Tall Closed Forests (>30m. 70-100%)

Subtropical Rainforest

1. Gully Rainforest

A narrow broken band of gully rainforest extends 2 km along a steep south facing lower slope fringing the Tweed River adjacent to McAuley's Road at Terranora.

The soils are mostly rich krasnozems with krasnozem influenced yellow earths along the western portion.

The forest is floristically diverse with representative species from both the subtropical and warm temperate rainforest formations. Common species include Flindersia bennettiana, Tristania conferta, and Doryphora sassafras on the upper slopes and Archontophoenix cunninghamiana, Ficus coronata, Sloanea australis, Syzygium moorei and Endiandra globosa on the lower slopes. This community once occupied the krasnozem soils of the highlands, along most lower slopes and gullies, and entire slopes in protected situations.

2. Lowland Floodplain Rainforest

Lowland floodplain rainforest once occupied extensive areas along the Tweed River floodplain in a broad band adjacent to the low undulating extremities of the surrounding hills. The soils of this area belong to the meadow group but can be differentiated from those of the lower central portion of the floodplain by their lower water table and the presence of larger amounts of humus in the topsoils.

The only substantial example of lowland floodplain rainforest remaining in the state is at Stott's Island on the Tweed River. It is also one of the few rainforest communities supporting Araucaria cunninghamii in a coastal

situation on lowland alluvial soils.

Closed Forest (10-30m 70-100%)

3. Gully Rainforest

Several small patches of gully rainforest occur at Banora Point on steep krasnozem based slopes. They are floristically similar to the tall closed forests bordering the Tweed River at Terranora, but differ structually because of their more exposed coastal situation.

Both rainforests abut developed urban areas on their uphill boundaries and then merge into more extensive wetland communities at the bottom of the slope.

Open Forests (10-30m. 30-70%)

4. Tristania conferta Forest

Protected south and east facing lower slopes support open forests dominated by Tristania conferta. They represent an intermediate transition between the eucalypt dominated upper slopes and ridges, and the establishment of rainforest species along the creeks and valley floors, and may comprise up to 40% of the stand. In these situations associated species include Eucalyptus gummifera, E.acmenioides, E.pilularis, E.grandis, E.saligna, Syncapria glomulifera and Araucaria cunninghamii. The poorer, well drained yellow earths often cannot support an abundance of rainforest species, so that in dry, and exposed valley floors Tristania conferta forest is continuous. Excellent examples of this community are reserved in the Mooball State Forest adjacent to the south western corner of the study area.

5. Eucalyptus pilularis Forest

Forests dominated by Eucalyptus pilularis once clothed the

exposed ridges and upper slopes of south facing upland areas. They were mostly restricted to shallow siliceous soils of the yellow earth group, but occurred on krasnozem soils in exposed situations.

Because of the high forestry value place on E. pilularis as one of the most important hardwood resources in Australia, no sizeable stands remain in the area that have not been logged. The species regenerates quickly, with a rapid early growth. Most stands contain large numbers of small trees only 30-40 years old. Associated tree species include Eucalyptus acmenioides, E. resinifera, E. propinqua, Casuarina torulosa, Tristania conferta and Alphitonia excelsa.

Logging and frequent fires have eliminated or reduced most of the native ground species so that Themeda australis and Pteridium esculentum are widespread.

Excellent examples of this community also occur in Mooball State Forest.

6. Eucalyptus propinqua, E.acmenioides Forest

Forests dominated by Eucalyptus propinqua and E.acmenioides occur on the driest and most exposed sections of the coastal mountains.

They are common on north and west facing slopes and on ridge tops that are too exposed to support the usual E. pilularis forest. Associated species include E. gummifera, E. pilularis, E. saligna, E. microcorys, E. resinifera and Casuarina torulosa.

This community also occurs in Mooball State Forest in association with the Tristania conferta and E. pilularis forests.

7. Eucalyptus robusta Forest

Forests dominated by Eucalyptus robusta occur along most of the N.S.W. coast usually within 2km of the shoreline adjacent to mountains. Highland areas in close proximity to the coast only occur in the vicinity of Round Mountain in the southern portion of the study area.

At the junction between the yellow earths of the mountains and the gley podsols and meadow soils of the lowlands, restricted bands of E. robusta forest occur for a short distance before increasing soil moisture induces the formation of Melaleuca quinquenervia forests. Subordinate tree species include Eucalyptus gummifera, E. resinifera, Casuarina glauca and Melaleuca quinquenervia, with Eucalyptus propinqua and E. acmenioides along the drier western extremities. Common shrub and ground species include Leptospermum laevigatum, Blechnum indicum, Gahnia grandis and Baumea juncea.

8. Eucalyptus tereticornis, E. gummifera Forest

Individual specimens of Eucalyptus tereticornis can be found along the levee banks of Terranora Creek, throughout the urban areas along Kennedy Drive, West Tweed Heads, and on old levee banks away from the present river course in South Tweed Heads. Sizeable stands dominated mostly by E. tereticornis and E. gummifera occur between Banora Point and South Tweed Heads, with the most significant, and least disturbed occurrence located immediately south of Ukerebagh Island. Most of these sites are on high elevated sections of the gley podsol soils and are poorly drained, but considerably drier than surrounding areas which may have their water tables at ground level.

Associated, less prominent species in these forests include E. robusta, E. resinifera, Melaleuca quinquenervia and Casuarina glauca. A lower tree layer up to 6m in height is

comprised mostly of Banksia serrata, Acacia suaveolens, A. glaucescens, and Casuarina torulosa.

Ground coverage is comprised of a representation of species common to poorly drained alluvial soils in the area.

Where extensive areas of the forest have been burnt the ground has been colonised by a closed grassland of Themeda australis and Pteridium esculentum.

See Appendix II for a more comprehensive species list.

9. Melaleuca quinquenervia Forest

Extensive forests of Melaleuca quinquenervia occur throughout the study area on all types of alluvial soils in those areas subjected to high water tables and flooding by fresh water. Numerous depressions remain water filled permanently or for prolonged periods and support sedgelands comprised of the various species listed below.

Melaleuca quinquenervia regenerates freely under grazing conditions so that abondoned or neglected pastoral areas quickly revert to a forest of similar structure and composition to that which was originally cleared.

Regenerating areas and those recovering from fire damage provide a wide range of structural types within the mapped areas, from low closed forests to woodlands.

Tree species such as Eucalyptus propinqua, E. tereticornis, E. robusta, Casuarina glauca, C. littoralis, C. torulosa and Tristania suaveolens may invade the forest margins from adjoining communities, but it is principally a monospecific stand.

Shrub and ground strata vary locally depending on soil moisture conditions and include Banksia robur, Acacia

ulicifolia, A. suaveolens, Pultenaea villosa, Callistemon pachyphyllus, Pimelia linifolia, Belchnum indicum, Imperata cylindrica, Hemarthria uncinata, Cenchrus echinatus, Paspalum plystachyos, Phragmites australis, Schoenus brevifolius, Baumea ribiginosa, Scirpus validus, Chorizandra cymbaria and Juncus "x" (new species).

10. Casuarina glauca Forest

As frequency of inundation and soil salinity increase towards estuarine waterbodies, the Melaleuca forests give way to open forests dominated solely by Casuarina glauca.

They occur on meadow soils or on the wide gradational zone tending towards gley podsols and regosols. Humus content of the topsoil is markedly higher than that of the preceding Melaleuca forests with a corresponding relative decrease in mineral matter.

Some areas have been cleared and drained for pastoral and agricultural pursuits, but the majority remain undisturbed, or are lightly grazed. There is usually a dense ground coverage which includes Baumea juncea, B. articulata, Juncus maritimus, Cotula repens, C. coronopifolia, Selliera radicans, Schoenus brevifolius, Eleocharis minuta, Scirpus inundatus and Triglochin maritima.

