

2. For each of the following parasites identify the life-cycle stage that is infective to the human host (be specific):

a. *Trichinella spiralis* _____

b. *Ancylostoma braziliense* _____

c. *Loa loa* _____

d. chiggers _____

e. *Ascaris lumbricoides* _____

f. *Toxocara canis* _____

g. *Ascaris suum* _____

h. *Trichuris trichiura* _____

3. Describe how you would go about definitively diagnosing a human infection with each of the following parasite species. In each case be certain to indicate the type of sample you would take and the stage of the parasite you would expect to find.

a. *Trichiuris trichiura*

b. *Necator americanus*

c. *Onchocerca volvulus*

4. Describe 2 differences and 2 similarities between cutaneous larval migrans and visceral larval migrans. (Hint: consider all aspects of the biology, taxonomy, disease, etc.)

Differences: a.

b.

Similarities: a.

b.

5. Identify the site in/on the human host that you would find the ADULT stage of each of the following parasite species:

a. *Dracunculus medinensis* _____

b. *Demodex folliculorum* _____

c. *Ascaris lumbricoides* _____

d. *Phthirus pubis* _____

e. *Loa loa* _____

f. *Wuchereria bancrofti* _____

g. *Trichinella spiralis* _____

h. *Pediculus humanus capitus* _____

6. Identify whether each of the following parasites exhibits a monoxenous or a heteroxenous life-cycle.

a. *Wuchereria bancrofti* _____

b. *Demodex folliculorum* _____

c. *Dracunculus medinensis* _____

d. *Necator americanus* _____

e. *Sarcoptes scabiei* _____

f. *Phthirus pubis* _____

g. any species of flea _____

h. *Ancylostoma caninum* _____

7. Answer each of the following questions.

- a. Identify a **phylum** of parasite in which the outermost layer of the body is a protective cuticle.
- b. Identify a **species** that has almost been entirely eradicated from the planet thanks to the generosity of certain drug companies.
- c. Identify a **species** in which the microfilaria is the stage infective to the intermediate host.
- d. Identify a nematode **species** that is transmitted between hosts only via predation.
- e. Identify the **species** of parasite commonly referred to as “the whip-worm.”
- f. Identify the **phylum** of the species that causes scabies.
- g. Identify a **genus** of nematode that includes one or more species that are zoonotic in humans.
- h. Identify the only **species** of nematode of medical importance with an aquatic life-cycle.

8. a. Of all of the nematode species we have covered, which would be least happy to acquire as an infection? Explain your answer.

b. Of all of the nematode species we have covered, if you **had** to host an infection, would you choose to host? Explain your answer.

9. Answer each of the following questions.

- a. Where in/on the host would you expect to find the pre-J1 stage of *Trichinella spiralis*?
- b. Where in/on the host would you expect to find adults of *Demodex folliculorum*?
- c. Where in/on the host would you expect to find adults of *Loa loa*?
- d. In/on what type of host would you expect to find J2s of *Wuchereria bancrofti*?
- e. Where would you expect to find adults of chigger mites?
- f. Where in/on the human host would you expect to find J3s of *Ancylostoma caninum*?
- g. Where in/on the definitive host would you expect to find adults of *Wuchereria bancrofti*?
- h. Where in/on the human host would you expect to find J3s of *Toxocara canis*?

10. Answer each of the following questions.

- a. Identify a species that is an etiological agent of hookworm disease.
- b. The etiological agent of Ascariasis belongs to what phylum?
- c. Identify the species that is the etiological agent of Elephantiasis.
- d. Identify a species that possesses tarsal claws and sucking mouthparts.
- e. Identify a species that is the etiological agent of visceral larval migrans.
- f. Identify a species that may move to higher latitudes in response to climate change.
- g. Identify a genus that possesses a buccal capsule and cutting plates and sucks blood.
- h. Identify a taxon that is an etiological agent of "cooties".

11. Identify and describe in detail a parasitic infection that can likely be avoided by each of the following 2 scenarios. Be sure to name the parasite, discuss the stage of the parasite involved, and also how the action indicated would serve to prevent an infection.

a. covering sand boxes in the southern United States

b. cooking polar bear meat in the Arctic

12. Describe the pathogenicity associated with each of the following species in humans. Be certain to include pathology in all important sites of infection.

a. *Ancylostoma duodenale*

b. *Ascaris lumbricoides*

13. Identify and describe in detail a parasitic infection that can likely be avoided by each of the following 2 scenarios. Be sure to name the parasite, discuss the stage of the parasite involved, and also how the action indicated would serve to prevent an infection.

a. filtering drinking water in Africa

b. using a mosquito net in Africa

14. Identify 4 zoonotic species and in each case describe conditions under which infections could successfully be transmitted between the natural animal host and a human.

a.

b.

c.

d.

Part II. Complete 20 cells in the following Table. If you determine that a particular cell does not apply, write N/A as your answer for that cell. Note: each row must represent a DIFFERENT parasite species (1 point per cell).

Parasite species	Intermediate host (common name is fine)	Mode of entry into/onto human host	Site occupied by adult in/on definitive host	Parasite Phylum
		Consumption of egg with J3	large intestine/rectum	
<i>Necator americanus</i>				
		consumption of copepod with J3		
	black fly			Nematoda
<i>Ascaris lumbricoides</i>	N/A			
<i>Pediculus humanus humanus</i>				
<i>Trichinella spiralis</i>				

Bonus point:

Describe one important "life rule" that you have learned from taking Medical Parasitology.

Part II. Complete 20 cells in the following Table. If you determine that a particular cell does not apply, write N/A as your answer for that cell. Note: each row must represent a DIFFERENT parasite species (1 point per cell).

Parasite species	Intermediate host (common name is fine)	Mode of entry into/onto human host	Site occupied by adult in/on definitive host	Parasite Phylum
<i>Trichuris trichiura</i>	N/A	Consumption of egg with J3	large intestine/rectum	Nematoda
<i>Necator americanus</i>	N/A	Penetration of J3 into skin	small intestine	Nematoda
<i>Dracunculus medinensis</i>	copepod	Consumption of copepod with J3	subcutaneous	Nematoda
<i>Onchocerca volvulus</i>	black fly	Bite of black fly with J3	subcutaneous	Nematoda
<i>Ascaris lumbricoides</i>	N/A	Consumption of egg with J2	large intestine	Nematoda
<i>Pediculus humanus humanus</i>	N/A	crawls	Hair of body	Arthropoda
<i>Trichinella spiralis</i>	N/A	Consumption of uncooked muscle with pre-J1	small intestine	Nematoda

Bonus point: