sp.	3	0.72	0.16	
	GOO 17	*Phlebocarya ciliata*		0.05	0.55	
	GOO 34	*Kunzea ericifolia*	4	5.44	0.65	
	GOO 36	*?Melaleuca* sp.	1	3.75	0.45	
2A	GOO 34	*Kunzea ericifolia*	13	0.8	0.18	
	GOO 32	*Astroloma* or *Leucopogon* sp.	3	3.73	0.26	
	GOO 17	*Phlebocarya ciliata*		0.05	0.5	
	GOO 11	*Hypolaena exsulca*		0.01	0.15	
2B	GOO 34	*Kunzea ericifolia*	9	1.48	0.31	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	0.03	0.15	
	GOO 17	*Phlebocarya ciliata*		0.5	0.6	
	GOO 8	*Melaleuca preissiana*	2	3	0.175	
	GOO 11	*Hypolaena exsulca*		0.01	0.15	
2C	GOO 34	*Kunzea ericifolia*	10	12.64	0.6	
	GOO 8	*Melaleuca preissiana*	4	0.97	0.15	
	GOO 17	*Phlebocarya ciliata*		0.5	0.5	
	GOO 11	*Hypolaena exsulca*		0.01	0.1	
	GOO 12	*Lepidosperma ?tenue*		0.001	0.25	
	GOO 37	*Carpobrotus* sp.		2.5	0.1	
	GOO 35	*Xanthosia atkinsoniana*		0.001	0.05	
2D	GOO 34	*Kunzea ericifolia*	8	10.34	0.71	
	GOO 17	*Phlebocarya ciliata*		5	0.4	
	GOO 11	*Hypolaena exsulca*		0.5	0.2	
	GOO 8	*Melaleuca preissiana*	6	0.95	0.31	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	7.5	1.1	
2E	GOO 17	*Phlebocarya ciliata*		50	0.4	
	GOO 11	*Hypolaena exsulca*		2.5	0.3	

	GOO 8	*Melaleuca preissiana*	5	1.27	0.24	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	8.25	1.25	
	GOO 35	*Xanthosia atkinsoniana*	1	0.009	0.15	
	GOO 34	*Kunzea ericifolia*	3	3.28	1.17	
3A	GOO 17	*Phlebocarya ciliata*		90	0.35	
	GOO 8	*Melaleuca preissiana*	1	0.09	0.15	
3B	GOO 17	*Phlebocarya ciliata*		95	0.35	
3C	GOO 4	*Melaleuca viminea*	1	1.25	1.7	
	GOO 12	*Lepidosperma ?tenue*		0.001	0.4	
	GOO 19	*Patersonia occidentalis*		0.01	0.2	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	0.03	0.15	
	GOO 17	*Phlebocarya ciliata*		75	0.3	
3D	GOO 27	*Hakea varia*	3	23	1.25	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	1.25	0.4	
	GOO 12	*Lepidosperma ?tenue*		0.01	0.65	
	GOO 19	*Patersonia occidentalis*		0.01	0.3	
	GOO 35	*Xanthosia atkinsoniana*		0.001	0.05	
	GOO 10	*Hibbertia subvaginata*	1	0.02	0.1	
	GOO 17	*Phlebocarya ciliata*		70	0.3	
3E	GOO 27	*Hakea varia*	12	12.95	0.54	
	GOO 32	*Astroloma* or *Leucopogon* sp.	1	0.006	0.15	
	GOO 17	*Phlebocarya ciliata*		60	0.3	

