DEVELOPMENT OF THE TRUST'S PROGRAMME OF SCIENTIFIC RESEARCH

By G. V. T. Matthews

WHILE all aspects of the biology of the Anatidae come within our purview, those having a bearing on the conservation of the group have always had priority. It is very satisfactory to report that the Nature Conservancy have shown their recognition of the value of the work being done by making increasingly substantial grants towards the cost of the programme. These will not only enable lines of research already in being to be continued at an increasing tempo, but allow new lines to be developed. Thus we have embarked on an investigation of the use of aerial survey methods under British conditions and an investigation of the food preferences of wildfowl and allied problems.

The basic work of measuring the size and fluctuations of wildfowl populations both by ringing research and by the Wildfowl Counts continues and is reported on elsewhere in this issue. Attention is being directed to the evaluation of wildfowl habitat and its distribution in this country. Our reports will enable the Nature Conservancy to plan a system of wildfowl refuges which do not overlap in function and yet will be sufficient to ensure the maintenance of adequate stocks of birds. The techniques for the management of such refuges are being studied and methods whereby the competing requirements of wildfowl and agriculture can be reconciled are being worked out.

We are very ignorant about the incidence and importance of diseases and parasites in wild birds. A generous grant by the Nuffield Foundation has made it possible for us to recruit to the staff Dr G. Lapage, formerly Lecturer in Animal Pathology at Cambridge University. He is carrying out a general survey of the parasites of the Anatidae, and making particular researches into blood parasites. Dr Lapage is based at Cambridge where he is working in close association with Mr A. R. Jennings and Dr E. J. L. Soulsby of the Department of Animal Pathology who very kindly undertake respectively the post-mortem examinations for the Trust and identification of the worm-parasites. Continuation of the Bristol, Clifton and West of England Zoological Society's Scholarship at the University of Bristol has enabled Mr J. V. Beer to proceed with his study of the fungus disease Aspergillosis while working for a Ph.D. at that University. In addition to financing this scholarship the Bristol, Clifton and West of England Zoological Society has made a generous contribution towards salary charges in the programme.

An increasing number of workers in other scientific institutions are being provided with specimens and material for their particular researches. Professor C. Tyler of Reading University is investigating the structure of egg shells and their pores; Dr H. Lehman of St. Bartholomew's Hospital is working on the haemoglobins of the blood; Dr J. G. Harrison is making a study of the relation between skull pneumaticity and mode of life; preparations of tracheae are being made for Professor J. van Tyne and Dr P. S. Humfrey, University of Michigan, for their monographic study of this important organ; complete skeletons are sent to Dr G. Kramer, Max-Planck Institut, Wilhelmshaven, for

his studies of the mechanics of the wing and leg bones. At the Trust itself a representative collection is being built up which will be especially strong in skins of downy young. All this anatomical material, it might be mentioned, is only gathered as it becomes available through natural causes.

The gratitude of the Trust, it will have been seen, is increasingly due to financial support from outside bodies, the Nature Conservancy, the Nuffield Foundation and the Bristol, Clifton and West of England Zoological Society, and to the facilities afforded by Bristol University. But it must be emphasised that the Trust continues to bear more than half the cost of the research programme and that outside support is essentially on a *quid pro quo* basis. Continued support both indirectly by subscription and directly through the Duck Adoption scheme is thus very essential if the good work is to be maintained.

HOW TO MAKE AND USE DUCK TRAPS

By Major-General C. B. Wainwright, C.B.

Traps

I have proved two main types of trap: (i) 15 feet or 12 feet square, 6 feet high, with three funnels, and (ii) 6 feet square, 4 feet high, with one funnel. The designs of the traps are illustrated in Figures 1 and 2.

If the water level is constant so that the traps do not have to be moved, the four corner posts and the posts on each side of the funnels and the door can be driven into the ground, and no ground frame is required. As after a time the bottom will be lowered by constant trampling a moveable trap is best.

If the trap has to be moved a ground frame of 2 inch by 2 inch timber, on to which the vertical posts are bolted, must be used. The side members should be extended 1 foot at each end to act as skids. On large traps the front and back members should be extended about 8 inches at each side so that a rope can be looped round them for pulling.

Funnels

The outside is square and the top horizontal, the sides tapering to a point. The front funnel on the 12 feet trap is 3 feet $\times$ 3 feet and extends 4 feet into the traps. The side funnels are 2 feet $\times$ 2 feet and extend 3 feet 9 inches into the trap. On the 15-feet trap, the side funnels are 3 feet $\times$ 3 feet. The tapered end of the funnel is cut as shown in Figure 3, the top of the opening 6–9 inches above the water level.

Skirt

Ducks will splash away the mud and get out under the sides of a trap unless there is a skirt. A strip of wire netting 2 feet wide is attached to the side and lies flat on the ground inside the trap all the way round. In the smaller traps 1 foot on the sides is sufficient, but 2 feet is best at the front and where one steps on entering the door. A skirt is necessary in a stationary trap, although it may be trodden into the mud. The bottom of the sides of the funnels should be laced on to the skirt.

Escape Door

It is essential to have a door reaching ground level which should be left open if the trap is not going to be visited for over 24 hours, so that small birds (or ducklings) can get out; otherwise they will die. It is quite useless simply to