Low Closed Forest (5-10m, 70-100%)

11. Mangrove Forest

The mangrove forests in the vicinity of the N.S.W. - Qld border represent the southernmost limit of the extensive mangrove areas of eastern Australia - only two species, of limited extent occur further south to Sydney and one of these to South Australia.

Mangroves occur on the upper levels of the shore between

extreme high water mark and a level slightly above mean sea level. Most estuarine waters are lined with a narrow band of mangroves 1-3 trees wide, but only the extensively forested areas have been mapped.

Zonation within the mangrove forests is evident, the number of bands and dominating species being determined by tidal influences, salinity and waterlogging. Where there is much waterlogging or hypersalinity of the soil, Avicennia marina is the only tree present, while species characteristic of better drained soils tend to cluster along the edges of creeks. Towards the limit of saline influence Aegiceras corniculatum is the sole representative.

In the coastal situation the seaward fringe is dominated by a mixture of Avicennia marina and Aegiceras corniculatum usually only 1-3 trees wide. This is often followed by a broken band of Rhizophora stylosa and Bruguiera gymnorhiza (usually the tallest in the forest). The landward edge is usually occupied by Avicennia marina, with Excoecaria agallocha and Hibiscus tiliaceus, then grades into Casuarina glauca forests.

Closed Heath (0-2m, 70-100%)

12. Coastal Heath

Tropical heath covers a narrow discontinuous strip of lowland country between Taree, N.S.W. and Broad Sound, Qld. The soils are very high in silica, and deficient in N,P,K, Ca, S, Cu, Zn and Mo (Andrew and Bryan 1955). Within the study area the entire coastal strip has been mined so that the only remaining heath communities are very small and restricted to an area 1 km north of Hastings Point. They occur on gley podsol and regosal soils and are subjected to a high and widely fluctuating water table.

A large number of shrub species occur in these tropical

heaths with many assuming local dominance. Representative species include Tristania suaveolens, Banksia integrifolia, B. serratifolia, Acacia longifolia, Xanthorrhoea resinosa, Epacris pulchella, Caustis recurvata, Baeckea stenophylla, Pimelia linifolia, Casuarina glauca and Lomandra longifolia.

Sedgelands (30-70%)

13. Lepyronia articulata Sedgeland

Around the western and southern perimeter of Round Mountain extensive sedgelands dominated by Lepyronia articulata occurred on the meadow soils of the lowlands. A major part of these areas have been sown with pasture grasses and are widely grazed, so that Lepyronia articulata has been restricted to a ground cover of 0-10%. The only areas maintaining a relatively undisturbed form occur at their lowest extremity near Cudgen Lake, where the high water table has deterred pastoral disturbance.

14. Scirpus littoralis Sedgeland

Sedgelands dominated by Scirpus littoralis occur where there are long stretches of shallow water in protected locations away from the main water flow towards the Cudgen Creek exit of Cudgen Lake. These areas are along the southern and western banks and may extend up to 100m from the shore in water up to 1m in depth.

Other Plant Communities

Small freshwater swamps (slotting into the herb category of Specht) occur throughout the area, a typical example occurring north of Terranora Heights is dominated by Cyperus lucidus. They represent a variety of herblands and are too small to map successfully.

Angophora and eucalypt dominated forests with a lower

stratum of Banksia once occupied the hind dune area along parts of the coast, but no sizeable, undisturbed areas remain. It is mostly represented by isolated patches and single individuals, strongly dominated by exotic species.

NEWS RELEASE

AUSTRALIA

McVEIGH FAREWELLS FLYING KANGAROOS

MINISTER FOR HOME AFFAIRS AND ENVIRONMENT

52/82

Four ambassadors will leave Brisbane on Qantas flight 11 tonight (Thursday) to begin establishing a permanent relationship between Australia and the American city of Knoxville, Tennessee.

The quartet - two grey kangaroos and two white cockatoos - will be the first animals in a new Australian section to be established at the Knoxville zoo.

