

HOST & DIFFERENT TYPES OF HOST

HOST

IT IS AN ORGANISM OR ANIMAL WHICH HARBOURS THE ANOTHER LIVING ORGANISM (*i.e.* PARASITE)

- **HOST ALWAYS LARGER THAN PARASITE.**

TYPES OF HOST



Definitive
Host

Reservoir
Host

Intermediate
Host

Transport
Host

Paratenice
Host

DIFINITIVE HOST

DIFINITIVE HOST OR FINAL HOST OR DETERMINATE HOST.

It is the host which harbours the adult stage of the parasite.

the parasite attains sexual maturity in it.

Example: Dog for *Ancylostoma caninum*

Cattle for *Fasciola gigantica*



***Ancylostoma
coninum***

Fasciola gigantica



INTERMEDIATE HOST

IT IS THE HOST WHICH HARBOUR THE LARVAL STAGE OF THE PARASITE.

IT IS THE HOST WHICH HARBOUR THE IMMATURE STAGE OF THE PARASITE.



INTERMEDIATE HOST

✓ DEPENDING UPON THE SPECIES OF THE PARASITE THERE MAY BE FIRST, SECOND, THIRD INTERMEDIATE HOST.
EXAMPLE. SNAILS IN Trematodes.

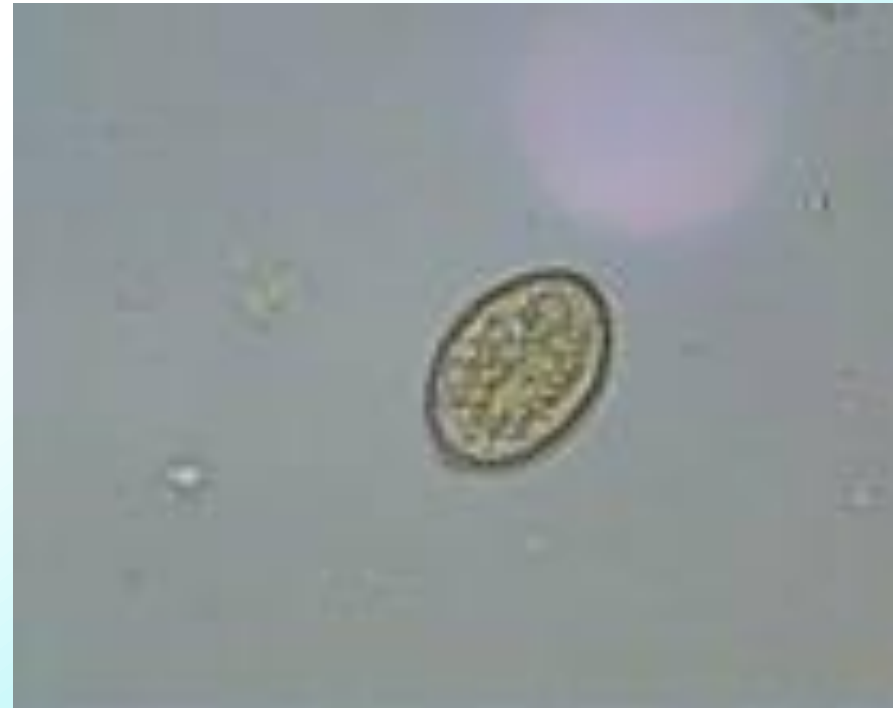
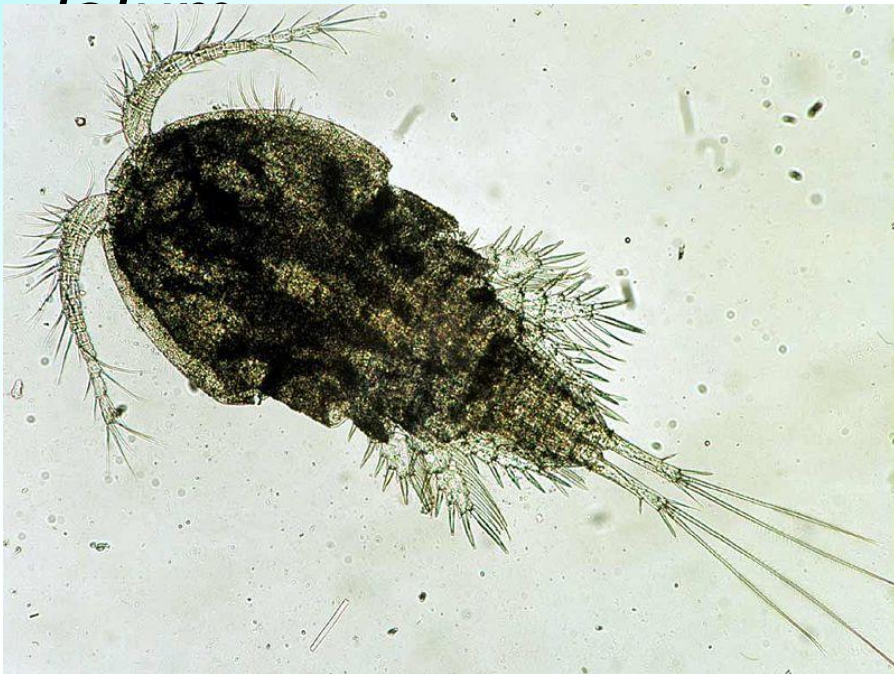


