

**Department of biology**

**((Parasites))**

**2 stage**

**Lab 1**

**By**

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**Parasitic worms**

Parasitic worms, also known as helminths, are a polyphyletic group of large macroparasites; adults can generally be seen with the naked eye. Many are intestinal worms that are soil-transmitted and infect the gastrointestinal tract. Other parasitic worms such as schistosomes reside in blood vessels.

Some parasitic worms, including leeches and monogeneans, are ectoparasites – thus, they are not classified as helminths, which are endoparasites.

Parasitic worms live in and feed in living hosts. They receive nourishment and protection while disrupting their hosts' ability to absorb nutrients. This can cause weakness and disease in the host, and poses a global health and economic problem. Parasitic worms cannot reproduce entirely within their host's body; they have a life cycle that includes some stages that need to take place outside of the host Helminths are able to survive in their mammalian hosts for many years due to their ability to manipulate the host's immune response by secreting immunomodulatory products. All parasitic worms produce eggs during reproduction. These eggs have a strong shell that protects them against a range of environmental conditions. The eggs can therefore survive in the environment for many months or years.

Many of the worms referred to as helminths are intestinal parasites. An infection by a helminth is known as helminthiasis, helminth infection, or intestinal worm infection. There is a naming convention which applies to all helminths: the ending "-asis" (or in veterinary science: "-osis") is added at the end of the name of the worm to denote the infection with that particular worm.[citation needed] For example, Ascaris is the name of a type of helminth, and ascariasis is the name of the infection caused by that helminth

Lifre cycle of worm parasite

Roundworms typically have five developmental stages, namely, the first stage larvae (L1), the second stage larvae (L2), the third stage 'infective larvae' (L3), the pre-adult or fourth stage larvae (L4) and the adult stage. In most cases, the third stage infects the definitive host, and the later stages are parasitic.

The worm life cycle describes the developmental changes worms undergo to produce the next generation of worms and to spread infection to new hosts, or re-infect the same hosts. Adult and immature life stages are involved.

Animals that harbour the adult and pre-adult life stages of worms are called the definitive or final hosts, whereas animals (including insects or snails) harbouring immature life stages are known as the intermediate hosts.

Worm life cycles that involve only a definitive host are said to be ‘direct’ life cycles whereas those that use an intermediate host in addition to the definitive host, are said to be ‘indirect’ life cycles.

• In a direct life cycle, infection is spread to new hosts by life stages that live on pasture in a non-parasitic (‘free living’) life stage that, after a period of development, is ingested by the grazing animal.

• Indirect life cycles have immature life stages parasitic in other hosts, but the spread of infection to new hosts may require non-parasitic life forms out in the environment, or predation.

Cattle and other animals can be both the definitive hosts for roundworms, tapeworms and fluke, and intermediate hosts for some larval tapeworms. Roundworms of the digestive tract usually have direct life cycles whereas tapeworms and flukes have indirect life cycles.