APPENDIX 4

GIS and Aerial Photographs - Transect Locations

Blue Gum Swamp



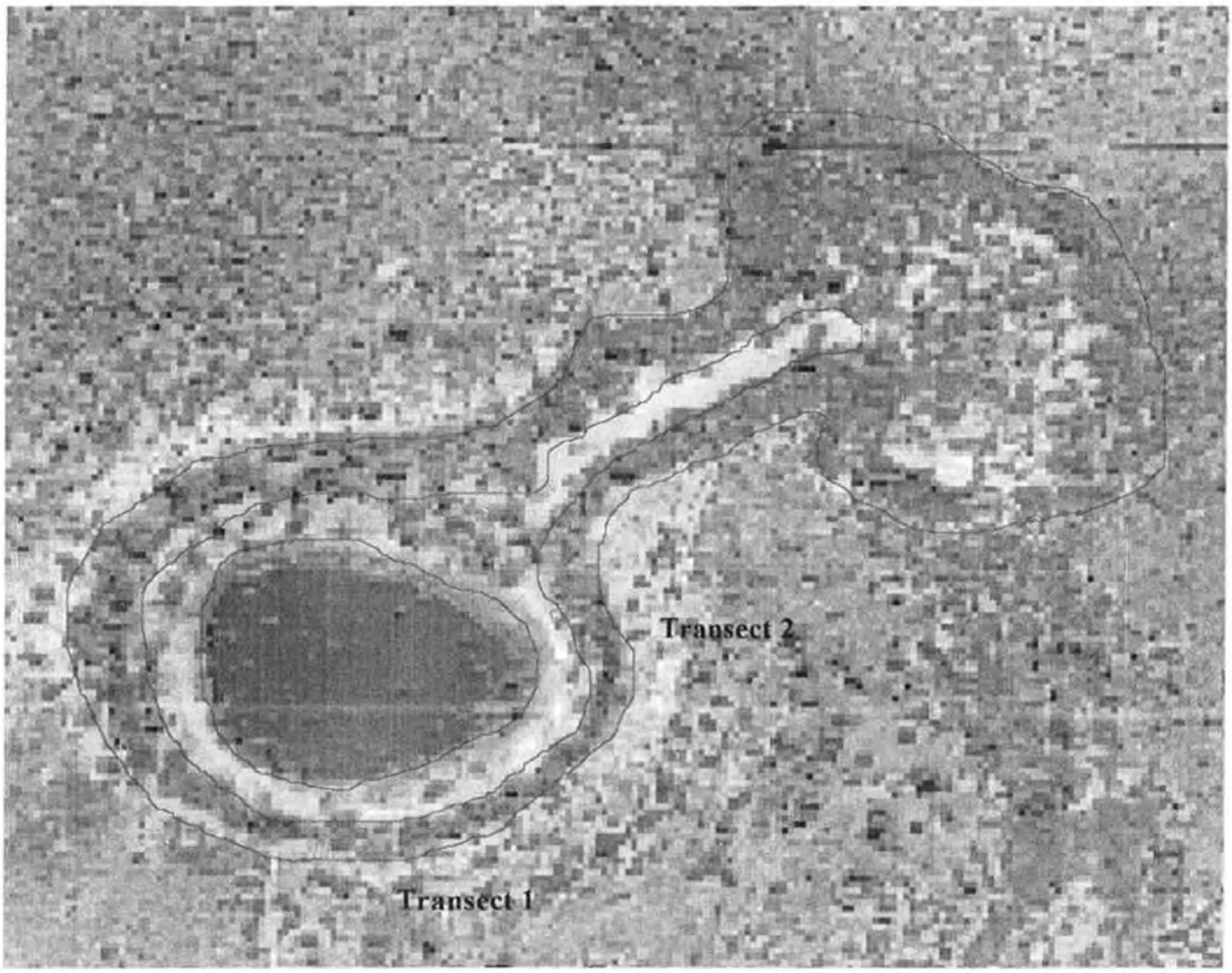
500 0 500 1000 Meters

Transects

E. rudis - C. obesa open woodland
M. viminea - M. strobophylla - C. obesa open woodland
Dead C. obesa

N
W E
S

Blue Gum Swamp

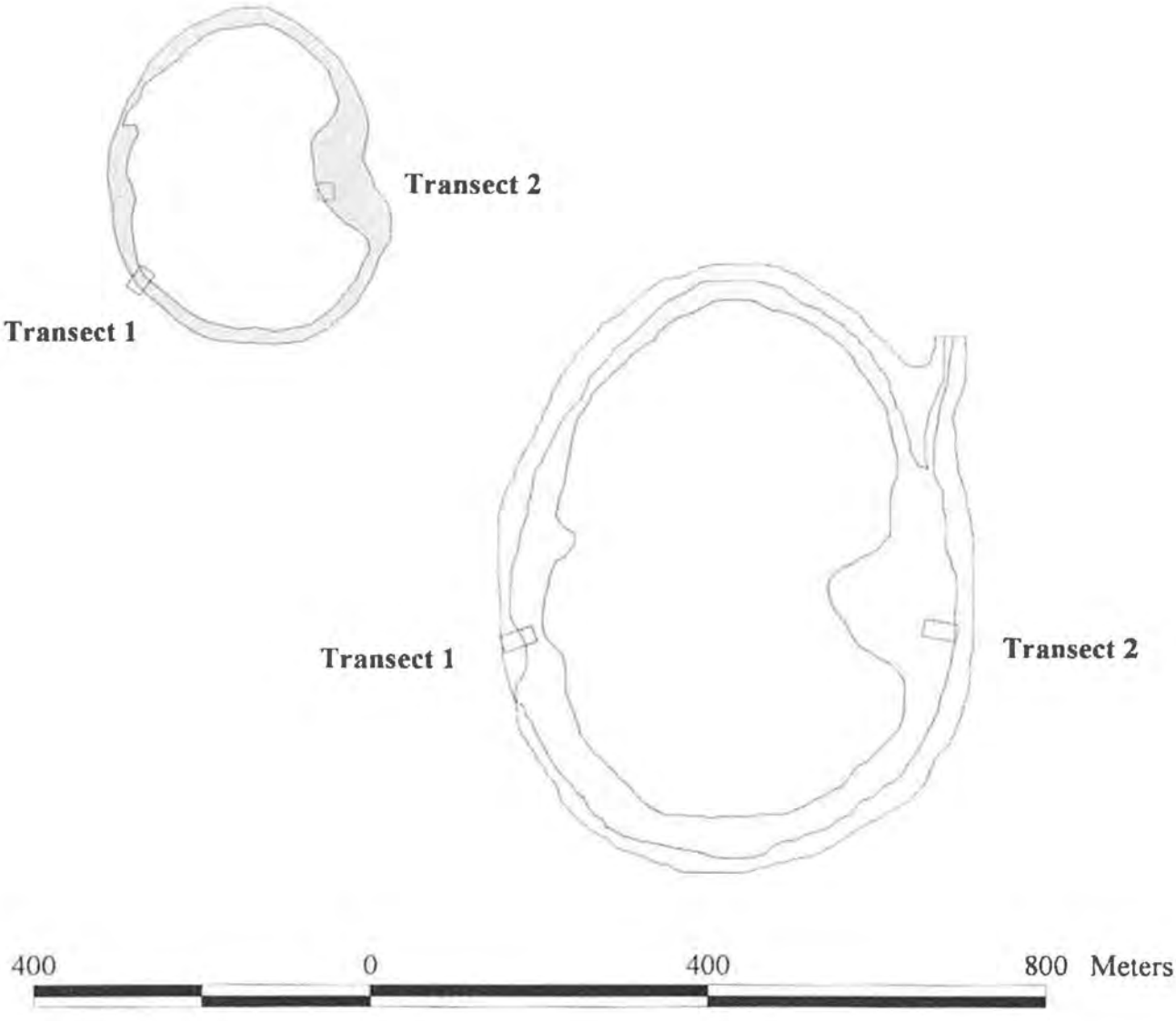


500 0 500 1000 Meters

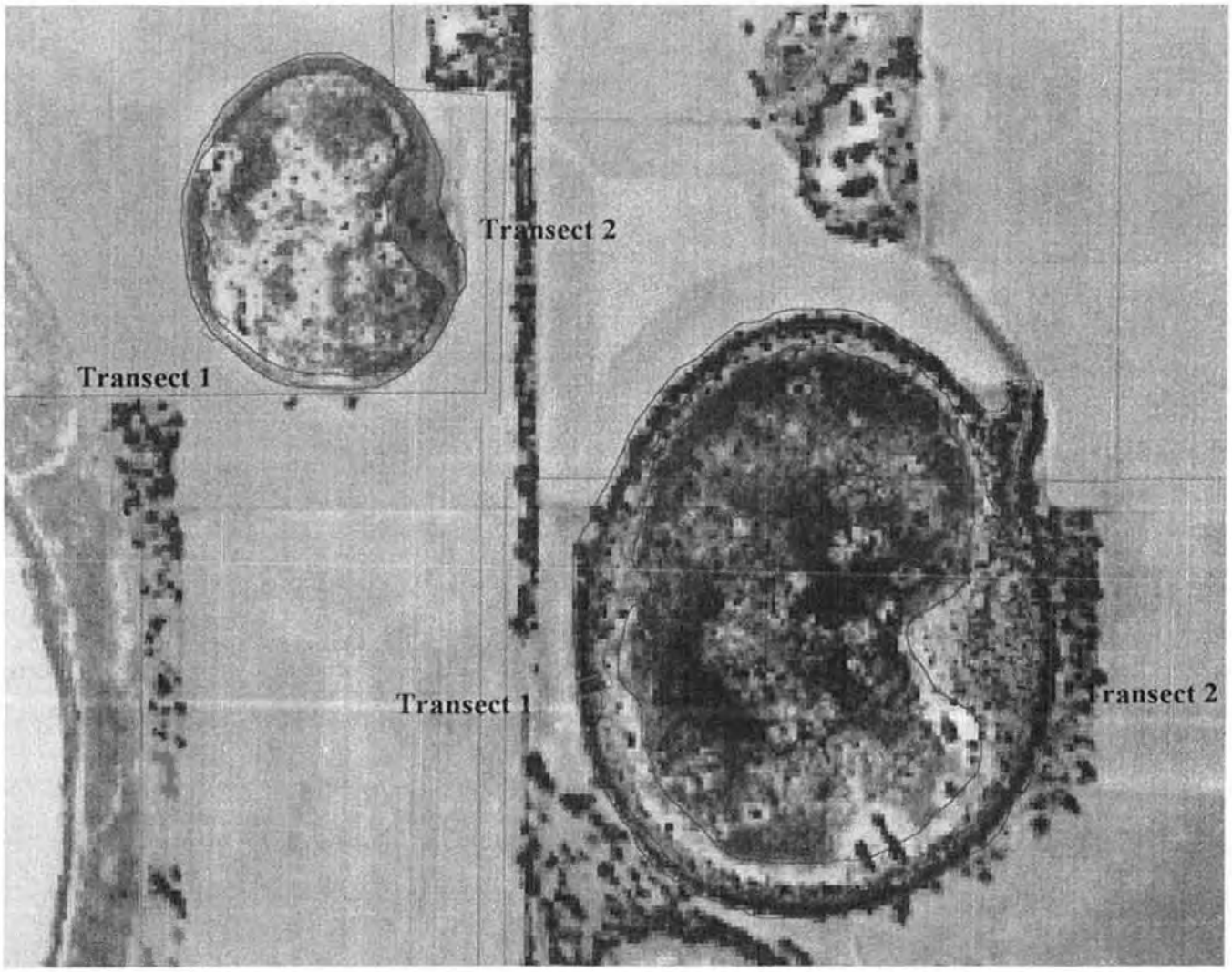