TYPES OF INTERMEDIATE HOST

1) FIRST INTERMEDIATE HOST -

IT IS THE FIRST HOST PARASITIZED BY THE LARVAL STAGES OF THE PARASITE.

EXAMPLE. CYCLOPS IN THE *Diphyllobothrium*



2) SECOND INTERMEDIATE HOST -

IT IS THE HOST PARASITIZED BY LARVAL STAGES AT A LATER PERIOD IN THE LIFE CYCLE, AFTER CERTAIN DEVELOPMENT IN THE FIRST INTERMEDIATE HOST.

THESE LARVAL STAGES IN THIS HOST FURTHER DEVELOPED AND NORMALLY REACHED TO INFECTIVE STAGES OF THE PARASITES.

EXAMPLE. FISHES FOR *Diphyllobothrium latum*
ANTS FOR *Dicrocoelium dentriticum*.





DICROCOELIUM DENTRITICUM.

RESERVOIR HOST

IT IS A VERTEBRATE HOST IN WHICH PARASITE OR DISEASE OCCURS NATURALLY. HOST HARBOUR THE PARASITE BUT IT DOES NOT PRODUCE ANY HARM TO HOST.

EXAMPLE. *Balantidium coli* COMMONLY OCCURS IN PIGS AND HORSES.



CARRIERS HOST

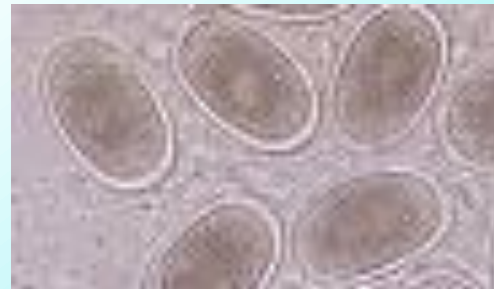
THOSE HOST WHICH HAVE A LIGHT INFECTION WITH SOME PARASITE BUT ARE NOT HARMED BY IT. USUALLY DUE TO IMMUNITY RESULTING FROM PREVIOUS EXPOSURE BUT IT SERVE AS A SOURCE OF INFECTION FOR SUSCEPTIBLE HOST.

EXAMPLE. ADULT SHEEP AND CATTLE MAY BE LIGHTLY INFECTED WITH GASTROINTESTINAL NEMATODES WITHOUT EFFECT BUT THEIR LAMBS AND CALVES MAY BECOME HEAVILY PARASITIZED FROM GRAZING WITH THEM.

TRANSPORT HOST

IT IS ONE IN WHICH THE LARVAL OR IMMATURE STAGE OF THE PARASITE DOES NOT UNDERGO ANY DEVELOPMENT BUT REMAIN ALIVE AND INFECTIVE TO ANOTHER HOST.. LATER ON, THEY ARE VOIDED OUT FROM SUCH HOST.

