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# A LIST OF THE SCUTELLEROIDEA (HEMIPTERA) COLLECTED ON IMMATURE BLACK WALNUT TREES IN SOUTHERN ILLINOIS WITH SOME NOTES ON BIOLOGY

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ABSTRACT.--An annotated list of the Scutelleroidea collected during 1974-1975 on black walnut (Juglans nigra L.) in southern Illinois is presented.

The superfamily Scutelleroidea (stink bugs and their allies) is world-wide in distribution, and contains several North American species. The vast majority are feeders on grassy and/or herbaceous vegetation, with very few considered to be strictly arboreal.

For the past 2 years (1974-1975), we have been compiling an annotated list of the insects attacking immature black walnut trees (Juglans nigra L.) in southern Illinois[3]. Almost all of these trees have been planted by the USDA Forest Service, or private individuals under the direction of the Illinois State Department of Conservation. We have collected ca. 200 insect species thus far, including 12 species of scutelleroids. This paper presents information on these scutelleroids, several of which are not considered arboreal species; all were collected by sweeping or hand-picking.

## Family CORIMELAENIDAE

### Genus Galgupha Amyot & Serville

G. atra Amyot & Serville. This species occurs from Quebec and New England south to Florida, and west to Manitoba, Arizona, Washington, Texas and Mexico (Blatchley 1926, McAtee & Malloch 1933). It is often associated with grasses (Blatchley 1926) and herbaceous vegetation (McPherson & Mohlenbrock 1976).

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We collected 1 adult ♀ on 27 August 1974 from a black walnut growing in a weedy plantation in Jackson Co. It was on a leaflet but was not observed feeding.

Genus Corimelaena White

C. agrella McAtee. This species has been collected in Maryland, District of Columbia, Virginia, Texas (McAtee & Malloch 1933), Kentucky (Hart 1919) and Illinois (McPherson 1974). The only host plant recorded is Phlox pilosa L. (McPherson 1974).

An adult ♂ was collected 26 April 1974 by sweeping black walnut in Jackson Co.

C. lateralis lateralis (Fab.). This subspecies is common throughout the eastern, southern, and midwestern United States. It occurs on tall grasses and weeds (Blatchley 1926) and is often associated with wild carrot (Daucus carota L.) (McPherson 1972).

We collected 3 adult ♂ on 25 June 1975 by sweeping black walnut in Jackson Co. They had probably moved onto the walnut from the wild carrot which was growing beneath the trees.

C. pulicaria (Germar). This species is widespread throughout the United States and Canada. It has been collected primarily from grasses, herbaceous vegetation and agricultural crops (McPherson & Mohlenbrock 1976). It is commonly found on daisy fleabane (Erigeron philadelphicus L.).

We collected 37 adults 27 June-1 July 1974, and 21 adults 24 April-25 June 1975, respectively, on black walnut leaflets in Jackson Co. All but 2 were found on trees growing near daisy fleabane (Erigeron strigosus Muhlenberg), upon which numerous additional adults were found. One individual was observed feeding on the midvein of a leaflet.

Family CYDNIDAE

Subfamily Sehirinae

Genus Sehirus Amyot & Serville

S. cinctus cinctus (Palisot de Beauvois). This subspecies is found from New England south to Florida, and west through Kansas and Oklahoma to New Mexico, Texas and Mexico (Froeschner 1960). It primarily attacks herbaceous and grassy vegetation (McPherson & Mohlenbrock 1976).

An adult ♀ was collected on 20 August 1975 from a black walnut in Clinton Co. It was on a leaflet but was not observed feeding.

## FAMILY PENTATOMIDAE

### Subfamily Pentatominae

#### Genus Brochymena Amyot & Serville

B. arborea (Say). This species occurs from Ontario and New England south to Florida, and west to Kansas, Texas and Mexico (Blatchley 1926). It is an arboreal species and is known to attack several tree genera, including walnut (McPherson & Mohlenbrock 1976).

An adult ♀ was collected on 26 April 1975 on a branch of black walnut in Jackson Co., but was not observed feeding.

B. quadripustulata (Fab.). This species ranges from Quebec and New England south to Florida, and west to Utah, Arizona and California (Blatchley 1926). It also is an arboreal species and attacks several tree genera, including walnut (McPherson & Mohlenbrock 1976).

We collected 7 adults 26 April-1 October 1974 (Jackson Co.), and 8 adults 1 May-9 October 1975 (Alexander, Jackson Co.), respectively, on black walnut. Feeding was observed on the trunk, branches, twigs and a leaflet rachis.

#### Genus Mormidea Amyot & Serville

M. lugens (Fab.). This common stink bug occurs from Quebec and New England south to Florida, and west to Wyoming, Texas and Mexico (Blatchley 1926). It feeds primarily on grassy and herbaceous vegetation (McPherson & Mohlenbrock 1976).

An adult ♀ was collected on 11 July 1974 by sweeping black walnut in Jackson Co.

#### Genus Euschistus Dallas

E. servus (Say). This species is widespread in the United States and Canada and is divided into 2 subspecies, E. s. servus and E. s. euschistoides (Vollenhoven). Southern Illinois lies in the zone of intergradation between these subspecies (Sailer 1954).

E. servus feeds on numerous host plants ranging from grasses to trees (McPherson & Mohlenbrock 1976). Thus, its occurrence on black walnut was not surprising.

We collected 2 adults 17 July-14 August 1974 (Jackson Co.) and 8 adults 22 April-30 September 1975 (Gallatin, Jackson Co.), respectively, from black walnut. They were on buds, leaflets and rachises, and several were observed feeding. We also found 6 egg clusters (28 May-4 June 1975,

Jackson Co.). ca. 12 first instars (11 June 1975, Jackson Co.), and 10 second instars (4 August 1975, Hardin Co.) on leaflets but no feeding was observed. A fifth instar (14 August 1974) was swept from black walnut in Jackson Co.

One of the 6 egg clusters (collected 1 June 1975) proved to be parasitized by Trissolcus euschisti Ashmead (Hymenoptera:Scelionidae); adults emerged in the laboratory from this cluster on 14 June 1975.

E. tristigmus tristigmus (Say). This subspecies is found from the East Coast west to Louisiana, Oklahoma, Texas and Mexico (Blatchley 1926). It feeds on grasses, herbaceous vegetation and trees (McPherson & Mohlenbrock 1976).

An adult ♀ was collected on 10 September 1975 from a leaflet of black walnut in Jackson Co., but was not observed feeding.

Genus Acrosternum Fieber

A. hilare (Say). This species occurs from Quebec and New England south to Florida, and west to the West Coast (Blatchley 1926). It feeds on numerous host plants, including several agricultural crops (McPherson & Mohlenbrock 1976).

An adult ♂ and ♀ were collected on 17 July 1974 and 14 July 1975, respectively, by sweeping black walnut. An egg cluster was found on 7 June 1975, and a fifth instar, 5 September 1975, both on leaflets. All specimens were collected in Jackson Co. No feeding was observed.

Subfamily Asopinae

Genus Podisus Herrich-Schaeffer

P. maculiventris (Say). This predaceous stink bug is found in Canada and throughout the United States (Blatchley 1926). It occurs on herbaceous vegetation and trees, and frequently attacks insect larvae (McPherson & Mohlenbrock 1976).

A fourth instar was found on 5 June and another 9 July 1975 on leaflets. A fifth instar was found on 25 June 1975 on a leaflet with its beak inserted in an adult Anomoea flavokansiensis Moldenke (Coleoptera:Chrysomelidae) at the base of an antenna. All immatures were collected in Jackson Co.

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