Guide to identifying the four major banana damaging Nematodes:

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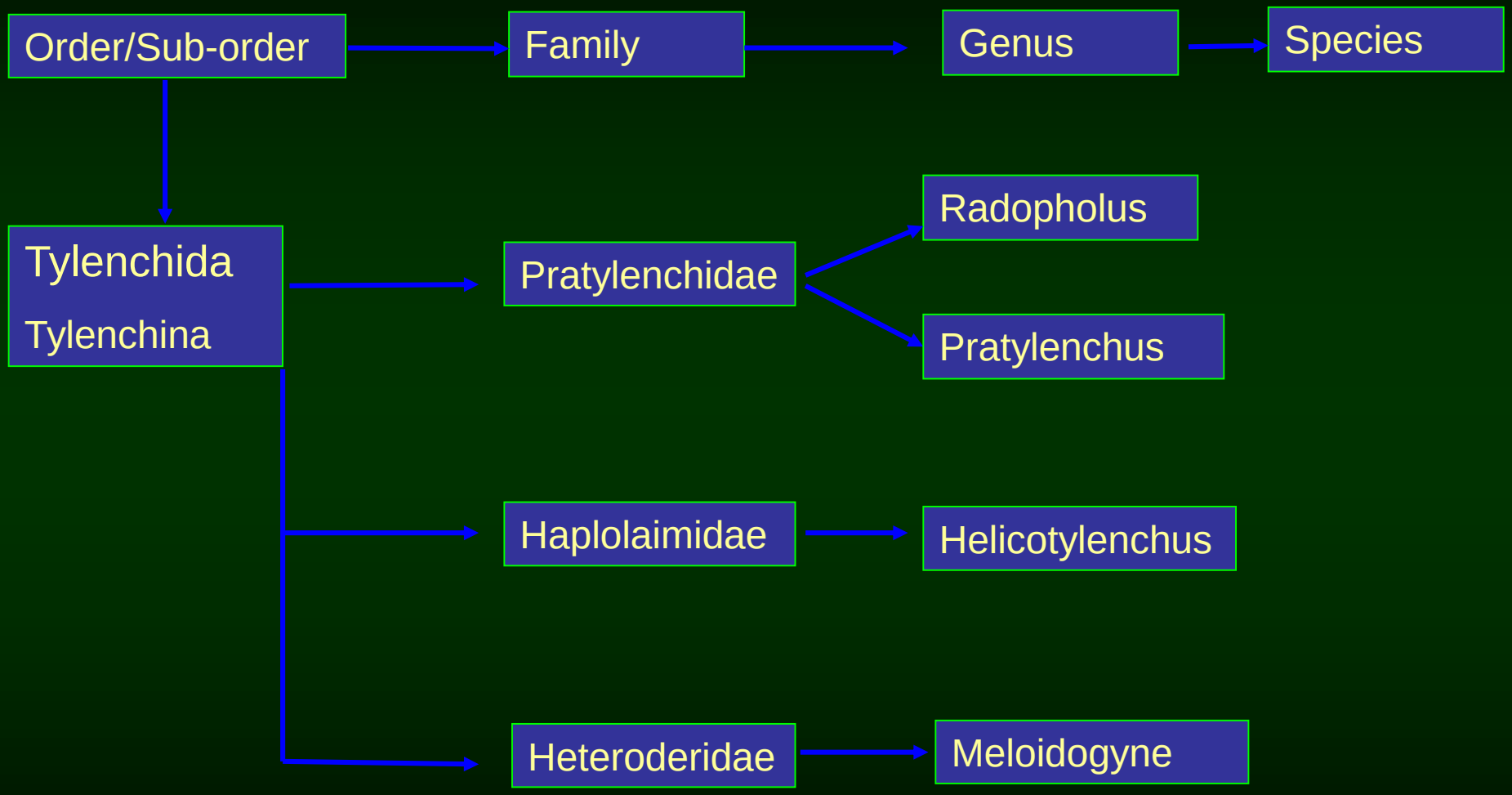
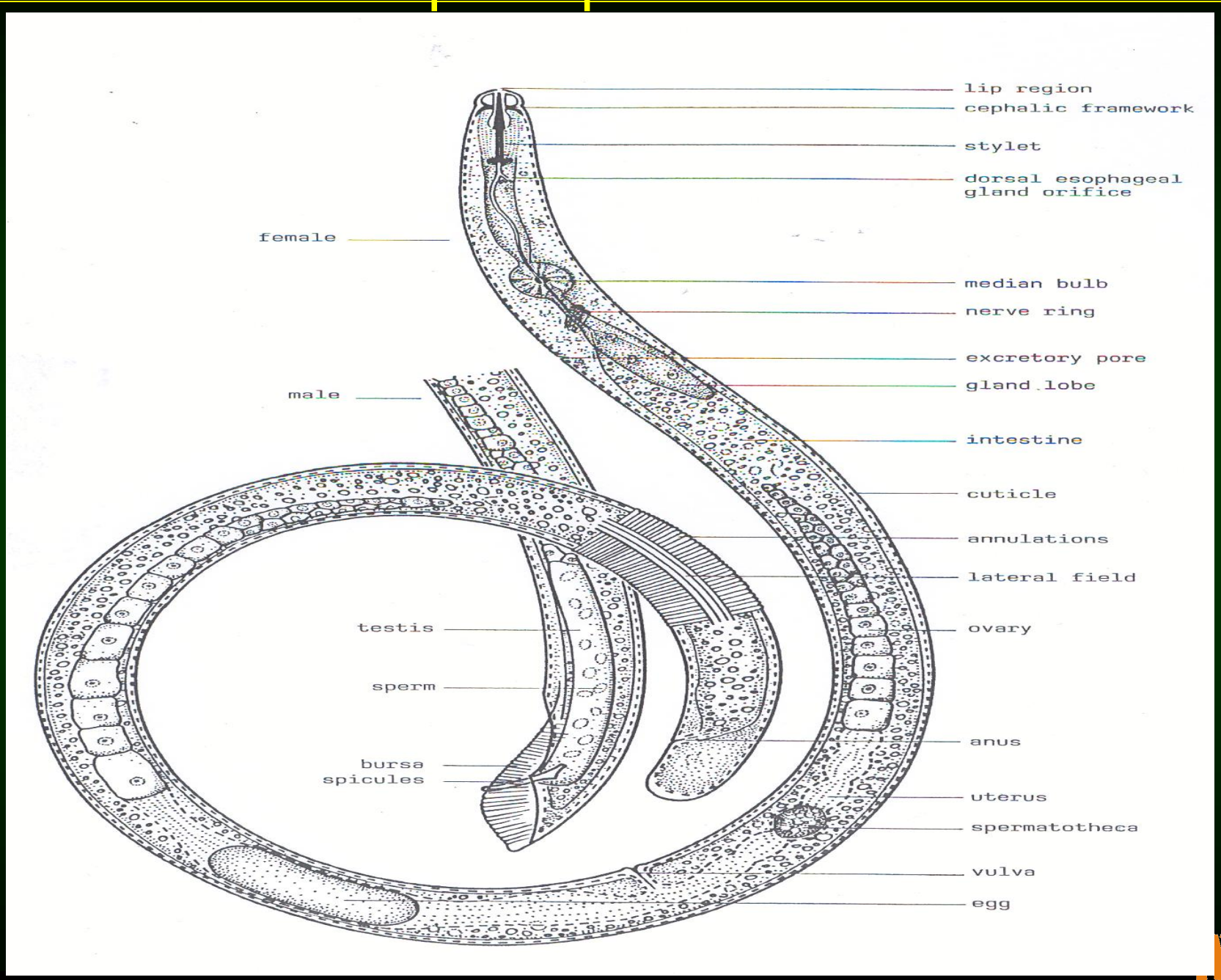
Functional nematodes damaging banana

