



Ascaridoidea

Practical parasitology

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General Characteristics

- 1- The ascarids are large nematodes that usually live in the small intestine.
- 2-All ascarids have three lips around the mouth opening and have no buccal capsule.
- 3-Species occurring in cats and dogs have prominent cervical alae.
- 4-Eggs are thick-shelled and unsegmented when passed.
- 5-They embryonate in feces or fecally contaminated soil.
- 6-Infection is by ingestion of the embryonated egg, by ingestion of a larva in a paratenic host, or by vertical transmission (in utero or via the milk).
- 8-Vertical transmission is particularly important among the ascarids of dogs (prenatal) and cats (transmammary).

1- *Ascaris lumbricoides*

A common “round worm of man”, is the largest of the intestinal nematodes parasitizing humans and the most common worm found in human. A worldwide in distribution and most prevalent throughout the tropics, sub-tropics and more prevalent in the countryside than in the city.

Morphology

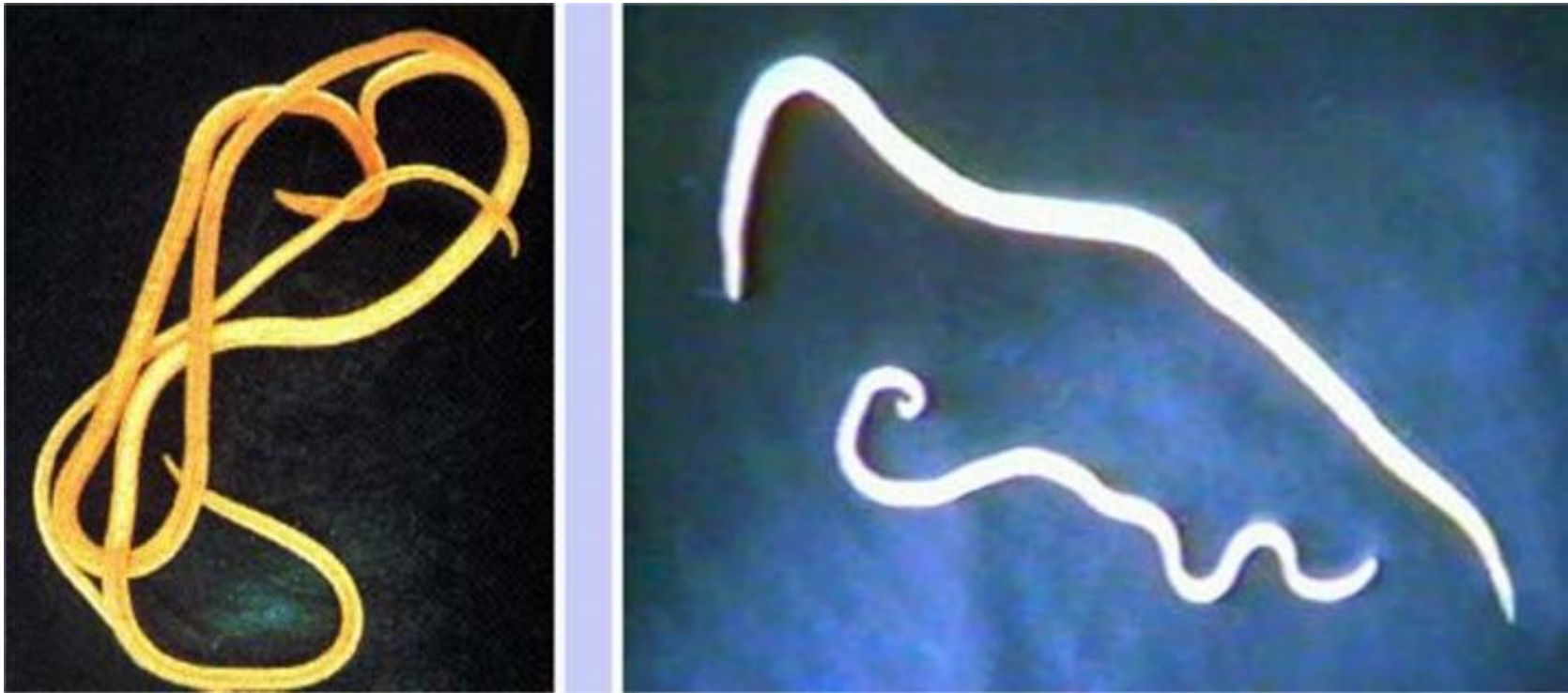
Adult:

The adults are cylindrical in shape, creamy-white or pinkish in color. The female averages 20-35cm in length, the largest 49 cm. The male is smaller, averaging 15- 31 cm in length and distinctly more slender than the female.

