Lab #1B
Fecal Sedimentation
Tapeworm Segment Squash

What you should accomplish during Lab #1B

1. After an introduction, students will prepare & examine a **Fecal Sedimentation**.
2. After an introduction, students will prepare & examine a **Tapeworm Segment Squash**.
3. After an introduction, students will become familiar with select Trematode eggs, Tapeworm eggs, and Tapeworm proglottids

Technique

Fecal Sedimentation

1) Mix about one gm of feces with 12 - 14 ml of saline solution.
2) Strain fecal solution into a plastic beaker.
3) Pour the strained solution into a 15 ml centrifuge tube and allow to stand 20 minutes.
4) After 20 minutes, use a pipette to aspirate and discard all but the bottom 0.5 to 1ml of solution from the centrifuge tube
5) Mix this bottom aliquot.
6) Place a drop of the sediment on a slide, cover with a cover slip, and examine with 4X & 10X.
7) Scan for operculated trematode ova

Technique

Dried tapeworm proglottid

1) To distinguish between a *Taenia sp* and a *Dipylidium caninum* infection in a dog or cat.
2) Place the dried proglottid in a petri dish of water
3) Allow proglottid to rehydrate in the water for 20 to 30 minutes.
4) Squash a thoroughly softened (rehydrated) proglottid between two microscope slides.
5) With both slides still together, examine under the compound microscope.
6) Identify the tapeworm proglottid from the ova released.

OR

1) In the petri dish, use dissecting needles to open or macerate the softened proglottid
2) Transfer debris with a pipette to a microscope slide, cover with cover glass & examine for tapeworm ova.
3) Identify the tapeworm proglottid from the ova released.

Exercises

1. **Fluke Diagnostics** --- Perform a Fecal Centrifugation on the provided Cow Feces.

2. **Tapeworm Diagnostics** --- Perform a Tapeworm Segment Squash on the provided Tapeworm Proglottid.

3. Examine specimens of common fluke and tapeworm eggs presented on the overhead monitors.

   Ruminant: **Fluke - *Fasciola hepatica***
   Tapeworm -- *Moniezia*

   Equine: **Tapeworm - *Anoplocephala sp.***

   Canine: **Fluke - *Paragonimus kellicotti, Heterobilharzia americana***
   Tapeworm - *Taenia pisiformis, Dipylidium caninum, Spirometra sp.*

   Feline: **Fluke - *Paragonimus kellicotti***
   Tapeworm - *Taenia taeniaformis, Dipylidium caninum, Spirometra sp.*

   Utilize this lab and the Parasitology website to learn these diagnostic stages as one will be responsible for identifying these on the Lab Practicals.