- **Burrowing nematode: *Radopholus similis***
- **Root-lesion nematodes: *Pratylenchus coffeae & goodeyi***
- **Spriral nematodes: *Helicotylenchus Multicinctus & dihystera***
- **Sedentary nematodes: *Meloidogyne* spp (*incognita, javanica, arenaria, hapla*)**

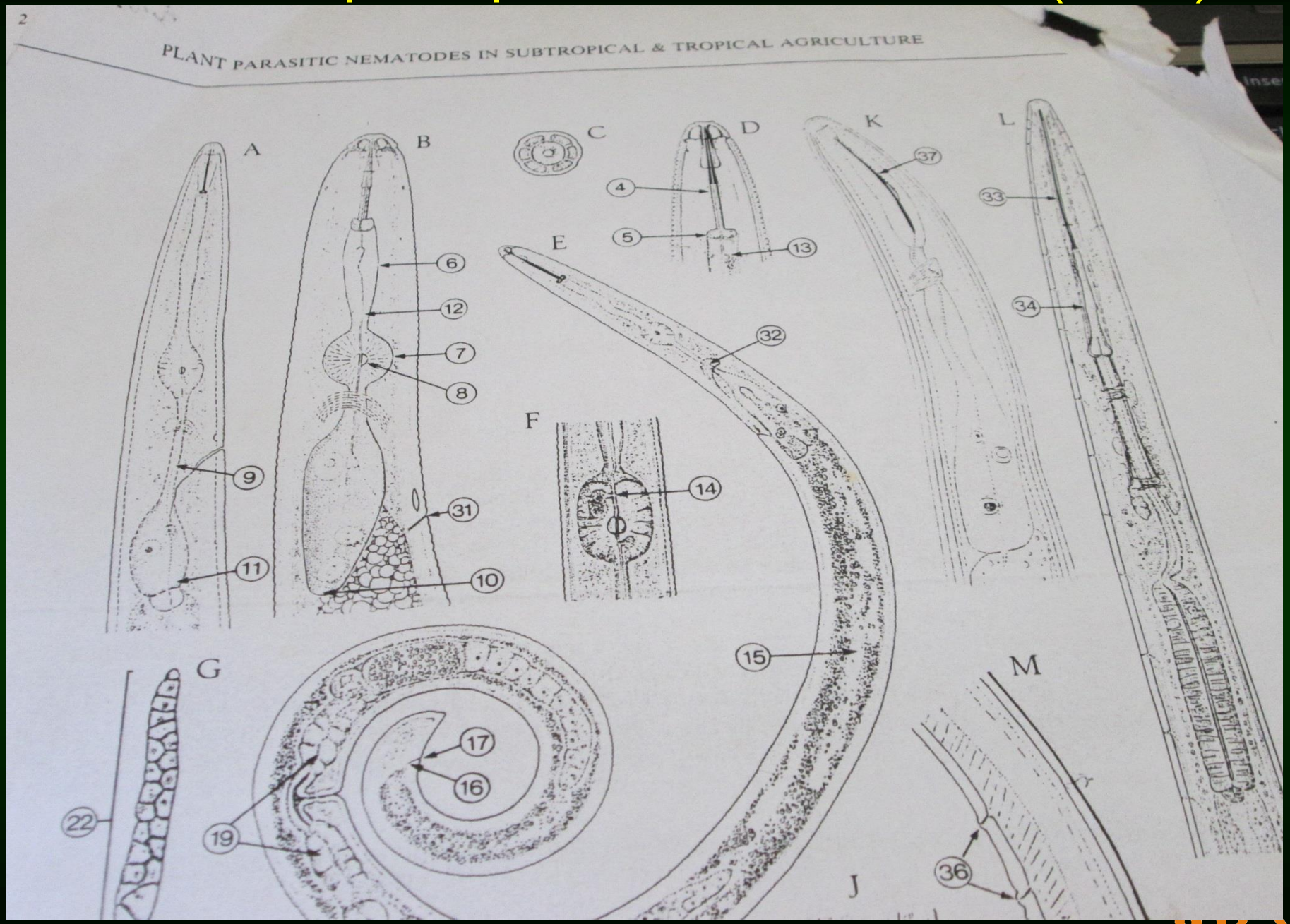
Banana nematodes phylogeny



Features of plant parasitic nematodes



Features of plant parasitic nematodes (con't)



