Atlas of Microscopic Artifacts & Pseudoparasites

By:
DR. ANUAR BIN MD. ZAIN
UniSZA

Intro…

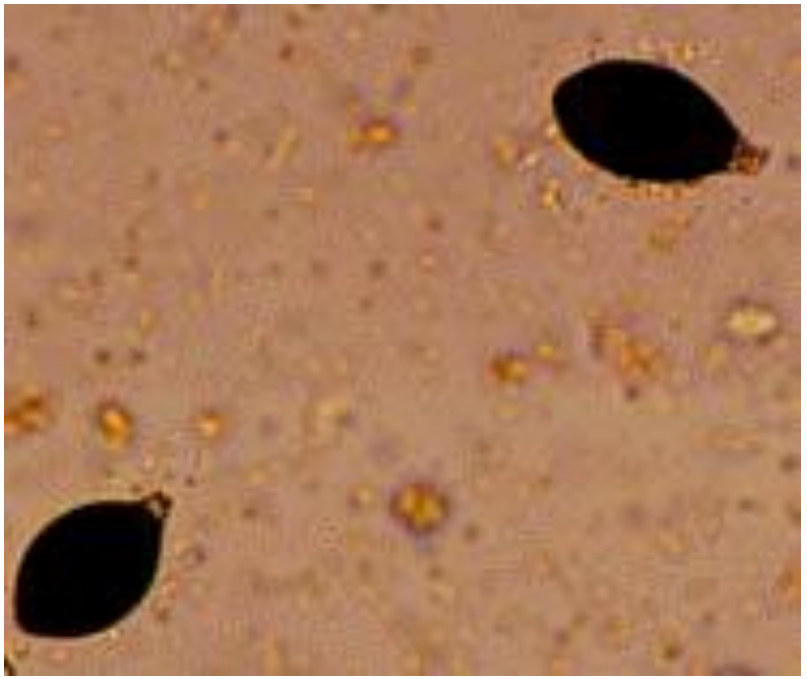
- When examining feces for parasites, be mindful of
  - a) characteristics of the specific parasitic material you are searching for.
  - b) non-parasitic material that may be included in the sample.
  - c) pseudoparasites which may be present, but are not harmful to the host.

- Here are a couple of guidelines:
  - **Know** the shape and size of the eggs and cysts you could potentially find in the feces of the animal you are examining.
  - **Remember**: Parasite eggs and cysts are, in general, regularly shaped and fall within a size range of about 2 to 200µm.

Plant Spines

- Plant Spines
  Plant spines are sometimes mistaken for nematode larva, however, a nematode larva would have a head and a tail (they aren't found broken in the middle).

Fungal spores

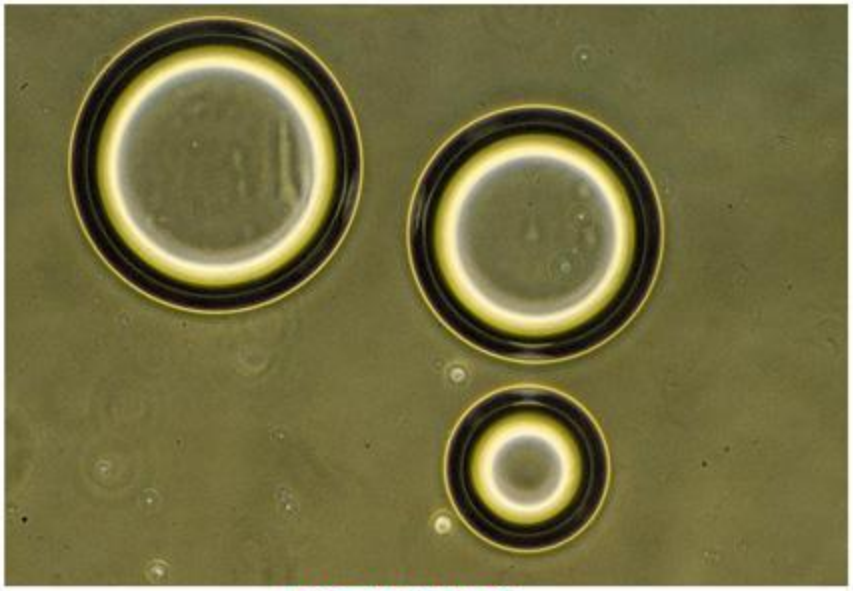


- Fungal Spores
  These are very common in the feces of herbivores. Note that although they are of the right size and shape, their contents are homogeneous and there is the remnant of the hyphae still attached to one end. If the hypha has completely broken off, a curved depression would be evident where it once was attached

Plant cells

- Plant Cells
  Note the irregular boarders of the cell membrane surrounding the lipid storage product

