

LECTURERS IN VETERINARY PARASITOLOGY

INTRODUCTION, NEMATODA AND SYSTEMIC PLATYHELMINTHES

THIRD YEAR STAGE

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PROF. DR. GHAZI Y. AL-EMARAH

PROF. DR. SUZAN A. AL-AZIZZ

PARASITOLOGIST

Department of Veterinary Microbiology and Parasitology

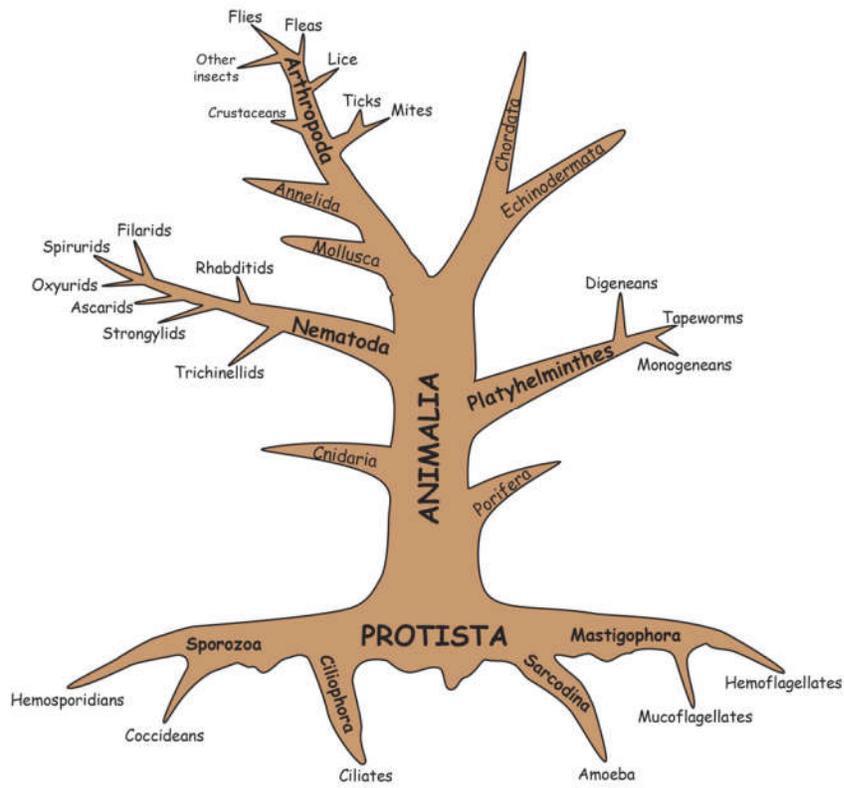
College of Veterinary Medicine

University of Basrah

CHAPTER THREE

SYSTEMATIC PLATYHELMINTHES

NC STATE UNIVERSITY



Ornithobilharzia turkestanicum

Orientobilharzia spp. is a Schistosomes infection that cause Orientobilharziasis disease in a large number of animals including goats, sheep, cattle and other mammals and they live in the portal or intestinal veins of the infected animals with causing emaciation, anemia and diarrhea, with incidence extraction of blood and mucosal material in the host feces, and infection may lead to acyesis or abortion in females and reduce the possibility of growth in young with wide spread in many countries at the world including Russia, Mongolia, Turkey, India, Iran, China and Iraq.



Fig. (33): Oral and ventral sucker of male *Ornithobilharzia turkestanicum*, by: Ismael W. Ismael amd Prof. Dr. Suzan Al-Azizz and Assist. Prof. Dr. Hana N. Abdullah

