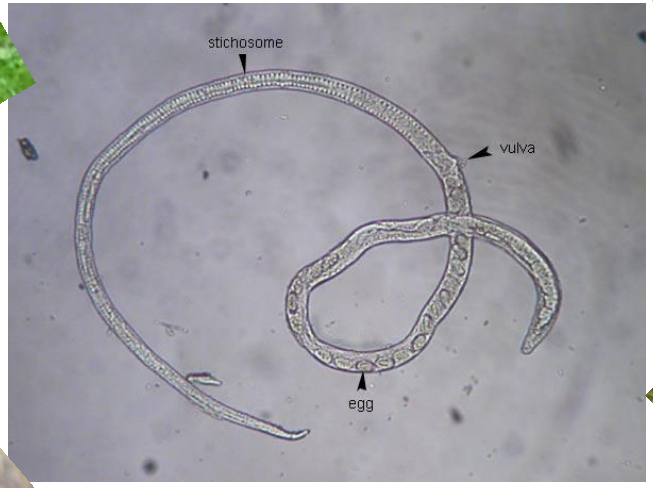
Capillaria



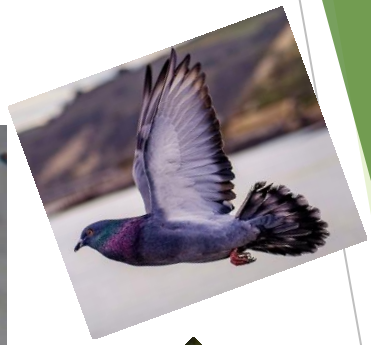


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Image source: Google image

Capillaria

Family : Capillariidae

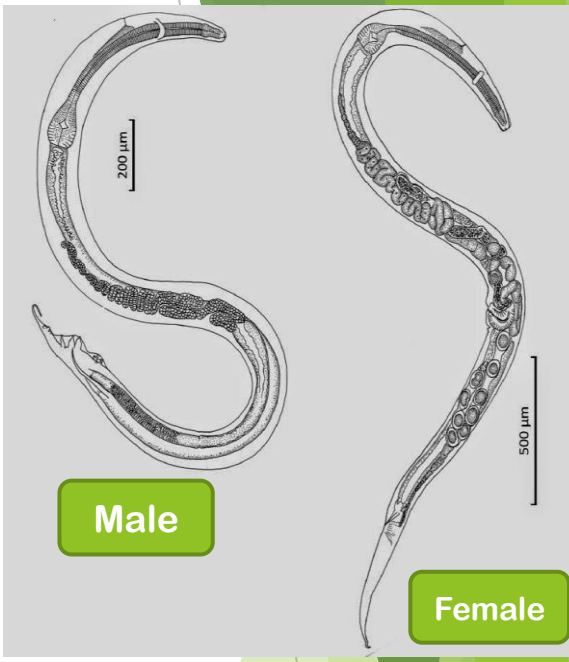
Species:

Species	Host	Location
Capillaria caudinflata (Hair worm)	Fowl and pigeons	Duodenum and Ileum
Capillaria annulate (Hair worm)	-do-	Crop & oesophagus
Capillaria hepatica	Rat and mouse, occasionally dog, cat & man	Liver
Capillaria aerophila	Dog, foxes and coyotes	Trachea and bronchi
Capillaria plica (Bladder worm)	Dog, cat & fox	Urinary bladder
Capillaria philippinensis (Pudoc worm)	Man	Intestine

Capillaria

Morphological Characters:

- Closely related to *Trichuris* species but are smaller and hair-like.
- Anteriorly thinner whereas gradually become thicker posteriorly.
- Male worm has single spicule.
- Female worm is oviparous.
- Eggs are colourless, more barrel-shaped, with the sides nearly parallel and the bipolar plugs do not project as far in comparision to *Trichuris* species eggs.



