A microscopic image of a nematode, showing its elongated, segmented body and internal structures. The nematode is positioned horizontally across the top of the slide.

# **Microscopy - Chapter 1**

## **Lecture 9**

### **Nematode Morphology**

A microscopic image of a nematode, showing its elongated, segmented body and internal structures. The nematode is positioned horizontally across the top of the slide, with its head on the left and tail on the right. The background is a light, textured surface, possibly soil or a laboratory slide.

# Beneficial Nematodes

- Make nutrients available to plants
- Stimulate prey groups
- Build soil structure
- Inhibit root-feeding nematodes

A microscopic image of a nematode, showing its elongated, segmented body and internal structures. The nematode is positioned horizontally across the top of the slide, with its head on the left and tail on the right. The background is a light, textured surface.

# Nematodes

- **Classify Nematodes by what they eat**
  - Bacterial-feeders
  - Fungal-feeders
  - Switchers
  - Predatory nematodes
  - Root-feeders
- Active beneficial nematodes die if oxygen drops below 6 ppm; Eggs will survive.
- Much larger than prey.

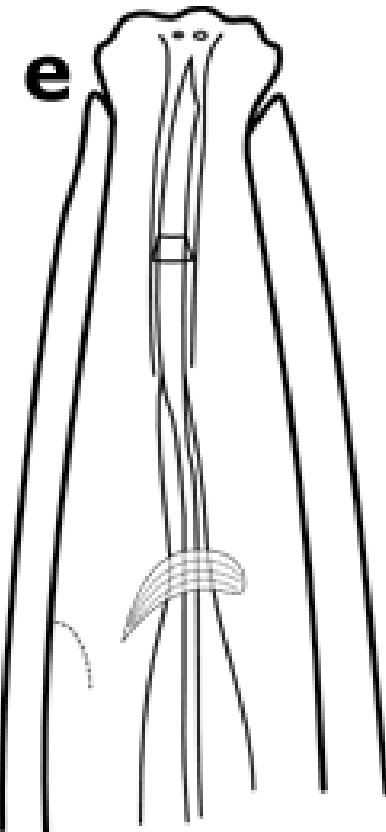
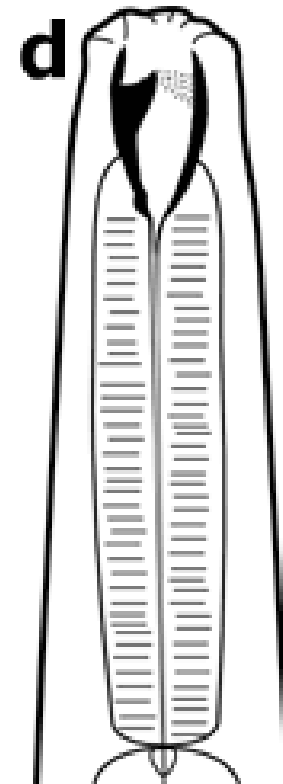
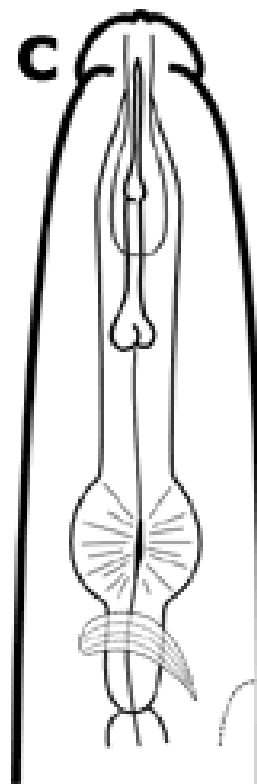
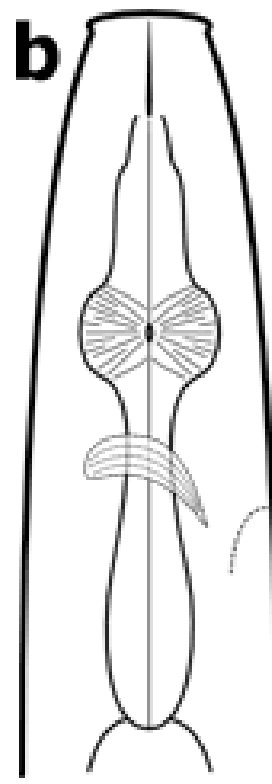
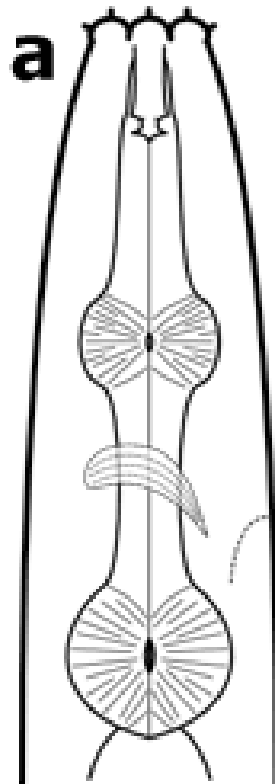
Bacterial

Fungal

Root

Predatory

Omnivore  
(Fungal)