Differences amongst the four nematodes

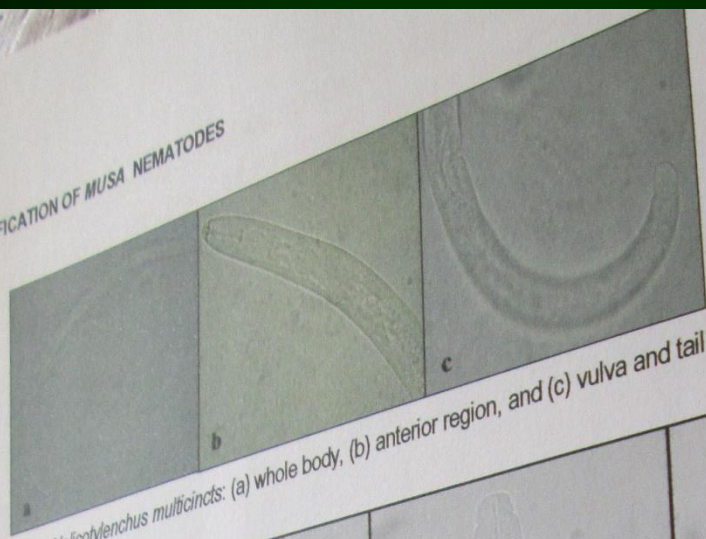


Figure 2. *Helicotylenchus multicincts*: (a) whole body, (b) anterior region, and (c) vulva and tail region.

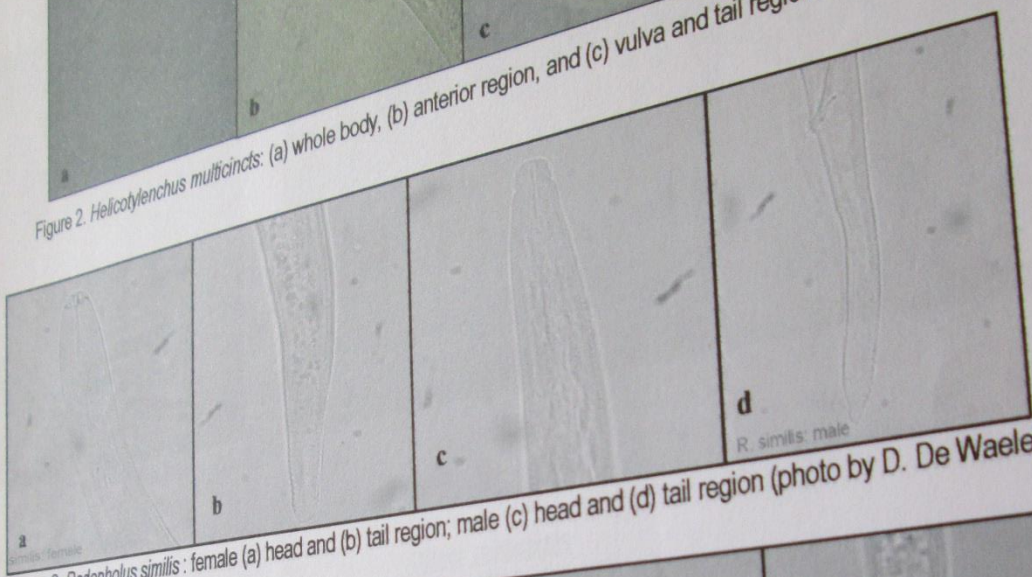


Figure 3. *Radopholus similis* : female (a) head and (b) tail region; male (c) head and (d) tail region (photo by D. De Waele).

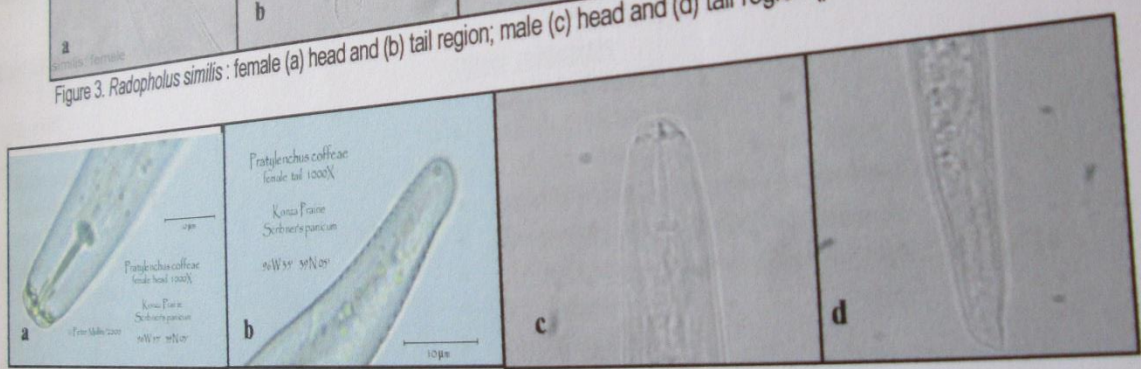


Figure 4. *Pratylenchus coffeae*: (a) head and (b) tail region (photo downloaded from http://nematode.unl.edu) ; *Pratylenchus goodeyei* : (c) head and (d) tail region (photo by D. De Waele).

