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# Annotated Records of Species of Pentatomoidea (Hemiptera) Collected at Lights

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# ANNOTATED RECORDS OF SPECIES OF PENTATOMOIDEA (HEMIPTERA) COLLECTED AT LIGHTS

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## ABSTRACT

Records of specimens of Pentatomoidea collected at various light sources in Alabama, Arizona, Florida, Georgia, Illinois, Louisiana, and Texas are presented. Of the 51 species and subspecies reported, about 75% belong to the Pentatomidae.

Included in a monograph by the senior author on the Pentatomoidea of northeastern North America (McPherson 1982) was a list of the species that had been collected at lights, an interesting phenomenon because these insects are primarily diurnal. However, the identity of a few of the species is uncertain because the list was based on the older literature (e.g., Hart 1919, Blatchley 1926). Since that time, several major taxonomic revisions have been published (e.g., McAtee and Malloch 1933, Froeschner 1960). Additionally, the type of light involved and number of specimens collected often were not given, thereby making it difficult to evaluate whether or not this nocturnal activity is normal. Nocturnal activity as defined here includes crepuscular activity.

A better understanding of the nocturnal activity of pentatomoids has economic implications. Many of these bugs are either agricultural pests or predators (McPherson 1982), and knowledge of degree of attraction to various light sources could aid in the development of improved pest management strategies (e.g., monitoring of population levels, attraction to bait stations).

Since 1982, we have collected many pentatomoid specimens at various night light sources in Arizona, Illinois, and Texas. Additionally, many specimens with data on light attraction are housed in the Southern Illinois University (SIU) and Texas Tech University (TTU) Entomological Collections. Thus, the list presented here is a cumulation of collection data since 1982 as well as data from museum specimens. We hope that this information will encourage other investigators to update and expand this list with additional records.

## RESULTS AND DISCUSSION

Members of four of the five pentatomoid families occurring in North America (i.e., Scutelleridae, Thyreocoridae [ = Corimelaenidae], Cydnidae, and Pentatomidae) were collected at lights (Table 1). Of the 51 species and subspecies collected, 39, or about 75%, belonged to the Pentatomidae. Several of the taxa were represented by only a single specimen, suggesting that they may have been adventitious (i.e., only of chance occurrence). However, several (i.e., *Pangaeus bilineatus* [Say], *Acrosternum hilare*

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Table 1. List of Pentatomoidea collectedat lights.

| Taxon | Number Collected | Type of Light[1] | County/Parish Locality[3] | Range of Collection Dates |
|---|---|---|---|---|
| SCUTELLERIDAE | | | | |
| Pachycorinae | | | | |
| *Homaemus parvulus* (Germar) | 3 | BL | Br, Lu | 5 June–28 July |
| *H. proteus* Stål[2] | 1 | BL | Ki | 24 July |
| *Stethaulax marmorata* (Say) | 1 | MV | Ki | 15 Oct. |
| CORIMELAENIDAE | | | | |
| *Galgupha ovalis* Hussey | 2 | BL | Ki | 15 May–1 Aug. |
| CYDNIDAE | | | | |
| Cydninae | | | | |
| *Cyrtomenus ciliatus* (Palisot de Beauvois)[2] | 4 | BL, L, WL | Co, Lo, Sp | 29 July–11 Oct. |
| *Melanaethus robustus* Uhler | 1 | BL | Ki | 24 May |
| *Pangaeus bilineatus* (Say) | 271 | BL, CL, IL, MV | Ba, Bo, Ca, Da, He, Ki, Lu, Mi, Ra, Re, Uv | 13 May–19 Sept. |
| *P. setosus* Froeschner[2] | 5 | BL, MV | Co, Cu, Jd | 2 July–31 July |
| *P. tuberculipes* Froeschner[2] | 1 | MV | Jd | 16 July |
| *Tominotus communis* (Uhler) | 2 | BL | Mi, Li | 7 Aug.–3 Sept. |
| *T. unisetosus* Froeschner[2] | 1 | BL | Ca | 8 Sept. |
| Sehirinae | | | | |
| *Sehirus cinctus cinctus* (Palisot de Beauvois) | 9 | BL, MV | Bo, Jd, Ki, Pa | 23 May–2 Sept. |
| *S. cinctus texensis* Froeschner[2] | 8 | BL | Ki | 22 May–1 Aug. |
| PENTATOMIDAE | | | | |
| Pentatominae | | | | |
| *Acrosternum hilare* (Say) | 87 | BL, L, MV, SL, WL | Bo, Ga, He, Ki, Kn, Lu, Un | 18 April–2 Oct. |
| *Banasa calva* (Say) | 5 | BL, L | Cl, Cu, Oc | 14 June–27 Aug. |
| *B. euchlora* Stål | 21 | BL, L, MV | Ba, Co, Cu, Jd, Ki, Lu, Sc | 15 May–4 Sept. |
| *B. grisea* Ruckes[2] | 1 | MV | Co | 11 Aug. |
| *B. packardi* Stål | 6 | BL, MV | Co, Sc | 8 Aug.–11 Aug. |
| *B. subcarnea* Van Duzee[2] | 7 | BL, MV | Co | 15 July–11 Aug. |
| *Brochymena cariosa* Stål | 2 | BL | Ki | 7 March–5 July |
| *B. haedula* Stål[2] | 1 | BL | Ki | 24 July |
| *B. parva* Ruckes?[2] | 1 | BL | Ki | 4 July |
| *Chlorochroa sayi* (Stål) | 1 | BL | Cu | 2 July |
| *Chlorocoris flaviviridis* Barber[2] | 1 | MV | Sc | 10 Aug. |
| *C. hebetatus* Distant[2] | 3 | MV | Co | 31 July |
| *Cosmopepla bimaculata* (Thomas) | 3 | BL | Ki | 9 June–27 Aug. |
| *Euschistus comptus* Walker[2] | 5 | BL | Ca, Sp | 6 Sept.–8 Sept. |
| *E. obscurus* (Palisot de Beauvois)[2] | 27 | BL, L, SL | Bo, Ca, Do, Hr Kn, Po, Sp, Za | 15 March–9 Oct. |
| *E. quadrator* Rolston[2] | 1 | BL | Ki | 24 July |

