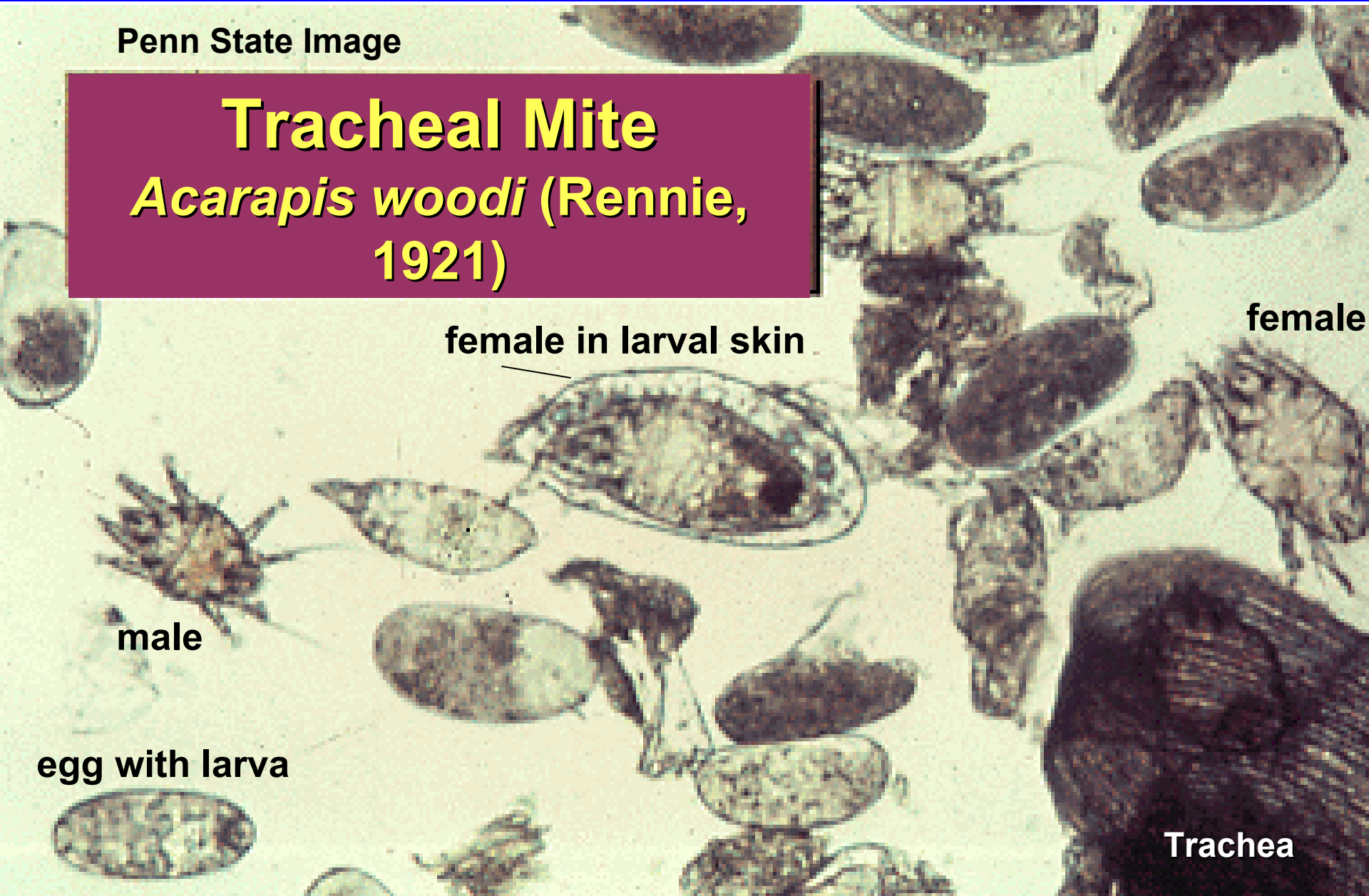


Penn State Image

Tracheal Mite

Acarapis woodi (Rennie, 1921)