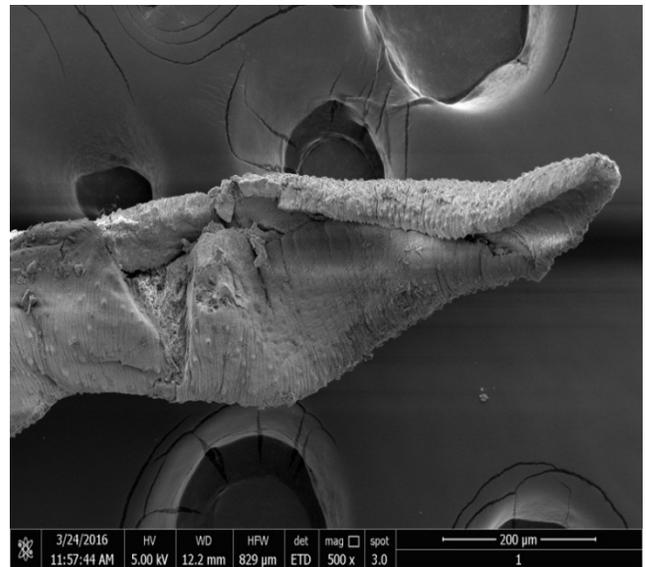


Fig. (34): Gynecophoric canal of male *Ornithobilharzia turkestanicum*, by: Ismael W. Ismael amd Prof. Dr. Suzan Al-Azizz and Assist. Prof. Dr. Hana N. Abdullah

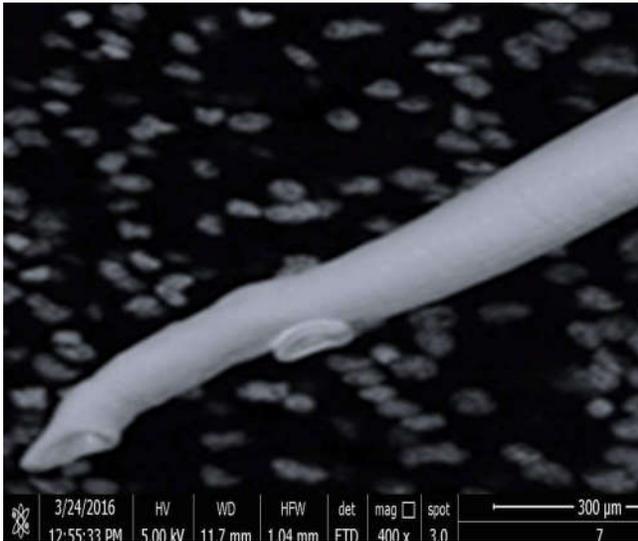


Fig. (35): Adult female of *Ornithobilharzia turkestanicum*, by: Ismael W. Ismael and Prof. Dr. Suzan Al-Azizz and Assist. Prof. Dr. Hana N. Abdullah

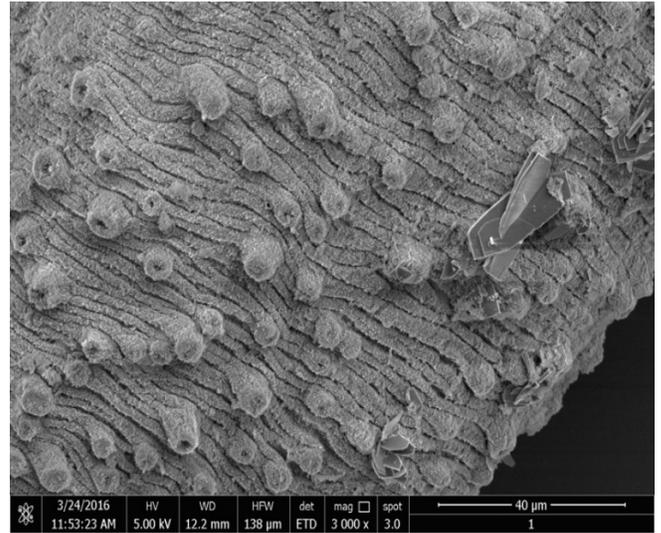


Fig. (36): Spiny tegument of *Ornithobilharzia turkestanicum*, by: Ismael W. Ismael and Prof. Dr. Suzan Al-Azizz and Assist. Prof. Dr. Hana N. Abdullah

Schistosoma cercarial dermatitis or swimmers itch

Schistosoma of animals or birds other than man (usually rodents and birds) try to penetrate the skin of man, they cannot establish themselves in the blood vascular system of man causing sores in different part of their body and the causing called swimmer's itch or diggers itch, where cercaria penetrate skin, die, Often cause a dermatitis which can be severe and in some cases life threatening and cause type of inflammation and allergic reaction in abnormal hosts with few days later it's disappear.