N
W E
S

Transects
Plant Communities

Maisey's wetlands 1 and 2



Maisey's wetlands 1 and 2

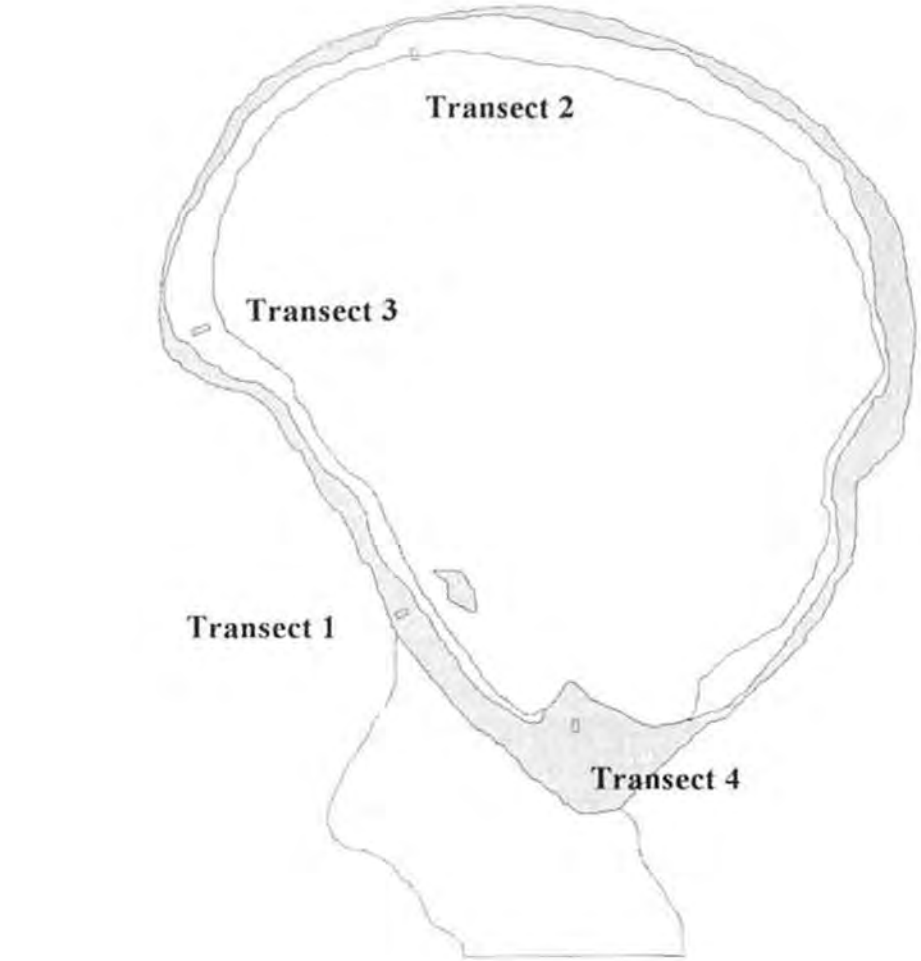


400 0 400 800 Meters

Transects
Plant Communities
Roads

N
W E
S

Lake Logue



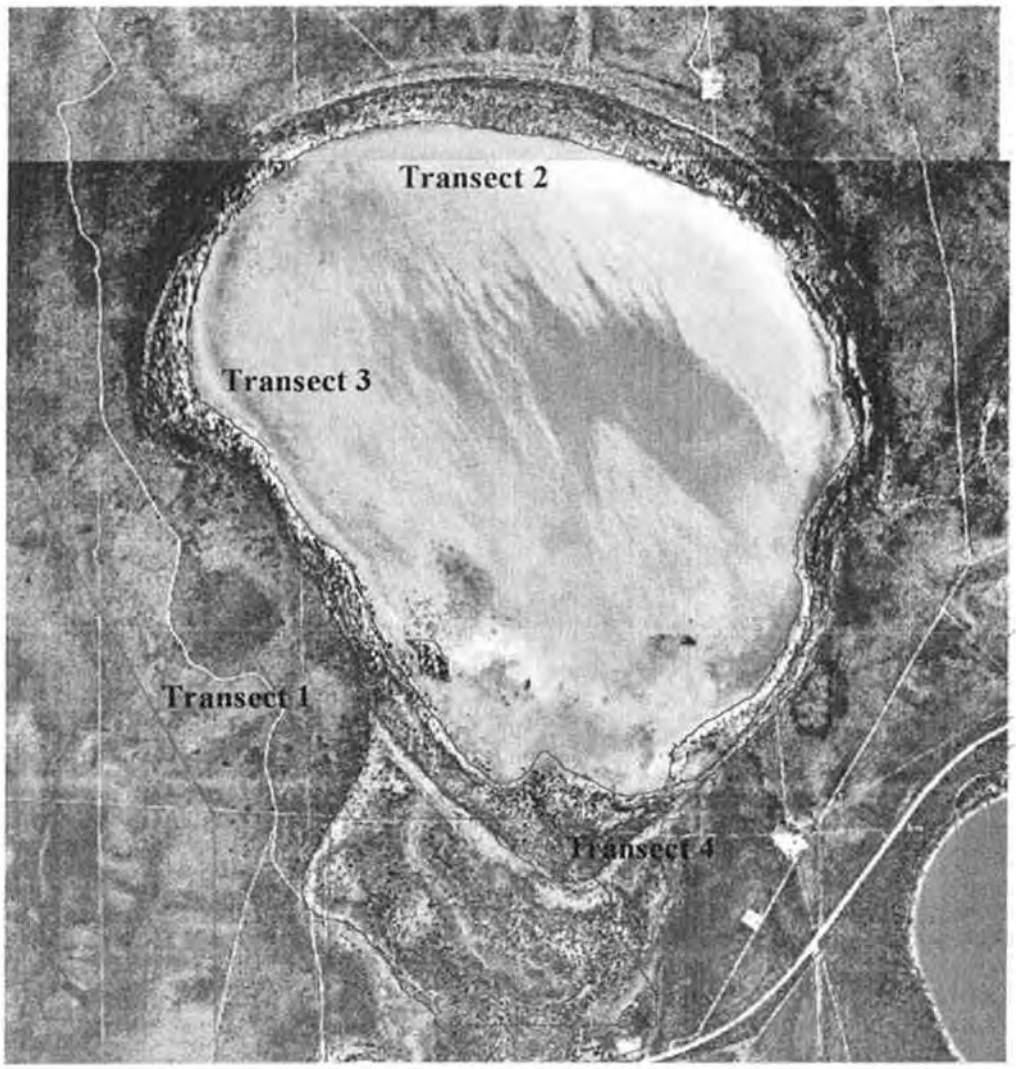
1 0 1 2 Kilometers

Transects

M. strobophylla woodland
M. strobophylla - C. obesa woodland
Open water

N
W E
S

