

## The Grasshoppers (Orthoptera: Acrididae) of the Bibb County Glades, Alabama

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The Bibb County Glades are a botanically unique community that contains 60 species of rare plants, including eight endemic taxa (Allison and Stevens, 2001). These glades are found in Bibb County, Alabama on Ketona dolomite outcrops along the Little Cahaba River. A large portion of these glades can be found on the Kathy Stiles Freeland Bibb County Glades Preserve, an approximately 194 ha parcel owned by the Nature Conservancy. (Figures 1 and 2.)

The Mississippi Entomological Museum (MEM) visited these glades three times (1-2 May, 4-6 June, and 6-7 August 2003) for the annual William H. Cross Collecting Expedition. Typically the Cross Expedition is a weeklong excursion to a particular place, but due to the proximity of these glades to the MEM, three short trips spread out over the growing season were made to better sample the insect fauna. These three trips yielded nine species of grasshoppers (Orthoptera: Acrididae). However, based on collections made in other naturally open habitats in the Southeastern United States, namely black land prairies, I believed that this habitat should support additional species of grasshoppers. To confirm this theory, two subsequent trips were made to the site on 13 August and 8-9 September 2005 to investigate the fall grasshopper fauna. These trips yielded 10 additional species of grasshoppers resulting in a total of 19 species for the site (Table 1).

No new state records or new species were found in these habitats, but there were a few interesting finds. Both *Spharagemon cristatum* (Scudder) and *S. marmorata picta* (Scudder) are species that are typically associated with sandy habitats (Dakin and Hayes, 1970 and Otte 1984). Here, they were found dwelling on the rocky dolomite outcrops on the most extensive glade on a bluff overlooking the Little Cahaba River. (Figure 1) Although *S. cristatum* is known to occupy sandy areas near rivers (there were some sandy margins on the river below), there were significant numbers of this species occupying the rocky outcrops. Both *Spharagemon* species were camouflaged quite well when resting on the exposed dolomite. Another interesting find was that of *Melanoplus impudicus* Scudder, which can be found in dry areas of sparse vegetation on rocky or sandy areas (Gurney, 1941 and Dakin and Hayes, 1970). Gurney (1941) figured a shale barren habitat at Short Mt. near Mt. Jackson, Massanutten Mts. Virginia where *M. impudicus* was found and this shale barren is similar in appearance to the Bibb County Glades. (Figure 1.) Female specimens belonging to the *Melanoplus querneus*-group were collected along the glade and forest edge, however no further identification could be made, as males are needed for positive species level identification. All other species collected are commonly seen in open habitats in the Southeast and were expected to occur there. Voucher specimens were deposited in the MEM collection.

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#### Literature Cited

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Table 1. Grasshoppers Collected in the Bibb County Glades, Alabama.

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| <i>Orphullella pelidna</i> (Burmeister)        |
| <i>Dichromorpha viridis</i> (Scudder)          |
| <i>Amblytropidia mysteca</i> (Saussure)        |
| <i>Syrbula admirabilis</i> (Uhler)             |
| <i>Achurum carinatum</i> (Walker)              |
| <i>Arphia sulphurea</i> (Fabricius)            |
| <i>Arphia xanthoptera</i> (Burmeister)         |
| <i>Chortophaga viridifasciata</i> (De Geer)    |
| <i>Hippiscus ocelote</i> Scudder               |
| <i>Pardalophora phoenicoptera</i> (Burmeister) |
| <i>Spharagemon cristatum</i> (Scudder)         |
| <i>Spharagemon marmorata picta</i> (Scudder)   |
| <i>Romalia microptera</i> (Beauvois)           |
| <i>Schistocerca damnifica</i> (Saussure)       |
| <i>Melanoplus scudderi</i> (Uhler)             |
| <i>Melanoplus</i> “ <i>querneus</i> group”     |
| <i>Melanoplus femurrubrum</i> (DeGeer)         |
| <i>Melanoplus impudicus</i> Scudder            |
| <i>Melanoplus keeleri</i> (Thomas)             |



**Figures 1 and 2.** Ketona Dolomite Glades of Bibb County, Alabama.