

Report of the Honorary Parasitologist for 1946.

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During 1946, the number of specimens of animal faeces examined microscopically and reported upon for detection of Entozoa was 56. Repeat examinations were frequently made, most of which are not included in this number. Concentration methods and washing of samples for worms were usually done. Forty-two mammals, one Python, also were examined, many from collections newly arrived from Africa. In the list of Entozoa and the hosts harbouring them, the popular name of the host is given where it occurs for the first time.

The Entozoa detected are grouped as follows :—

	Entozoa.	Hosts.
Protozoa	Entamoebae	<i>Anthropopithecus troglodytes</i> (Chimpanzee), <i>Cercopithecus aethiops centralis</i> (Uganda Vervet Monkey).
	<i>Dientamoeba fragilis</i>	<i>Anthropopithecus troglodytes</i> .
	<i>Balantidium coli</i>	<i>Phacochoerus aethiopicus</i> (Wart-Hog).
	<i>Isotricha</i> spp.	<i>Cephalophus dorsalis</i> (Bay Duiker).
	<i>Paraisotricha</i> sp., <i>Entodinium</i> spp., <i>Diplodinium</i> spp., <i>Cycloposthium</i> sp.	<i>Equus grevyi</i> (Grevy's Zebra).
	<i>Eimeria</i> sp.	<i>Felis uncia</i> (Snow Leopard).
	<i>Isospora bigeminum</i>	<i>Vulpes vulpes</i> (Common Fox), <i>Melursus ursinus</i> (Sloth Bear).
Cestoda	Embryophores, cf. <i>Hymenolepis</i> <i>diminuta</i> and <i>H. nana</i>	<i>Felis uncia</i> .
	<i>Moniezia</i> sp.	<i>Herpestes nyala</i> (Grey Mongoose).
Trematoda	<i>Amphistomum</i> sp.	<i>Equus grevyi</i> .
	Trematode ova, unidentified	<i>Herpestes nyala</i> .
Nematoda	<i>Ascaris</i> spp.	<i>Herpestes nyala</i> , <i>Melursus ursinus</i> .
	<i>Ascaris suilla</i>	<i>Phacochoerus aethiopicus</i> .
	<i>Ascaris transfuga</i> (probably)	<i>Melursus ursinus</i> .
	<i>Toxocara</i> spp.	<i>Felis pardus</i> (Leopard), <i>Canis familiaris</i> (Husky dog), <i>Canis familiaris dingo</i> (Dingo), <i>Canis aureus</i> (Oriental Jackal), <i>Canis lupus</i> (Timber Wolf), <i>Vulpes vulpes</i> , <i>Chrysocyon brachyurus</i> (Maned Wolf).
	<i>Toxascaris leonina</i>	<i>Felis uncia</i> .
	<i>Pandascaris ailuropoda</i>	<i>Ailuropoda melanoleuca</i> (Giant Panda).
	<i>Ophidascaris</i> sp.	<i>Python molurus</i> (Indian Python).
	Ascarid ova, unidentified	<i>Herpestes nyala</i> .
	<i>Enterobius</i> spp.	<i>Anthropopithecus troglodytes</i> , <i>Cercopithecus fuliginosus</i> (Mangabey), <i>Macaca nemestrina</i> (Pig-tailed Macaque).
	<i>Trichuris</i> spp.	<i>Macaca nemestrina</i> , <i>Rangifer tarandus</i> (Reindeer), <i>Equus caballus</i> (Pony), <i>Rhinoceros bicornis</i> , <i>Melursus ursinus</i> , <i>Vulpes vulpes</i> , <i>Chrysocyon brachyurus</i> , <i>Felis pardus</i> , <i>Aetherurus africana</i> (Porcupine).
	<i>Oxyuris</i> spp.	<i>Equus caballus</i> , <i>Giraffa reticulata</i> (Reticulated Giraffe), <i>Vulpes vulpes</i> .

	Entozoa.	Hosts.
Nematoda ..	<i>Hepaticola</i> sp.	<i>Aetherurus africanus</i> .
	<i>Strongylus</i> spp.	<i>Equus caballus</i> , <i>Giraffa reticulata</i> , <i>Cephalophus dorsalis</i> .
	<i>Strongyloides</i> larvae	<i>Anthropopithecus troglodytes</i> .
	<i>Hyostromylus</i> sp.	<i>Phacochoerus aethiopicus</i> .
	<i>Triodontophorus</i> sp.	<i>Equus grevyi</i> .
	<i>Oesophagostomum</i> sp.	<i>Macaca nemestrina</i> .
	<i>Ancylostoma</i> spp.	<i>Anthropopithecus troglodytes</i> , <i>Felis</i> <i>pardus</i> , <i>Felis uncia</i> , <i>Chrysocyon</i> <i>brachyurus</i> .
	<i>Necator</i> sp.	<i>Anthropopithecus troglodytes</i> .
	Strongyloid ova, not classified	<i>Macaca nemestrina</i> , <i>Rangifer</i> <i>tarandus</i> , <i>Aetherurus africana</i> , <i>Rhinoceros bicornis</i> .
	Strongyloid larvae	<i>Rangifer tarandus</i> .

Faeces of the following animals were examined and found free from Entozoa:—*Erythrocebus patas* (Patas Monkey), *Papio papio* (Baboon), *Canis latrans* (Coyote), *Canis lupus* (Timber Wolf), Litter of 3 Husky pups, 1 *Ursus tibetanus* (Himalayan Bear), *Felis serval* (Serval), *Felis pardalis* (Ocelot) and 1 leopard cub.

Multiple infections with Entozoa were usual. The Entozoa observed in some cases were commensal rather than parasitic. This was particularly the case with the cellulose-digesting Ciliata found in the duiker and zebra. While very large numbers of these organisms were present in the faeces of the hosts immediately after their arrival, it was found that they decreased rapidly in numbers until the ciliate population reached a stationary level. As usual, the parasite load of newly arrived animals fell rapidly after a short stay in the Menagerie.

Variation in parasite load and species of parasite present in different members of the same host-species was observed, this being especially noticeable among the chimpanzees and leopards.

The presence of numerous parasites did not appear always to be detrimental to the host. Thus, of two Himalayan bears one was free from Entozoa but soon died, while the other with a fairly heavy load of parasites survived and flourished and is now a fine specimen.

The occurrence of relatively heavy loads of "hookworms" (*Ancylostoma* spp., *Necator* sp.) in chimpanzees, leopards, the snow leopard and maned wolf was not only interesting but of economic importance. As hookworm infection is contracted through the skin from the inburrowing of larvae in the soil or other surface of contact, and larval development needs warmth, the presence of hookworm in chimpanzees and leopards is understandable. But the method of infection of this new maned wolf and of a previous one (see Proc. Zool. Soc. Lond., 115, 385-6), living in cold and difficultly accessible habitats, is not easy to explain.

During 1946, post-mortems were performed on various fish that had died in the Aquarium; and in some cases, deaths were due to parasitic infections. Also, during the year, a number of vials of Entozoa have been received from the Prosectorium. This material is now being examined and it is hoped that separate reports on it and also work on fish diseases will be presented later.

Finally, may I express my keen appreciation of the interest and cooperation I have received from both the Scientific and the Menagerie Staff during the year,