Lake Logue

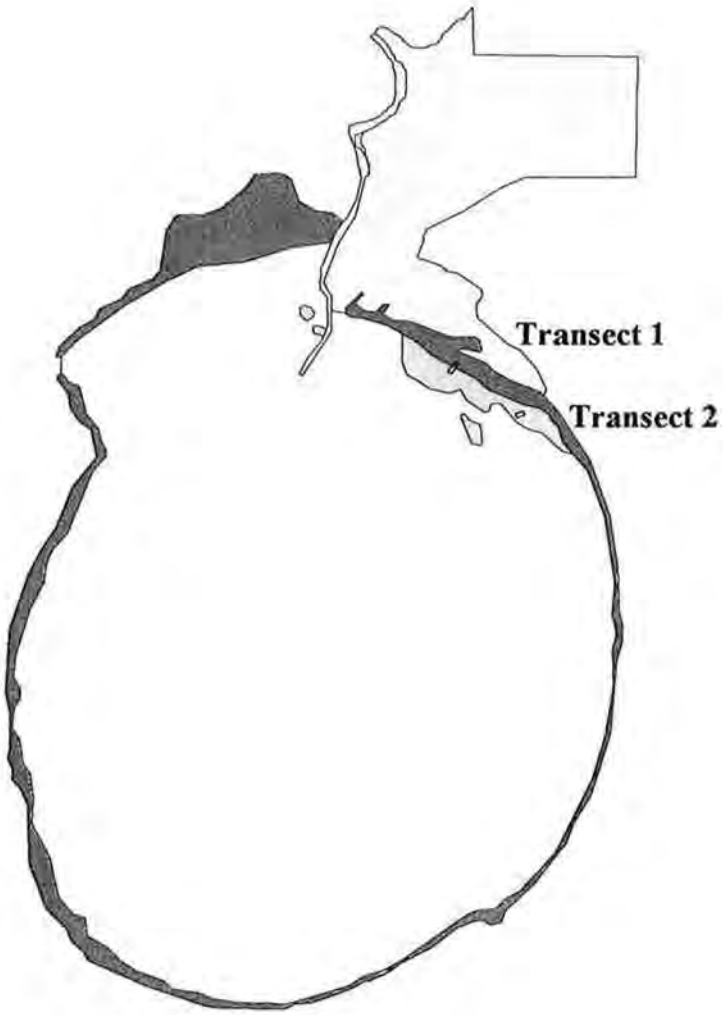


1 0 1 2 Kilometers

Transects
Plant Communities
Roads

N
W E
S

Lake Walyormouring



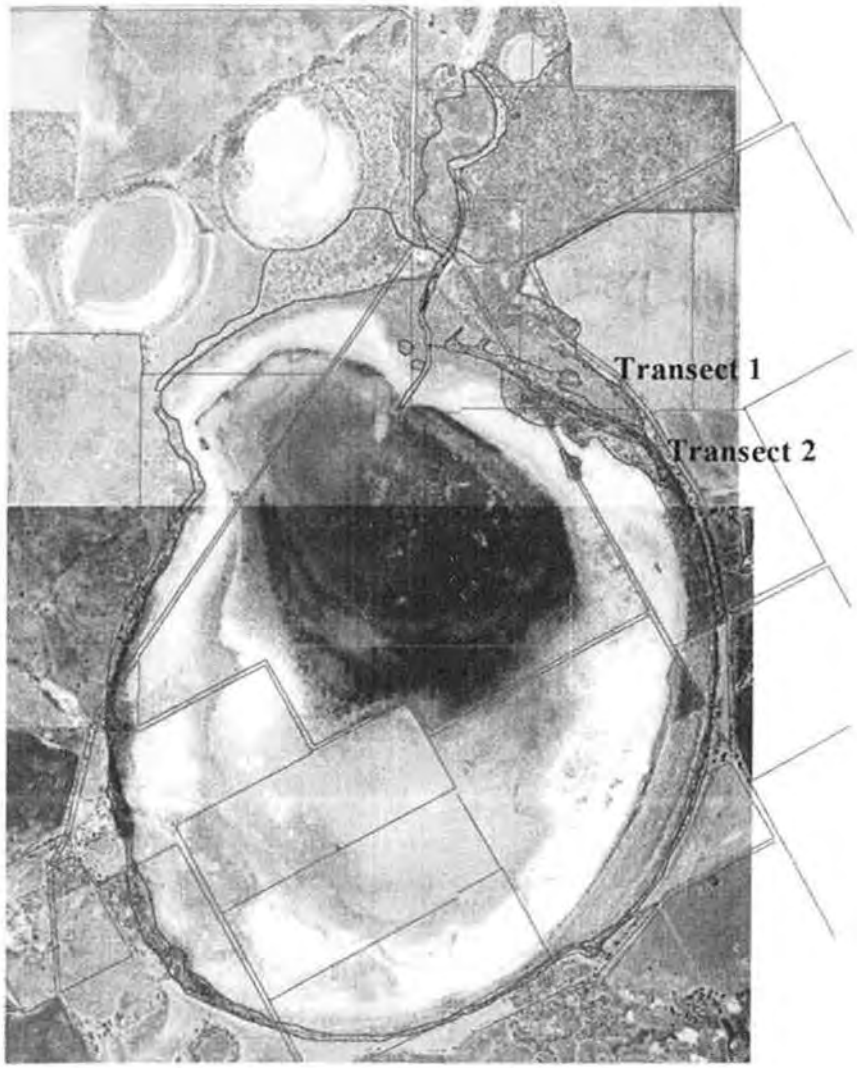
0.6 0 0.6 1.2 1.8 Kilometers

Transects

E. loxophleba - C. obesa with A. acuminata understorey
E. loxophleba - C. obesa with M. viminea understorey
C. obesa woodland
Inflow
Lake bed - dead C. obesa

