

Literature-based key to Florida "burrowing bugs" (Heteroptera: Cydnidae)

The insects that fall under the family Cydnidae are quite an interesting group of creatures. These insects are commonly called "Burrowing Bugs". This common name comes from their activity of almost always being found burrowing underground to feed on the roots of plants. Because they spend the majority of their life underground, it is hard to get a good grasp of their daily activities and their life cycles. There are currently 13 genera and 43 species listed under this family. Of these, 9 genera and 20 species have been reported from Florida.

This group of insects is closely related to the Pentatomidae. Their appearance is very similar to the Pentatomidae, and are oftentimes found misidentified as Pentatomidae. Early literature classified the Cydnidae as a subfamily of the Pentatomidae. It was not until recently that they were separated into their own family. The Cydnidae can be separated from the Pentatomidae by comparing the spines or lack of spines on the tibia. Pentatomidae have hairs, but lack stout, hardened spines that are characteristic of the Cydnidae. Another visual clue is the scutellum. The scutellum of Cydnidae is triangular in shape, but does not extend to the tip of the abdomen. Any final diagnostic characters can be discovered following a thorough key.

Although this family has been known to damage certain agricultural crops, it is not considered a common pest insect. Thus far this insect has not caused near enough damage to gain this title, although an outbreak in the population could cause serious damage. It is definitely one to watch in the future.

In doing research on this family, we discovered just how little information on this family there is. The research that we came upon was generally old and very similar. In contacting the Division of Plant Industries and searching through all of the online catalogs for the Universities libraries, only three references were listed. Of these references, only one was in English. There is much to be desired in the way of research on this family.

Literature-based key to genera of Florida Cydnidae

- 1(a). Pentatomoid-like scutellum not present: scutellum does not pass the apices of the clavi *Amnestus*
- 1(b). Pentatomoid-like scutellum present..... 2
- 2(a). Tarsi absent on hind legs*Scaptocoris*
- 2(b). Tarsi present on hind legs..... 3
- 3(a). Primary setae absent on head.....*Sehirus*
- 3(b). Setae present on head..... 4
- 4(a). Osteolar peritreme an elevated, trough-like structure extending almost to lateral margin of segment where it forms a recurved, polished lobe *Rhytidoporus*
- 4(b). If not as above go to 5
- 5(a). Terminal process of peritreme flat, simply expanded posteriorly as a more or less polished lobe, osteole opening posteriorly, not conspicuous ventrally.... *Melenaethus*
- 5(b). Not as above 6
- 6(a). Pronotum anteriorly with deep, sharply impressed line paralleling anterior margin from side to side..... *Pangaeus*
- 6(b). If not as above go to..... 7
- 7(a).Second labial section somewhat compressed, but with large, foliaceous lobe*Cyrtomenus*
- 7(b). Not as above 8
- 8(a). Head with a complete row of coarse, more or less contiguous punctures giving rise to numerous long hairs and usually also to a row of pegs.....*Tomintotus*
- 8(b). Head without a complete row of coarse setigerous puncture: pegs never present*Dallasiellus*

Literature-based Key to Florida Species of Cydnidae

Genus: *Amnestus*

- 1(a). Labium long, reaching or surpassing base of abdomen*spinifrons* (Say)
1(b). Labium short, not reaching abdomen..... **2**
- 2(a). Exocorium with costal half hyaline, impunctate or very feebly punctate.....
.....*trimaculatus* (Froeschner)
2(b). Exocorium uniformly punctate..... **3**
- 3(a). Prosternal carinae lobulate, vertical anteriorly*subferrugineus* (Hope)
3(b). Prosternal carinae rounded or longer than it is high..... **4**
- 4(a). Clavus and corium concolorous with pronotum and scutellum.....*pallidus* (Zimmer)
4(b). Clavus and corium distinctly paler than scutellum and most or all of pronotum..... **5**
- 5(a). Male: subapical ventral spine of posterior femur more than one third length of tibia.
Female: lasternite with medially flattened, glabrous area delimited laterally by
partial or complete, obtuse, longitudinal carinae *pusillus* (Uhler)
5(b). Male and Female: not with afore mentioned characters **6**
- 6(a). Male: anterior tibia with distinct, sub-basal spine ventrally.....
.....*basidentatus* (Froeschner)
6(b). Male: anterior tibia with out subbasal spine ventrally*pusio* (Stal)

Genus: *Cyrtomenus*

- 1(a). Apices of juga projecting as blunt to acute triangles*emarginatus* (Stal)
1(b). Outline of juga rounded *ciliatus* (Palisot)

Genus: *Dallasiellus*

Only one species reported from Florida - *lugubris* (Stal)

Genus: *Melanaethus*

- 1(a). Anterior convexity of propleuron with numerous coarse punctures.....
.....*cavicollis* (Blatchley)
1(b). Not as above **2**
- 2(a). Head dorsally impunctate or with few patches of minute punctures.....
.....*pensylvanicus* (Signoret)
2(b). Head dorsally distinctly punctate or rugopunctate over most of surface..... **3**

- 3(a). Pronotal disc, especially transverse impression and posterior lobe, polished, with few minute punctures much finer than those on sides; scutellar punctation becoming obsolete basally **4**
- 3(b). Pronotal disc, especially transverse impression, with numerous punctures of which many are as coarse as those on sides; scutellum usually distinctly punctured to base ..
..... *robustus* (Uhler)
- 4(a). Costa straight and subparallel on basal half, neither explanate or recurved near base.
..... *uhleri* (Signoret)
- 4(b). Costa gently convex, diverging on basal half, explanate and gently recurved near base.....*subpunctatus* (Blatchley)

Genus: *Pangaeus*

Only one species reported from Florida - *bilineatus* (Say)

Genus: *Rhytidoporus*

Only one species reported from Florida - *indentatus* (Uhler)

Genus: *Scaptocoris*

Only one species reported from Florida - *castanea* (Perty)

Genus: *Sehirus*

Only one species reported from Florida - *cinctus* (Palisot)

Genus: *Tominotus*

Only one species reported from Florida - *communis* (Uhler)

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