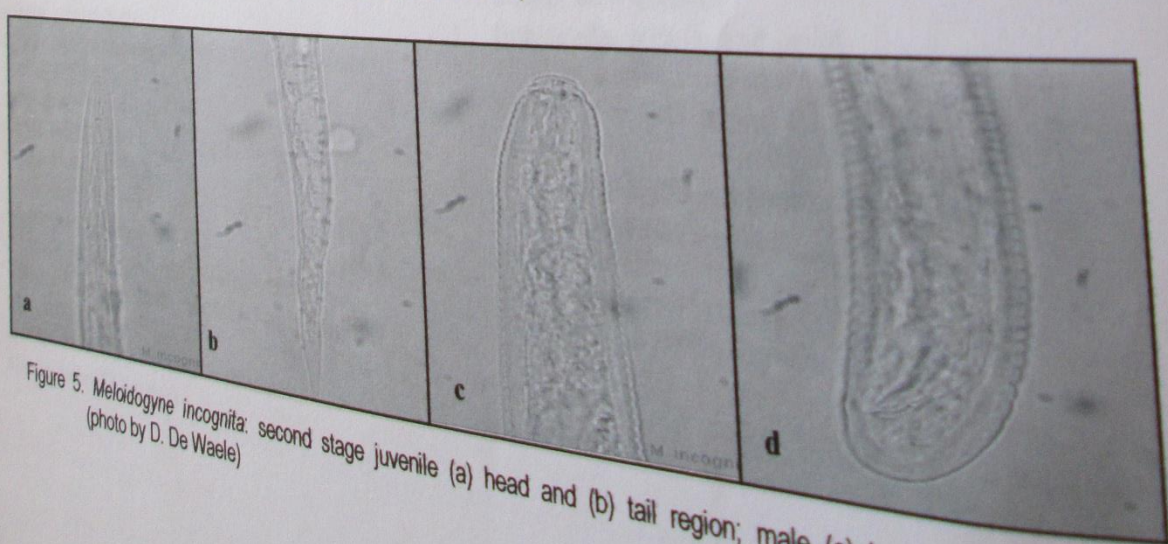
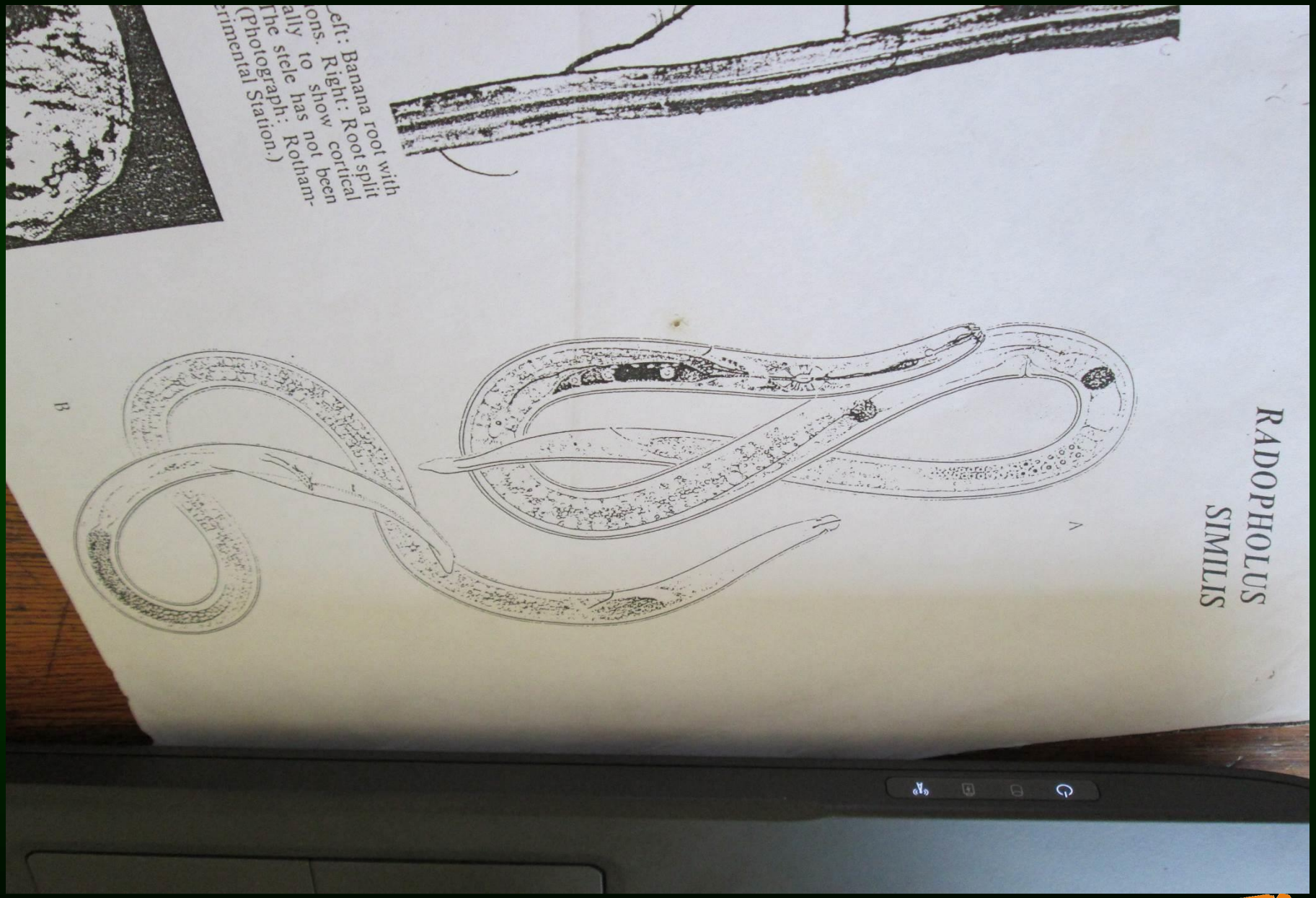