Fig. (37): swimmers itch

QUESTIONS:

Q1: Put True or Fools with Correct the Wrong.

- 1- Nematodes Are free- living or parasitic , segmented worm.
- 2- Ascarodidae Mouth surrounded by two lips.
- 3- The life cycle of *T. canis* is complex and according to the age of the host may involve.
- 4-in *Ascaridia galli* the male tail has small alae and bears six pairs of papillae .
- 5-*Heterakis gallinarum* it has -per-cloacal sucker and twelve pairs of papillae.

6- *Subulura bramptoni* life cycle is direct.

7-The chief feature of oxyuriasis in equines is the anal pruritus produced by the egg-laying females.

8- -the buccal capsule of *Strongylus vulgaris* is oval and contains two y-shaped dorsal teeth at the base .

9-In Ancylostomatoidea - The buccal capsule bears on its ventral margin 1-8 pairs of teeth.

10- at *Ancylostoma caninum* worms suck blood due to poor source of iron in blood and milk .

11- Cutaneous larva migrans -occurs in man and other hosts and is caused by the larvae of nematodes which enter the lung and migrate in it ,caused papules and inflamed tracks.

12-Haemonchus contortus life cycle In all genera the life cycle is direct without requiring an intermediate host.

13-*Dictyocaulus filaria* -Occurs in the bronchi of cow and some wild ruminants.

14- Nematodes Pharynx; which is usually cylindrical and surrounded by muscular tissue.

15-in *Parascaris equorum* there are two double and three single pairs of postcloacal papillae .

16-in *Toxocara canis* infection hepatic and pulmonary damage not caused by larval migration.

17- in *Ascaridia galli* life cycle The larvae burrow into the wall of the gut after eight days.

18-In *Heterakis gallinarum* life cycle -The ingested eggs hatch in the intestine after 10 hours .

19-The male *Oxyuris equi* has one pin-shape specula which is 120-150Mm long and the tail bears two pairs of papillae.

20- In *Strongylus* spp There is a globoid buccal capsule and dorsal gutter.

21- aneurysms is Extensive irregular inflammatory lesion occur in the media of the affected arteries producing an endarteritis and the formation of thrombi ,the larval stages may be found embedded in the thrombus, specially of (*Strongylus equinus*).

22-*Ancylostoma caninum* -its cosmopolitan in distribution, being common in tropical and sub tropical zones in north Amerce ,Australia and Asia.

23-*Bunostomum* spp -Is a hookworm which occur in the small intestine (ileum and jejunum).

24-*Haemonchus contortus* Adult worms are attached to abomasal mucosa and feed on blood.

25- *Ostertagia* spp, They are found in the abomasum, rarely the intestine, of ruminants, are thin , brown and called brown stomach worms. This genus is the major cause of parasitic gastritis in ruminants .

26- In *Dictyocaulus filaria* -The spicules are stout , dark –brown, boot –shaped .

27- Nematode is not separated sex.

28- in *Parascaris equorum* life cycle The larva has one ecdyses occur before eggs hatch to third stage larva.

29- Visceral larva migrans This condition of children is mainly caused by the larvae of *T. canis* ,though the larval stages of *T. leonina* ,*T. cati*, *Capillaria hepatica*(of rodents).

30- in Heterakidea the Oesophagus in three parts (a short pharynx , a cylindrical, middle part and no bulbous posterior part.

31- *Subulura bramptoni* the oesophagus has a small swelling posteriorly ,followed by a deep constriction and then a spherical bulb.

32- *Oxyuris equi* Eggs are laid in clusters on the skin in the intestine .