N
W E
S

Lake Walyormouring

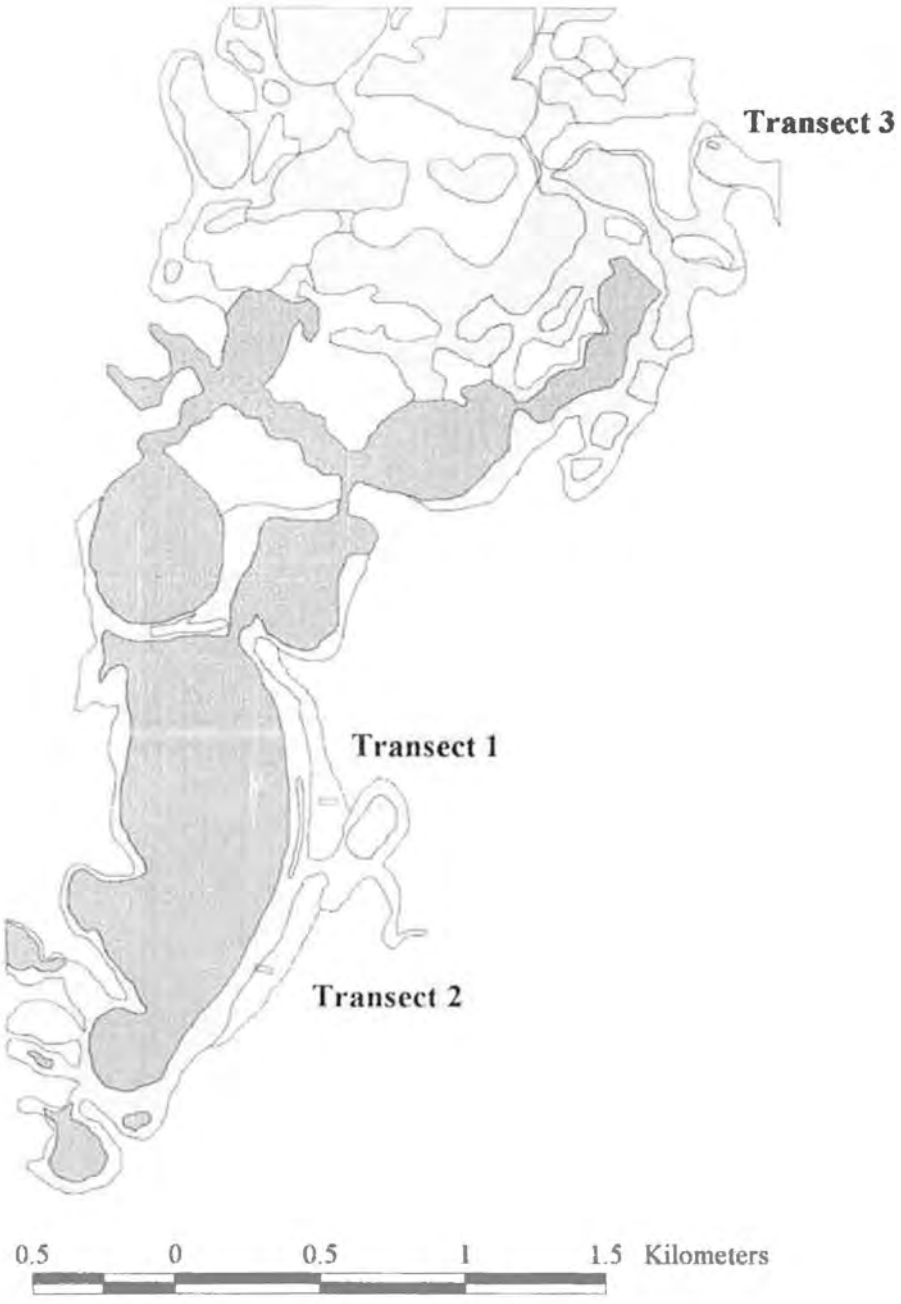


0.6 0 0.6 1.2 1.8 Kilometers

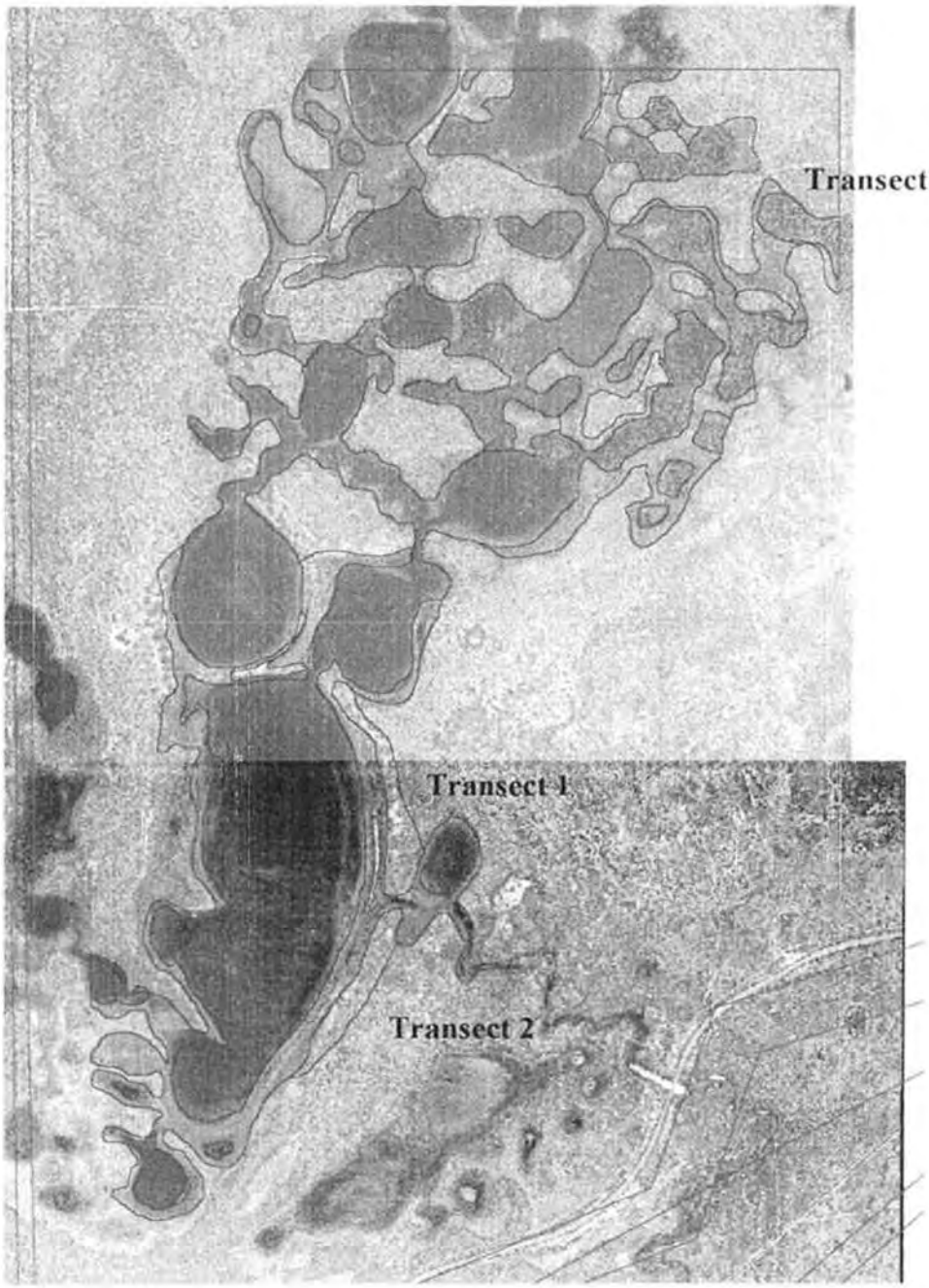
Transects
Plant Communities
Roads

N
W E
S

Lake Eganu


Transect 3
Transect 1
Transect 2
0.5 0 0.5 1 1.5 Kilometers
Transects
Open water - sparsely vegetated
C. obesa woodland with scattered M. viminea
C. obesa woodland with scattered E. loxophleba
Open water - C. obesa - M. strobophylla
N
W
E
S