female in larval skin

female

male

egg with larva

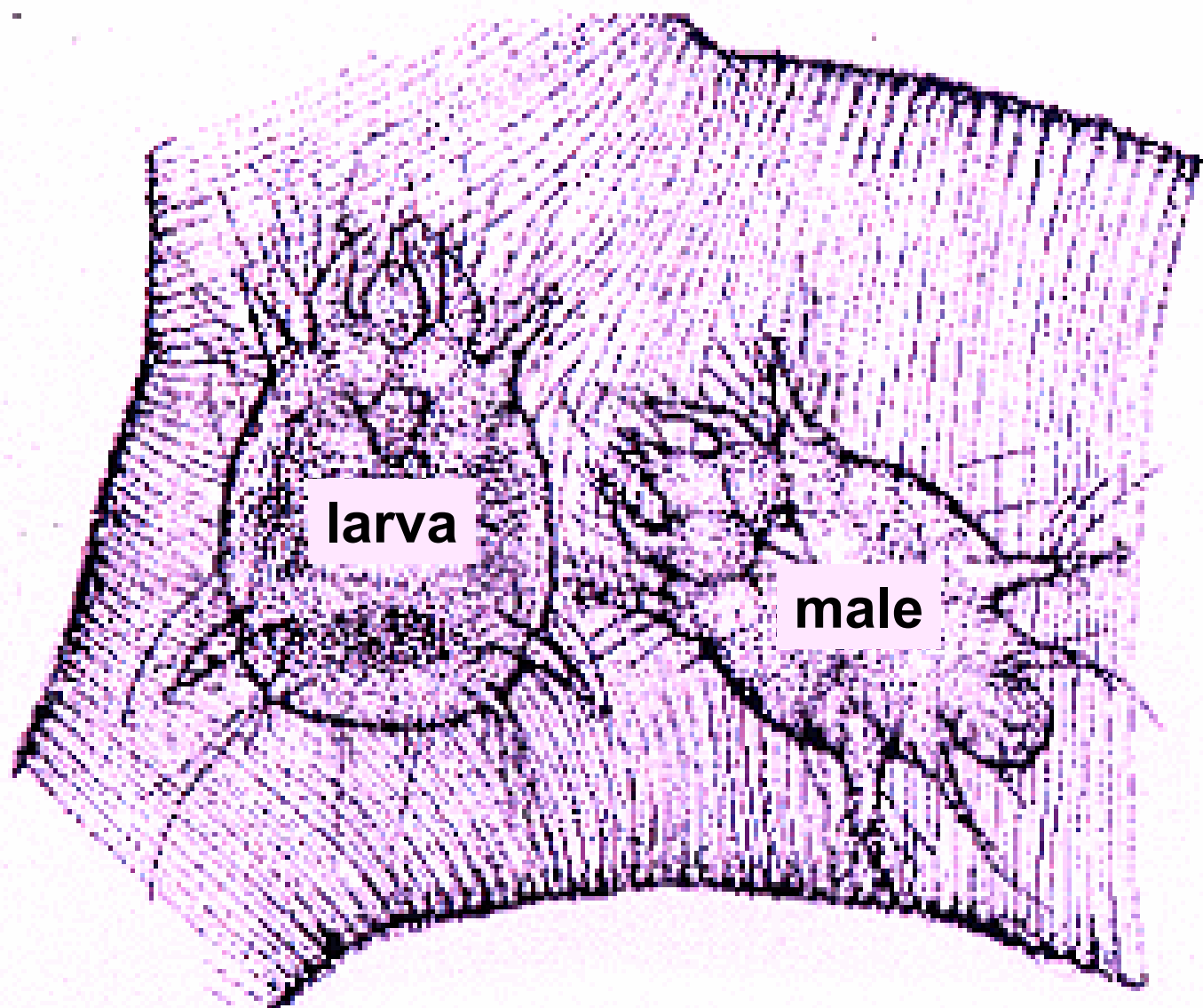
Trachea

**A female mite from the tracheal trunk –
as seen with the Scanning
Electron Microscope**



Courtesy of Ron Ochoa.