The typical curled tail with a pair sickle like copulatory spines.

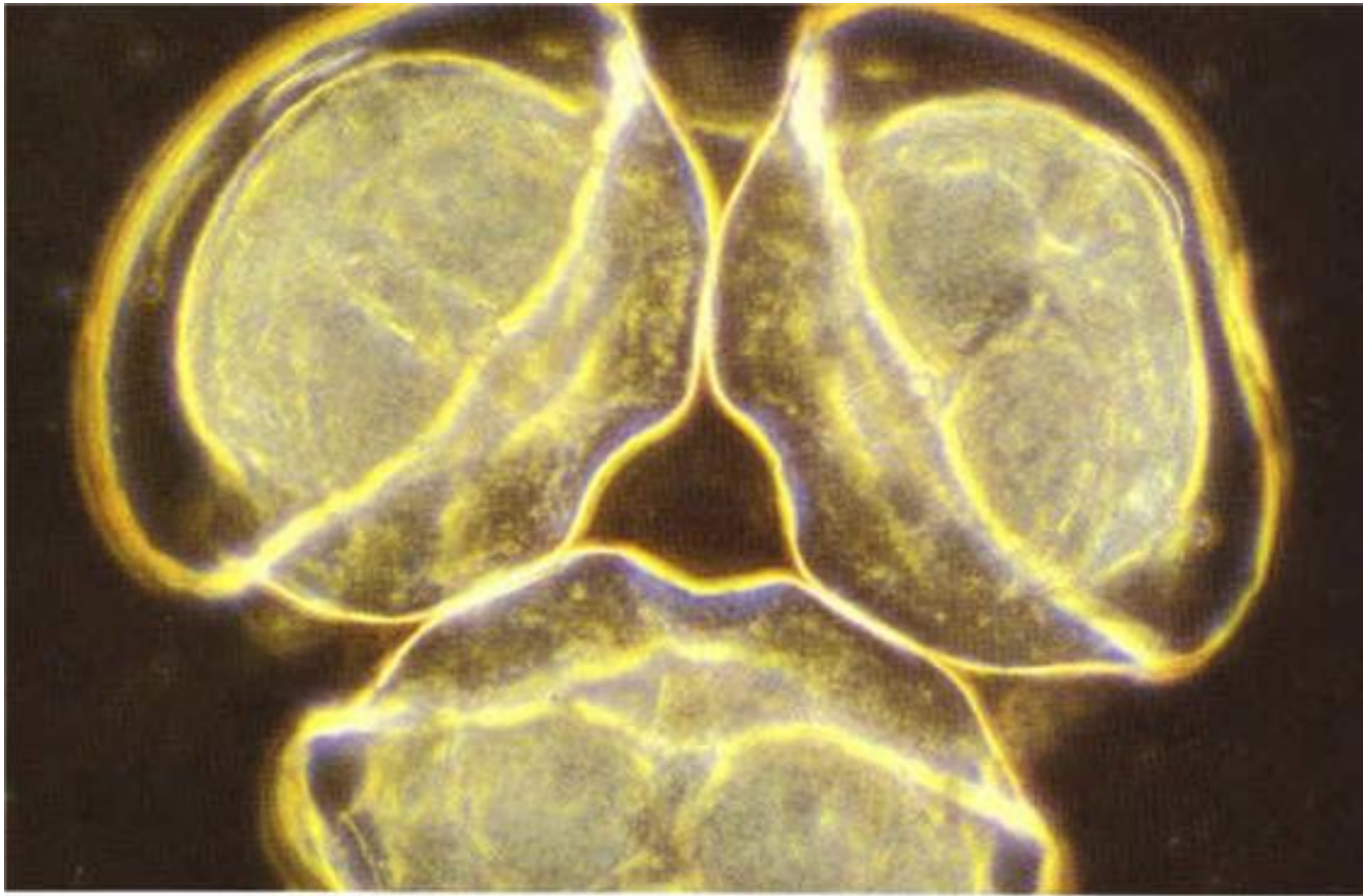
On the tip of the head there are three lips, arranged as a Chinese word “品”. They have a complete digestive tract.

Reproductive organs are tubular. male has a single reproductive tubule. The female has two reproductive tubules and the vulva is ventrally located at the posterior part of the anterior 1/3 of the body.