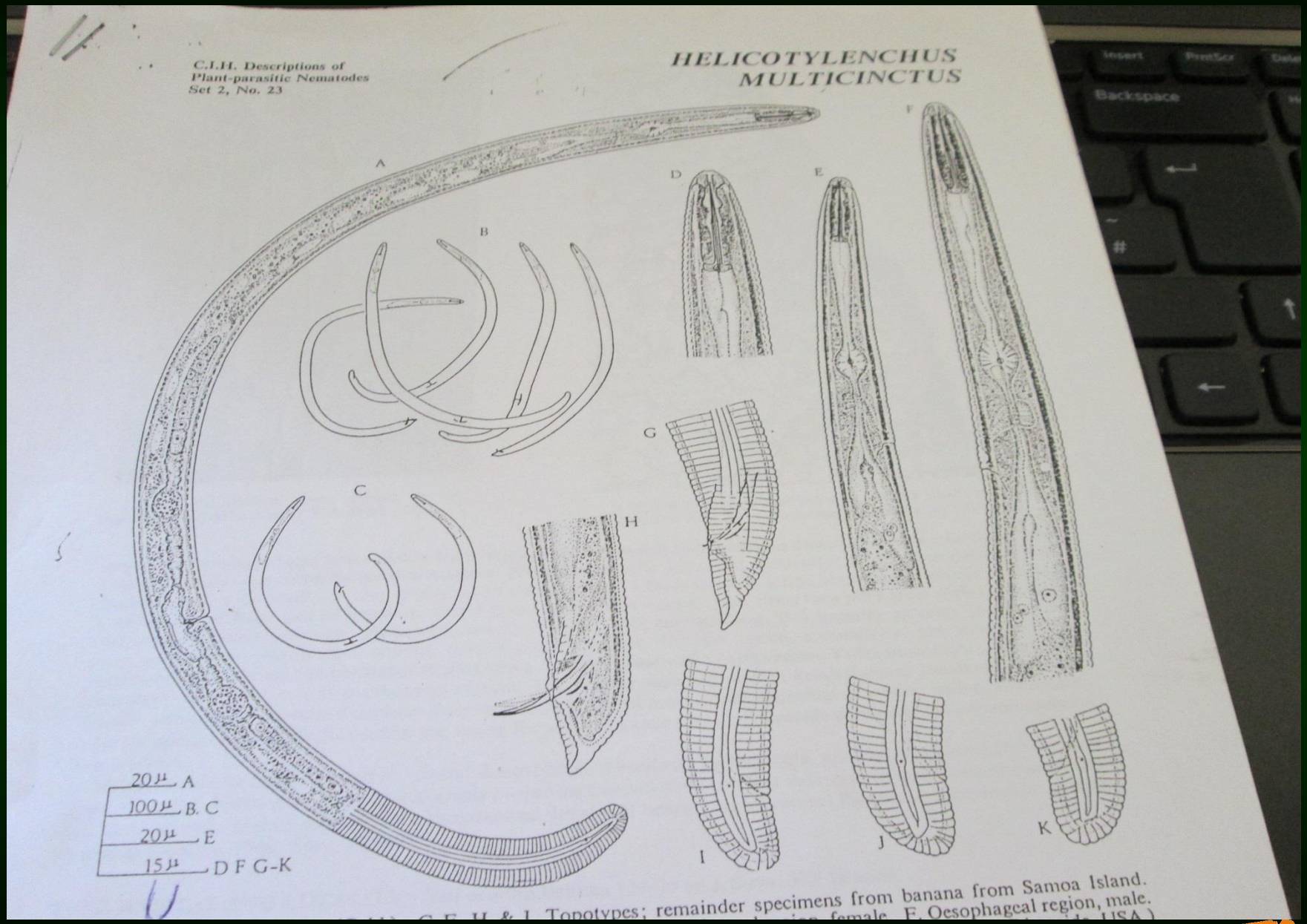
Figure 5. *Meloidogyne incognita*: second stage juvenile (a) head and (b) tail region; male (c) ...
(photo by D. De Waele)