66.7 μ



Size:

Female
143 - 174 microns

Male
125 - 136 microns

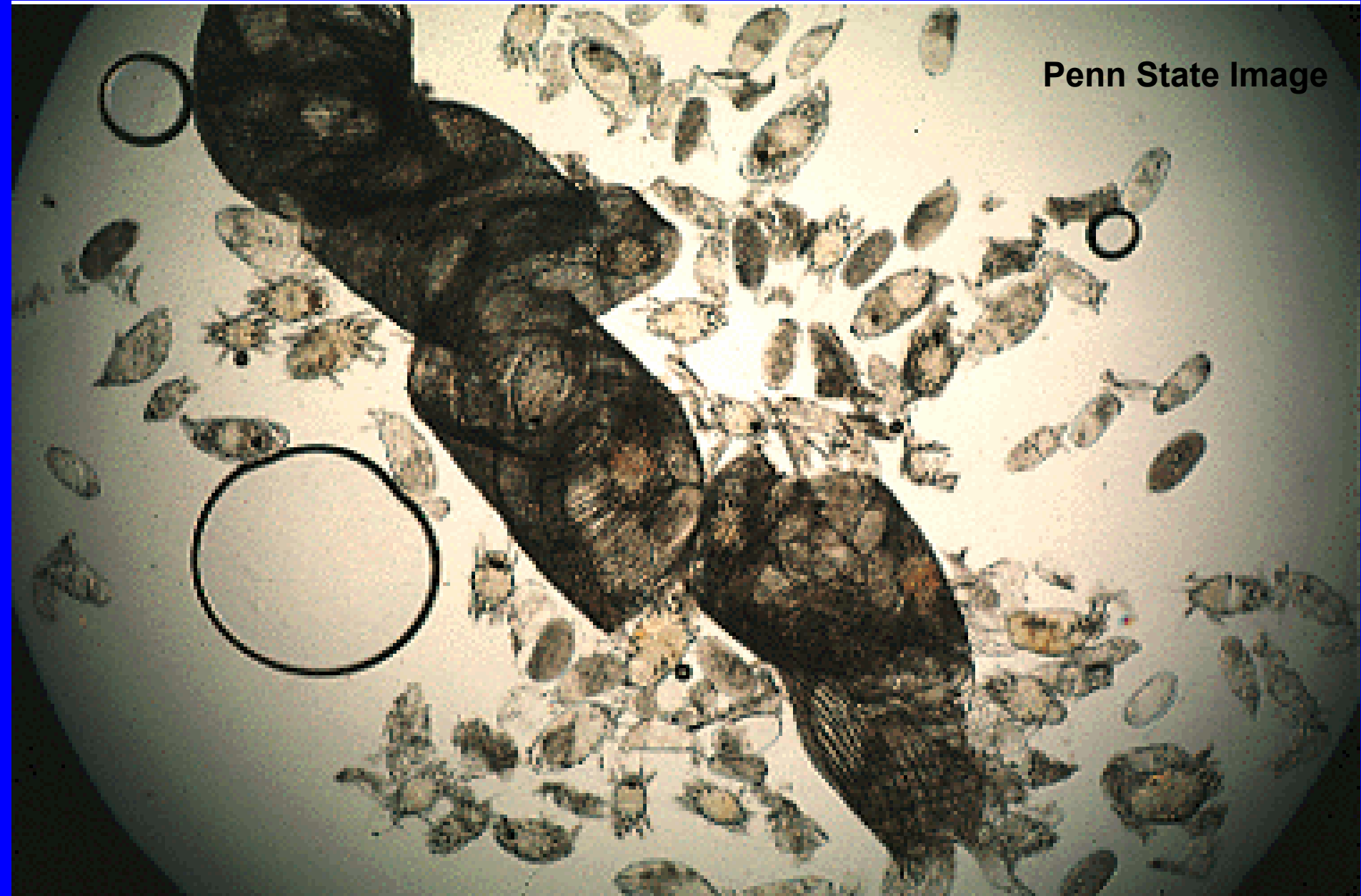
Not visible with
the naked eye

Tracheal Mites in the Honey Bee Trachea

Penn State Image

Dissected tracheal trunk from thorax.

