management of a forest estate established over ten instead of fifty years has posed New Zealand foresters with such extremely difficult problems that future generations are unlikely to repeat the mistake of their predecessors.

5. *Training and Research Essential to Progress and Efficiency.*—Looking forward instead of backward, forest-management may correct the mistakes of the past provided there is continued insistence upon the highest standards of training for Forest Service staff. The ecological complexity of the primitive vegetative cover of the country makes the regeneration and management of the indigenous forest resource a problem of extraordinary abstruseness and requires highly-qualified officers for its solution. Likewise, seemingly easy to manage because of the readiness with which so many of them regenerate, the exotics pose some extremely difficult problems. Many arise from the basic fact that their periods of annual growth are so remarkably long that laterals develop and persist abnormally, not only to create points of weakness in the growing stem, but to yield sawn timber characterized by large knots and—worse still—large knot holes. Only by the complete integration of forest-management and forest-products research are these problems capable of solution.

Management

6. *National Forest Survey.*—The first quarter of a century of the Forest Service was ushered in by a 5-year national forest survey based to some extent upon reconnaissance, but more often upon guesswork owing to the inaccessibility and impenetrability of many of the forests in the 1919–24 period. It had little use other than to prove the inadequacy of the indigenous forest resource for substained timber-production and the necessity for the supplementary exotic capital since created. The second quarter of a century of Forest Service history has likewise been marked by a national forest survey of much improved technique. Aerial photography has replaced guesswork and ground parties penetrate everywhere for sample assessments—working under the direction of trained foresters and ecologists so that not merely timber quantities but forest compositions are determined with accuracy. The work will provide information upon which the forest policy of the future may be based with a confidence hitherto absent.

7. *Management of Beech Forests Holds High Promise.*—Even though the final results of the national survey will not be available for several years, interim results have disclosed the existence of sufficiently large tracts of indigenous forest—three of them each of about 50,000 acres—to allow of the immediate institution of a practicable system of forest-management which will ensure their perpetuation as a source of timber-supplies. All are essentially beech (*Nothofagus*) forests two of which are situated in the western Nelson section of the Nelson-Marlborough Conservancy. As forerunner to their management, another beech forest in the Southland Conservancy is already being silviculturally treated under guidance of the national forest survey. Prior to logging, seed-trees are reserved and the mineral soil of the forest floor exposed by removal of the *Blechnum* fern. After logging, all standing trees, other than those finally selected as seed bearers, are felled and additional usable material salvaged for milling, &c. Ample regeneration will occur within a short time and thrive on the exposed forest floor. Owing to the heavy deer population in this locality the whole managed area is being protected by a deer-proof fence. Typifying the deer damage, which must be prevented, there is one thirty-year-old clearing in this forest in which the beech regeneration instead of now averaging 5 in. DB.H. and 35 ft. high, consists merely of 6 in. high plants with stems up to ½ in. in diameter as a result of continual browsing by deer. Withal, the operation is an economic one as measured by a net forest revenue after selling the produce and paying for all silvicultural and protective measures.

8. *Kauri and Rimu Management.*—In contrast, though it is entirely practicable to restore some of the kauri forests of North Auckland by suitable treatment of the advance growth already existing, only in rare instances will there be sufficient revenue from