

FOREST ETHICS

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Forests, either exotic or indigenous, can be considered as land-based ecological systems producing a product or a combination of products desired by man. The tree species which make up the forest, together with the management practices applied, largely determine the product combination achieved. In order to consider rationally the comprehensive role of forests and forest management in New Zealand, we must examine the case for a combination of products, and then identify what this combination may be.

The last decade has witnessed the development in this country of an environmental awareness — some foresters still label it as a conservation mania or freak out. It has nevertheless successfully challenged Government decree and, more significantly, professional opinion. This development continues to follow a predictable pattern, clearly outlined and at a much further advanced stage in Europe and North America. Thus, like it or not, forest management must recognize new dimensions and restraints imposed by current circumstances. Environmental awareness by the public is a new dimension which must be amalgamated into forest planning. It is a situation which brings an ambivalence which at first appears paradoxical. It is certain that it will bring constraints to forest management, but it will also by the same token open up new and challenging fields in multi-purpose resource planning, fields in which ethics and integrity of purpose are as important as technical expertise.

To ensure that professional arrogance does not overlook public opinion, there is in this country the development of a legal framework which in time will add yet a further powerful control over foresters and other natural-resource managers. Whilst we may conjecture on the future strength and form of environmental-impact auditing, it is salutary to examine the recent situation in the U.S.A. with regard to clearfelling practices in publicly-owned forests. Activist conservation groups came within an ace of obtaining a moratorium on clearfelling in many specified state and national forests, a situation which may make the New Zealand forester shake in his professional

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boots. The point I wish to make is that to consider environmentalists as banner-waving protestors who cry wolf with monotonous persistence is naive. Legislation in the U.S.A. in the form of the National Environmental Policy Act of 1969, and the relatively recently won standing to sue in the courts of law, has catalysed and infinitely sophisticated the development of public participation in environmental decisions in that country. The same process has already commenced in New Zealand. Why, then, must some foresters still insist on the demarcation between ourselves and the conservationists? Do they fear an environmental plot of iconoclasm? I suggest that forest ethics are the key to our dilemma. When we consider the role of forests and foresters in New Zealand, to fail to accord due recognition to these new dimensions and concepts is to be short-sighted. It is also to display incompetency in our role as forest planners.

Hagenstein (1971) comments that in the past it may have been possible to rely on professionals for most public land decisions. He suggests, however, that, within present-day concepts, professional judgement must be supplemented by procedures that meet the test of public acceptance. The day may not be far off in New Zealand when professional judgement will no longer be considered the sole necessary constituent of sound forest management. In spite of broad statutory powers and large appropriations, foresters may be approaching a condition which Aldo Leopold (1941) had in mind when he wrote that "expertness may cancel understanding". Rowe (1973) in considering the same point suggests that, whilst it is a worthy sentiment that the forester is qualified by education and experience to manage forests, it is also at present an arguable one. He concludes that, when foresters begin to think in terms of land and all that it encompasses, and place the harvesting of timber within that larger context, then a new day will have dawned in resource management. There is more than an element of truth in this as it applies to New Zealand forestry. White (1967) in his examination of the historical roots of the present ecological crisis persuasively argues his belief that Western Christianity firmly established a division between man and nature. Further, by destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to any feelings for natural objects. Certainly the early European in New Zealand reflected exactly these sentiments in his approach to his new environment; an approximation to the early American Puritan to his new country — "a hideous and desolate wilderness". A close and honest appraisal may detect the remnants of this Abrahamic approach to man's domination over nature in our past and present attitude to indigenous forest. How different and ludicrous this approach seems when compared with the old traditional Maori

beliefs described in Elsdon Best's monograph, *Forest Lore of the Maori*.

The environmental era is here to stay and already forest management and forest use are receiving their share of critical attention (see, e.g., Molloy, 1974). Much of this interest is coming from outside the profession. We shall be increasingly called upon to justify our stewardship of the resources and land under our control. I hope that within this context, and in future management decisions, there will be an important role for wise ecology and ethics as well as economics. Leopold (1949) wrote about an ecological conscience — "a thing is right when it tends to preserve the integrity, the stability and the beauty of the biotic community. It is wrong when it tends otherwise". Hopefully our future indigenous forest management may approximate more to this than it has in the past. Merton (1968) draws attention to the fact that the poetic or sentimental language of early philosophers of nature frequently turned out to have realistic and practical implications.