Radopholus similis

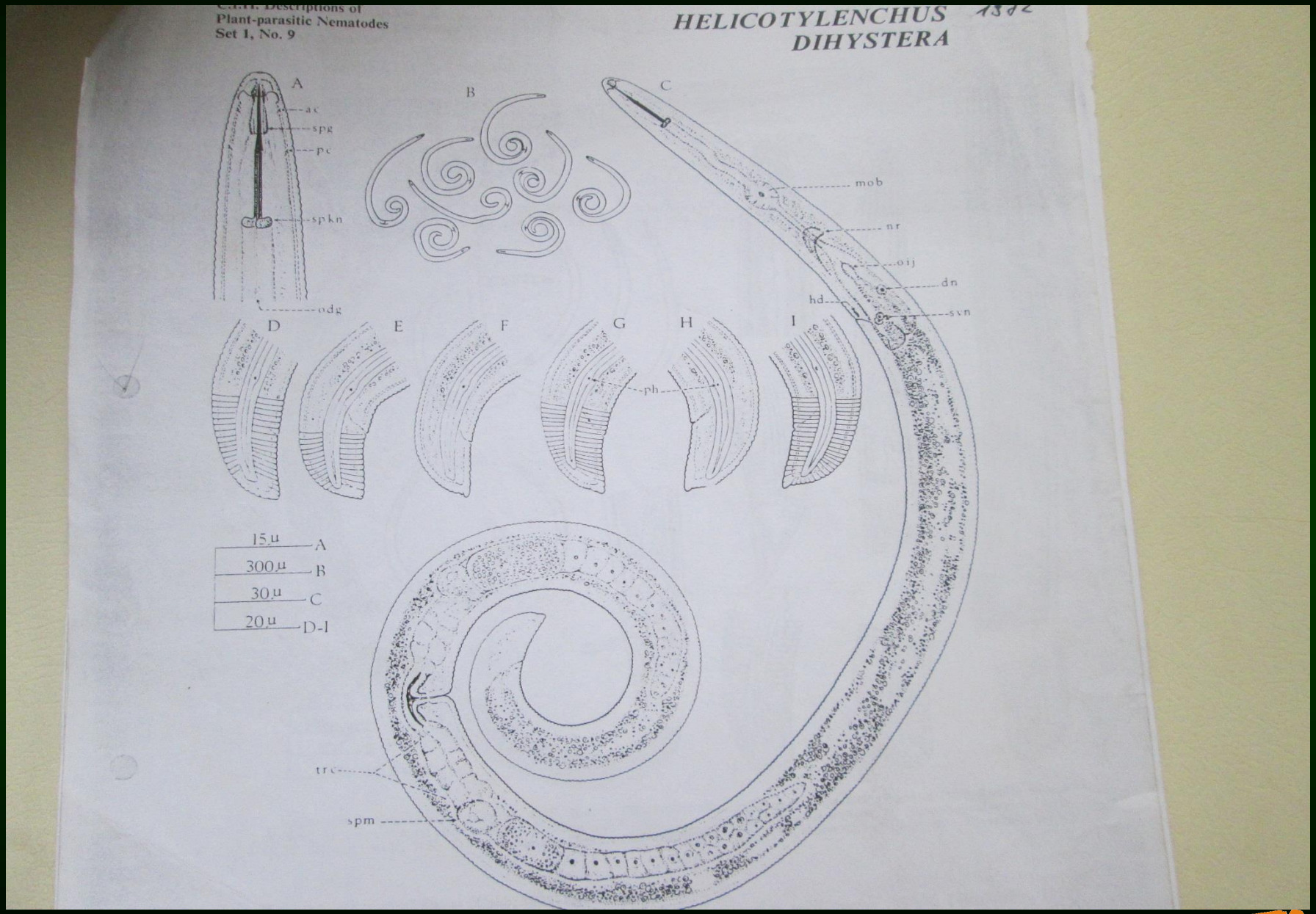


Left: Banana root with
ons. Right: Root split
ally to show cortical
The stele has not been
(Photograph: Rotham-
erimental Station.)