Penn State Image



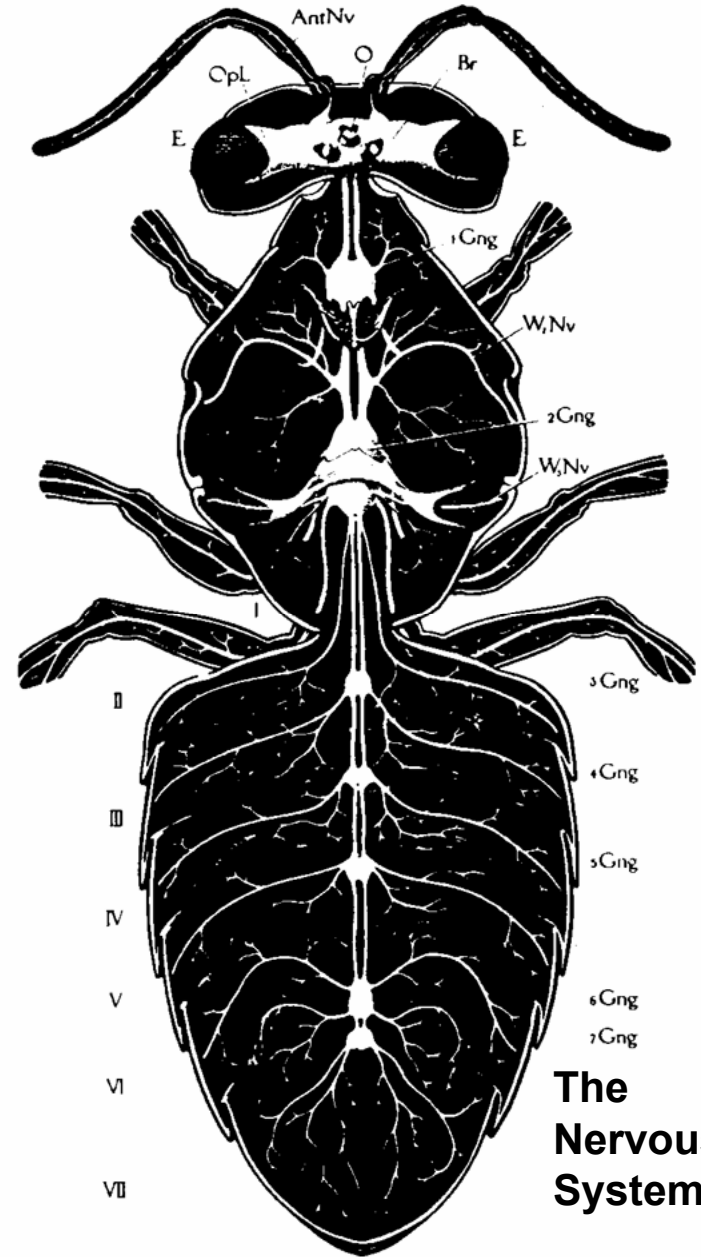