# Root

# Fungal

# Predatory

# Omnivore

# Bacterial / Omnivore

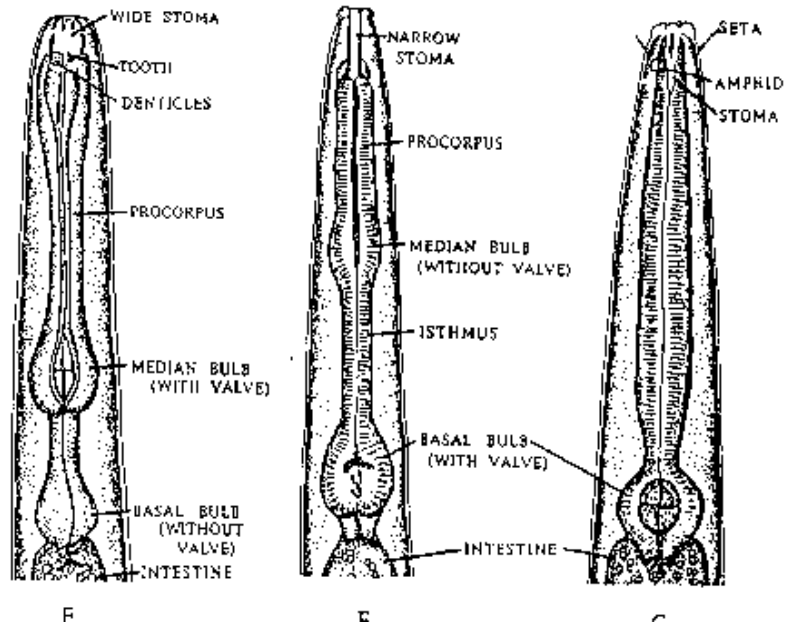
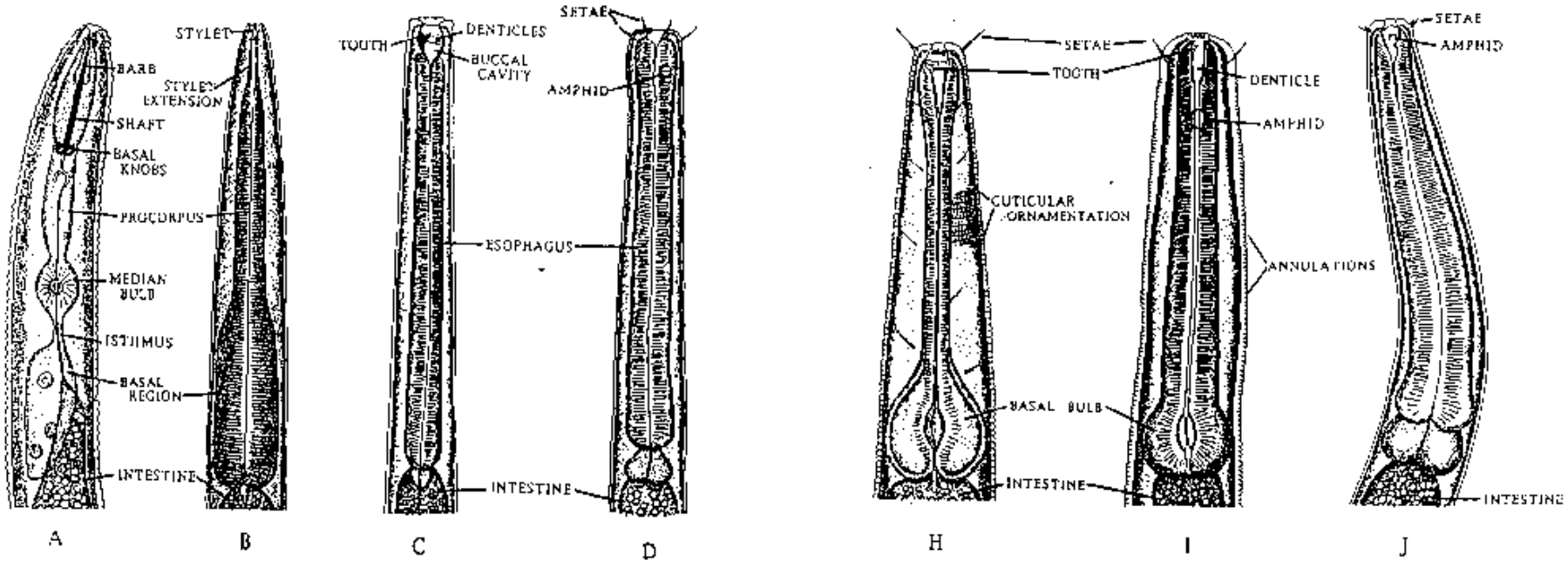
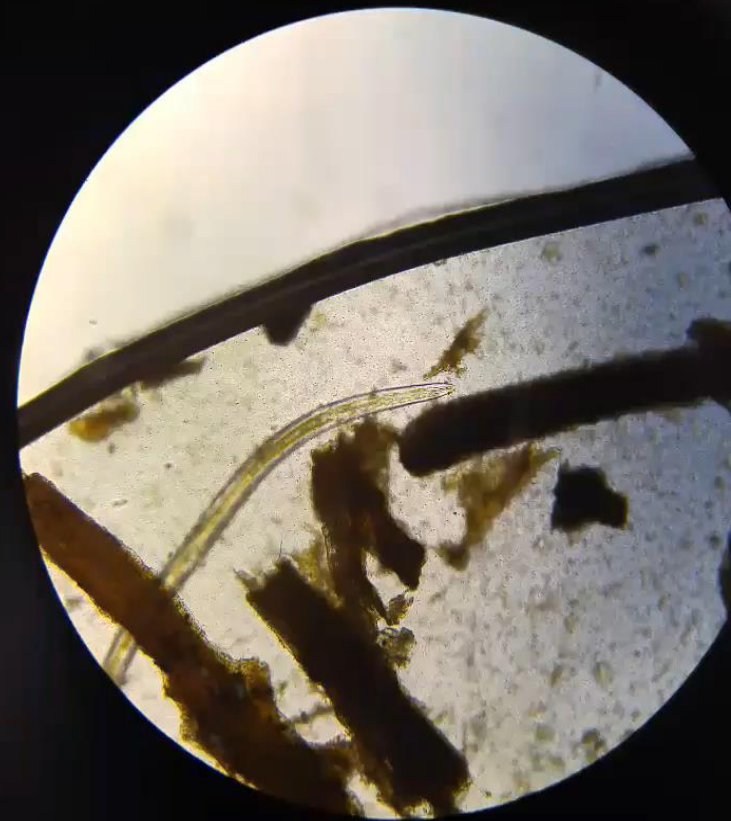


Fig. 9-5. Individual representatives for the nematode Orders found in soil illustrating the distinguishing features within the esophageal region. (A) Tylenchida (modified from Siddiqi), (B) Dorylaimida, (C) Mononchida, (D) Monhysterida, (E) Rhabditida with wide stoma and teeth, (F) Rhabditida with narrow, smooth stoma (modified from Mai and Lyon), (G) Araeolaimida, (H) Chromadorida (modified from Goodey), (I) Desmodorida, (J) Enoplida (all illustrations by Kathy Merrifield).



