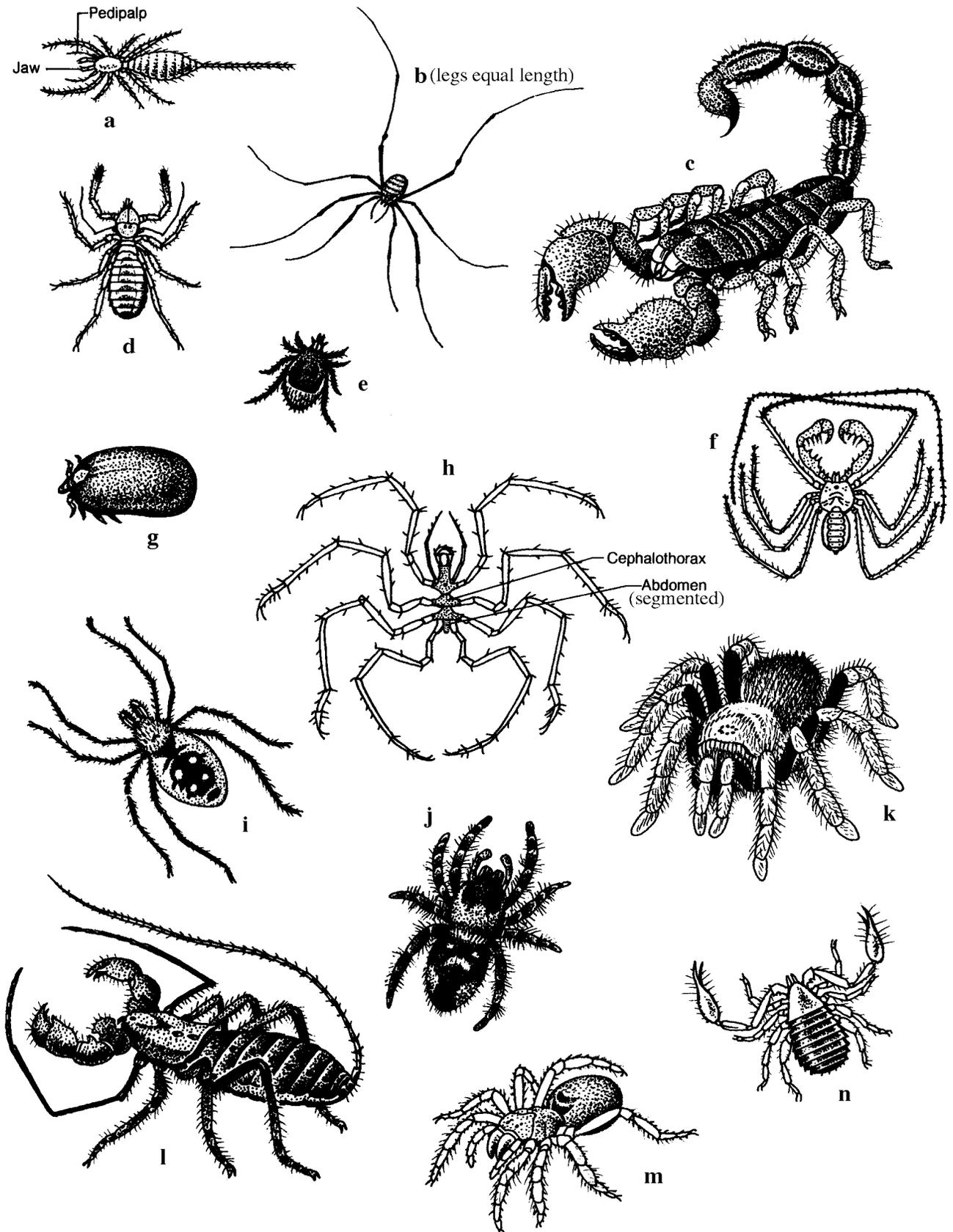




## Dichotomous Key:

1. a) Cephalothorax or abdomen segmented..... go to 2  
b) Neither cephalothorax nor abdomen segmented ..... go to 9
2. a) Abdomen with tail..... go to 3  
b) Abdomen without tail ..... go to 5
3. a) Thick tail with stinger at tip.....Scorpion  
b) Slender tail without stinger at tip..... go to 4
4. a) Pincers on pedipalps; large arachnid..... Whipscorpion  
b) Pincers on jaws; small arachnid ..... Microwhipscorpion
5. a) First leg long and whiplike ..... Whipspider  
b) Legs about equal length ..... go to 6
6. a) Abdomen much smaller than cephalothorax..... Sea spider  
b) Abdomen as large or larger than cephalothorax ..... go to 7
7. a) Pedipalps longer than legs..... Pseudoscorpion  
b) Pedipalps about the same size or shorter than legs..... go to 8
8. a) Legs long and stiltlike .....Daddy long legs  
b) Legs not longer than body; pedipalps lack pincers ..... Wind scorpion
9. a) No narrowing where cephalothorax and abdomen join ..... go to 10  
b) Narrowing where cephalothorax and abdomen join ..... go to 11
10. a) Tiny and covered with spines .....Mite  
b) Large, oval body; few spines if any..... Tick
11. a) Entire body and all legs covered with "hair" ..... go to 12  
b) Only parts of body covered with "hair" ..... go to 13
12. a) Pedipalps curved..... Jumping spider  
b. Pedipalps straight ..... Tarantula
13. a) Large, thick jaws that are close together;  
cephalothorax covered by plate .....  
..... Trapdoor spider  
b) Small, thin jaws; long, hair-covered legs;  
cephalothorax covered with short hairs.....Argiope

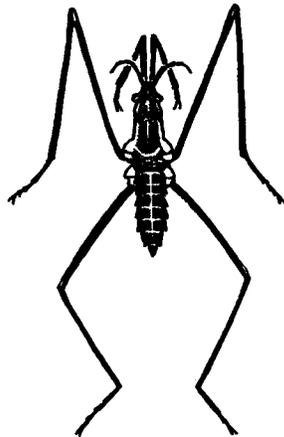
Arachnids:



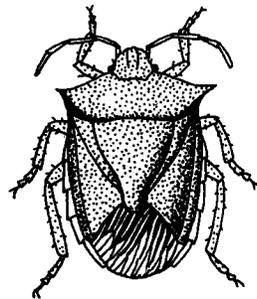
## Part B: Making a Dichotomous Key

Study the drawing of the insects below. On a separate piece of paper, construct a dichotomous key for the identification of the insects. Use the key from part A as a model. Use your textbook to identify the major anatomical features of an insect. **You cannot use more than two choices for every key step.**

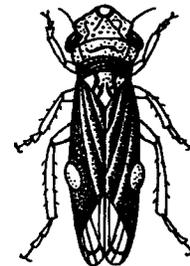
Insects:



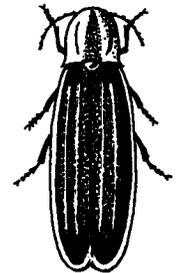
Water strider



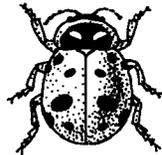
Stink bug



Leafhopper



Firefly



Ladybird beetle  
(Ladybug)



Spider beetle

## Conclusion:

1. Name three traits common to all arachnids and **recognizable** in the pictures of each arachnid.
2. State why behavioral traits, such as "preys on small insects" or "spins intricate web," would not be appropriate for many dichotomous keys? When might such a trait help you identify an organism? (2 pts)
3. How is "dichotomous" an appropriate word to describe the keys you used and constructed in this laboratory?

- Don't forget error analysis and suggestions