EXAMPLE. EARTHWORMS ACT AS TRANSPORT HOST FOR *Ascaridia galli*.



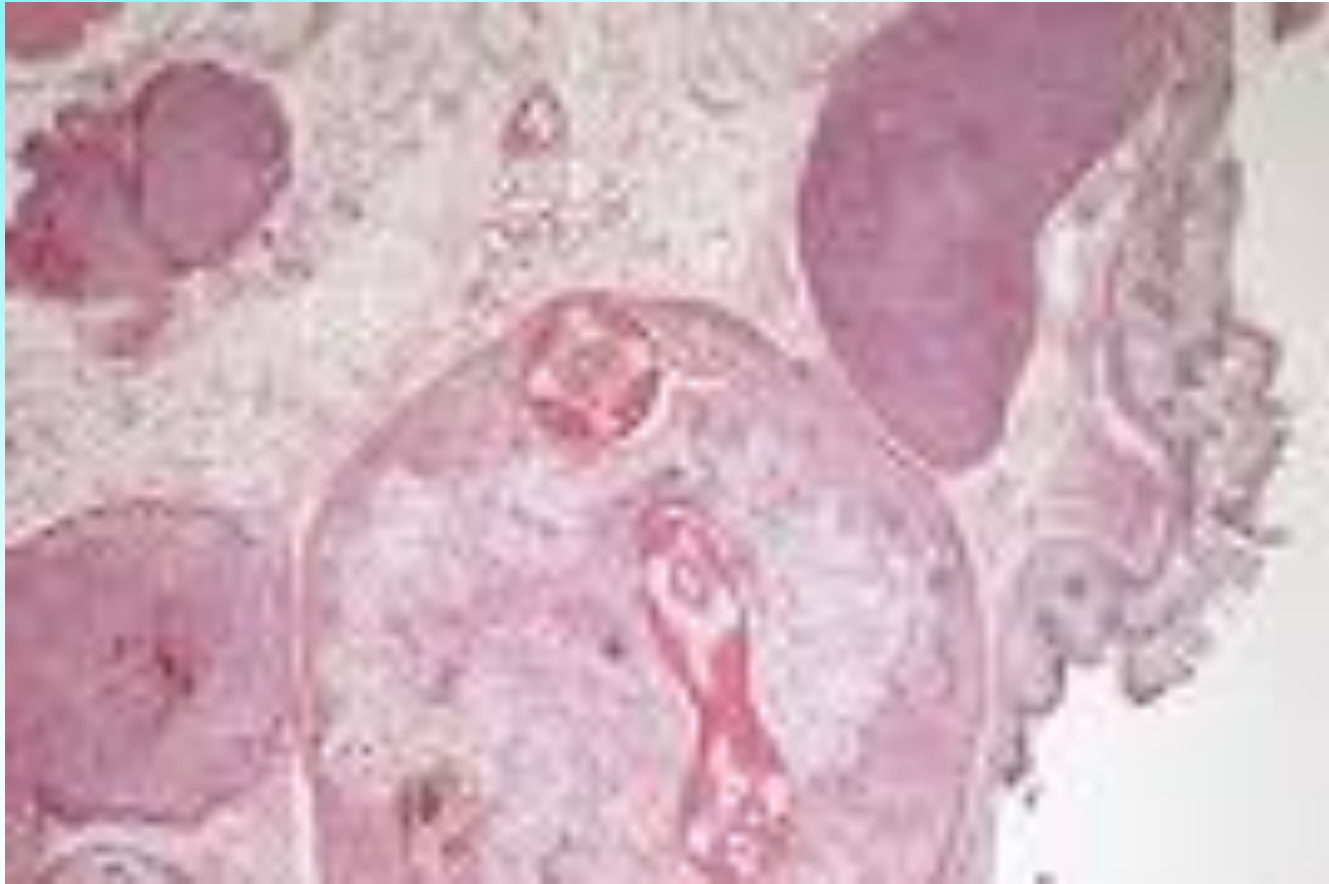
PARATENIC HOST

IN THIS CASE THE IMMATURE STAGE OF THE PARASITE GETS ENCAPSULATED IN TISSUES OF THE HOST, HENCE, THEY CANNOT BE VOIDED OUT AND REMAIN ENCYSTED UNTIL THE DEFINITIVE HOST EATS THE PARATENIC HOST.