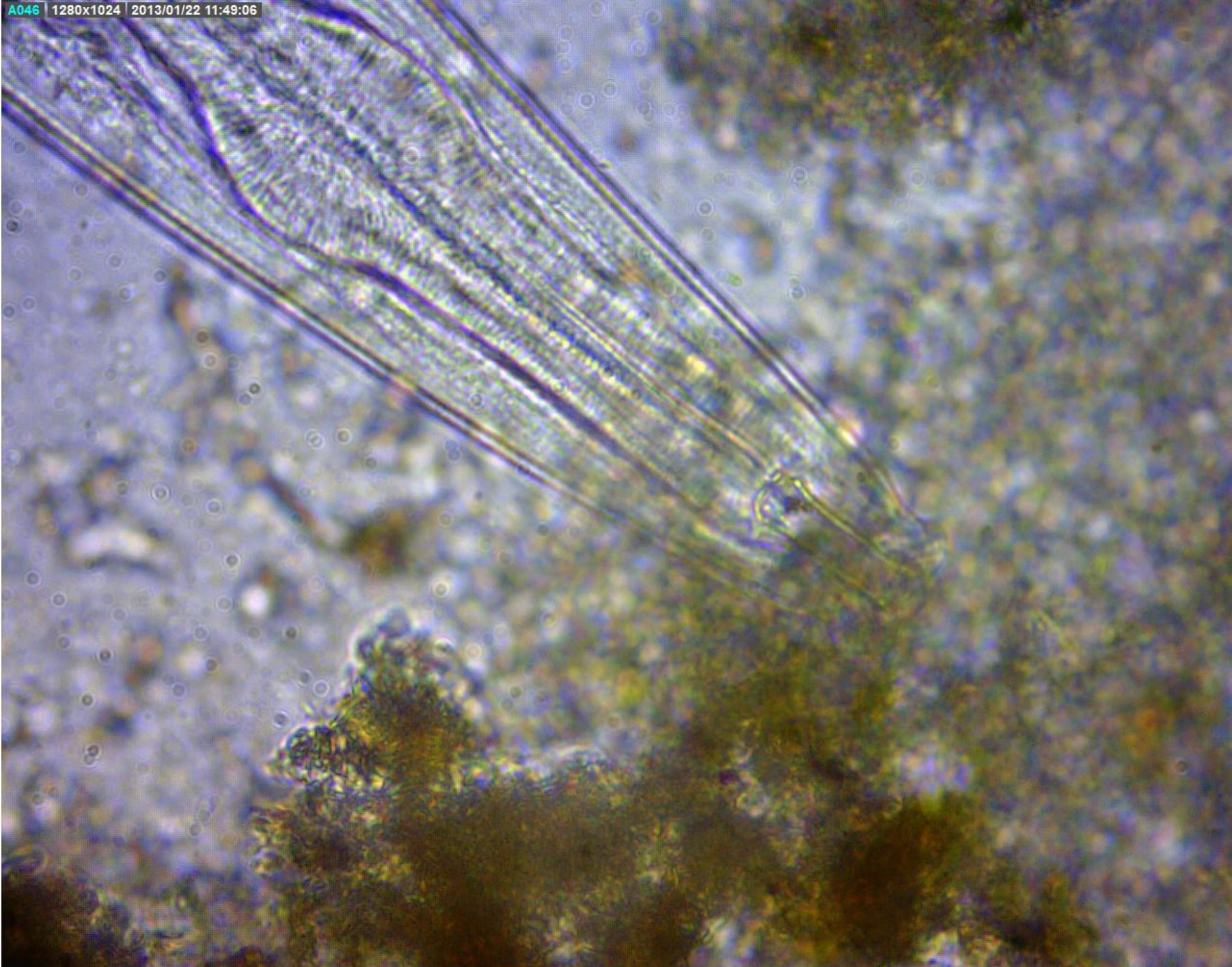










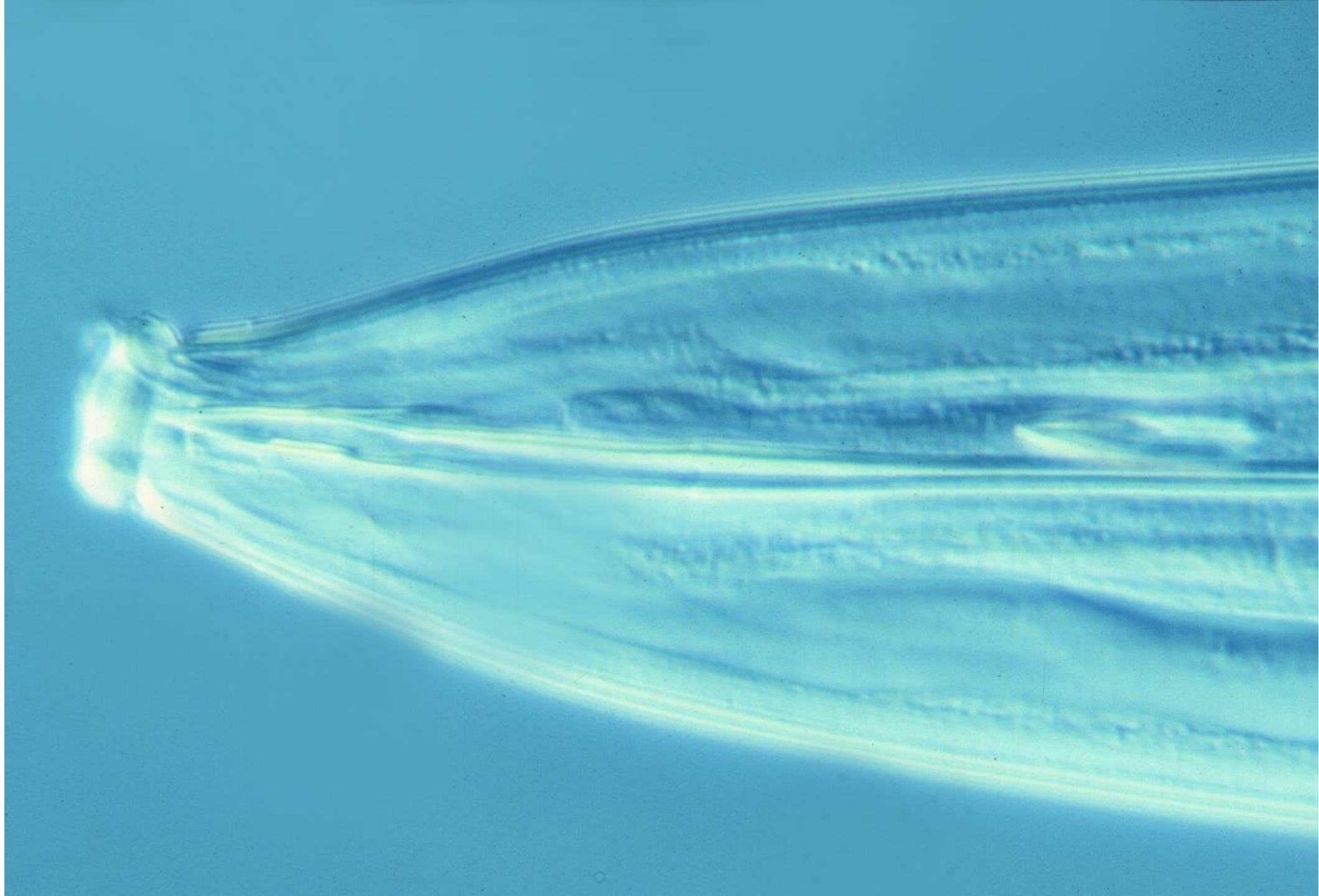