Table 1. List of Pentatomoidea collected at lights (cont'd.).

| Taxon | Number Collected | Type of Light[1] | County/Parish Locality[3] | Range of Collection Dates |
|---|---|---|---|---|
| *E. servus* (Say)[4] | 2 | MV | Un | 7 Aug.–31 Aug. |
| *E. servus servus* (Say)[2] | 8 | BL, L | Ki, Wh | 8 June–1 Aug. |
| *E. tristigmus tristigmus* (Say) | 2 | BL, MV | Ba, Un | 28 Aug.–4 Sept. |
| *Holcostethus limbolarius* (Stål) | 1 | BL | Ki | 27 Aug. |
| *Hymenarcys aequalis* (Say) | 1 | BL | Ki | 22 May |
| *H. nervosa* (Say) | 1 | BL | Ki | 8 March |
| *Lineostethus tenebricornis* (Ruckes)[2] | 1 | MV | Co | 31 July |
| *Mecidea major* Sailer | 3 | IL, SL, UV, WL | Ga, Kn, Lu | 15 Sept.–13 Oct. |
| *M. minor* Ruckes | 21 | BL, CL, MV | Ki, Kn, Lu, Ra | 12 May–13 Nov. |
| *Menecles insertus* (Say) | 39 | BL | Ki | 14 May–5 July |
| *Murgantia histrionica* (Hahn) | 4 | BL, MV | Jd, Ki, Lu, Pa | 19 May–3 July |
| *Nezara viridula* (L.) | 6 | BL | Ca | 8 Sept. |
| *Oebalus pugnax* (Fab.) | 9 | BL, L, MV | Ca, Ki, Lu, Re, Un | 14 May–5 Oct. |
| *Proxys punctulatus* (Palisot de Beauvois) | 10 | BL, L | Ba, Ca, Ha, Ki, Sp | 14 May–18 Sept. |
| *Tepa* prob. *vanduzeei* Rider[2] | 2 | BL | Ga, Lu | 23 Aug.–13 Oct. |
| *Thyanta accerra* McAtee | 81 | BL, CL, IL, L, MV, WL | Ba, Bo, Cu, Da, Fi, Ga, He, Ki, Kn, Lu, Pa, Ra, Re, Tg, Un, Vv | 26 Feb.–13 Oct. |
| *T. accerra* McAtee/ *T. pallidovirens spinosa* Ruckes[2] | 2 | BL | Ki, Vv | 25 May–16 Sept. |
| Asopinae | | | | |
| *Alcaeorrhynchus grandis* (Dallas)[2] | 1 | BL | Ki | 24 July |
| *Apateticus cynicus* (Say) | 1 | MV | Un | 7 Aug. |
| *A. lineolatus (Herrich-Schaeffer)*[2] | 1 | BL | Ki | 31 July |
| *Podisus acutissimus* Stål[2] | 5 | BL | Br, Ki | 22 May–5 June |
| *P. maculiventris* (Say) | 3 | BL | Ki | 15 May–11 Sept. |

[1]BL = Black light, CL = Coleman Lantern, IL = Incandescent Light, L = Light, MV = Mercury Vapor, SL = Street Light, WL = White Light.
[2]Does not occur in northeastern North America.
[3]ALABAMA: Hr (Henry); ARIZONA: Co (Cochise), Sc (Santa Cruz); FLORIDA: Po (Polk); GEORGIA: Cl (Clarke), Do (Dooly), Oc (Oconee); ILLINOIS: Un (Union); LOUISIANA: Li (Lincoln); TEXAS: Ba (Bastrop), Bo (Bosque), Br (Brewster), Ca (Cameron), Cu (Culberson), Da (Dallas), Fi (Fisher), Ga (Garza), Ha (Harris), He (Hemphill), Jd (Jeff Davis), Ki (Kimble), Kn (Kinney), Lo (Live Oak), Lu (Lubbock), Mi (Mills), Pa (Parker), Ra (Randall), Re (Reeves), Sp (San Patricio), Tg (Tom Green), Uv (Uvalde), Vv (Val Verde), Wh (Wharton).
[4]Intergrade population.

[Say], *Banasa euchlora* Stål, *Euschistus obscurus* [Palisot de Beauvois], *Mecidea minor* Ruckes, *Menecles insertus* [Say], and *Thyanta acerra* McAtee) were collected in high numbers, which indicates this nocturnal activity and attraction to lights is part of their

normal behavior. Because different light sources vary in wavelengths emitted, Table 1 also includes label information on the type of light source involved.

The question still to be answered is why these typically diurnal insects (other than *M. insertus* [Balduf 1945]) are active at night. Is this an adaptation to reduce predation during dispersal? How common is it?

All specimens are deposited in the SIU and TTU Entomological Collections.

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