Lake Eganu



0.5 0 0.5 1 1.5 Kilometers

Transects
Plant Communities
Roads

N
W E
S

Lake Ardath

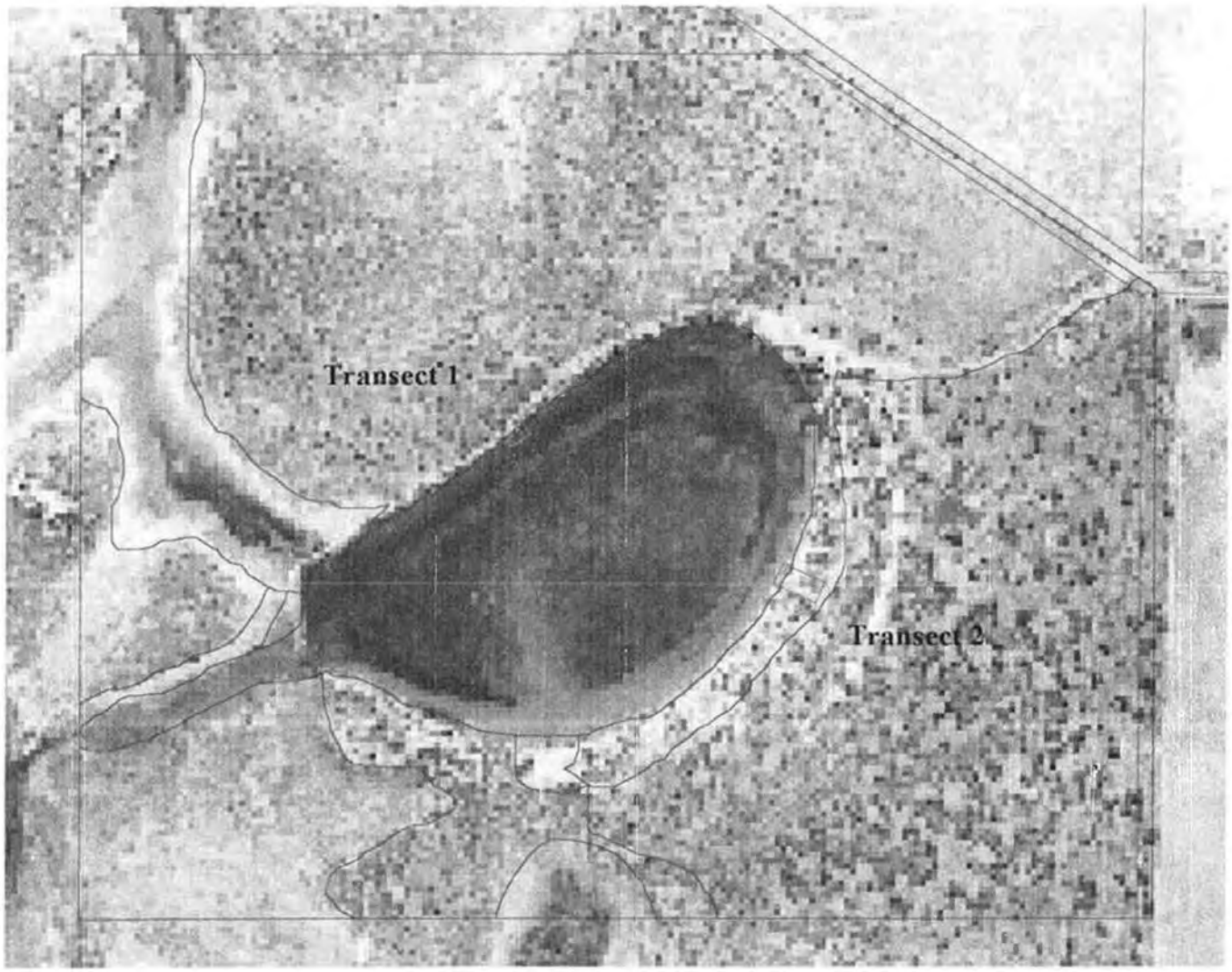
300 0 300 Meters

Transects

Open water
Car park
E. yilgarnensis open woodland
M. uncinata thicket
Seasonal Inundation
C. obesa open woodland - severely salt affected
Halosarcia sp. low open shrubland
Outflow
Bund