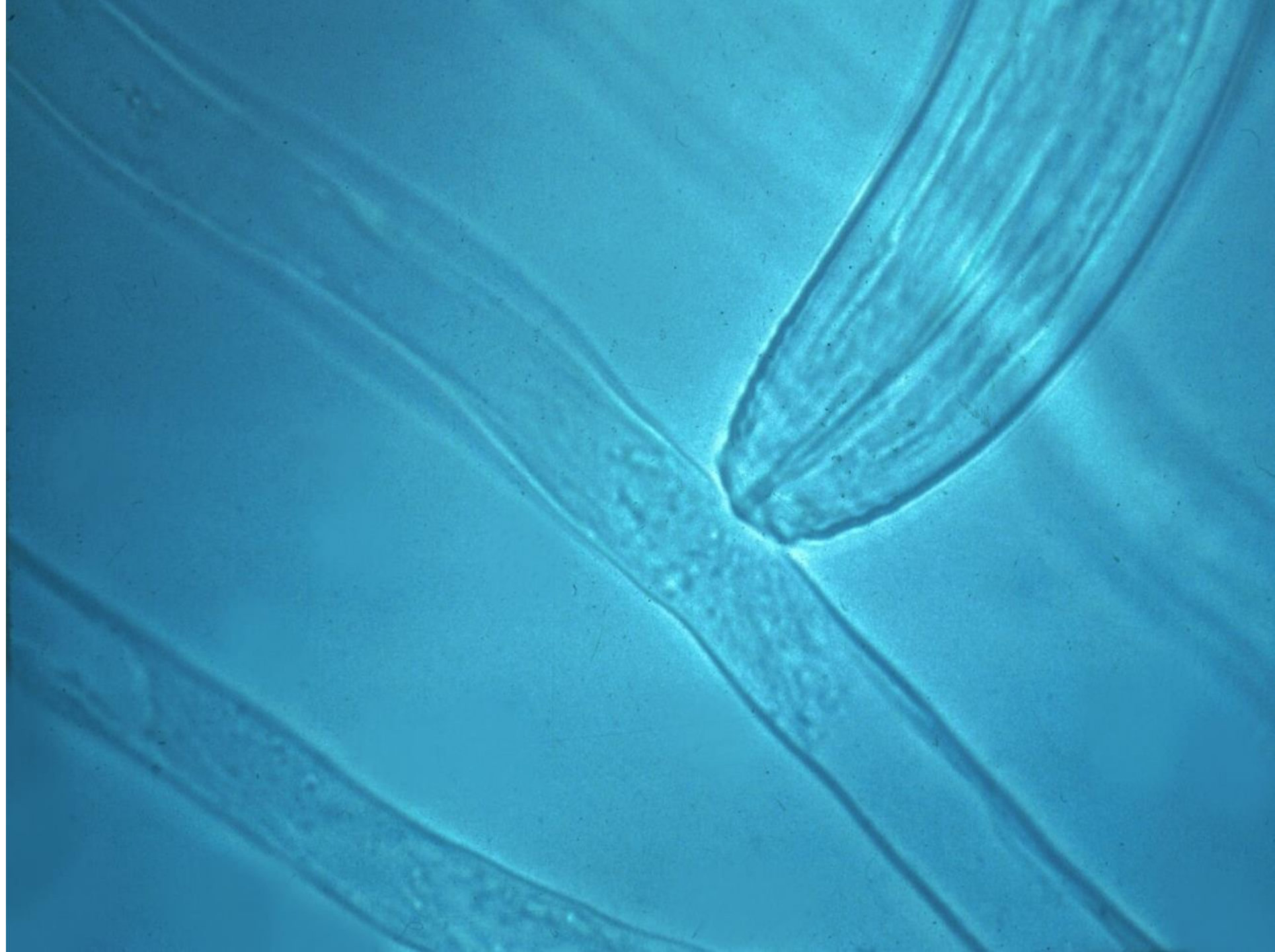






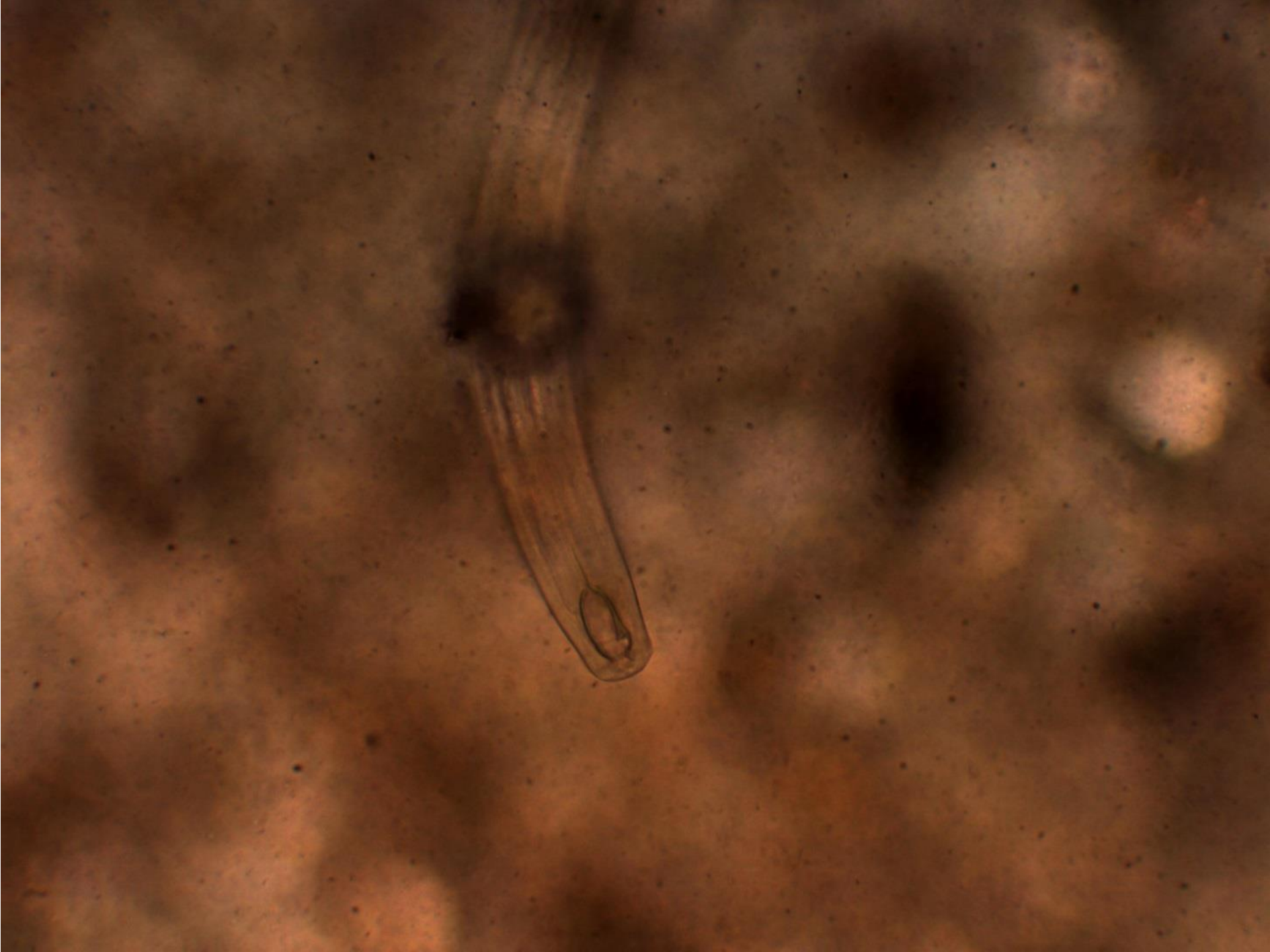


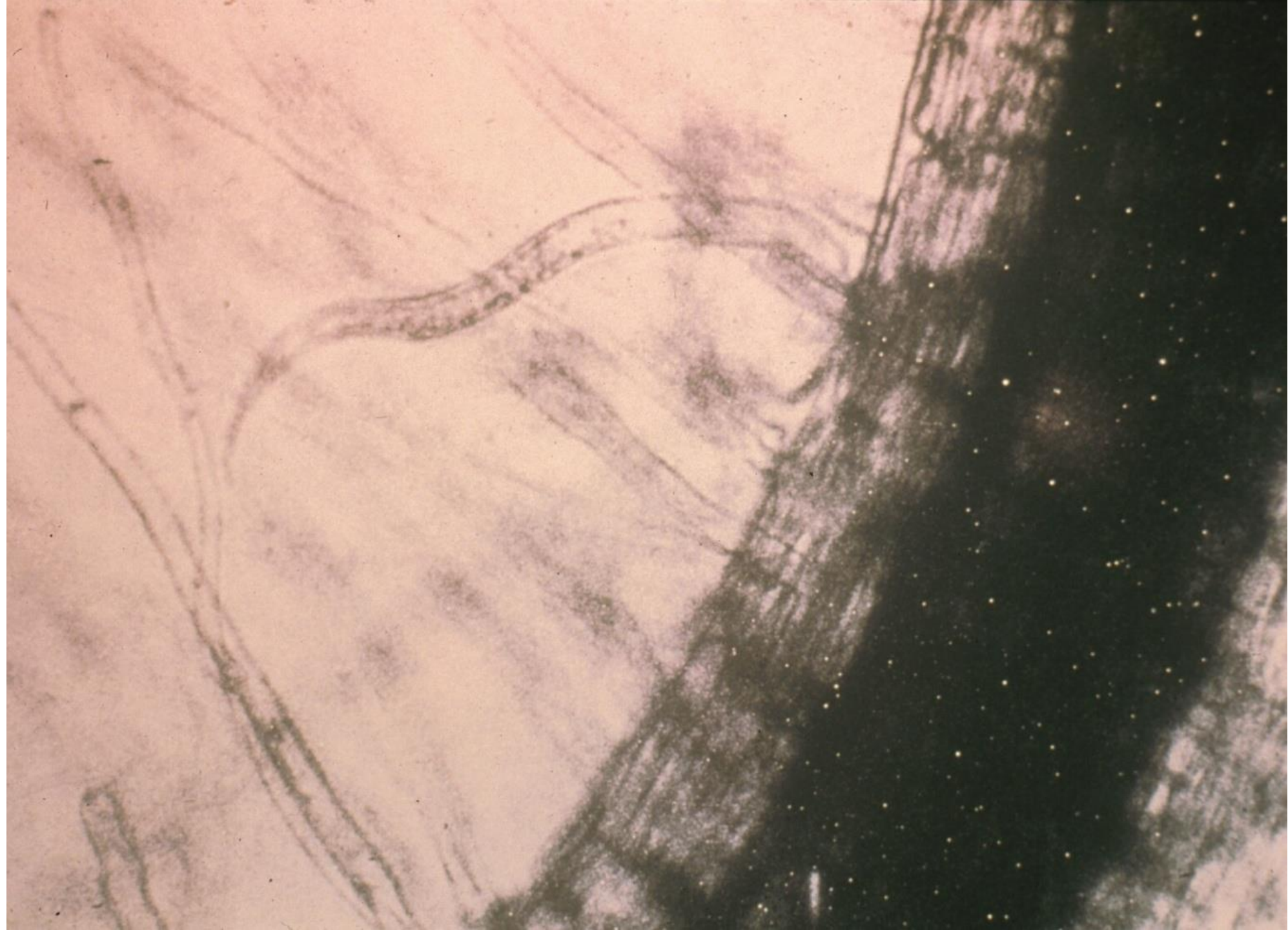


