

PROTOZOA

Amoebae

Flagellates

Apicomplexa

Ciliates

Lobosea

Trichomonads

Diplomonads

Kinetoplastids

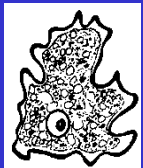
Enteric

Tissue

Haemosporidia

Piroplasms

Trichostomes



trophozoite

↕ faecal-oral



cyst

Entamoeba



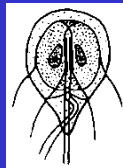
trophozoite

↕ venereal



trophozoite

Trichomonas



trophozoite

↕ faecal-oral



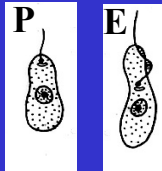
cyst

Giardia



mastigotes

↕ vector-borne



mastigotes

Trypanosoma
Leishmania



schizont

↕ faecal-oral



oocyst

Eimeria



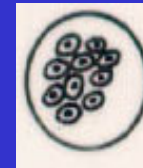
cysts

↕ predator-prey



oocyst

Toxoplasma



plasmodia

↕ vector-borne



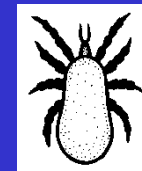
mosquitos

Plasmodium



piroplasms

↕ vector-borne



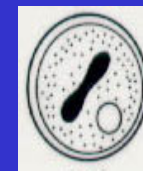
ticks

Babesia



trophozoite

↕ faecal-oral



cyst

Balantidium

NEMATODES

Oxyurida

Trichocephalida

Ascarida

Rhabditida

Strongylida

Spirurida

pin-worm
peri-anal

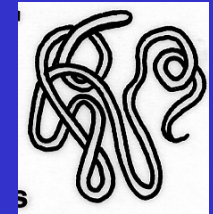
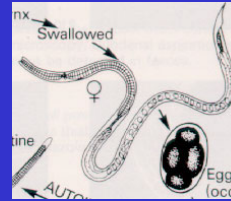
whip-worm
bowel

round-worm
intestines

thread-worm
intestines

hook-worm
intestines

filarial worms
blood/lymph



adult
larva

adult
larva

adult
larva

adult
larva
eggs

adult
larva

adult
larva

faecal
-oral

faecal
-oral

trach.
migr. faecal
-oral

trach.
migr. soil

trach.
migr. soil

vector-
borne



egg

egg

egg

larva

eggs
larva

micro-
filaria

Enterobius

Trichuris

Ascaris
Toxocara

Strongyloides

Ancylostoma
Necator

Wuchereria
Onchocerca
Dirofilaria

PLATYHELMINTHS

CESTODES

TREMATODES

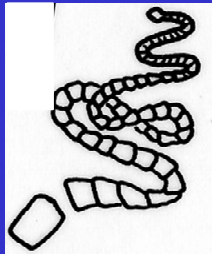
Cyclophyllidean tapeworms

Pseudophyllidean tapeworms

Gut flukes

Liver flukes

Blood flukes



adult



adult



adult



adult



adults

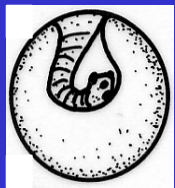
predation ↑
↓ egg

predation ↑
↓ egg, coracidium, pro-, plero-cercoid

metacercaria ↑
↓ egg, miracidium

metacercaria, cercaria ↑
↓ egg, miracidium

cercaria ↑
↓ egg, miracidium



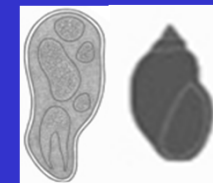
larva



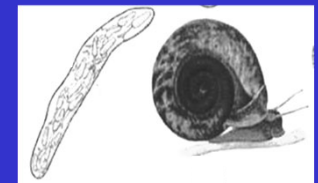
larva



sporocyst in snail host



sporocyst in snail host



sporocyst in snail host

Taenia
Echinococcus

Diphyllobothrium

Clonorchis

Fasciola

Schistosoma

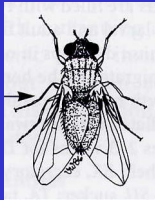
ARTHROPODS

INSECTS

ARACHNIDS

Flies

(skin-blood)



adult

pupa $\begin{matrix} \uparrow C \\ \downarrow M \end{matrix}$ egg



larva

Lucilia
Culicoides
Anopheles

Fleas

(skin-blood)



adult

pupa $\begin{matrix} \uparrow C \\ \downarrow M \end{matrix}$ egg

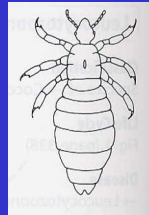


larva

Pulex
Ctenocephalides

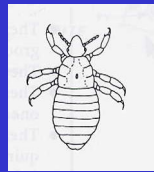
Lice

(skin-blood)



adult

nymph $\begin{matrix} \uparrow I \\ \downarrow M \end{matrix}$ egg



nymph

Pediculus
Phthirus

Mites

(skin-blood)



adult

nymph $\begin{matrix} \uparrow I \\ \downarrow M \end{matrix}$ egg



larva

Sarcoptes
Chorioptes
Demodex

Ticks

(skin-blood)



adult

nymph $\begin{matrix} \uparrow I \\ \downarrow M \end{matrix}$ egg



larva

(1-, 2-,3-host)
Ixodes
Rhipicephalus