Air bubbles, Spores, or Pollen Grains

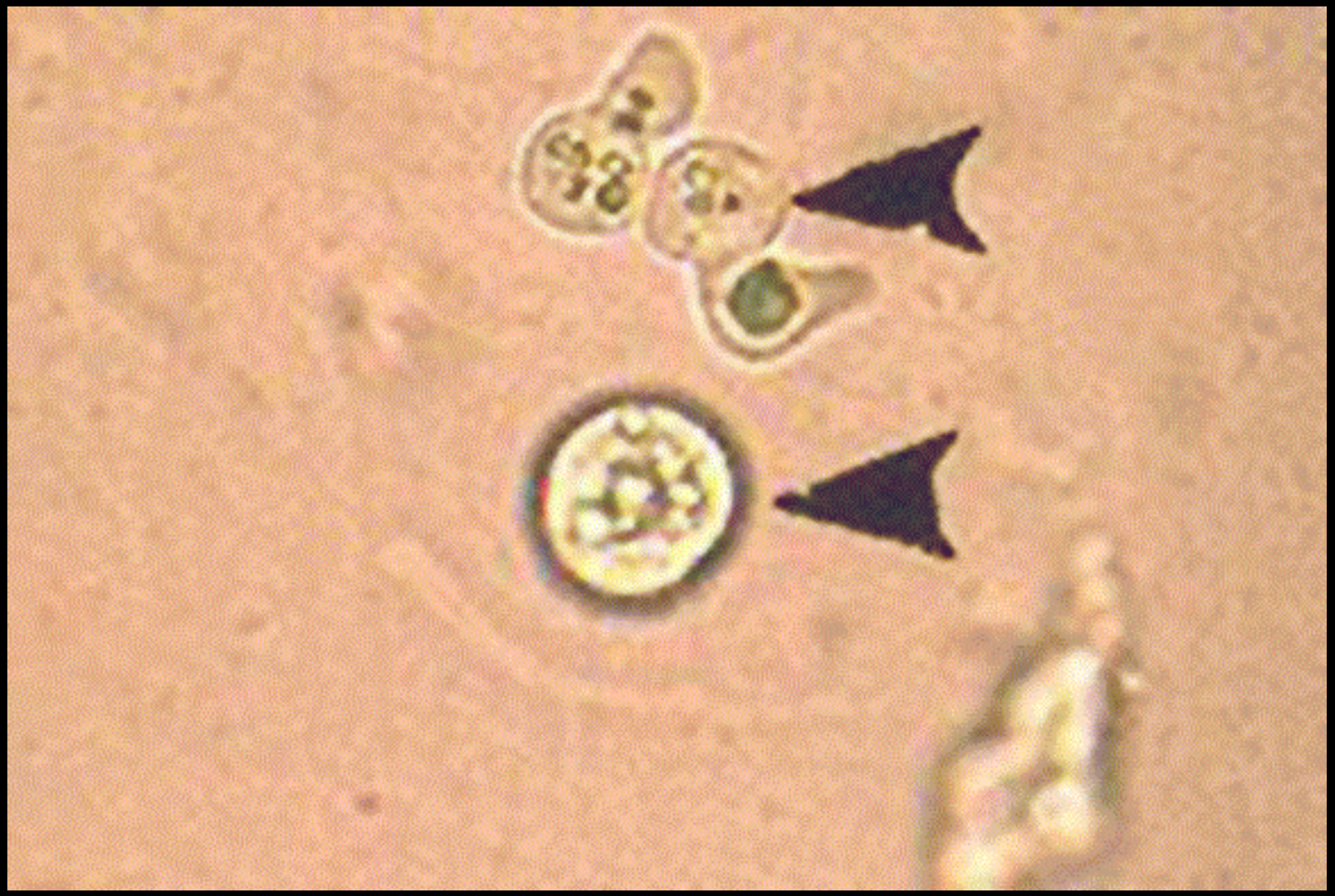


AIR BUBBLES

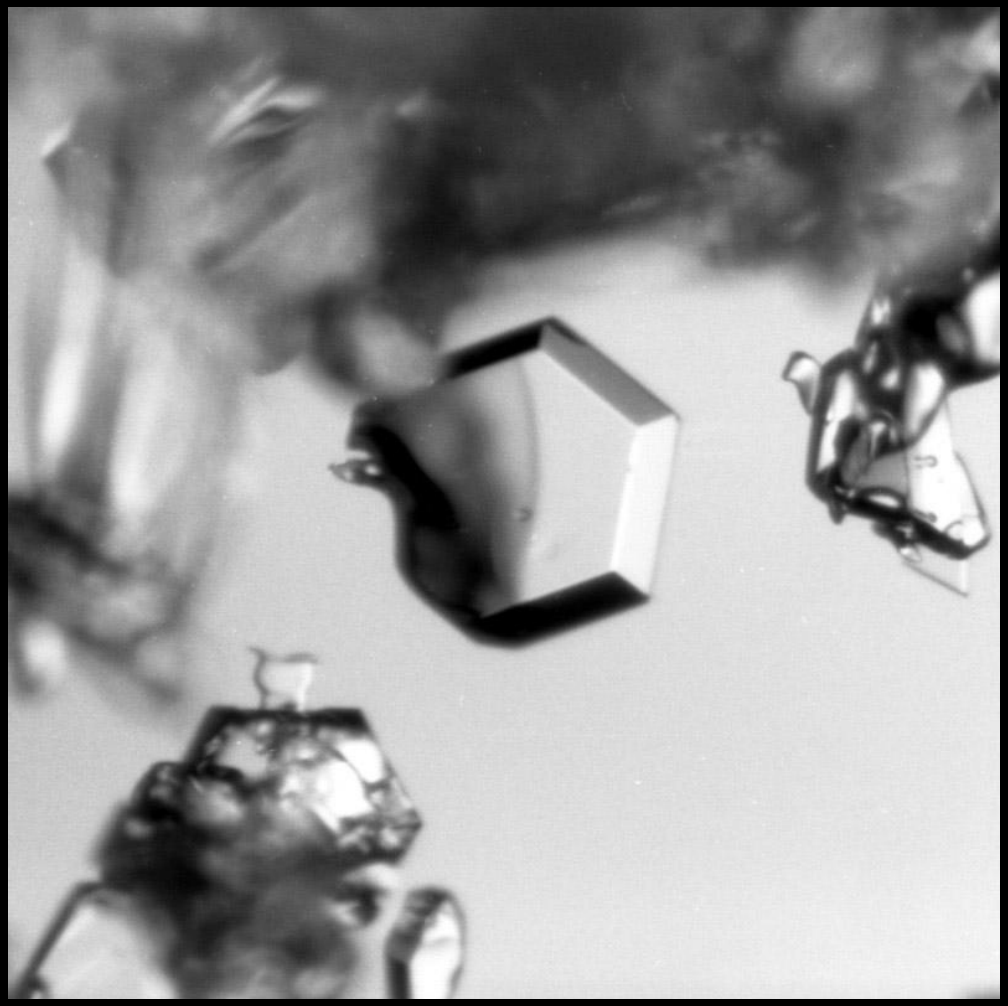
- Air bubbles, Spores, or Pollen Grains
  Although the pollen grain in the image to the immediate right is regular in shape and within the size range, its contents are homogenous in nature, i.e. it is filled, wall to wall, with one undifferentiated substance. Air bubbles are perfectly round and empty