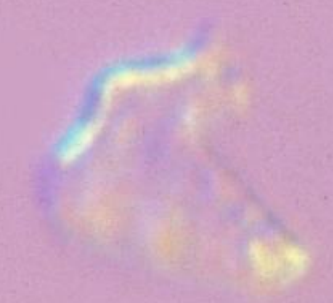
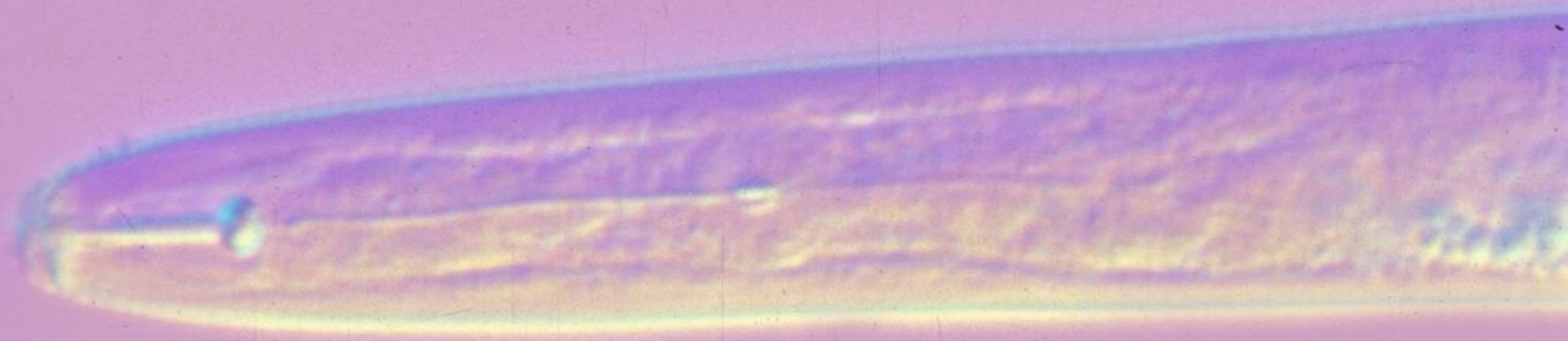