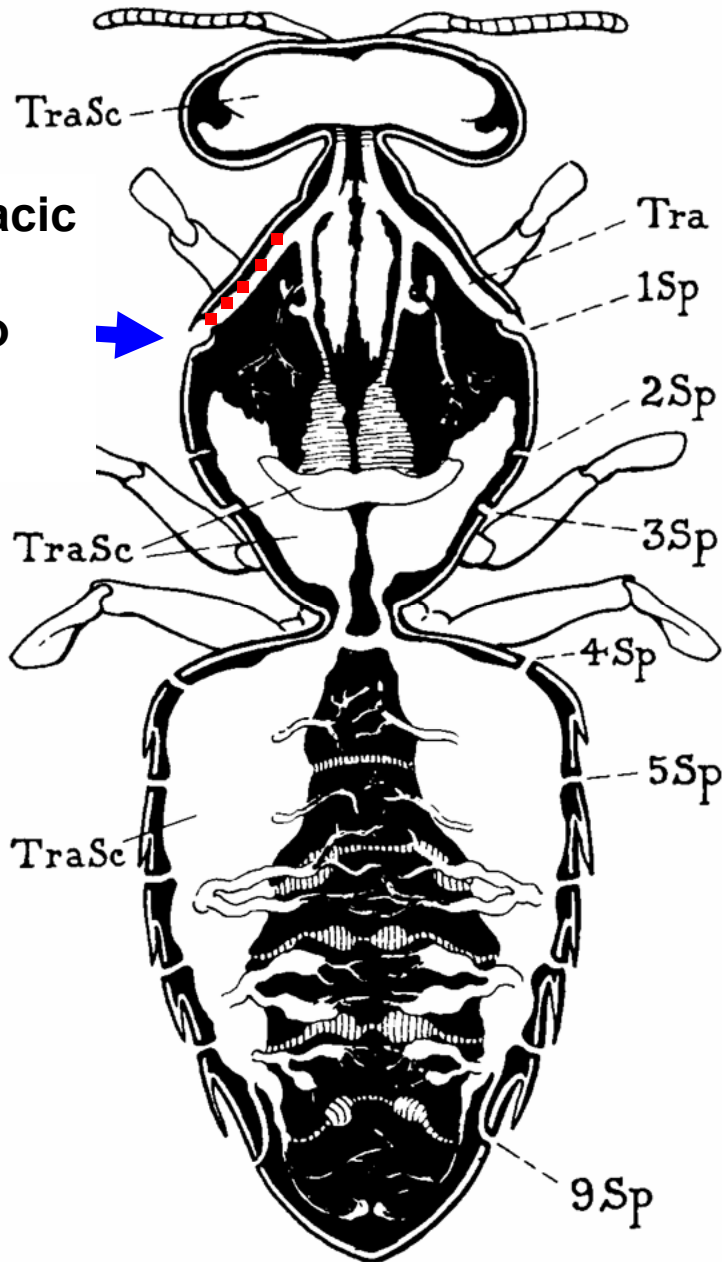


