Plasmodium	*Raillietina*	*Trichobilharzia*
Polymorphus	*Schistogonimus*	*Trichostrongylus*
Prosthogoniumus	*Strigea*	*Typhlocoelum*
Pseudamidostomum	*Syngamus*	*Tyzzeria*
Pseudobilharziella	*Tetrameres*	*Zygocotyle*

Examination of Blood Smears from Pink-footed Geese

In October 1956 some 200 blood smears from Pink-footed geese caught by rocket-nets in northern Britain were sent to me for examination. Glassware, stains and reagents for dealing with these were supplied by the Cambridge School of Veterinary Medicine, through Dr Morgan, Lecturer in Veterinary Parasitology. The parasites to be looked for in these films are *Plasmodium* and *Haemoproteus* in the red blood cells, *Leucocytozoon* in the white blood cells and microfilarial larvae in the plasma. All of these should be readily seen. So far, however, no parasites at all have been found in these films. Each film is being examined for about ten minutes with an oil immersion lens. Using this method, Levine and Hanson (1953, *J. Wildlife Management*, **17**, 185) found in the blood smears of 353 Canada Geese, *Leucocytozoon simondi* in 31 (9·1%), *Haemoproteus* sp. in 5, *Plasmodium* sp. in 1 and microfilariae in 4.

It is therefore not to be expected that many of the films from the Pinkfooted Geese will show parasites, especially as only one film was taken from each bird. The incidence of these parasites in their blood is conditioned by the birds' contact with the vectors of the parasites: mosquitoes for Plasmodium and blackflies (Simuliidae) for the others. There is little information about the time during which these parasites persist in the blood. Examination of a further batch of films taken in 1957 is now proceeding.

VISCERAL PARASITES IN WILDFOWL

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DURING the 1956–57 season 46 viscera were examined in order to ascertain the type and degree of parasitism which occurs under natural conditions. Ten species of wildfowl were represented in the samples, the distribution being as follows: Shoveler 3, Mallard 3, Teal 15, Wigeon 12, Greylag Goose 1, Velvet Scoter 3, Common Scoter 4, Goldeneye 1, Shelduck 3, Tufted Duck 1. With the exception of three viscera which were sent by Mr J. L. Hirst of Morecambe, the rest were sent by the Kent Wildfowlers' Association. The author is extremely grateful to the gentlemen concerned who have helped with this survey.

Parasites found

Nematodes (Roundworms):

Amidostomum anseris
Tetrameres fissispina
Echinuria horrida

Acanthocephala (Thorny-headed worms):
Polymorphus minutus
Trematodes (Flukes):
Catatropis verrucosa
Psilochasmus oxyrus
Echinostoma revolutum
Cotylurus cornuatus
Paramonostomum alveatum
Maritrema subdolum
Himasthla elongata
Hyptiasmus arcuatus
Cestodes (Tapeworms):
Paricterotaenia borealis
Hymenolepis gracilis
Echinocotyle rosseteri
Hymenolepis sp.

Observations on the parasites found

Amidostomum anseris is a very common parasite of ducks and geese. It was found in a Greylag Goose and in two Common Scoters. It affects the gizzard and causes marked erosions. It also occurs in domestic ducks and geese, sometimes causing severe disease.

Tetrameres fissispina was previously thought to be uncommon in this country but was found in Scoters and a Teal. It may cause serious damage to the proventriculus.

Polymorphus minutus was found in extremely large numbers in Common Scoters and in a Velvet Scoter. Despite gross infection the birds appeared to be healthy.

Paramonostomum alveatum and *Maritrema subdolum* were found in extremely large numbers in a Shelduck which was found dead and also suffered from gross tuberculosis. In addition, this bird had a massive infection with *Hymenolepis gracilis*.

Paricterotaenia borealis and *Echinostoma revolutum* were found in large numbers in a Shelduck and a Tufted Duck respectively.

Other parasites were found in small numbers only.

The purposes of this survey are twofold: firstly, to obtain information regarding the species of parasites which occur in wildfowl in this country. We do not know which are the indigenous parasites and which are introduced by migratory species of wildfowl. Secondly, to obtain information regarding the parasitic burden of apparently healthy wildfowl. We do not know at present what levels of parasitism to expect in the natural state, but it would appear from the few viscera examined so far that generally a low level of parasitism obtains, but apparently heavy burdens can occur with impunity. Nevertheless, such burdens may be of importance in so far that they can be a potential menace to the health of the bird if its food supply is curtailed or if other diseases are acquired.

It is only by an extensive and prolonged survey of the parasite fauna of such birds that the importance of parasitism can become apparent. This must be accompanied by other observations on such things as the food supply, abnormal behaviour in migration or use of feeding grounds, or abnormal plumage, which only the man in the field, the wildfowler or bird-watcher can provide.