EXAMPLE. LIZARDS ACTS AS PARATENIC HOST FOR *Spirocera lupi* IN DOG.

- THE ROLE OF SUCH HOST TO FILL UP AN ECOLOGICAL GAP BETWEEN INTERMEDIATE HOST AND THE DEFINITIVE HOST.





Spirocera lupi

NATURAL HOST

THEY ARE THE HOST IN WHICH A PARTICULAR PARASITE CAN LIVE AND DEVELOP EASILY.
IT IS DUE TO HOST SPECIFICITY.

EXAMPLE. DOG FOR *Ancylostoma caninum*.

UNNATURAL HOST

THOSE HOSTS IN WHICH PARTICULAR PARASITE
CANNOT LIVE AND DEVELOPS.

- **If the parasite enter in such hosts then.**
 - **They are killed immediately.**
 - **They may be passed out of the host.**
 - **They may enter into host tissue and migrate but cannot develop.**
 - **There may be some development but never mature.**
 - **They may enter in host tissue and remain infective**

VECTOR

- ✓ IT IS A LATIN WORD WHICH MEANS BEARER.
- ✓ THE VECTOR OF A PARASITE OR DISEASE AGENT IS AN ARTHROPOD, MOLLUSC OR OTHER AGENT WHICH TRANSMITS THE PARASITE FROM ONE VERTEBRATE HOST TO ANOTHER.
- ✓ IT IS VERY MUCH LIKE INTERMEDIATE HOST.



BIOLOGICAL VECTOR

THOSE VECTOR IN WHICH THE PARASITE DEVELOPS OR MULTIPLIES AND MAKES IT INFECTIVE FOR SUSCEPTIBLE HOST.

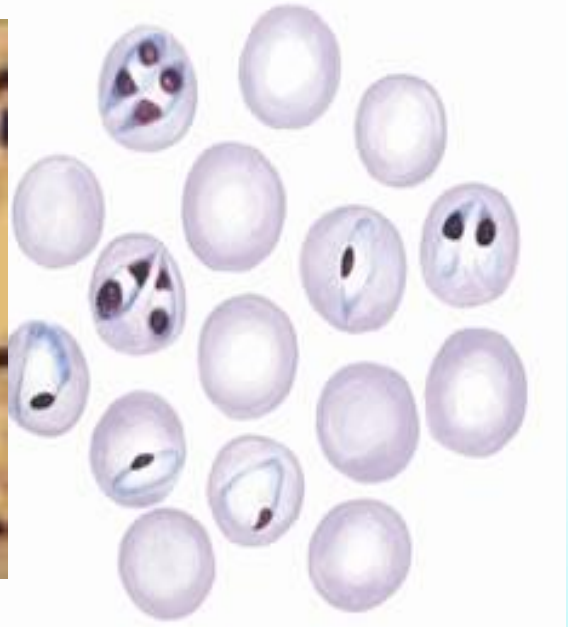
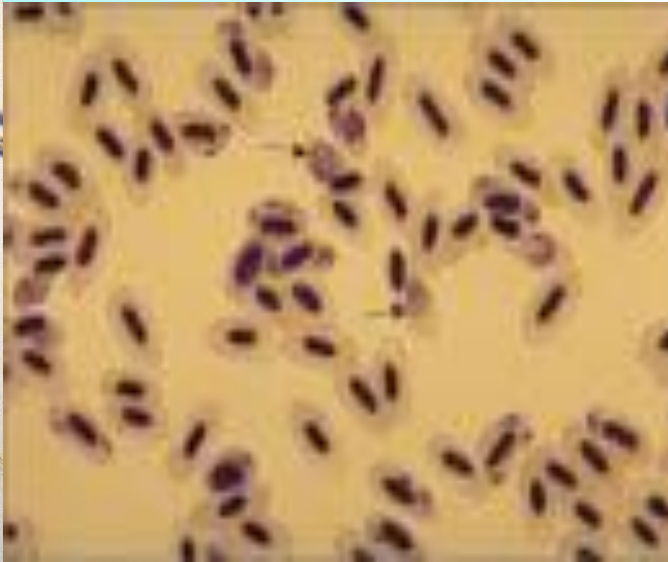
✓ ALL INTERMEDIATE HOSTS ARE BIOLOGICAL VECTOR BUT ALL BIOLOGICAL VECTOR ARE NOT NECESSARILY INTERMEDIATE HOST.