What place has this concept of forest ethics in exotic forestry in the future? Bunn (1974) sees the large exotic forests of the future as a technocrat's dream with each tree and each unit progressively surpassing higher and higher internal rates of return with steadfast purpose. The realist must agree that a large part of the exotic estate of the future must fit this concept, where radiata pine will be grown as quickly as possible and to the optimum schedules demanded by efficiency and economics. There would appear to be little room for other species under such a regime. Indeed, I think to hide monocultures behind two-row screens of eucalypts or Douglas fir is to show uncertainty of purpose and largely misplaced concern. In presenting forestry we should be advocates rather than apologists. Such industrial forests will be managed on principles common to all successful business ventures — economic efficiency in producing an acceptable product with sound management expertise. Responsibilities for production in such circumstances are clearly defined in area and not encumbered with the often ineffective "tarting up" known as amenity forestry.

If, however, we could accept a concept of a zoning system within the one large forest or within a planning region, we would have other forests or zones which would be largely freed of immediate economic constraints. These would be planned for aesthetic and visual qualities rather than timber production. These areas would have to be significant in size — a minimum of 400 ha is suggested — and specifically planned and managed to approximate to a natural forest, albeit with exotic species. Species diversity and mixed age classes, with environmentally-acceptable services would be important management objectives. It is easy to visualize the place for larch, western

red cedar and Douglas fir in such circumstances. The latter is unique in New Zealand in its propensity to regenerate more than adequately under its own shade, and lends itself admirably to selection and shelterwood-type silvicultural systems.

I firmly believe that the most challenging expression of amenity forest management today is the creation of forest units, using exotic species, which are as close to natural forests as we can make them. There would need to be a total blending of silvicultural expertise, with landscape appreciation, ecological understanding and a true environmental awareness. The means to this end are wise ecologies rather than the accepted economic parameters. We must change from the idea that the often rather absurd picnic site, surrounded by a few autumn colour trees set in a sea of even-aged radiata pine, is a reasonable panacea for public demand and environmental involvement. The real need is for forests to be created which have the biological diversity and richness of natural forests, where some semblance of the complex forest ecosystem can develop unhindered by the exigencies of commerce and current silvicultural schedules. Services — for timber production, recreation and amenity — could be developed with a sympathy for the land which has not been possible in the past.

Examples of this do already exist in State forest but on a relatively small scale and their very existence is in many cases largely fortuitous. The Black Forest at Naseby is an example. Not only has an uneven-aged Douglas fir/Ponderosa pine forest developed, but a whole range of minor exotic species have naturally seeded in to the area and are now well established and adding toward species diversity both floristically and faunistically. Rowan, whitebeam, silver birch, sycamore — even gooseberry and red currant — have all contributed to what appear to be a fairly balanced ecosystem and semi-natural environment. Of particular importance is that it looks natural to the visitor. Conical Hill, parts of Hanmer and Whakarewarewa, spring to mind as other examples and there must be more — many, alas, on a fairly small scale.

I think it would be good management and sound forest ethics for each forest or forest region primarily concerned with exotic forestry to be so zoned, and a minimum percentage of land ear-marked for natural forest synthesis — a term I use in preference to amenity forest. Such aesthetic requirements are a legal prerequisite of the urban developer; they would appear to have as much pertinence in the development of the rural scene. I think the time is upon us to look beyond the immediate gain and plan for coming generations — a premise with which cost benefit cannot cope. A basic fault of existing economics has been illustrated by Boulding (1966). He characterizes popular conceptions of economics as open "cow-boy" economics in which resources are considered infinite

and nature is assumed to be self-cleansing. He suggests the need to encourage closed "spaceship" economics which recognize that the earth has finite resources and a finite capability to buffer man-made change. This concept also suggests that man is part of and not apart from nature. A new ethical concept of forest management requires an acceptance of man as part of the forest environment.

In summary, I have attempted to outline a type of resource management which involves land as the resource base and trees as only one product. If by environmental perception and ecological ethics we can produce a product combination within the terms outlined above, we shall have in part alleviated what would appear at present to be antithetical goals of forestry. We are reminded by Pardo (1970) that our Ozian counterpart — the tin wodsman planned to ask the Wizard for a new heart rather than a brain — having experienced both. We have in the past possibly insulated ourselves from the experience of public involvement. If the public are misinformed, it may well be our fault.

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