

## Impacts of Logging on Fraser Island

Although logging operations ceased on Fraser Island in December, 1991, the impacts and scars from almost 130 years of logging are still very evident. Although the controversy is no longer current FIDO provides this brief backgrounder to assist those wishing to make an evaluation of the Fraser Island timber industry.

### The value of the forest

Fraser Island is the world's largest vegetated dune system. The forests of Fraser Island are unique in that they contain the tallest rainforests growing on sand in the world. They contain enormous individual specimens, many of them amongst the largest trees of their species. The overall canopy of the forests is higher than occurs on any dune system in the world. They are very attractive forests. This is testified to and acknowledged by all visitors to them. They have been described as wet deserts because elsewhere in the world, sand dunes in more arid climates are virtually denuded.

### Short History of Logging

The forests of Fraser Island were logged from 1863 to 1991. Initial logging was uncontrolled at least up until 1913 when the Forestry Department began to assert controls. In that time the logging has done a significant amount of environmental damage. Until the mid-1930s all logging was done with bullock teams and steam train haulage with minimal incidental damage. Because tallowwood and blackbutt was sought more eagerly than most other species, prior to the mid-1960s almost all of the logging occurred outside the rainforests (including the satinay - brush box forests). After 1970, mechanization and the impact of logging of the rainforests have dramatically accelerated the damage to Fraser Island's forests.

### Some early Fraser Forests descriptions

When people see the magnificence of Fraser Island's Forests, they are still impressed despite seeing the landscape punctuated by the stumps of old trees which were logged. To appreciate some of the magnificence which has been lost, it is worth noting how some of the first people record their impressions of the forest

*"The following sizes (of trees) may be of interest. Kauri pine 80 feet to the first limb; diameter of stump 10 feet 4 inches diameter, of top log 6 feet; White beech 60 feet to the first limb, diameter of tree 6 feet. Tallowwood 80 feet to first limb, diameter of tree 7 feet 3 inches; Blackbutt 65 feet to first limb, diameter of tree 6 feet and Red Stringy much the same; Turpentine 80 feet to the first limb and diameter 8 feet 3 inches; These are the largest trees, runners up being hoop pine, scrub box, quandong and bolly gums (hard and soft). The best development of the great bulk of the different species is reached in or down the sides of the deep gullies (almost gorges). ..."*

**Walter Petrie**

*The traveller strikes a 'living wall' of giant timber trees up to 150 feet high, buried in jungle--scrubs so thickly growing that roads or tracks must be cut to enable one to get through, great piles 100 to 120 feet clear to the first limb, are there in thousands, straight as an arrow but by far the greater number are much too big for piles, and can only be used as saw-mill logs . . . then beyond that limit again come the super-giants, so big that no saw-mills at present in use in Queensland have any machinery capable of handling them, so the timber-getter must reluctantly pass them by and leave them for some future saw-mills with bigger machinery, to deal with . . . These great Monarchs of the forest are from six to ten feet in diameter, and contain from seven thousand to thirty thousand feet of timber in each tree ..."*

**Edward Armitage**

### A Summary of the Impacts of Logging

Forestry logging operations, construction of roads, and the establishment of experimental plantings had directly injurious effects. The following are some of the continuing and enduring impacts of 128 years of logging on Fraser Island:

- (i) Logging and infrastructure such as roads, access, settlements and installation of service facilities such as airstrips has destroyed the wilderness values of the island. These continue to influence Fraser Island patterns of recreation.
- (ii) Logging disturbed the soil and accelerated loss of very precious nutrients in this nutrient deficient forest. In the nutrient poor soils of Fraser Island this is more serious.
- (iii) The manipulation of ecosystems through silvicultural practices reduced Fraser Island's biodiversity.
- (iv) Logging has caused a substantial reduction of the average size of the trees which occur and lessened the grandeur of the forests. The greatest aesthetic impact in a forest is the appreciation of trees of great stature and age. Most of these have now been removed and people travel great distances just to observe the few remaining and to hold them in awe.
- (v) The protection of the log resource has been associated with a manipulation of the fire regime with very severe ecological implications for the sacrificed areas outside the commercial forests. The frequency of fires has been greatly increased. Fire has been excluded from the main tall forest areas for many years with almost as significant an impact.
- (vi) Logging operations over 120 years were responsible, directly or indirectly for the introduction and dissemination of plant diseases, weeds and other injurious agents to Fraser Island which had escaped many alien introductions which occurred on the mainland. The traffic between the island and the mainland and the bringing over of supplies and equipment brought with it many undesirable pests.
- (vii) Forests growing on the impoverished sandy substrate have a low productivity. The pre 1970 logging rates could only be maintained in later years by logging the rainforests which escaped earlier operations. It ended up by exploiting the vast biomass capital accumulated prior to European settlement.
- (viii) In later years, logging operations were far more devastating than that done in the earliest era of timber extraction due to mechanization. Trees adjacent to such snigging tracks and roads were scarred and surface root systems extensively damaged.
- (ix) The opening of the canopy caused significant desiccation in the rain forests. Increased exposure to sun and wind has resulted in a changed microclimate. This has resulted in accelerated drying out of the top-soil where the canopy openings are wider and a reduction in the number of epiphytes in the closed forests.
- (x) There has been a very significant aesthetic impact from the mauling of the forests.
- (xi) The composition and structure of the forest was changed. The mean size of the trees is now greatly reduced. This may take centuries to repair. However the targetting of the most desirable species such as kauri and hoop pines and white beech may mean that these species may never be as well represented in Fraser Island's forests again.
- (xii) Some trial plantations remain on Fraser Island. These include a number of small residual experimental conifer plantations as well as hoop pine plantations. There are also large blackbutt coupes which were given the "treatment".