**SEM of a tracheal trunk opened to show the tracheal mites.
Glen Needham, Ohio State University.**

Tracheal System

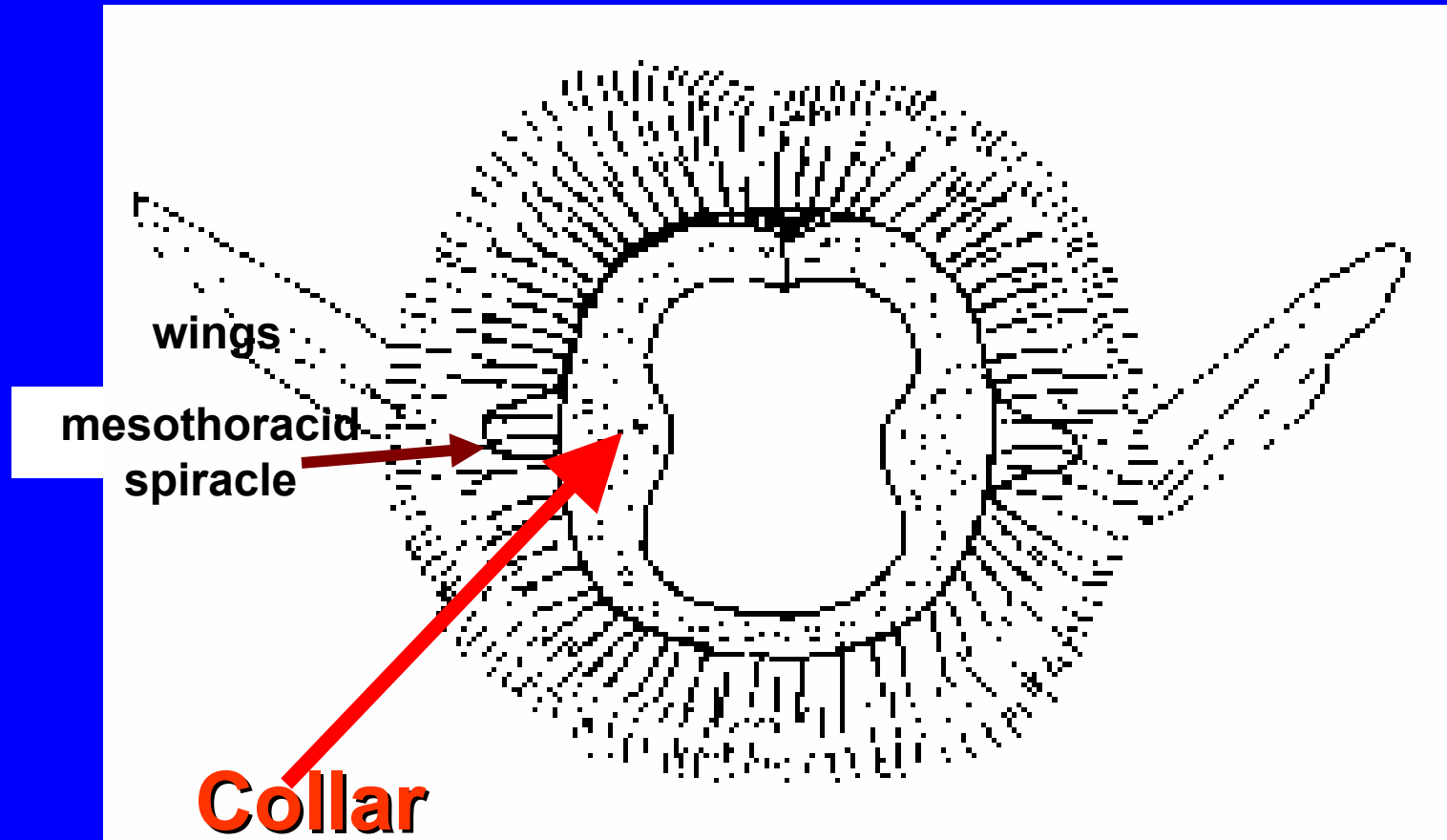
Nervous System

Mesothoracic Spiracle
Leading to
Tracheal trunk



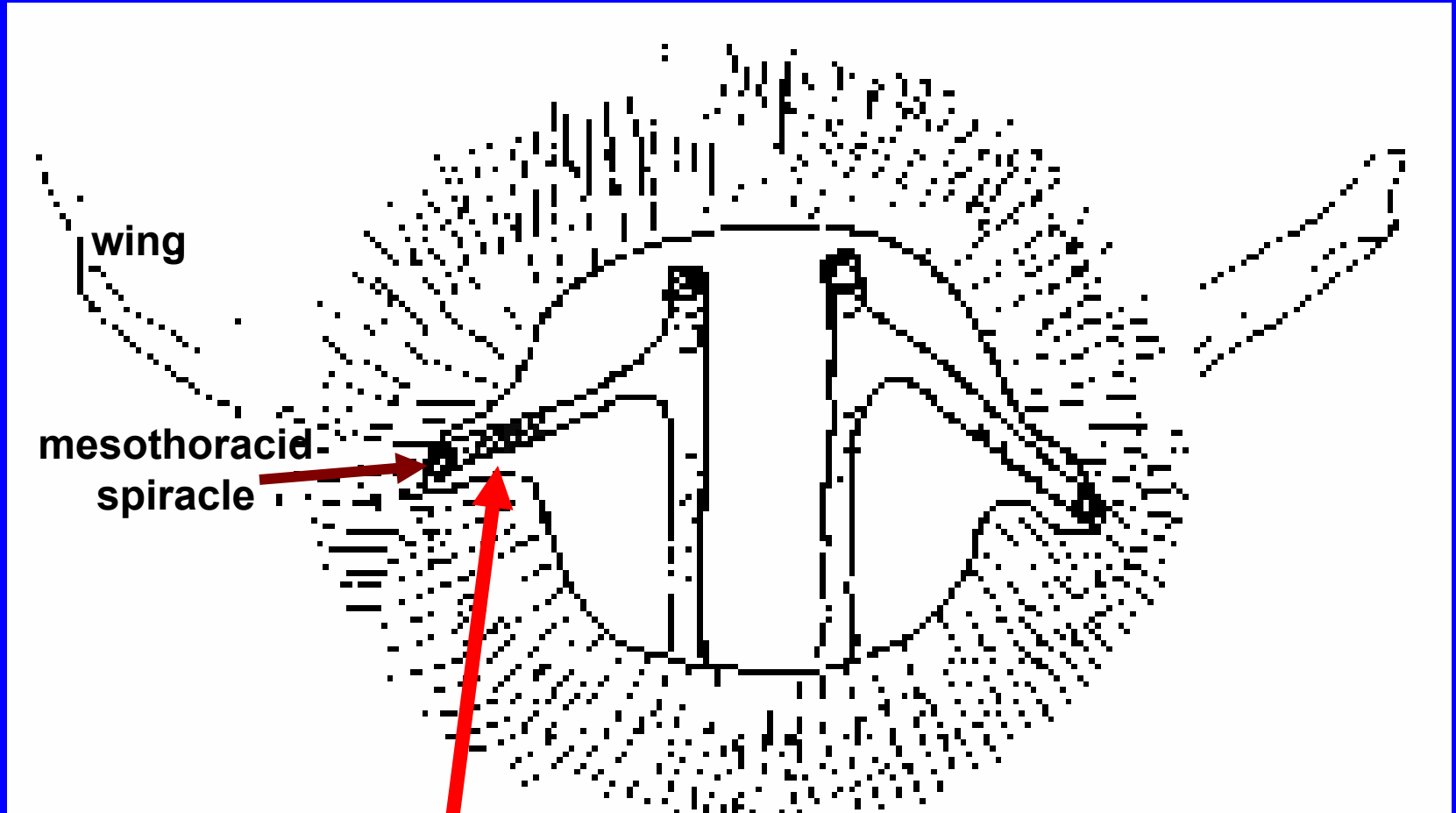
The
Nervous
System

Frontal view of the Mesothorax, head & prothorax removed. Collar in place- tracheal trunks hard to see.



Procedure: remove abdomen, remove head, remove 1st pair of legs. If the abdomen is left on, the gut contents will ruin the preparation.

**Collar Removed with fine forceps
- tracheal trunks are now visible.**



**Black or brown discoloration indicates mites are present.
A pearly white trunk is free of mites.**

Tracheal Mite Control: Grease Patties

Current Formula:

4.4 pounds (1814.4 g) of granulated sugar (sucrose)

3 ounces (88.8 ml) of corn oil

1.5 Pounds (680.4 g) of vegetable shortening (Crisco)

1 pound (463.4 g) of honey

1/2 Pound (226.8 g) of mineral salt (pink color) approx.

\$7-\$8 for 50 # from feed stores.

2.2 ounces(65 ml) of wintergreen oil.

One batch will treat about 8-10 hives, depending on number of brood chambers, size of patties, etc. We place 5 small patties (about 2 ozs each) on top of each brood chamber and a 1/2" [1.27 cm] "roll" across the entrance, about 3/4" [1.9 cm] back in (otherwise, rain will wash it away).

Applying Grease Patties



Salt Patties on brood chamber



Rolled Salt Patty at Entrance



Screened Bottom Board



Dead mites (red dots) on sticky board



William C. Schnute, wschnute@honeyflowfarm.com uses our salt patty mix in grease guns. He had 86% survival in 150 colonies, 1999-2001.



**Patty mix applied at front Entrance of hive.
We have not found tracheal mites since 1995.**

Some beekeepers apply grease patties with ice cream Scoops from large buckets.

One beekeeper uses a truncated machete to put the grease Patties onto hives. He makes up 5 gallons at a time.