EXAMPLE. MOSQUITOES FOR MALARIAN PARASITES,

TICKS FOR *Theileria*, *Babesia*, *Anaplasma*.



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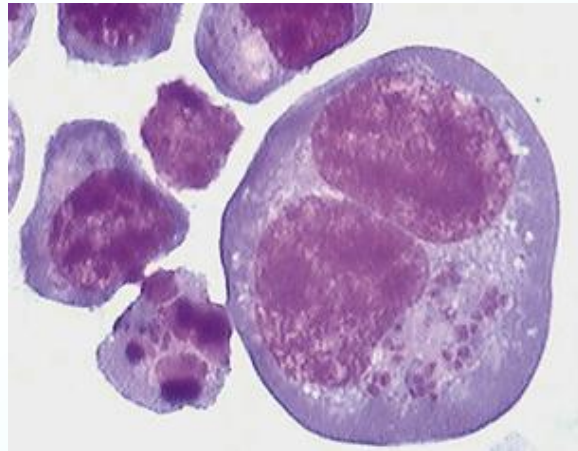
ANAPHLIS

BABESIA

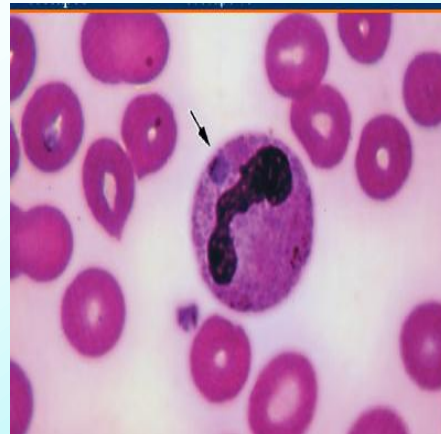


Example of a soft tick.

TICK



THEILERIA



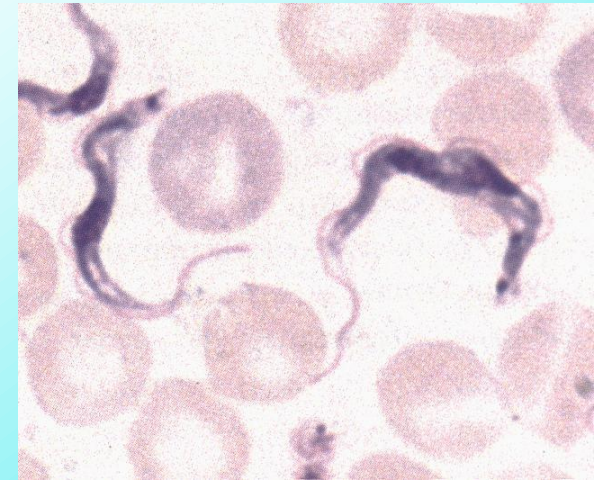
EHEARLYCHIA



MECHANICAL VECTOR

✓ THOSE VECTOR IN WHICH THE PARASITE DOES NOT DEVELOP OR MULTIPLY AND TRANSMIT THE PARASITES IN THE SHORT PERIOD.

EXAMPLE . TABANID FLIES FOR *Trypanosoma evansi*.





TRYPANOSOMA EVANSI.

THANKS