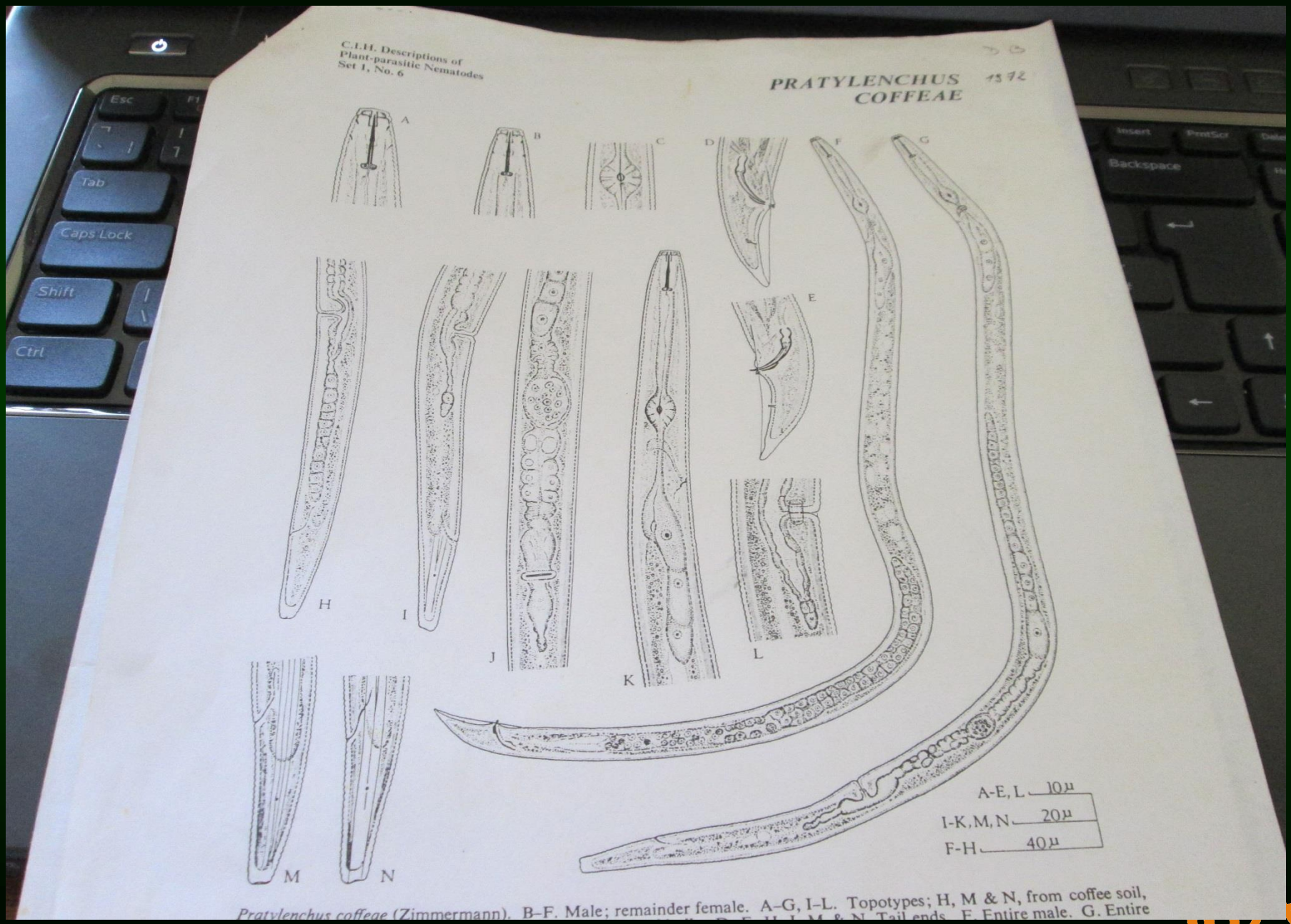
Helicotylenchus Multicinctus



Helicotylenchus Dihystera

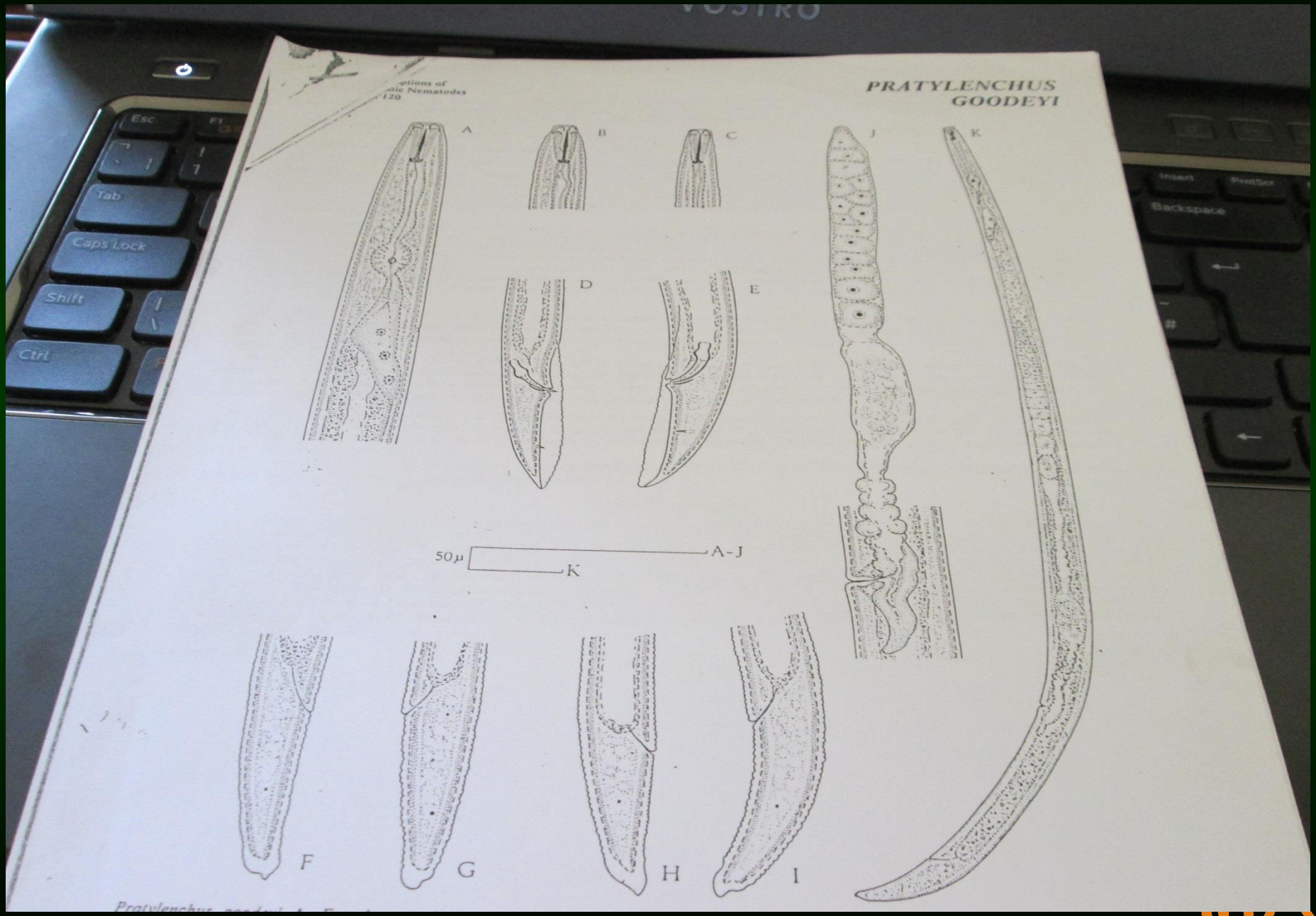


Pratylenchus coffeae

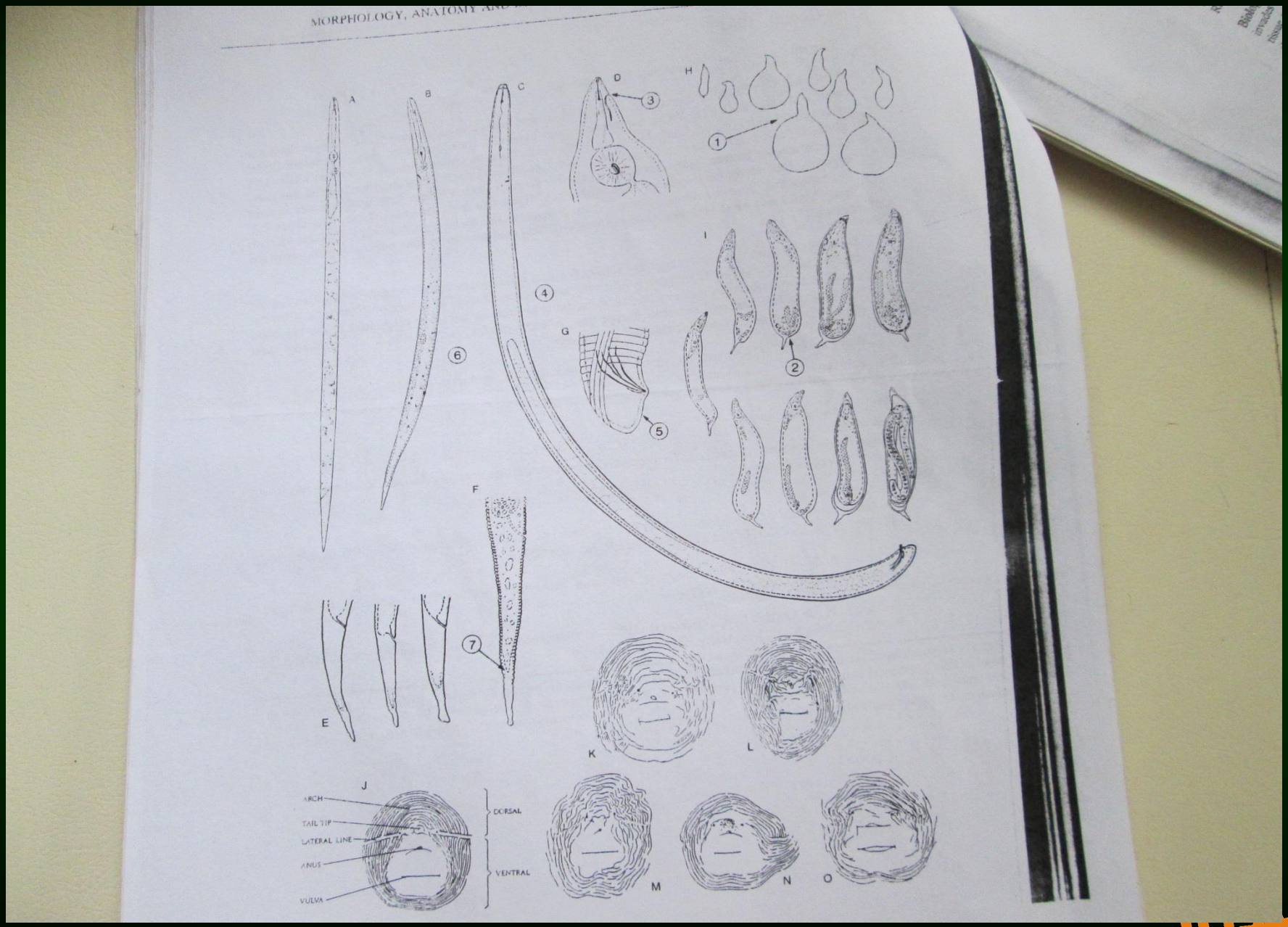


Pratylenchus coffeae (Zimmermann). B–F. Male; remainder female. A–G, I–L. Topotypes; H, M & N, from coffee soil,

Pratylenchus goodeyi

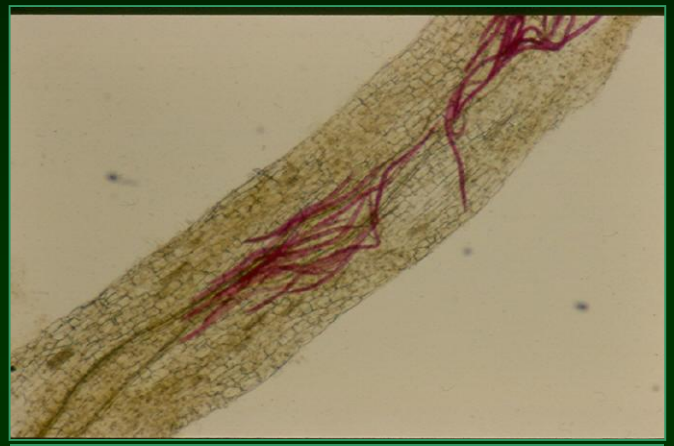


