Old Growth Forest Assessment:

Woodchipping and the Reductionist Approach

by Mary Frith

Introduction: The Evolution of Life

"There is an order of nature in the life of the population of living organisms that clothe the earth .... (which) can be understood in ecological terms. The key idea here is 'struggle for existence' which includes among its strategies individual adaptation and spreading the risks. From these dynamic processes emerges the principle of interdependence of living organisms and their environment. This is exemplified by the web of life and in the bio-geo-chemical cycle of the elements. These are both parts of the life-supporting system of the earth. If essential pathways are broken, the life veins of earth could be cut. The sustaining of life on earth is now very much in human hands ..."

The evolution of life and its processes on earth defy entropy, which is the norm of the universe. Maximum entropy is the hypothetical homogeneous state when everything will be at the same temperature and all processes will have therefore ceased. In undisturbed ecosystems life forms evolve increasing complexity and interdependence. This is exemplified as well as anywhere in the natural forest ecosystems of the south west of WA. Disturbance by humans is largely entropic, breaking threads in the web of life and simplifying complex ecosystems, even to the point of destroying them.

Climax Communities

The native forests of the south west are biological climax communities of the highest order. Their very long undisturbed history before the recent advent of white people, allowed them to evolve a complexity and biodiversity that rivals any in the world. The jarrah forest particularly has evolved a kaleidoscopic mosaic of species and communities. Every disturbance is potentially destructive.

Reductionism

The society in which we live is the most technologically powerful of all time; but it still clings to an outmoded mechanistic world-view accepted in the 17th Century from Isaac Newton and Rene Descartes. This regarded Nature as an object to be conquered and exploited, and examined piecemeal. The concept that humankind is part of and dependent upon Nature was lost.

This is reductionism. It is only in this context that the woodchipping of natural old growth native forests could possibly be sanctioned by society. There is no question that the process is ecologically unsustainable. Calculations from the Western Australian Department of Conservation and Land Management's (CALM) 1993 Annual Report demonstrate that woodchipping will 'clean out' all available old growth forests in just 50 years from its beginning 16 years ago. CALM states that it is 'aiming' for a rotation length of 100 - 150 years. This is scarcely half the length of time that would be necessary for ecological sustainability and the possible maintenance of species diversity. Its on-the-ground proposals demonstrate an even shorter rotation of only 77 years for jarrah and 46 years for karri.

Woodchipping

Woodchipping was introduced to WA in 1976, restricted to a licence area in the high rainfall zone, to use up sawmill waste and branchwood from the forest. In 1988 it was no longer restricted to a licence area or even the high rainfall zone. From then on it was used in intermediate and low rainfall zones, which until 1992 were considered salt risk. Now it is used anywhere within profitable haulage distance from the chipmill near Manjimup. And another chipmill is being sought for the south coast area.

This dovetails with CALM's vision of 'normalizing' our native forests. 'Normalizing' is a forester's term for establishing successive even-aged stands of trees, designed to produce a steady flow of timber through time. In the process it is necessary to 'clean out' the old growth native forest: it is simply too uneven and does not grow fast enough. It also carries many species that compete with 'crop trees'.

'Normalizing' is thus reductionist, attending to one facet only, manipulating the ecosystem for the maximum production of gross wood fibre, which, incidentally, can be produced far more efficiently by tree-cropping already cleared land.

Woodchipping assists CALM's purpose of 'cleaning out' and 'normalizing' native forests. It provides considerable financial benefit to timber companies, so there is great pressure to continue and even expand this ecologically disastrous industry. With the reductionist focus solely on the maximum extraction of wood fibre, all other aspects of the ecosystem are forgotten and neglected.

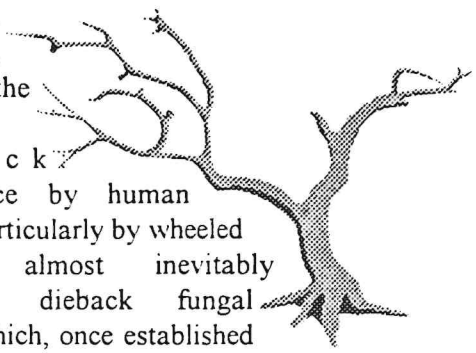
If our natural heritage were compared with the cultural heritage of Europe, it would be as though Europeans were pulling down their cathedrals and castles to sell them off as second hand bricks and stones, profiting from the basic industrial resource for building, but missing the cultural treasures of beauty, history, art and architecture, religion and symbolism, let alone their functional value.

High conservation value, old growth and virgin forests can never be replaced. Once gone, they are gone for ever. WA's 2% of forests has been reduced to 1% by clearing. We are seeing the very last irreplaceable forests lined up for destruction by woodchipping in the next few years. This is simply wrong. Further, because it is unnecessary, it is immoral.

Disturbance Impacts

There are many disturbance impacts on the forest ecosystems. Logging, even for woodchips, is only one. Reductionism considers each impact in isolation from the rest; but forest ecosystems have to withstand the combined effects all the time.

1. Logging: includes extraction of any marketable timber, even for charcoal, and thinning to a basal area of 10 sq m/ha. Clearfelling is practised in the karri forest and a marginally less drastic, heavy selection cut in the jarrah forest. All are drastic techniques ecologically.
2. Burning: CALM imposes a regime of frequent prescribed burns, which research indicates are conducted far more frequently and systematically than occurred naturally in the past.
3. Poisoning: Logging in the jarrah forest is followed by poisoning of any remaining unmarketable trees and large shrubs that remain standing, reducing density and age diversity.
4. Fragmentation: From personal observation it can be seen that each forest block is broken up by an extensive system of wide logging roads. Many shallow gravel pits, stripped of their forest cover and soil material, supply the gravel.
5. Dieback: Disturbance by human agency, particularly by wheeled vehicles, almost inevitably introduces dieback fungal disease, which, once established cannot be eradicated.



6. Insect attack: Disturbances, possibly resulting in the loss of insectivorous birds and mammals have released populations of naturally occurring leaf eating insects in uncontrollable plagues which periodically defoliate the forest canopy.
7. Invasion by weeds and feral animals: Disturbances allow entry of introduced species which compete with native species, often displacing them.
8. Loss of habitat: Disturbances eliminate the habitat of many species. Especially well understood are many hollow dwelling species, which depend on trees of much greater age than CALM even plans for. Such species are likely to be victims of planned extinction.
9. Climate change: Deforestation, even when it is planned to allow trees to regrow, destroys large deep-rooted trees and so affects the climate, reducing atmospheric instability and rainfall.

Conclusion

It is clearly unreasonable to consider woodchipping outside the context of related forest ecosystem disturbance. If all values of forest ecosystems were considered, the questionable short term financial gain of present woodchipping and reduction of native forest to ordered ranks of crop trees, are seen as a poor bargain. What little remains of natural old growth forests must be protected, and woodchipping transferred to tree crops without delay. ■