Air bubble
Plant hairs

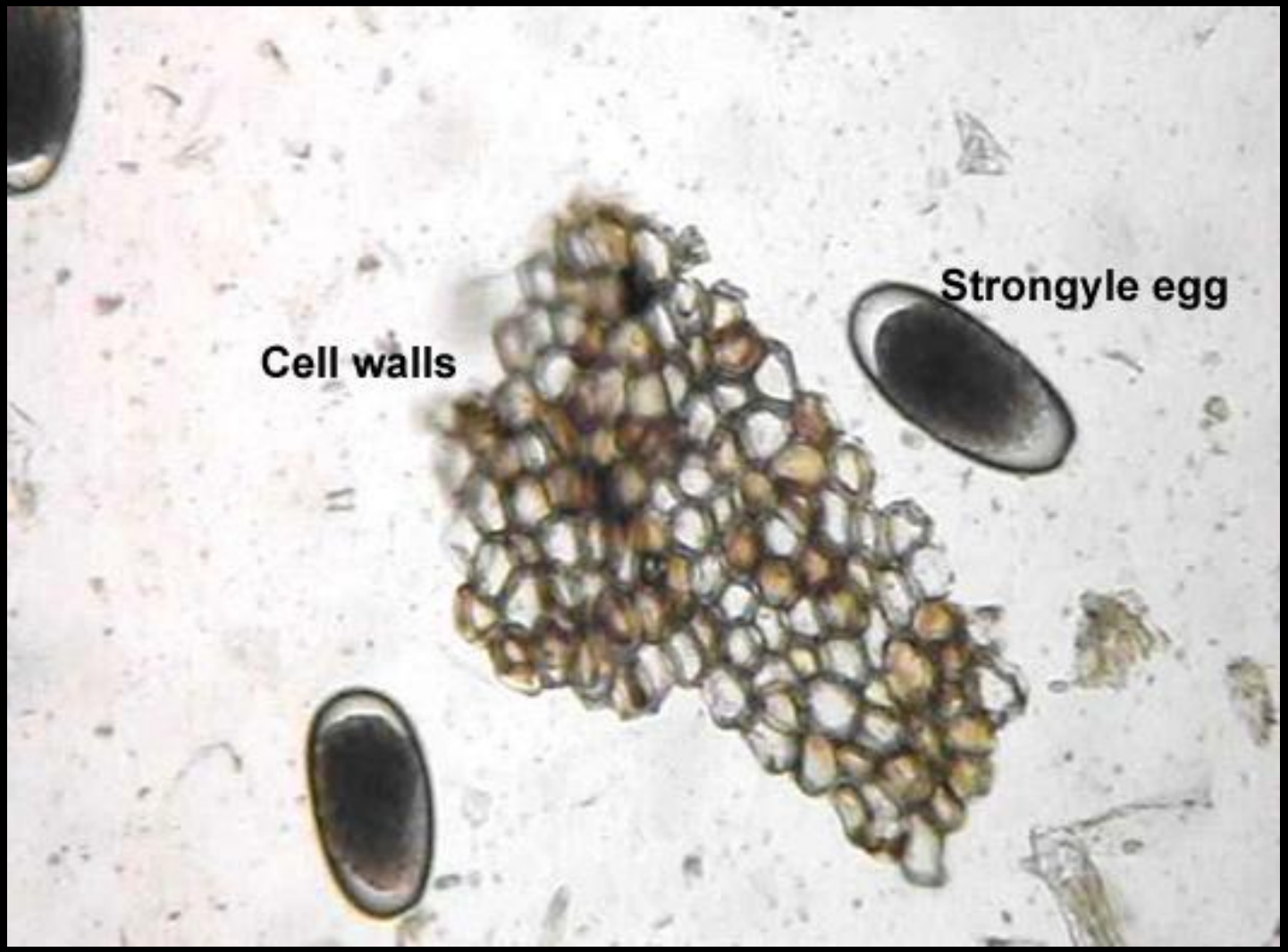
Yeast cell



Silica crystal

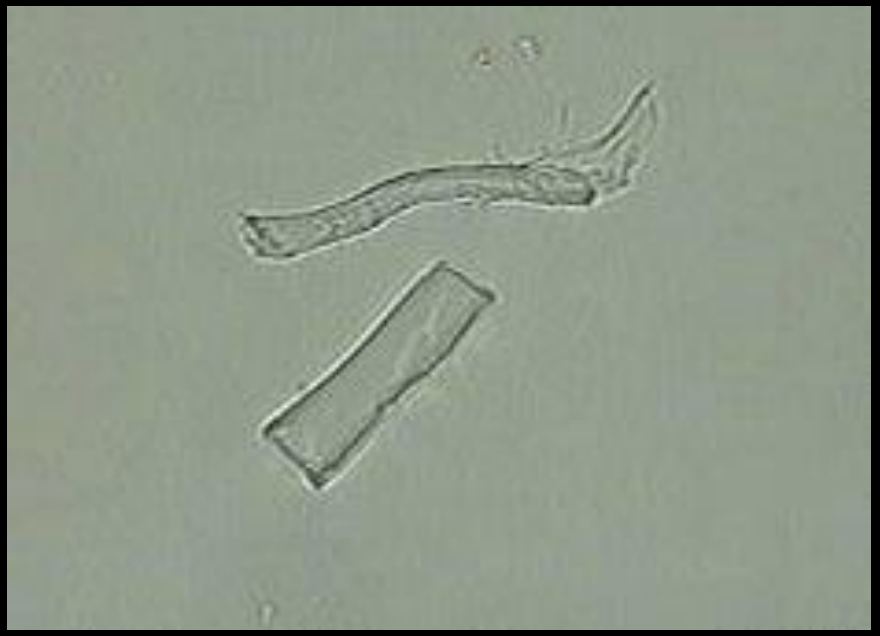


Plant cell wall (with Strongyloides egg)



Epithelial cell

Fibers



Fungal spore

Plant seed

Pecan pollen grain

Objects Sometimes Mistaken for Helminth Eggs and Protozoan Cysts

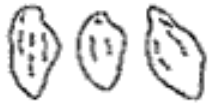
plant cells

plant hair/spine

seed fibers

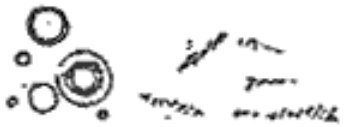
starch granules

protein particles



vegetable cells

fat/oil droplets



air bubbles

scratches on slide

plant spring cells

pollen grains

fungus spores