Meloidogyne spp



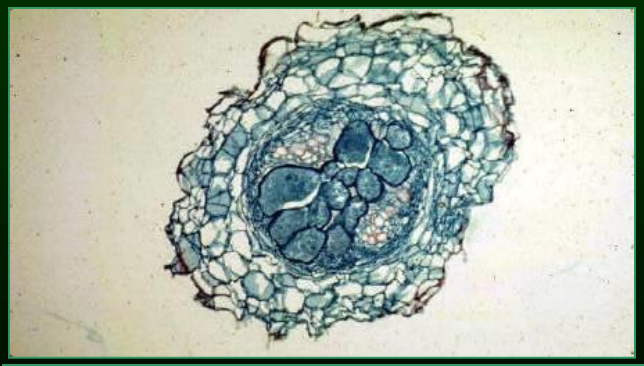
Meloidogyne under high resolution

- feed from highly modified cells
- Adults Loose mobility completely

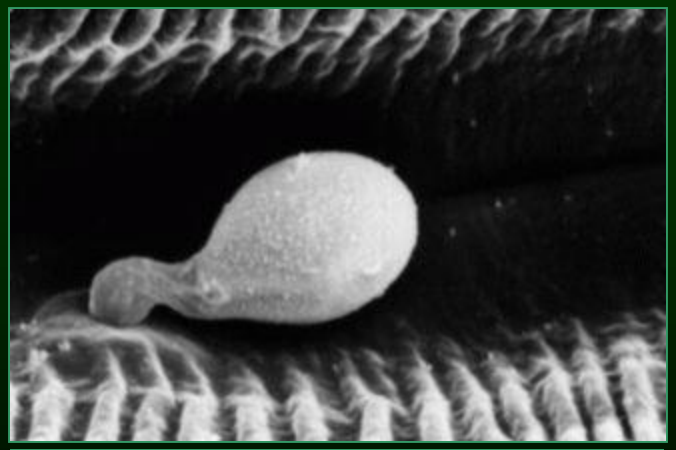


Meloidogyne juveniles in root tissue

Meloidogyne female with egg mass



Meloidogyne feeding sites (giant cells)



Globodera inside vascular bundle

IITA