Adult worm of *A. lumbricoides*

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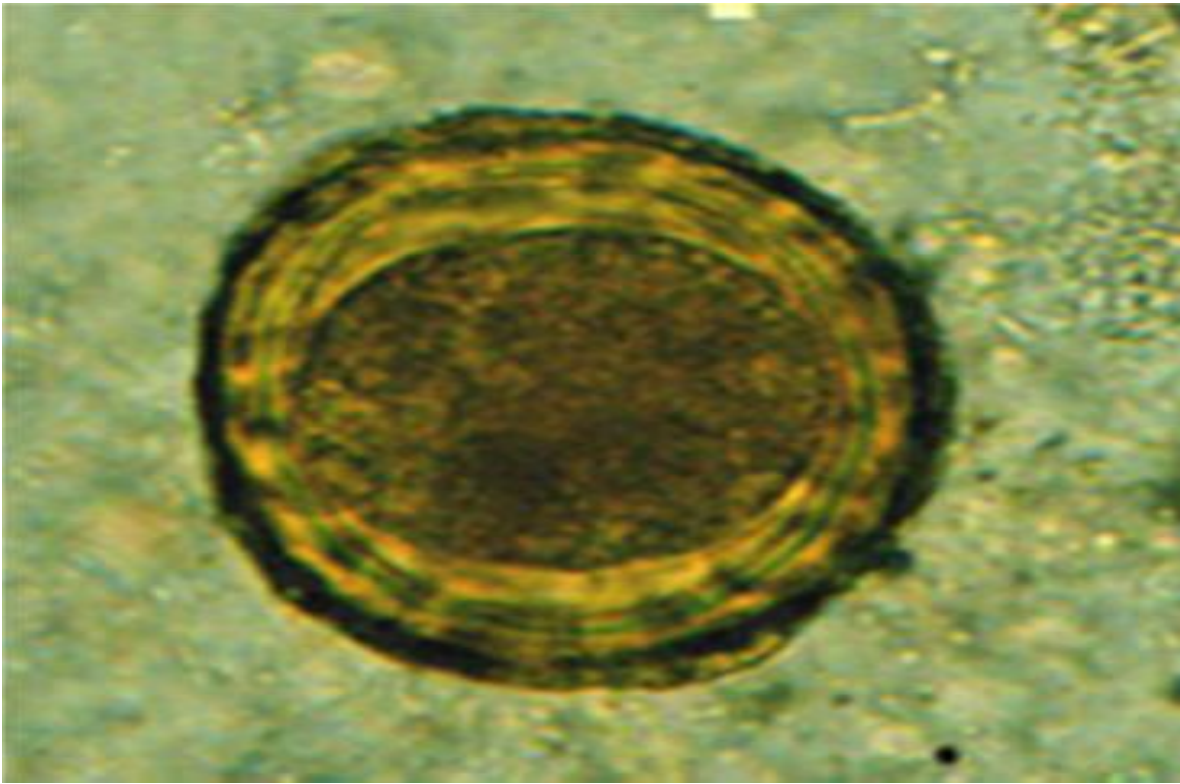


The three lips are seen at the anterior end. The margin of each lip is lined with minute teeth which are not visible at this magnification.

Egg:

There are three kinds of the eggs; fertilized eggs, unfertilized eggs and decorticated eggs. We usually describe an egg in 5 aspects: size, color, shape, shell and content.

- 1. Fertilized eggs:** broad oval in shape, brown in color, an average size $60 \times 45 \mu\text{m}$. The shell is thicker and consists of ascaroside, chitinous layer, fertilizing membrane and mammillated albuminous coat stained brown by bile. The content is a fertilized ovum. There is a new-moon(crescent) shaped clear space at the each end inside the shell.
- 2. Unfertilized egg:** Longer and slender than a fertilized egg. The chitinous layer and albuminous coat are thinner than those of the fertilized eggs without ascaroside and fertilizing membrane. The content is made of many refractable granules various in size.



A fertilized *Ascaris* egg, still at the unicellular stage, as they are when passed in stool.

3. Decorticated eggs: Both fertilized and unfertilized eggs sometimes may lack their outer albuminous coats and are colorless.



The chitinous layer and albuminous coat are thinner than those of the fertilized eggs without ascaroside and fertilizing membrane. The content is made of many refractile granules various in size.

2-Parascaris equorum



- 1-The parasite habitant in small intestine in horses.
- 2-Females longer than males.
- 3- It has 3 main lips and 3 small lips in middle.
- 4- The tail of male has lateral alae.
- 5- The worm has large head and white to creamy.
- 6- Vulva located in the end of first quarter of length of body.
- 7- Eggs semi spherical and it has external pitted rough sheath .



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Thank You