Capillaria

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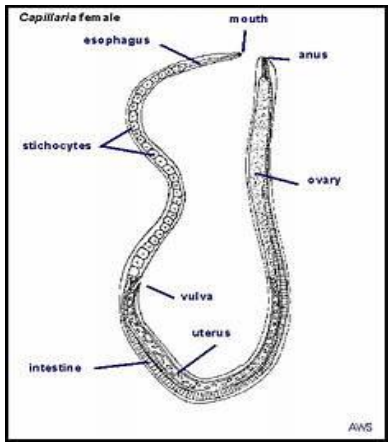
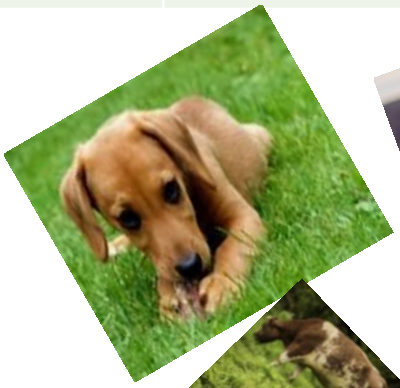
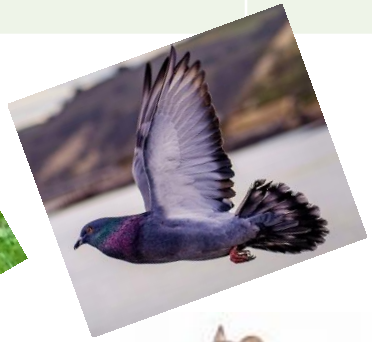
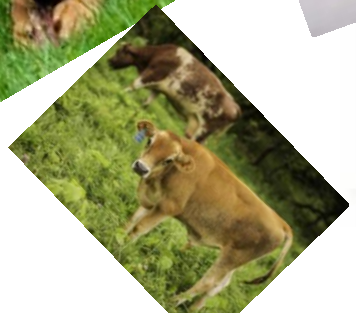








Capillaria

Life-cycle:

- Direct or indirect life-cycle depending upon the species.
- Earth worm acts as intermediate host for *Capillaria annulata, Capillaria caudinflata* and *Capillaria plica*.
- Fish acts as intermediate host for *Capillaria philippinensis.*

Capillaria

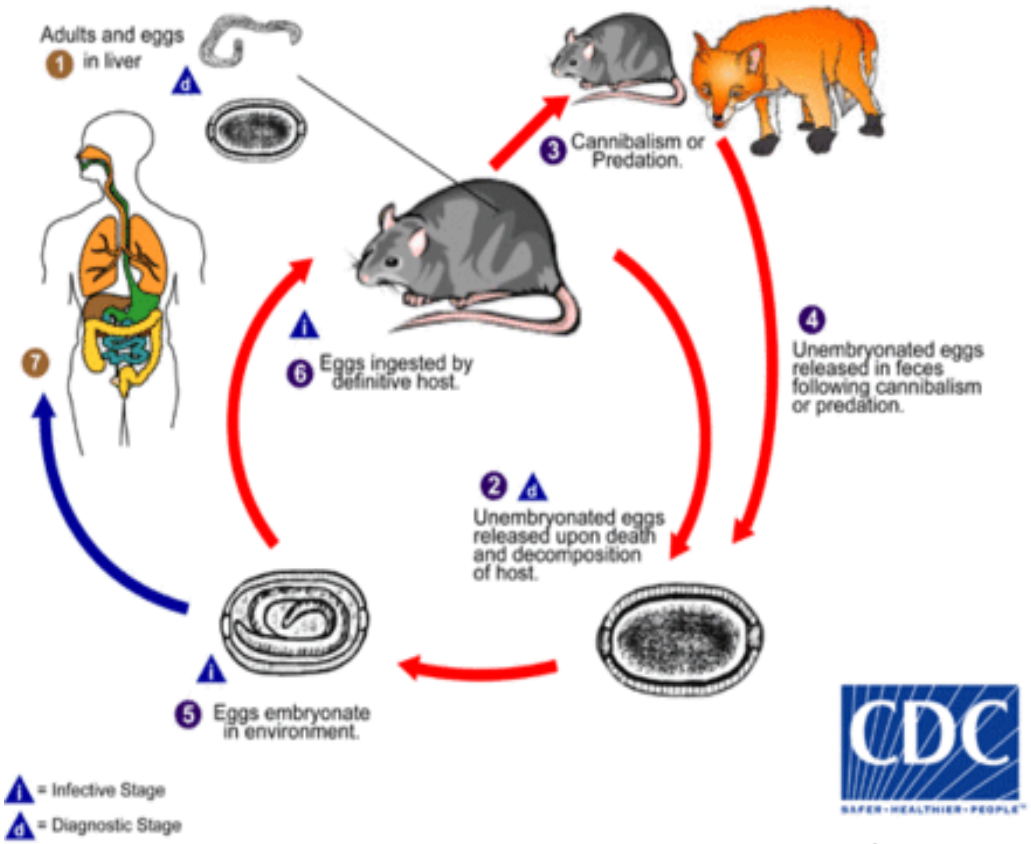
Transmission:

- Hosts get infection by the ingestion of food contaminated with eggs shed by intercalary or cannibalistic host or from a dead decomposed infected carcase.
- Ingestion of infected earthworm (*Capillaria annulata, Capillaria caudinflata* and *Capillaria plica*)
- Ingestion of infected fish (*C. philippinensis*)

Intercalary host is a **host** that liberates the infective stages of a parasite of another trapped in the body of the original **host.**

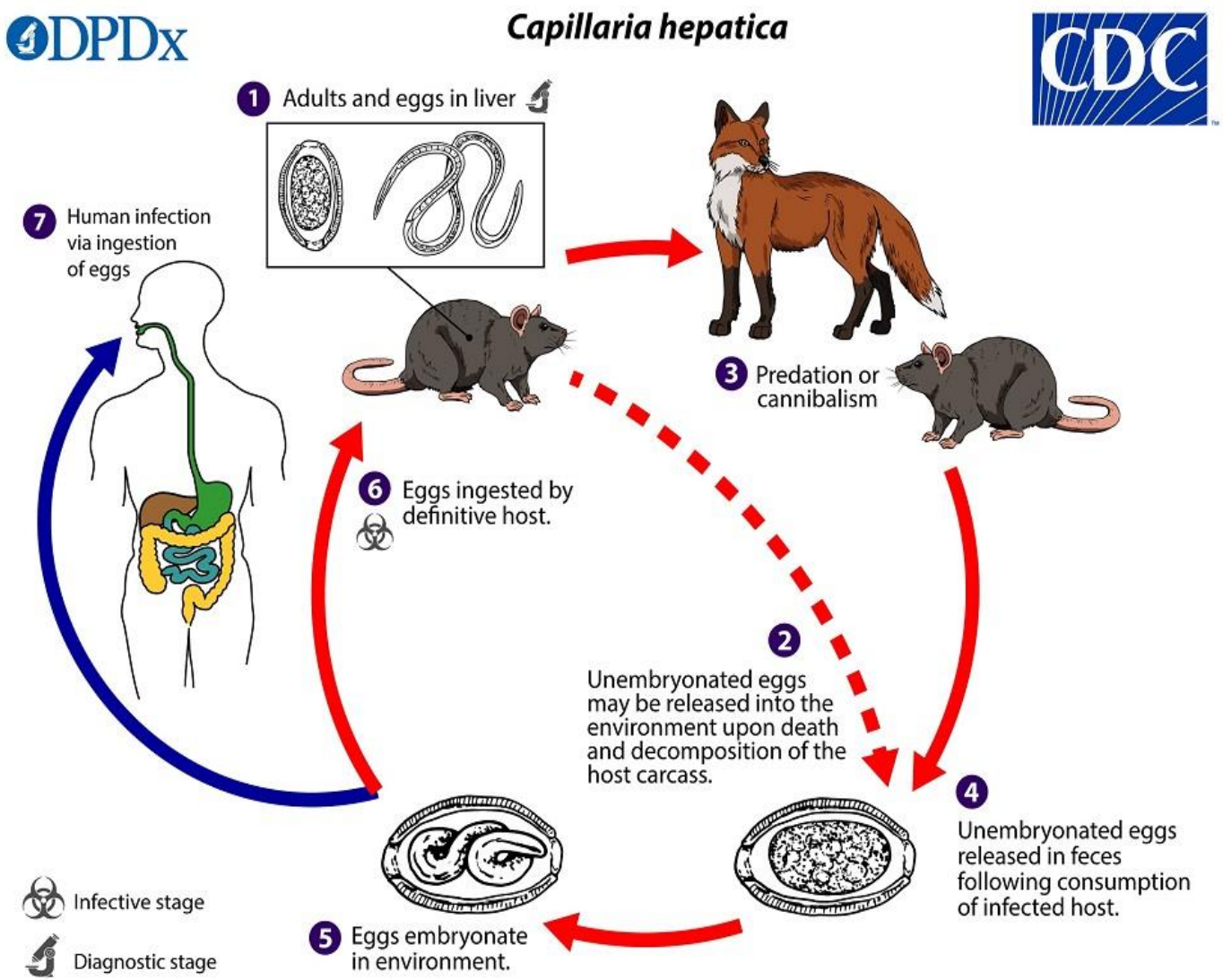
Capillaria

Life-cycle:



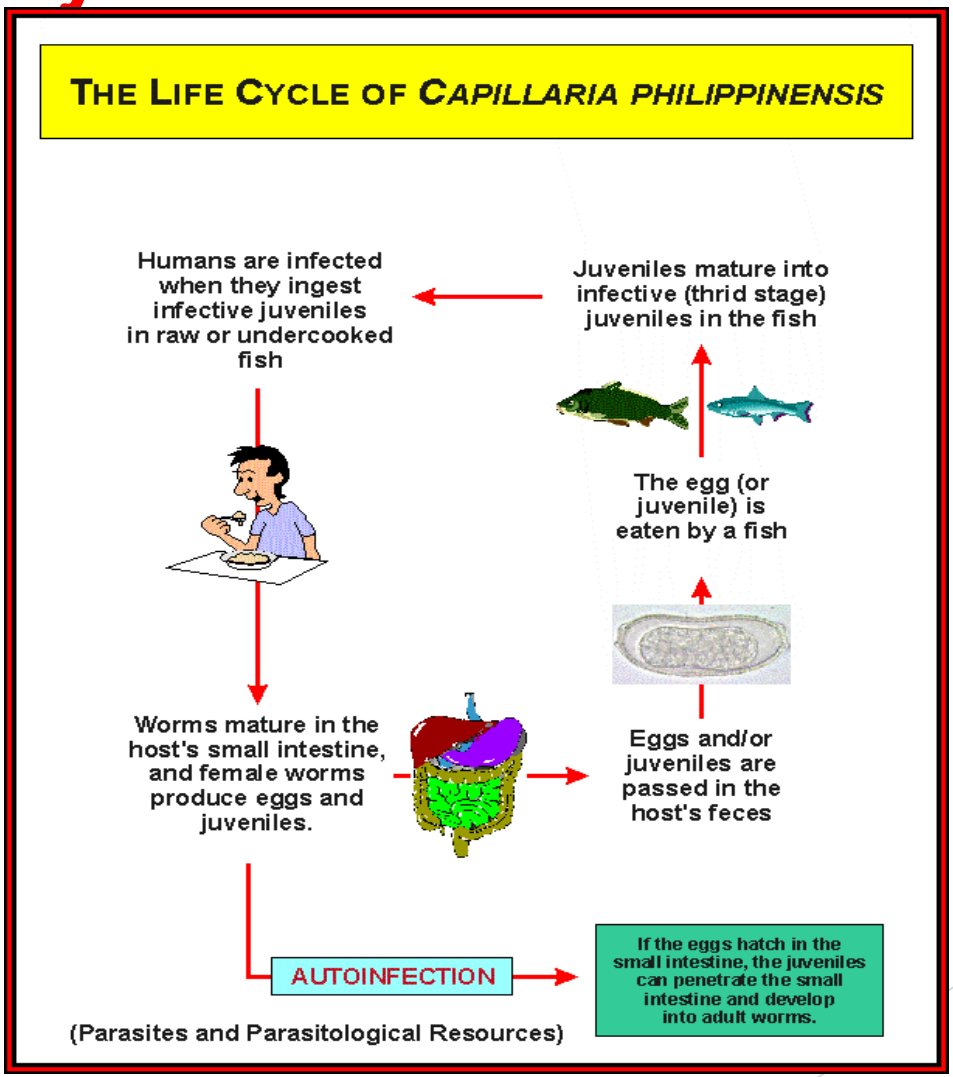
Capillaria

Life-cycle:



Capillaria

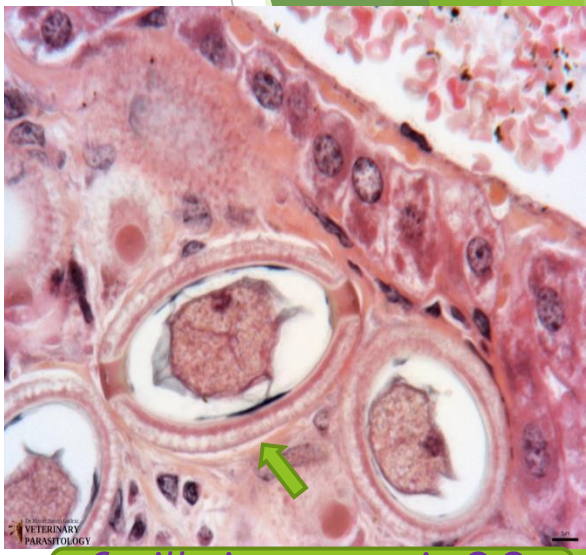
Life-cycle:



Capillaria

Life-cycle:

- Worms lay eggs in liver parenchyma from which there is no natural access to the exterior.
- The unembryonated eggs must be released from the liver by a predator (an intercalary host) or by cannibalism (*Capillaria hepatica*).
- Eggs are passed in the faeces of the predator or cannibal.
- Eggs are also spread on the ground by the decomposition of dead carcasses.



Capillaria sp. eggs in C.S. of liver

Capillaria

Pathogenesis & Clinical signs:

- Granulamatous lesions and cirrhosis are occurred in liver of infected domestic animals and man.
- Splenomegaly, peritonitis, ascites and eosinophilia.

***Capillaria* species in birds**

Inflammation and thickening of the digestive tract and also bloody diarrhoea, emaciation and weakness in heavy infection.

Capilllaria plica

Usually harmless but may cause cystitis and difficulty in urination

Capillaria aerophila

Rhinitis, nasal discharge with chronic inflammation of the affected parts.

Capillaria

Diagnosis:

Faeces or Sputum or nasal discharge or urine

- On the basis of symptoms.
- Microscopic examination of faces reveals eggs of worm.
- Eggs are colourless, more barrel-shaped, with the sides nearly parallel and the bipolar plugs do not project as far in comparision to *Trichuris* species eggs.

EGG

Capillaria

Treatment :

- **Levamisole**
- **Mebendazole**

Capillaria

Control:

- Rodent control programs and preventing dogs and cats from eating rodents.[8]
- **Preventing host from earthworm eating**

THANK YOU