Prior to the send-off from Brisbane Airport, the Federal Minister for Home Affairs and Environment, Mr Tom McVeigh, said the new section of the zoo would be a permanent reminder of Australia's participation in the International Exposition being held in Knoxville from 1 May to 31 October this year.

"The Australian Pavilion, which has a theme of "Energy Down Under" is one of the most popular at the Exposition," Mr McVeigh said.

"On average, about 25,000 Americans and other visitors from all over the world are pouring through the Australian Pavilion each day.

"Interest in Australian energy and the country as a whole has run considerably higher than anticipated, and it is felt that a selection of Australian fauna in the zoo would maintain this interest after the Exposition closes," Mr McVeigh said.

At the airport, the Minister thanked the Lone Pine Sanctuary for providing the kangaroos and cockatoos, and Qantas for undertaking to look after them on their flight to the United States.

Mr McVeigh said it was hoped more Australian fauna would join them in Knoxville later this year.

FURTHER INFORMATION:
STUART MAXWELL-WRIGHT
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NEWS RELEASE

AUSTRALIA

MINISTER FOR HOME AFFAIRS AND ENVIRONMENT

ST. BARBE BAKER MEMORIAL

Australians will long remember the outstanding contribution to the world environment made by the late Dr Richard St. Barbe Baker, OBE, founder of The Men of the Trees movement, the Minister for Home Affairs and Environment, Mr Tom McVeigh, said today.

"Dr St. Barbe Baker's death is a great loss to all Australians, and particularly all those who recognise the importance of trees and the need to halt tree decline", Mr McVeigh stated today on the occasion of the London memorial service for the "Man of the Trees".

"His legacy is the 26-trillion trees planted as a result of his personal effort during a lifetime in service," the Minister said.

The "Man of the Trees" died in Canada on June 10th, aged 92. He had visited Australia in May to help the United Nations Association of Australia launch the Year of the Tree.

"Dr St. Barbe Baker championed the tree as vital to the world's environment. He envisaged a Decade of the Tree which has been adopted by the United Nations Association of Australia to follow the Year of the Tree".

Australia's recently inaugurated National Tree Program owes much to Dr St. Barbe Baker's vision", Mr McVeigh said.

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14 July 1982

Northern Star
editorial

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Riding roughshod over the people

SOME State Government departments seem to think that their actions are protected and they can ride roughshod over local government by-laws and the rights of the community.

Yesterday, *The Northern Star* reported people's complaints of devastation of trees by the Housing Commission on its estate off Norwood Avenue, Goonellabah.

The people have every reason to complain.

Nobody who remembers that well-treed hill before the bulldozers moved in can be but appalled at the desert into which it has been turned.

There was no need for it.

Some judicious planning, even a modicum of environmental consideration, could have saved some of the trees, rather than turn once attractive bushland into a packed dustbowl of chocolate-box houses without the mitigating feature of greenery.

The devastation means also that one of Lismore's few remaining koala corridors has been wiped out.

The Lismore City Council's chief town planner, Mr Reynders, said his council had prepared a plan setting out trees on the estate that could be cut down and those that could be saved; and also providing for reserves to be kept for open space.

But, said the town planner, a 'misunderstanding' by the Housing Commission had occurred and trees marked for saving had been cut down and the open space area had to be relocated.

Such 'misunderstandings' by the Housing Commission are not uncommon, as an inspection of its treeless estates elsewhere will testify.

The Lismore town planner said that on numerous other occasions the Commission had cut down trees and cleared areas not approved by the council.

If anyone ignores the council's by-laws and indulges in massive tree destruction, the council is well within its rights to prosecute.

Are Government departments exempt and allowed to destroy whatever they wish without consideration of the environment and the laws that are supposed to protect the community from such actions?

An environmentalist only this week called for a Government department to be prosecuted over its breach of a Ballina Shire Council tree preservation order by felling a now rare and protected red cedar tree on the site of the new Alstonville High School.

