

Project
Report of
Zoology

Topic :- Life cycle of *Taenia solium*.

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CERTIFICATE

This is to certify that the project report entitled, 'Local Reef' submitted for Bachelor of Science, degree course in Zoology to fulfil the curriculum under Birlaagarh University by ~~Sahana~~ ~~Saikia~~ Roll No: 70 under my supervision and guidance I found her sincerely doing the entire period of her experiment. I wish her bright future.

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ACKNOWLEDGEMENT

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Metali Chalia as well as our promoted who gave us the opportunity to make this project on the topic "Life cycle of Taenia Solium", which helped me in doing a lot of research and I came to know about many new things so I am very thank full to them.

Secondly, I would like to thank my parents and friends who helped me in making this project with a limited frame of time

Jahnvi Sarda

Method and Materials :-

The study methods are one of the most important parts used to judge the overall quality of the paper.

In addition the methods section should give readers enough information so that can repeat enough information so that they can repeat the experiments.

I have followed direction from books and other research study, still and references.

Materials I used in making this project are internet, some books and articles.

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Introduction :- *Tricinellosis* are important zoonotic disease caused by *Tricinea saginata* and *Tricinea velum*. They are found in intestine of human host. They pass through two distinct phases in two different hosts to complete their development cycles. Eggs passed in the faeces of the human carries can caused further disease if ingested by cattle, pigs or human and develop. Cattle (*T. saginata*) and pigs (*T. velum*) become infected by ingesting vegetation contaminated with eggs or grained *fecopelletids*. In the animals intestine, the oncospheres hatch invade the intestinal wall, and migrate to the striated muscles, where they develop into cysticerci. A cysticercus can survive for several years in the animal.

OBSERVATION

* Taenia solium is Platyhelminthes —

Taenia solium is a tapeworm species of class cestoda of Phylum. Platyhelminthes, it is commonly called Pork Tapeworm. The organisms belonging to Phylum. Platyhelminthes have a dorso-ventrally flattened body, hence are called flatworms. Flatworms are bilaterally symmetrical, triploblastic and acoelomate animal with organ level of organisation. Platyhelminthes are acoelomates that are characterised by having three germ layers (ectoderm, mesoderm & endoderm). They are found in marine, fresh water and even damp terrestrial environments. So *Taenia solium* is Platyhelminthes.

Features of Phylum Platyhelminthes :-

- Firstly, they are parasites and free living.
- The symmetry of the organism in this Phylum is bilateral.
- They have three germ layers and are known as triploblastic organisms.
- As they don't have cavities in them so recognised as acoelomates.
- They lack cilia and have a soft covering over their body.

• Platyhelminthes lack segmentation so no segments can be seen in them and are dorsoventrally flattened

Taenia solium classification :-

Phylum - Platyhelminthes

Class - Cestoda

Sub class - Eucestoda

Order - Taeniidea

Family - Daenidae

Genus - Taenia

Species - Solium

Taenia solium characteristic :-

① Taenia solium is better known as the Pork Tapeworm.

② It is usually opaque white in colour but creamish, yellowish or grayish coloration is also common.

③ Body is 1 to 6 meters long and flattened like a ribbon or tape.

④ It has a 1 to 2 mm size head.

⑤ Scolex has two rows of hooks and rounded male come that is the proscellum.

⑥ Neck of the tapeworm is short and thin and unsegmented.

⑦ Near the neck the proglottid contain the male sexual organ. In the middle of the tapeworm length the proglottids contain the female sexual organ in the terminal position.

Taenia solium are parasitic :-

It is a Tapeworm that used humans as its definitive host and pigs as the intermediate are human feces that contain the parasite eggs and contaminate their fodder.

Taenia solium Tapeworm infection can lead to cysticercosis, which is a disease that can cause seizures, so it is important seek treatment.

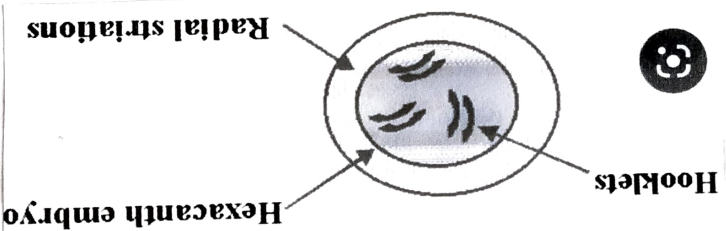
Human :- *Taenia solium* completes its life cycle in humans as the definitive or primary host. *Taenia solium* cysticercosis results from humans accidentally intermediate hosts for the parasite.

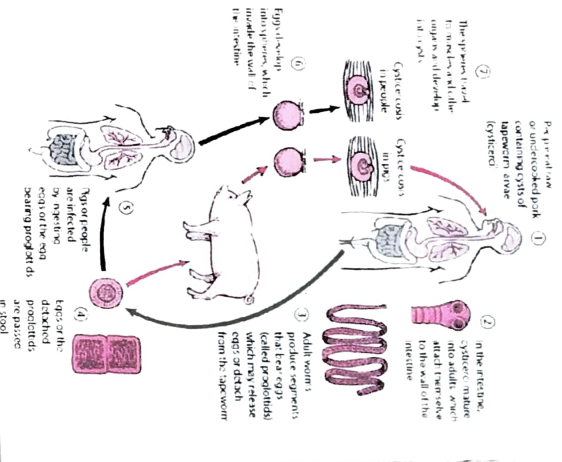
Pig :- *Taenia solium* is found nearly worldwide because pigs are intermediate hosts of the parasite. completion of the life cycle occurs in regions where humans live in close contact with pig and eat under cooked pork.

Taenia solium eggs :-

- (i) Each egg is round, brown in colour, measure 40-50 μm in diameter.
- (ii) Each egg consist of two shells.
- (iii) The outer shell is thin, transparent and represent the remnant of yolk mass.
- (iv) Eggs are infective to pigs as well as to humans.

Life cycle of *Taenia solium* :-





Trichinosis is the infection of humans with the adult tapeworm of *Trichinella spiralis* or *Trichinella*. Eggs or gravid paratubercles are passed with feces.

① The eggs can survive for days to months in the environment. Cattle (*T. vaginalis*) and pigs (*T. spiralis*) become infected by ingesting vegetation contaminated with eggs or gravid paratubercles.

② In the animal's intestine, the encystment takes place.

③ Inside the intestinal wall, and migrate to the striated muscles, they develop into the animal. Humans become infected by ingesting raw or undercooked infected meat.

④ In the human intestine, the cysticercus develops over 2 months into an adult *Tapeeworm*, which can survive for years. The adult *Tapeeworm* attach to the small intestine by their scolex.

⑤ And reside in the small intestine.

⑥ Length of adult worms is usually 5 m or less for *T. saginata* and 2 to 7 m for *T. solium*. The adults produce proglottids which mature, become gravid, detach from the *Tapeeworm*, and migrate to the anus or are passed in the stool.

REFERENCE

- Notes

- www.nationalgeographic.org
- www.ahm.ae.uk