Station A

1. *Borrelia burgdorferi (1 pt)*
2. Western blacklegged tick, or*Ixodes pacificus /*  Eastern blacklegged tick, also known as the “deer tick,” or *Ixodes scapularis ( 2 needed for full credit- 2 pts)*
3. Avoid tall grass, tick checks, insect repellent, removal of tick, wearing long clothing, etc *(3 needed for full credit- 3 pts)*

Station B

1. *Taenia solium (1 pt), Pork tapeworm (1 pt)*
2. Proglottid. (1 pt) Each segment contains a complete sexually mature reproductive system. (1 pt)
3. Consumption of raw and/or undercooked pork products, Human-to-human or pig-to-human transfer of *T. solium*eggs through direct contact with feces, Human-to-human or pig-to-human transfer of *T. solium*eggs through consumption of food/water containing fecal matter (indirect), Autoinfection (3 pts)

Station C

1. *Loa Loa (1 pt)*
2. Worm Worm\* (1 pt)
3. Western Africa. (Angola, Benin, Cameroon, Central African Republic, Congo, the Democratic Republic of Congo, Equatorial Guinea, Gabon, Nigeria and Sudan, Ghana, Guinea, Liberia, Uganda and Zambia) (1 pt)

Station D

1. *Ampulex compressa (1 pt)*
2. a cockroach (*Periplaneta americana*, *Periplaneta australasiae* or *Nauphoeta rhombifolia all acceptable*) (1 pt)
3. Venomous. (1 pt) The emerald wasp injects its victim twice. Both times into roach’s nervous system with a neurotoxin. The first injection in into the thoracic ganglion which paralyzes the front legs. The second injection is into the cockroach’s brain (ganglia) that turns off the escape response. (Explanation worth 3 pts total, partial credit allowed)

Station E

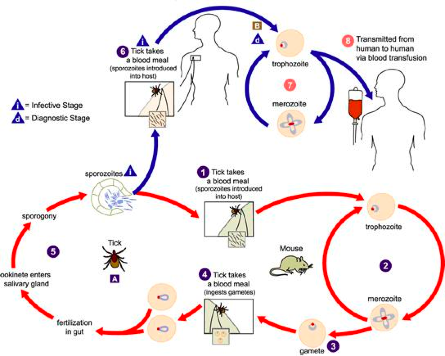
1. *Diphyllobothrium latum (1 pt)*
2. Small crustaceans (i.e. copepods) (1 pt)
3. Diarrhea, abdominal pain, vomiting, weight loss, fatigue, constipation and discomfort. B12 deficiency leading to megaloblastic anemia and neurologic symptoms.\* (1/2 pt each for up to 3 pts)

Station F

1. *Ascaris lumbricoides (1 pt)*
2. Fecal borne disease. Fecal oral route. (1 pt)
3. *Enterobius vermicularis*  (1 pt)
4. Human to human. Fecal oral routes- directly or via contamination. (1 pt)

Station G

1. Babesia microti (1 pt)

1 point each for tick, mouse, human, blood transfusion.

3 pts for quality of proper labeling, arrow directions, and life cycle stages.

Station H

1. *Entamoeba histolytica (1 pt)*
2. A. Nucleus (0.5 pts)

B. Pseudopodium (0.5 pts)

C. Chromatid bar (0.5 pts)

1. I. Trophozoite (0.5 pts)

II. Pre-cystic stage (0.5 pts)

III. Uninucleate cyst (0.5 pts)

IV. Binucleate cyst (0.5 pts)

V. Quadrinucleate cyst (0.5 pts)

Station I

1. caterpillars (1 pt)
2. *Camponotus leonardi* ant- ant given ½ credit (1 pt)
3. *Beauveria bassiana* is the anamorph (asexually reproducing form) of *Cordyceps bassiana*. The latter teleomorph (the sexually reproducing form) has been collected only in eastern Asia. (2 pt)

Station J

1. *Pulex irritans (1 pt)*
2. Left (1 pt)
3. Plague or Yersinia pestis acceptable (1 pt)
4. Cat, dogs, pigs, etc. Only one needed for credit. (1 pt)
5. Holometabolous metamorphosis is complete metamorphosis. (1 pt) Their life cycle includes four stages: egg, larva, pupae, and adult. (1/2 pt for each stage- 2 pts total)

Station K

1. *Cymothoa exigua (1 pt)*
2. It enters through the gills (1 pt)
3. Blood and mucus (1 pt)
4. The parasites are born as males (1 pt), and then when they enter a fish, one turns female (1 pt). This switch only occurs if there’s no female already installed in the host–otherwise, the males stay male (1 pt). (3 pts total)

Station L

1. *Cochliomyia hominivorax (1 pt)*, New World screw-worm fly (screw-worm for short) (1 pt)
2. Myiasis is the parasitic infestation of the body of a live mammal maggots that grow inside the host while feeding on its flesh. (1 pt)
3. 250-500 (1 pt)
4. 1982 using the sterile insect technique. (2 pts)

Station M

1. A (1 pt)
2. deer tick, bear tick, or black-legged tick (2 pts)
3. [*Anaplasma phagocytophilum*](https://en.wikipedia.org/wiki/Anaplasma_phagocytophilum)*,* [*Babesia*](https://en.wikipedia.org/wiki/Babesia)*, Borellia (1 pt each- total of 3 pts)*

Station N

1. *Naegleria fowleri (1 pt)*
2. infects people when water containing the ameba enters the body through the nose (1 pt)
3. Warm aquatic environments (up to 115°F (46°C) (2 pts- 1 pt for aprox temperature in degrees, 1 pt for “warm” )
4. Southern states in late summer (July, August, September) (2 pts)

Station O

1. *Wuchereria bancrofti (1 pt)*
2. Via mosquito bites (1 pt)
3. >97%.\* (1 pt, credit given for range of 95-99%)

Station P

1. *Paragonimus westermani (1 pt)*
2. A. Testes (0.5 pts)

B. Excretory Bladder (0.5 pts)

C. Cecum or large instestine (0.5 pts)\*

1. Lungs (1 pt)
2. Consumption of raw or undercooked seafood (1 pt)

Station Q

1. *Euhaplorchis californiensis (1 pt)*
2. Salt-water marshes of Southern California (1 pt)
3. The Killfish are four times more likely to “shimmy, jerk, flash, and surface” than uninfected fish. This behavior makes the infected fish 30 times more likely to be caught and consumed by a bird.
4. Fish eating birds