Principal Families of Florida Heteroptera

(Once you have arrived at a determination use your textbook and other handouts as checks because not all families of Heteroptera are included in this key)

1. Antennae shorter than the head, usually concealed in depressions on under side of head beneath the eyes (s.o. Cryptocerata) .................................................. 2
   — Antennae as long as or longer than the head, fully exposed (s.o. Gymnocerata) ......................... 7

2. Ocelli present. Inhabitants of margins of streams and ponds (Toad bugs) .................. Gelastocoridae
   — Ocelli absent; aquatic bugs ........................................ 3

3. Hind tarsi without 2 distinct claws; front legs not fitted for seizing prey ........................................ 4
   — Hind tarsi with 2 distinct claws; front legs fitted for seizing prey ........................................... 5

4. Head overlapping prothorax dorsally; dorsal surface flattened (water boatmen) ..................... Corixidae
   — Head inserted in prothorax; dorsal surface strongly convex (back swimmers) ..................... Notonectidae

5. Membrane of hemelytra reticulately veined .......... 6
   — Membrane of hemelytra not veined (water creepers) .......................................................... Naucoridae

6. Tarsi consisting of one segment; abdomen with a long, non-retractile, caudal appendage; hind legs not flattened and not fitted for swimming (water scorpions) .......................................................... Nepidae
   — Tarsi consisting of 2 segments; abdomen without long caudal appendage (short, flat retractile appendages present); hind legs flattened and fitted for swimming (giant water bugs) .................. Belostomatidae

7. Head shorter than the entire thorax; OR body not linear .......................................................... 8
   — Head as long as or longer than the thorax; body linear. (marsh treaders) .................................. Hydrometridae

8. Claws of the front tarsi inserted before the apex of the segment (anteapical), the segment more or less cleft .......................................................... 9
   — Claws of all tarsi inserted at apex of segment, the segment not cleft ...................................... 10

9. Beak 4-jointed; hind femora extending much beyond the apex of abdomen .................... Gerridae
   — Beak 3-jointed; hind femora not extending much beyond the apex of the abdomen .......... Veliidae

10. Antennae 5 segmented .................................................. 11
    — Antennae 4 segmented ........................................... 14

Belostomatidae - Antennae short and concealed in grooves under eyes.

Variations in shape and texture of hemelytra

Side view of Hemipteran, showing beak extending beneath head. Check for this, especially for those insects that first appear to be beetles.
11. Tibiae armed with strong spines (burrower bugs)...
   - Tibiae not armed with strong spines, smooth or with small setae ........................................ 12

12. Scutellum narrowed behind, more or less triangular in shape, rarely almost covering the abdomen (stink bugs) ........................................... Pentatomidae
   - Scutellum not narrowed behind, rounded and usually almost covering the abdomen (shield bugs and negro bugs)................................. 13

13. Tibiae not strongly spinose; connexivum of abdomen with seven dorsal segments; color never shining black ........................................... Scutelleridae
   - Tibia with two or more rows of strong black spines; connexivum with but six visible ventral segments; color usually shining black; size less than 5mm, usually 2-3mm Corimelaenidae (Thyreocoridae)

14. Hemelytra resembling a network ......... Tingidae
   - Hemelytra not resembling a network, or vestigial .. .......................................................... 15

15. Beak 3-jointed ......................................................... 16
   - Beak 4-jointed ................................................... 21

16. Tarsi 2 segmented or less ......................................17
   - Tarsi 3 segmented .................................................... 18

17. Body greatly flattened; femora of front legs not thickened................................. Aradidae
   - Body not flattened; front legs with greatly thickened femora; tarsi with 2 segments or none ........ Scutelleridae

18. Rostrum or beak stout; short, not reaching the middle coxae, fitting in a groove between front legs; ocelli, when present, placed distinctly behind the eyes or behind a transverse depression (Assassin bugs) ........................................... Reduviidae
   - Beak elongate, reaching the middle coxae; ocelli, when present, not behind a transverse depression, but usually in line with the rear margin of the eyes ............................................................... 19

19. Ocelli absent; hemelytra reduced, without membrane; parasitic bugs (Bedbugs) ........ Cimicidae
   - Ocelli present ........................................................... 20

20. Hemelytra with an embolium; membrane of hemelytra veinless or with indistinct veins but lacking closed cells ................................. Anthocoridae
   - Hemelytra without an embolium; membrane with 4 or 5 long, closed cells .............................. Saldidae

21. Tarsi 2-jointed; exceedingly flat bugs; found under bark .................................................... Aradidae
   - Tarsi 3-jointed; not exceedingly flat .......................... 22
22. Front legs fitted for seizing prey, raptorial; tibiae and usually the femora armed with numerous interlocking spines. Nabidae
— Front legs not raptorial; fitted for walking. 23

23. Hemelytra with a cuneus; membrane with one or two closed cells near the base. Miridae
— Hemelytra without cuneus. 24

24. Ocelli absent. Pyrrhocoridae
— Ocelli present. 25

25. Body and legs very slender, almost linear; head with a transverse incision in front of the ocelli; antennae elbowed. Berytidae, = Neididae

26. Membrane of hemelytra with 5 usually simple veins arising from its base. Lygaeidae
— Membrane of hemelytra with many, usually anastomosing, veins arising from a transverse basal vein. Coreidae

Terms to be familiar with:
anteapical
areolae
beak
arolium
buccula
cavus
claval suture
commissure
connexivum
corium
cuneus
embolium
corneum
hemelytron (hemelytra)
jugum
lorum
ocellus
pronotum
propleuron
scutellum
tylius
vertex

Additional References to Florida Heteroptera