N
W E
S

Lake Ardath

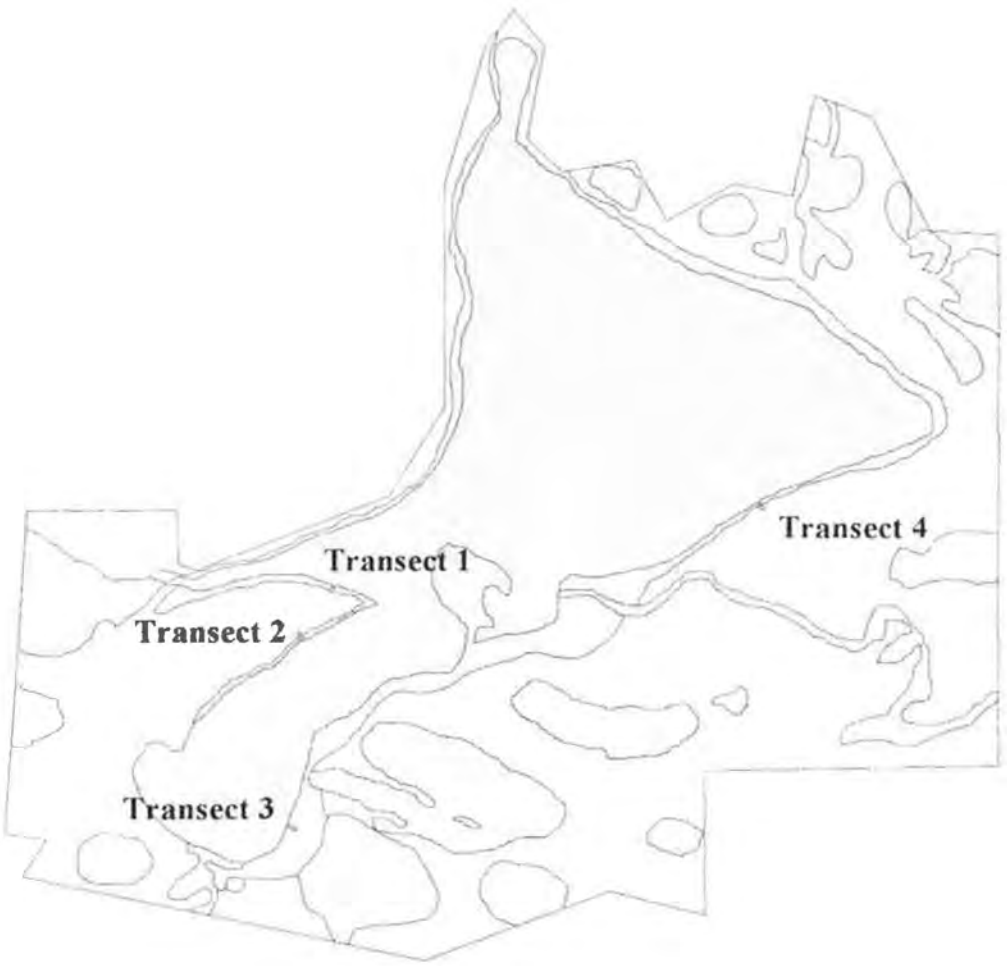


300 0 300 Meters

Plant Communities
Roads
Transects

N
W E
S

Lake Campion



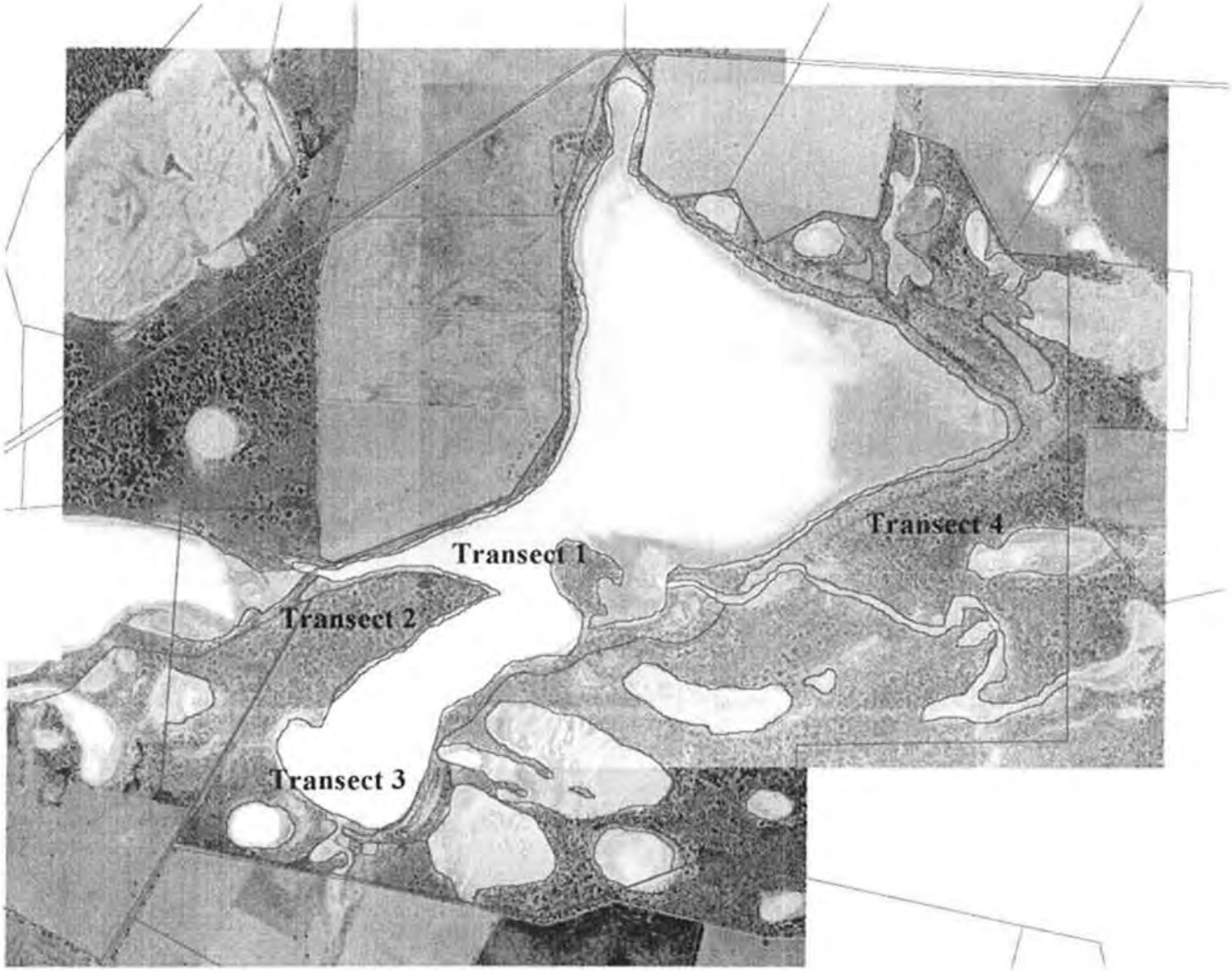
1 0 1 2 Kilometers

Transects

M. uncinata thicket
E. yilgarnensis - C. glaucophylla open woodland
M. pauperiflora open woodland
Open water

N
W E
S

Lake Campion

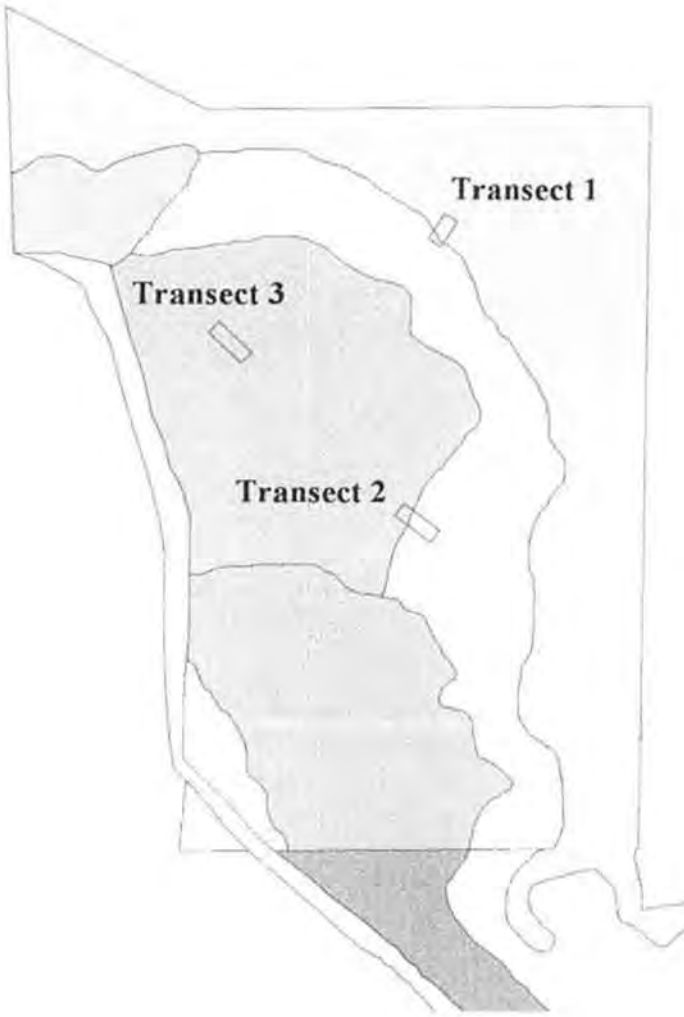


1 0 1 2 Kilometers

Transects
Plant Communities
Roads

N
W E
S

Lake Paperbark



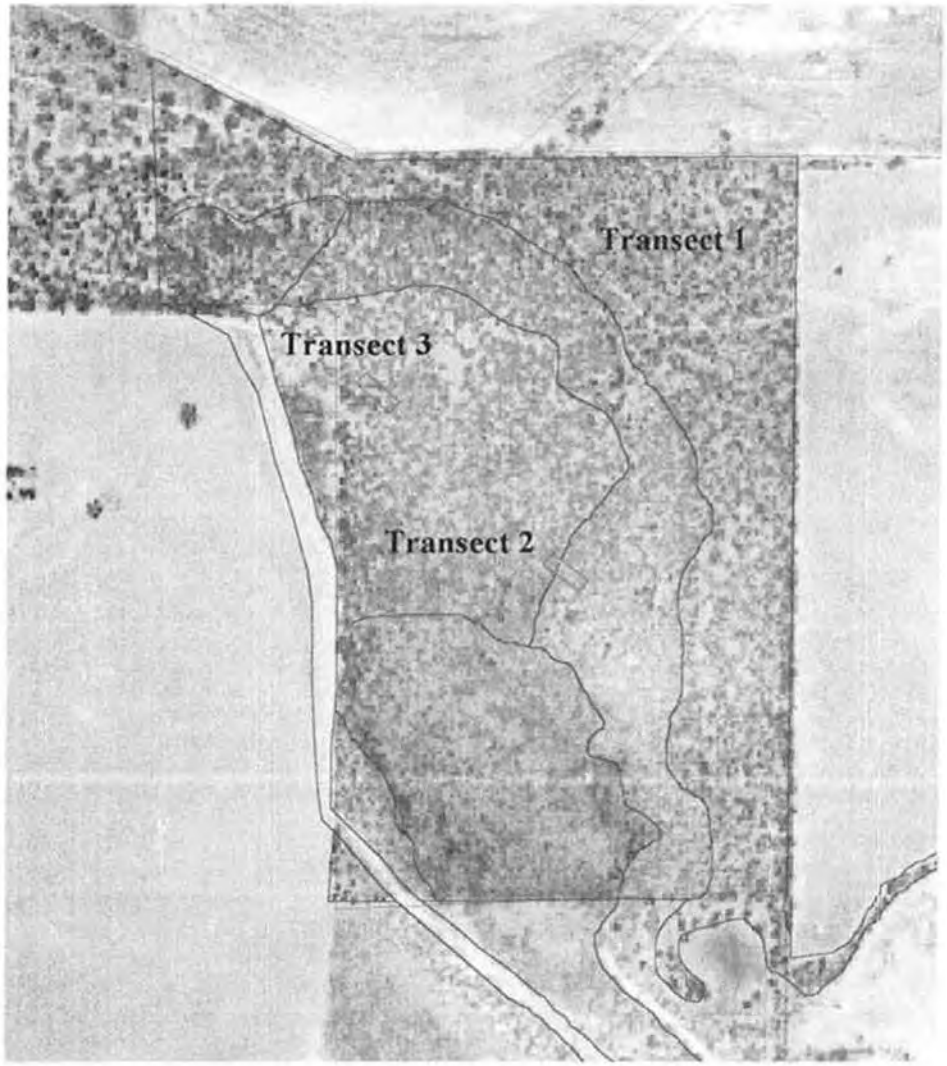
400 0 400 800 Meters

Transects

E. loxophleba - E. yilgarnensis woodland
M. lateriflora woodland with occasional E. loxophleba + M. strobophylla
E. salmonophloia woodland with occasional E. loxophleba
M. strobophylla with dense understorey of M. phoidophylla
M. lateriflora woodland with scattered M. strobophylla
Drain
Water-logged E. loxophleba + M. strobophylla