33- the fresh worms of *strongylus equinus* are dark grey in colour and sometimes the red colour of the blood in the gut can be seen .

34- in *Chabertia ovina* The anterior end is curved slightly ventral and large buccal capsule opens anteroventrally.

35- The pre-infection stages of *Ancylostoma caninum* are resistant to desiccation , so that they are found only in moist surrounding.

36- in *Bunostomum* life cycle Followed skin penetration the larvae pass to the liver where third ecdysis occurs.

37-*Haemonchus contortus* the male being long than the female and has an even reddish colour, and it has white ovaries wind, which turn to be the red intestine, giving the characteristic barber's pole appearance

38- Dictyocalidae-Number of this family occur in respiratory passages of the lung.

39-*Trichstrongylus spp* The adults are small and hair like, slender, pale reddish-brown worms.

Q2: Define the following

Sublura bramptoni, infection stage, direct life cycle, buccal capsule, prenatal infection.

Q3: A: Write the name of the parasite that are characteristic of the following

- 1- It have three main lips.
- 2- Large cervical alae.
- 3- Animals may become pol- bllied.
- 4- A small buccal cavity and pharynx.
- 5- The prepatent period is 24-30 day.
- 6- The esophagus has no posterior bulb.

Q4: Write the name of the parasite that are characteristic of the following

- 1- It have three main lips.
- 2- Large cervical alae.
- 3- Animals may become pol- bllied.
- 4- A small buccal cavity and pharynx.
- 5- The prepatent period is 24-30 day.
- 6- The esophagus has no posterior bulb.

Q5:Put a suitable words in blank

- 1- ----- Separated sex trematoda.

Fasciola gigantica, Schistosoma sp., Metagonimus yokogawii.

- 2- ----- in the life cycle the second intermediate host ants.

Heterophyes heterophyes, Dicrocoelium dendriticum, Ornithobliharizia turkestanicum.

- 3- ----- found at the surface of the host.

Ectoparasites, Endoparasites, Monogenia.

4- ----- Like a coffee beans shape.

Schistosoma haematobium, Clonorchis sinensis, Paragonimus waterman.

5- ----- with prohaptor and opsithaptor.

Cestoda, Digenia, Mongenia.

Q6: Put (True) or (False)

1- The intermediate host of *Dicrocoelium dendriticum* is snail and Ant.

2- *Schistosoma bovis* cause bottle jaw in infected animals.

3- Can recognize animal with *Fasciola sp.* infection immunologically by fecal examination.

4- Any parasitic infection cause eosinophilia.

5- *Metagonimus sp.* could be found in dogs and cats.

Q7: Give the differences between each below

1- Ectoparasites and Endoparasites.

2- Parasitemia and Parasitism.

3- Monogenea and Digenia.

5- Epizootic and Epidemic.

Q8: Fill in the blank with suitable word

- 1- The Swedish scientist ----- (1707-1778) developed the binomial system of nomenclature that is still in use today.
- 2- Parasitology is a type of -----.
- 3- Indirect transmission The animal ingests -----.
- 4- Epidemic -----.
- 5- ----- Example of High reproductive potential.
- 6- Trematoda is ----- symmetrical; ----- flattened.
- 7- ----- normally ectoparasites on aquatic vertebrates.
- 8- ----- Ciliated larval stage found outside the snail.
- 9- The cat passed several active proglottids of the flea tapeworm, *Dipylidium caninum*-----
-----.

Q9: Give the differences between Monogenea and digenia by attach organs.

Q10: Put (True) or (False) with correct the wrong one

- 1- The circulatory system in Trematoda was open.
- 2- The attach organs in Trematoda was suckers.
- 3- *Metagonimus sp.* found in the blood of their hosts.
- 4- *Paramphistomum cervi* a ruminant flashy worms.

5- *Dicrocoelium dendriticum* with high pathogenic because of their life cycle and high ova production.

Q11: Talk in details with draw the life cycle about TWO below.

1- *Dicrocoelium dendriticum* , 2- *Heterophyes heterophyes*,

3- *Paragonimus westermani*

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