He concluded that the number of birds were the same in summer as in winter, but that there were considerable decreases during early spring and autumn. The population also varied from week to week during the winter, but was constant during the summer. H. E. Norton publishes a commendable study of the territorial life of the blackbird—a long paper accompanied by six maps. He also presents the bird records for September 1949–July 1953. The bird-ringing report is made by J. A. L. Myres. Interest in birds is also enhanced in this report by a short account of the birds of Australia by J. E. Mollison.

A record of butterflies and moths around Winchester during 1950–53 is given by P. O'B. Harris. W. H. Dowdeswell describes the numerous visits made to Fisher's Pond, a pond which is proving ideal for the study of freshwater life. Molluscs, arthropods and birds were the main subjects of investigation. Another long paper is contributed by R. G. Borneman, writing on the movements and changes in a freshwater plankton community. This is accompanied by two figures and a table of results. Botanical activities are recorded by J. B. Poynton.

During the season reported about forty lectures and film exhibitions were arranged.

This report is one of several which reveal the active interest shown in some schools in field natural history where young students are able to make first-hand studies in ecology, taxonomy, behaviour, etc. Winchester College, with some of our more enthusiastic schools, is leading the way in a fuller appreciation of the true import and value of biological studies.

FORESTRY IN NEW ZEALAND

THE critical position of the indigenous forests of New Zealand has been known for some years and discussed in the annual reports of the Director of Forestry, New Zealand Forest Service. The annual report for the year April 1952–March 1953 (pp. 80. Wellington: New Zealand Forest Service, 1953) deals at some length in its opening pages with this question in its relation to the large area of exotic softwood coniferous forests now existing in the Islands. The position appears to be whether to sanction cutting out in a comparatively few years the remaining existing indigenous forest to maintain the saw-mill industry and industries dependent on indigenous timber and other vested interests, or to reduce the cut so as to maintain a portion at least of the natural forest of the Islands. The Forest Service correctly advocates the latter policy; but there appears to be a considerable body of public opinion against it.

New Zealand is not the only country in the world faced with this question in varying aspects, not excluding Great Britain. The time would appear to be approaching, if indeed it has not been already reached, when the world as a whole will have to make up its mind so far as forestry is concerned (which, in fact, is Nature herself) whether the forest soils of any country capable of maintaining its indigenous forest and species of trees should not rigidly be confined to this purpose; fast-growing exotics showing quick financial returns would then only be used when obviously useful or to fill a temporary gap in supplies, due to past mismanagement by man of the natural forests.

In New Zealand, as the report says, "The exotic forests were established to conserve the indigenous forests; therefore it is putting the cart before the horse to suggest that the Forest Service is seeking a ready sale for exotics by curtailing the cutting of native timber. It would be more correct to say that the production of exotics has been expanded in order to make it possible to reduce the sale of indigenous timber. . . . Experience has shown in foreign countries . . . that exotic species have definite limitations and for this reason the national policy must envisage the management of the indigenous forest to secure their maximum favourable production of timber". To this might have been added their management by the Forest Service in perpetuity, since there can be no question that this is the correct forest and economic policy for the indigenous forests.

E. P. STEBBING

NEW OBSERVATIONS ON THE CHEMISTRY OF N-CARBOXY-ALPHA-AMINO-ACID ANHYDRIDES

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THE polymerization of N-carboxy-α-amino-acid anhydrides initiated by primary and secondary bases has been studied in some detail, and the main features of the chemistry of the reactions occurring are fairly well understood[1]. In these cases the main products are linear polypeptides. When primary or secondary base initiation has not been used, other products have occasionally been observed, including cyclic peptides and substituted derivatives of hydantoin 3-acetic acid[2,3]. The exact experimental conditions favouring the formation of these substances are not established in the literature, and no detailed mechanism of the reactions has been put forward. We have recently investigated the behaviour of a number of N-carboxy-α-amino-acid anhydrides in highly polar organic media, and have observed some interesting phenomena which lead to a clearer understanding of the general chemistry of these compounds. Our main observations, on the effects produced by the addition of inorganic salts and tertiary bases, are summarized here.

Catalysis by Inorganic Salts

Many N-carboxy-α-amino-acid anhydrides are stable, or react only slowly when dissolved in highly polar organic liquids such as NN-dimethylformamide or NN-dimethylacetamide. Addition of a soluble anhydrous inorganic salt, however, has been found to produce a rapid reaction. Fig. 1 shows typical results with glycine, C-phenyl glycine and DL-phenylalanine N-carbonic anhydrides in NN-dimethylformamide. In the case of C-phenyl glycine N-carbonic anhydride there was no detectable reaction before the addition of lithium chloride; after addition, rapid evolution of carbon dioxide occurred. Glycine and DL-phenylalanine N-carbonic anhydrides gave