The environmentalist, Mr J Corkill, said the Public Works Department had broken the law by destroying the tree. By prosecuting the department, the Ballina Shire Council would be seen by the community to be willing and able to exercise its legitimate controls.

"If this breach goes unredressed, the council's controls will continue to be breached with impunity by individuals, companies and departments, and the environmental destruction will proceed unchecked," Mr Corkill said.

The Public Works Department says the tree was in poor condition and the decision to fell it was not taken lightly.

But the fact remains that the tree was protected by the council's tree preservation order, and the department went ahead with the felling without even notifying the council.

The Public Works Department has a record of treating the people badly when carrying out its works.

Its pipe-laying efforts in the recent Goonellabah water reticulation extensions left footpaths on the main entrance to the city in an atrocious condition, after making only token efforts to restore them.

There are many other examples of Government departments destroying surroundings with seeming impunity.

It's time some local government council had the courage to take them on, and insist that the laws cover everyone and grant immmunity to no one guilty of irresponsible actions.

88A KEEN STREET LISMORE. 2480

NEWS RELEASE - 3rd October 1985

"The Public Works Departments' Supervising Architect, Mr J. Klages had made a grave error in judgement when ordering the destruction of an original Red Cedar on the site of Alstonvilles' new High School, " said Mr John Corkill,Secretary of The Big Scrub Environment Centre.

Mr Klages was reported in The Northern Star to have claimed that the tree was "95 per cent dead" and that "under the circumstances" he did not think that the Tree Preservation Order applied.

"Mr Klages is aberrant in suggesting that the tree was '95% dead' It is either dead or it is not. There are no percentages which can assess life. The fact remains that the tree was very much alive at the time it was felled" said Mr Corkill.

"Further there are no circumstances, when a protected tree is concerned concerned, where a legitimate Tree Preservation Order does not apply. To think otherwise is a mis-interpretation of the truth of the matter," Mr Corkill said.

Mr Klages was also quoted as saying that the 'extensive' dry rot had been found after the tree had been actually felled. Mr Corkill refutes this arguement.

"This assertion implies that the alleged dry-rot was not a factor considered in assessing the tree prior to its' destruction. It has only now been advanced as a justification for the trees' destruction after the fact," Mr Corkill said.

"My inspection of the stump found it to be quite sound. The dry-rot which Mr Klages refers to was affecting the roots and base of the trunk in one small area only. If the tree had been "extensively" affected by dry-rot, why was the timber described as valuable? Why would the Department of Education allow dry-rotted timber to be used in woodwork classes? Why would alleged dry-rotted timber be stolen from the site?" asked Mr Corkill

Mr Corkill said that he accepted that the tree had dead limbs which may have posed a danger to people and buildings, but rejected the notion that felling was the only course of action available to counter this problem. Tree surgery was an option which apparently had not been even explored , he said.

"As a qualified supervising architect employed in a public authority Mr Klages has a professional responsibility to check all aspects of the situation carefully, and to ensure that all the statutory committments are met, before proceeding on a course of action. This was evidently not what had happened on Friday 13th,the day of the trees' destruction," Mr Corkill said.

"If Mr Klages had a good case to top, lop or remove the tree, then Ballina Shire Council would have almost certainly approved the Departments' application" Mr Corkill said. "Big Scrub Environment Centre would have applauded that as a proper process correctly exercised" he said.

"We do not advocate the total prohibition of the removal of any tree. We do insist however that unmitigated destruction of native vegetation cease forthwith. We prefer that all relevant considerations are explored before any trees are destroyed and that local concerns are included.We demand that the process of the law is carried out and is seen to be so. Only in this way will the indiscriminate destruction of precious remnants be arrested." Mr Corkill said.

Mr Corkill said that he was still awaiting a reply from the Ballina Shire Council, informing him of Councils proposed actions to ensure the enforcement of its' Tree Preservation Order.

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For further information contact John Corkill on (066)21.3278 work
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