N
W E
S

Lake Paperbark



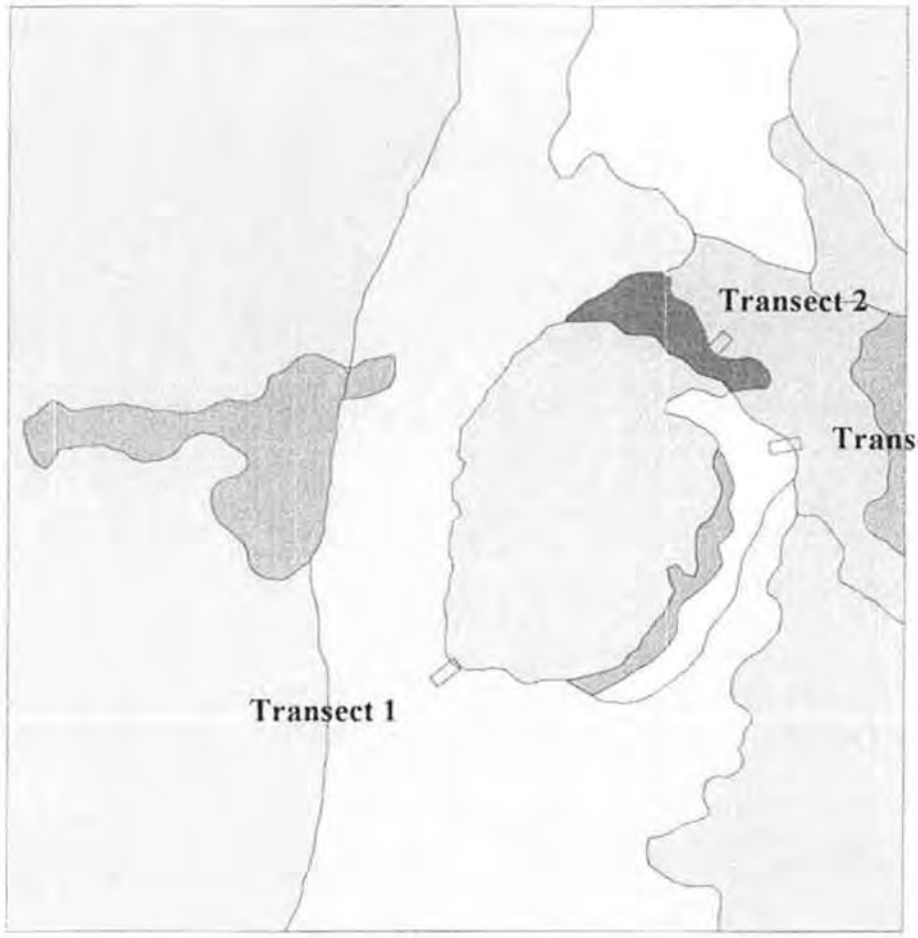
400 0 400 800 Meters

Transects
Plant Communities

Roads

N
W E
S

Goonaping Swamp

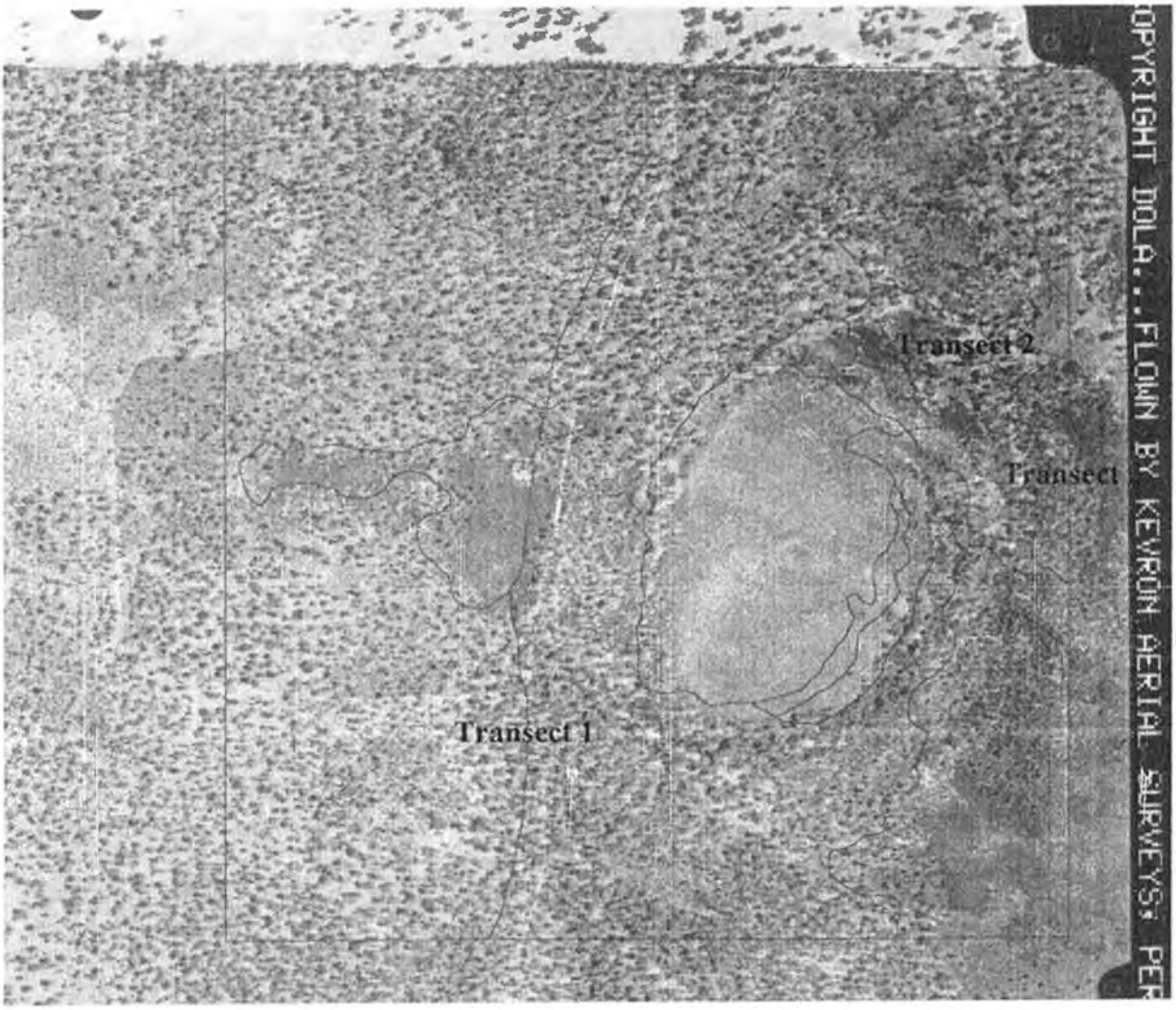


Transects

Allocasuarina sp. closed scrubland
B. attenuata - B. menziesii woodland, scattered emergent E. marginata + E. calophylla
Dense M. viminea thicket
E. marginata- B. attenuata - B. menziesii woodland
E. rudis - E. wandoo woodland with scattered M. preissiana
E. rudis - M. preissiana open woodland
E. wandoo woodland
E. wandoo woodland with scattered emergent E. marginata
M. viminea scrubland
Open E. wandoo - E. rudis woodland

N
W E
S

Goonaping Swamp



Transects
Plant Communities

N
W
E
S