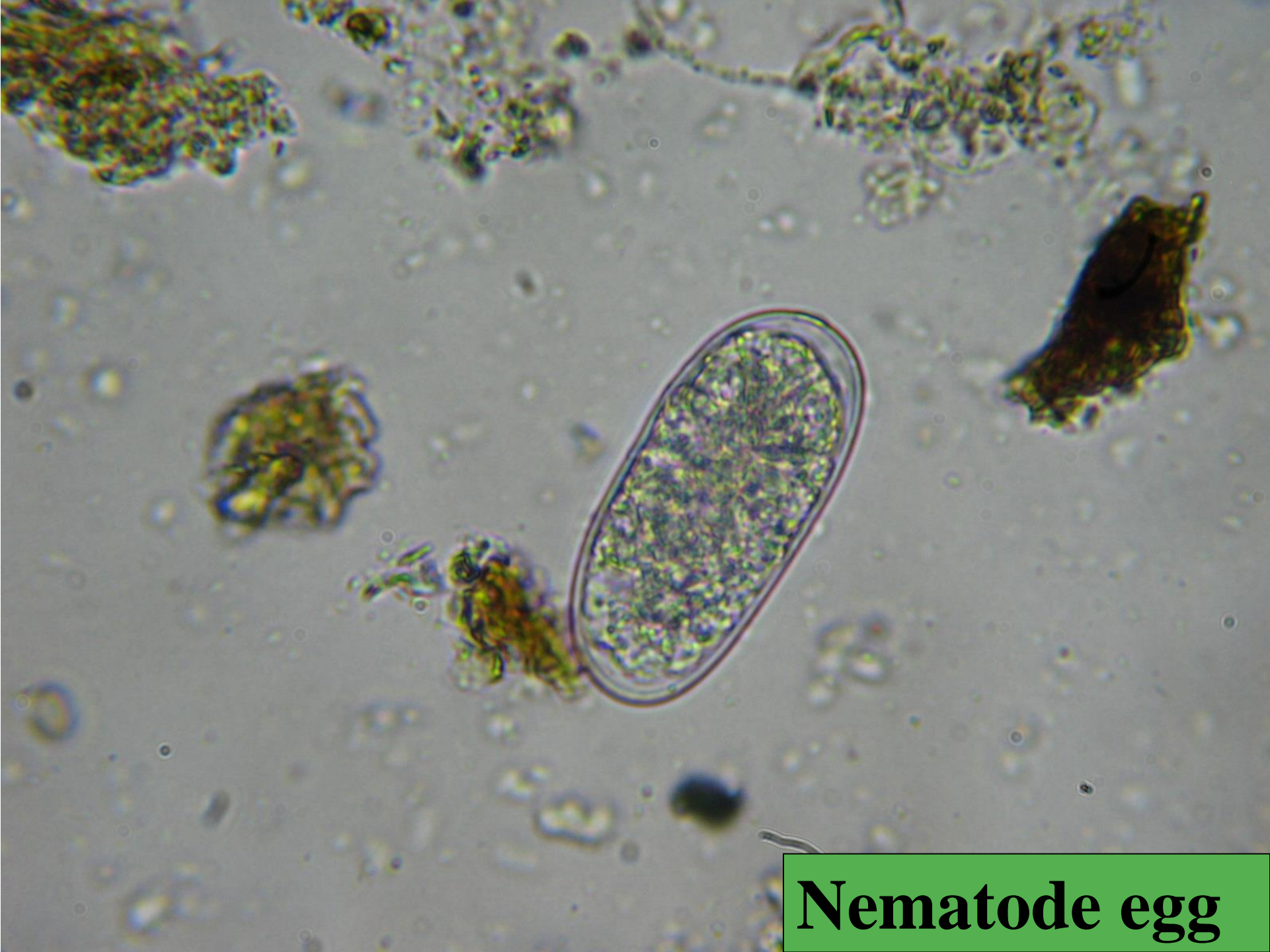




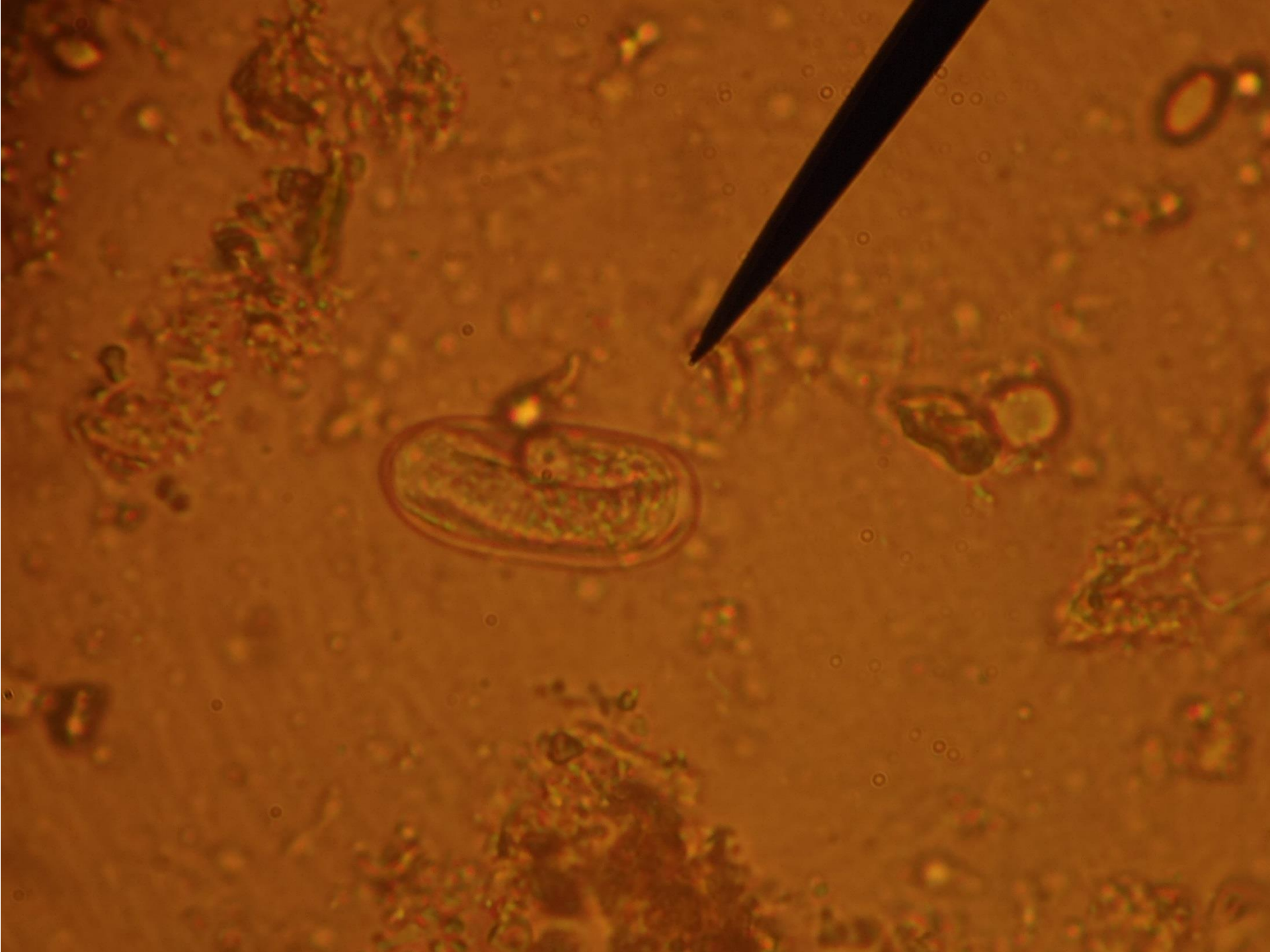




