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5 July 1978

SOME PEDOLOGICAL TRENDS FROM RECENT WEST COAST SOIL SURVEYS AND THEIR RELEVANCE TO FOREST USE: REPLY

Sir,

We are grateful that Drs Pearce and O'Loughlin have taken the trouble to comment so fully on our paper; have in large part found it useful; and have enhanced the value of the study by bringing a closer scrutiny to specific sectors. There does not appear to be much variance over questions of fact, but only over points of interpretation. However concerning some of the data used, we make the following points (paragraph numbers correspond to those used above):

1. There are in fact two N.Z. Met. Service rainfall stations named Maimai; they are Maimai (F21173) and Maimai Two (F21172). Maimai Two rainfall is given as 1744 mm/annum. The rainfall at Reefton varies between 1951 mm and 2016 mm (all figures N.Z. Met. Service 1973). At the time the original paper was written the Forest Service recording gauges across the Maimai transect had only been in operation for an extremely limited period and an average of long-term rainfall normals for the area as a whole was used.
2. The catchments used for Forest Service experiments are not necessarily representative of the Maimai block, as the area in which they fall was chosen primarily on the grounds of all-weather access. Traverses by the teams making the soil survey were located in several different parts of the Maimai block as a whole and until more detailed evidence is presented we would stand by our original figures.
3. The only **published** geological map (Warren, 1967) although at a scale of 1 : 250 000 shows all the hill cappings (approximately upper thirds of slopes) immediately east of, also to the north and south of Mount Riley in Omoto State Forest as being Old Man Gravels. The soft, weathered conglomerates observed in the course of soil survey may be subject to other geological interpretations but in terms of erosion characteristics are thought to offer a basis for comparison with the Maimai block. O'Loughlin and Gage (unpublished, 1975) say (p. 40) that "Sixty-two percent of the landslides (in the Omoto area) originated on partly weathered and cemented sandstone/conglomerate substratum while only 38 percent of the failures initiated on the capping gravels;" however if, as is thought, fresh gravels and strongly weathered gravels form intricate mixtures in this area, confusion may well have arisen as to on what material the slips actually did originate.
4. Sources for the Mt Fox-Mt Riley area rainfalls are N.Z. Met. Service isohyet maps, and the normals from the nearest N.Z. Met. Service rain gauges at Dobson and Kaimata (2959 mm). This would still seem to suggest rainfalls "between 2500 mm and 3800 mm"

which is what is shown by the isohyets, and allows a real contrast (nearly 1000 mm) between Maimai and Omoto.

It is quite clear that more intensive research into the process and causal elements of erosion hazard is needed before a better definition of the problem, leading hopefully to management solutions, can be made. Our paper was intended to paint a fairly broad picture based on data from soil survey operations, and to indicate a number of working hypotheses regarding the implications of pedological trends. We are gratified that it has had some success in this respect.

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9 October 1978

(This correspondence abridged by editor)

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PRELIMINARY RESULTS ON THE EFFECT OF SELECTION MANAGEMENT OF TERRACE RIMU FOREST: COMMENT

Sir,

I feel I should correct a fallacy which seems to have become engrained in the record of terrace podocarp forest management in south Westland. It has been stated (James and Franklin, 1977; p. 349) that: "Strip felling was abandoned in the mid-1960s mainly because regeneration in the felled areas was not as good as anticipated."

To explain the true position, I must go back to 1953, when I was posted to Westland in order to try to introduce some form of management into podocarp forests there. At that time all forests were clearfelled on a front, leaving a derelict landscape devoid of seed trees. This is described in a book entitled "Westland's Wealth" by J. H. Johns and C. G. R. Chavasse (Government Printer, Wellington, 1959). All access was by tramway, leaving an accessless forest when the loggers had moved on. The N.Z. Forest Service was at that time merely an agent for selling Crown timber, and the budget for Westland Conservancy was less than that for Ashley Forest.

The major initial step was to persuade the sawmillers, who for so long had had it their own way, that the N.Z. Forest Service should introduce forest management on a long-term sustained yield basis. It was soon decided that our efforts should be concentrated on terrace forests: first because these, to some extent, already had a quasi-selection structure as revealed by National Forest Survey figures for stocking at all levels; secondly, and even more importantly, clearfelling of these sites reduced them to the status of unproductive bogs, and it seemed vitally necessary to retain them in some form of standing forest.

The steps we had to take were thus to persuade the sawmilling fraternity that:

- the forests should be managed in perpetuity
- to do this, permanent road access would be needed
- that no further clearfelling of terrace forests could be permitted.

It was the late Mr D. Kennedy, then Conservator of Forests, who effectively sold these ideas to the sawmillers, several of whom were ready to co-operate.

By 1956 it was apparent that the eventual form of management of the terrace forests would have to be some form of selection. In the mean time, however, before selection methods could be tested for feasibility, we needed to halt clearfelling. Strip felling was