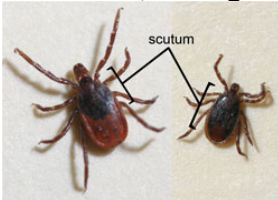
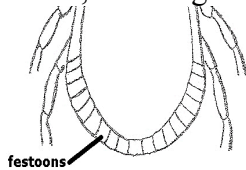


1. Is it an arthropod?
 - a. Yes it is an arthropod. Arthropods have segmented bodies, and paired jointed legs, an exoskeleton, and compound eyes. Continue to #2.
 - b. No, leave this key.
2. Is it an arachnid?
 - a. Yes it is an arachnid. Arachnids have 1-2 body segments, no antennae, and simple eyes. They may have 6 or 8 legs. Continue to #3.
 - b. No, it is an insect or other arthropod. Insects have 6 legs, 3 body segments (head, thorax, abdomen), two pairs of wings, antennae, and compound eyes. Leave this key.
3. Is it a spider?
 - a. Yes it is a spider. Spiders have narrow waists. Leave this key.
 - b. No it is not a spider, continue to #4.
4. Is it a tick or a mite?
 - a. Mites do not have hypostomes with teeth and are generally very small (<1mm). Commonly their bodies are almost translucent and have numerous setae. Leave this key.
 - b. Ticks have hypostomes covered with teeth. Continue to #5.
5. Is it a soft (argasid) or hard (ixodid) tick?
 - a. Argasids have the head tucked under the body so that the head is not visible dorsally. Leave this key.
 - b. Ixodids have a head obviously extending beyond the margin of the body when viewed dorsally. Continue to #6.
6. What stage is it? Determine the stage but also continue to #7.
 - a. Larvae have 6 legs.
 - b. Nymphs have 8 legs but no genital aperture.
 - c. Adults have 8 legs and a genital aperture.
7. If it is an adult, what gender is it? Determine the gender but also continue to #8.



--Female is larger (left) and scutum only partially covers her dorsal surface.

8. Is it an *Ixodes* or another hard tick?
 - a. *Ixodes* have no festoons, inornate scutum, and a posterior and anterior anal groove. If it is an *Ixodes*, ID using keys for the correct stage in Furman and Loomis or Kleinjen.



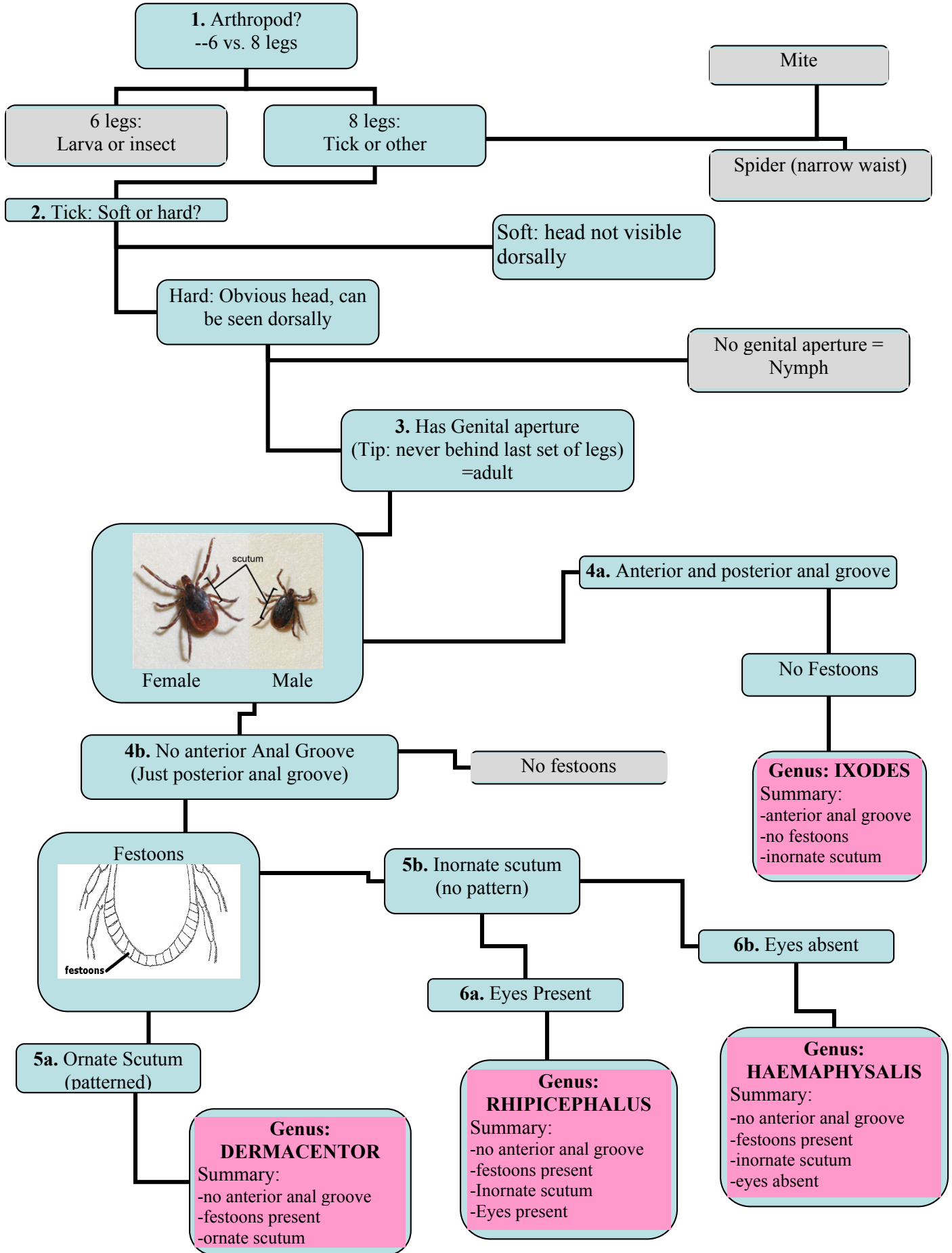
- b. If it is not an *Ixodes*, continue to #9.
9. Does it have an ornate scutum?
 - a. Yes. It is a *Dermacentor* and also has festoons and no anterior anal groove. ID to species using F&L.
 - b. No, it has an inornate scutum, continue to #10.
10. Does it have eyes?
 - a. Yes. It is a *Rhipicephalus*. It also should have a hexagonal basis capituli.
 - b. No. It is a *Haemaphysalis*. It also should have club-shaped pals with a sharp angle.

Resources:

http://www.mhhe.com/biosci/genbio/virtual_labs/BL_18/BL_18.html

<http://webpages.lincoln.ac.uk/fruedisueli/FR-webpages/parasitology/Ticks/TIK/tick-key/index.htm>

http://www.idph.state.il.us/images/TickDrawing_CC.jpg



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