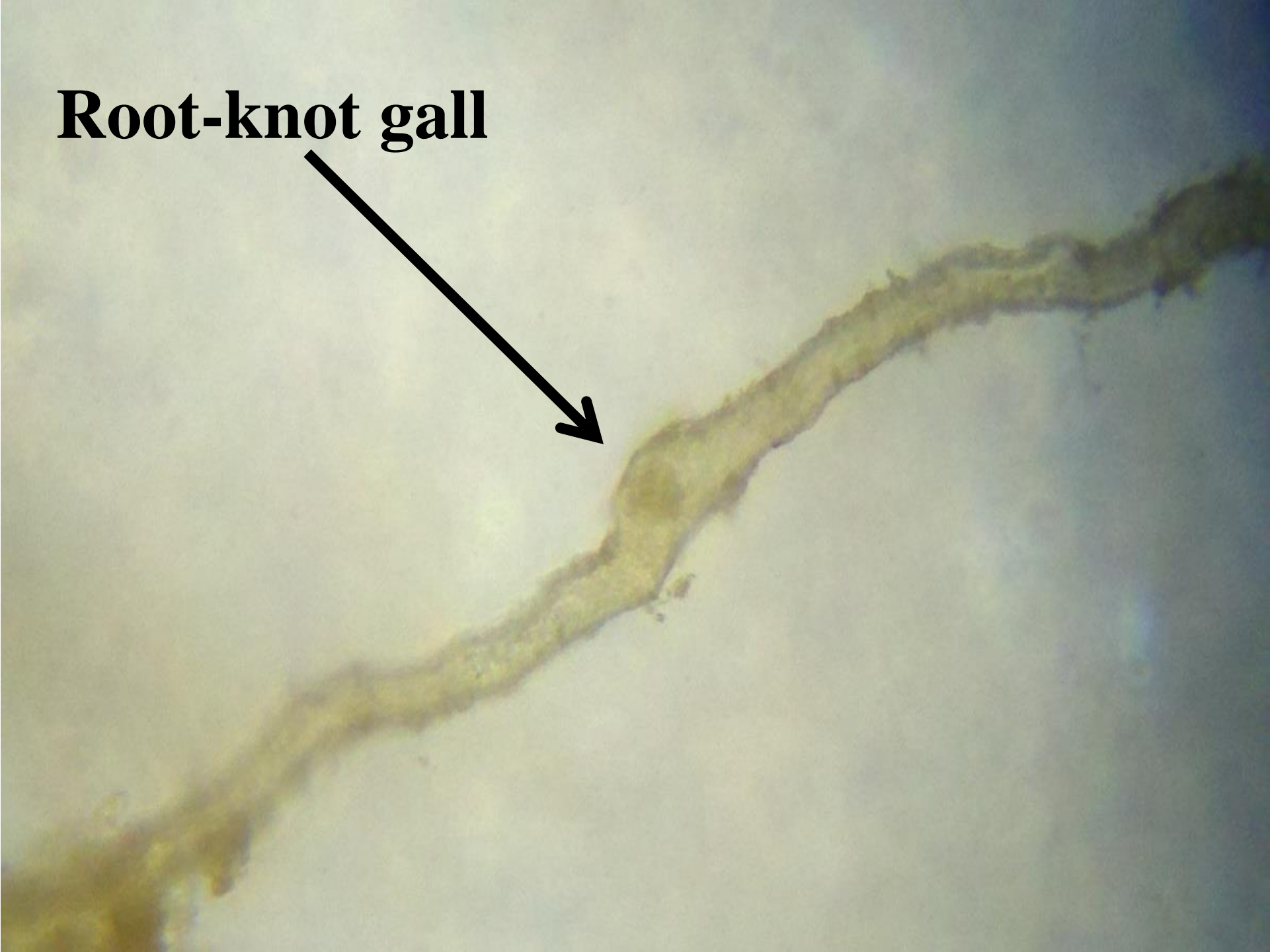
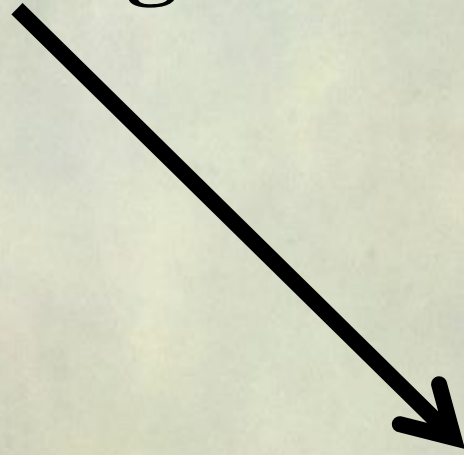




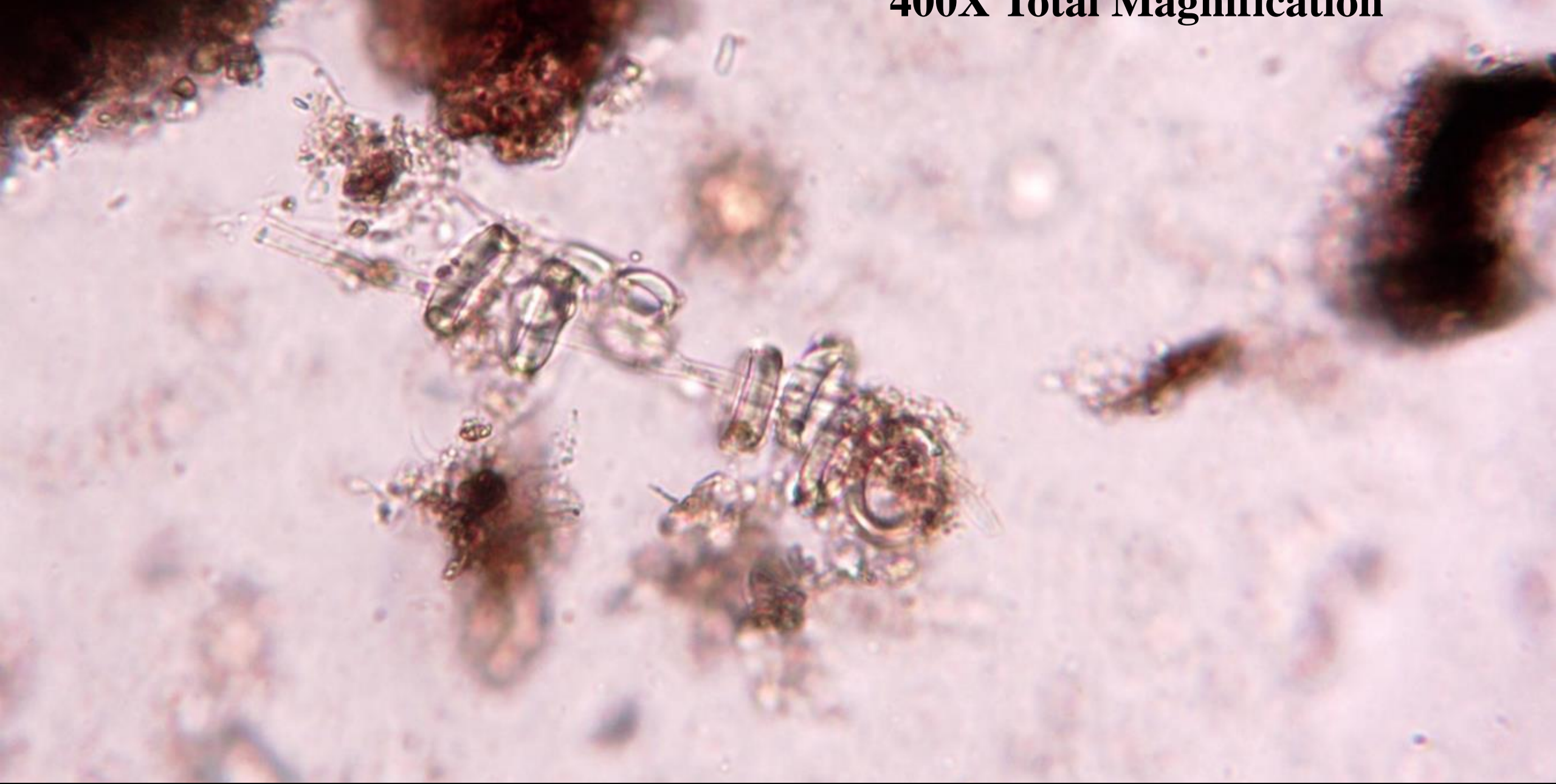
**Nematode egg**



**Root-knot gall**



400X Total Magnification



**Nematode-trapping Fungus Traps**



**Courtesy of Dr. Nordbring-Hertz**



**Many other fungi can parasitize nematodes**