

protecting the sitting hen with suitable fences, of course." Mr. Smith explained that research was being done into the seeding and renewal habits of many of our important native trees—it is known that the beeches, especially the Silver or Southland and the Red beeches, are satisfactory regenerators, the totara and kauri are fair, but the rimu is very unsatisfactory and very puzzling in its habits. One of the most depressing facts for a New Zealand forester to face is this: there is no indigenous tree of commercial value that will sprout from a stump or reproduce from a cutting. Private gardeners may achieve isolated successes with a few of our trees, but it cannot be done on a commercial scale. Therefore the trees must be good seed bearers before artificial reproduction by either the sitting hen or the incubator method is possible. Just one more complication, among many: certain native trees—totara, matai, kahikatea—bear female flowers on one tree, male flowers on another; if the forester by unlucky chance thins all the females or all the males from any particular stand, that stand is doomed to stagnation. The forester has the choice of marking all the trees in the flowering season or cutting them on an Eena-Deena-Dina-MOW system.

### Conservation is Twofold

"The whole of our work is conservation," Mr. Smith said. "There are two main divisions—afforestation and management. Afforestation is the setting down of new forests, largely exotics; and management is the maintenance of existing forests, the introduced and the indigenous, and their harvesting without destruction. The big problem is to weld the two divisions together into the whole called conservation."

"If this means maintaining the tree population, wouldn't it help if farmers and others planted more trees?"

Mr. Smith sighed. "That is a very big question; it has lately been recommended by the Soil Conservation Council that 3 per cent. of every farm should be planted in trees for shelter and other farm uses. That's 18 acres of trees on a 600-acre farm; it doesn't sound much when you say it quickly; but it means 18,000 trees to be planted by someone; it means 18,000 seedlings to be nursed by someone; and it means hundreds of times 18,000 seedlings if we are to consider hundreds of farms and not just one. In addition it means fencing, the right kind of fencing—rabbit-proof for five years, stock-proof all the time. And after all the work is done it will not be forestry—it will be paddocks of trees. I have no objection to trees in paddocks, just as I have no objection to rhododendrons in a private garden; but paddocks of trees are not forestry; trees in the farmyard, with old bits of iron and wire and implements hanging from them, are not parks; and an apple tree in the back garden is not an orchard. Trees in paddocks for sentimental or aesthetic reasons, yes, or even to provide shelter and wood for fence posts and so on; but not with the idea that they contribute much to the scientific work of conservation."

"But you would not condemn such varied and exotic woods as the early



*HELPING NATURE: A natural second-growth beech forest with seedpaths cleared on the fern covered floor to aid seed germination*

settlers put in for shelter or for appearance, or such a reserve as Deans Bush in Christchurch?" the sentimentalist from Canterbury asked.

"No, I would not condemn them, but I would not repeat them. And I would not regard them as economically sound, any more than I would regard a mixed flock of Romneys and Leicesters, and Corriedales and Southdowns and Merinos as economically sound. As for Deans Bush the question is simply 'will you shoot the old horse or turn him out to grass?' For the old horse is quite surely going to die. The forester,

the scientist interested in conservation, sees the land and its population—plant, bird, animal and human population—working together in a harmony. You cannot have that harmony if you leave a body of plant life in a prehistoric state while everything round it changes. Take Deans Bush—an indigenous forest surrounded by modern houses, concrete drains, and vegetable patches fortified with artificial manures; civilisation is killing it slowly but surely."

Mr. Smith has been watching New Zealand forests for 30 years as a forester; he has seen them recede before

fire and axe and plough and bulldozer and rabbit and goat and brumby; and he has seen them grow again according to careful plan and with the protection of scientific treatment, strong fences, and thousands of FIRES PROHIBITED notices.

"We are dealing with a slow crop, quite unlike wheat; our cycle is a 20-year or a 50-year or even 100-year cycle; but our harvest is there, slow and steady and perpetual—as long as we treat it with the respect and good sense it demands."