New and Interesting Plants for the Arkansas Flora

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Arkansas Academy of Science

**Table. Dytiscidae known to occur in Randolph County, Arkansas. State records are designated by an asterisk.**

<table>
<thead>
<tr>
<th>TAXA</th>
<th>STATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Graphoderus perplexus</em></td>
<td>30</td>
</tr>
<tr>
<td><em>Aptomurus flavicornis</em> (Say)</td>
<td>17</td>
</tr>
<tr>
<td><em>Aptomurus simillimus</em> LeConte</td>
<td>22</td>
</tr>
<tr>
<td><em>Hesperosternum flavicornis</em> (LeConte)</td>
<td>1, 6, 10, 11, 15, 20, 25</td>
</tr>
<tr>
<td><em>Hesperosternum concinum</em> Young</td>
<td>6</td>
</tr>
<tr>
<td><em>Hesperosternum limosellum</em> Hilsenhoff</td>
<td>13</td>
</tr>
<tr>
<td><em>Coptosternum remotum</em> Say</td>
<td>1, 4, 6, 8, 10, 11, 13, 15, 20, 25</td>
</tr>
</tbody>
</table>

**Cryptobius fimbriolatus* fimbriolatus* (Say) | 16 |

**Hydronurus perplexus* Sharp | 9 |

**Hydronurus nigricollis* Sharp | 3, 11 |

**Hydronurus subcostatus* Sharp | 8 |

**Hydronurus polyphagus* Matta & Wolfe | 27 |

**Hydronurus pulcher* LeConte | 3, 10, 11 |

**Hydronurus myriacanthus* Sharp | 3, 10, 11 |

**Hydronurus shermani* Fall | 5, 9, 12, 14, 16 |

**Hydronurus saundersi* Sharp | 12, 14, 19 |

**Hydronurus zamia* Fall | 5, 9, 17 |

**Hydrophilus vigilans* Fall | 31 |

**Hydrophilus wandalus* Say | 26, 27, 27 |

**Hydrophilus bituberculatus* Geininger & Von Harold | 2, 3, 11, 12, 14, 15, 20 |

**Hydrophilus urceolatus* Say | 2, 3, 11, 12, 14, 15, 20 |

**Oxylus punctulatus* punctulatus* Melsheimer | 6 |

**Oxylus maculatus* (LeConte) | 13 |

**Oxylus cinereus* Say | 13 |

**Laccophilus fulvus* Melsheimer | 5, 7, 8, 9, 10, 11, 13, 17, 21, 23 |

**Laccophilus nanus* nanus* Melsheimer | 2, 11, 13 |

**Laccophilus serratus* nanus* Melsheimer | 2, 3, 4, 5, 8, 9, 10, 11, 13, 17, 21, 23 |

**Chauliodus pulvillus* pulvillus* (LeConte) | 27 |

**Thermonectus hispidus* Harris | 10, 12, 17, 21, 23 |

**Thermonectus armatus* (Abele) | 10, 12, 17, 21 |

**Odonata*** lamellata* (Say) | 1, 13, 17, 23 |

**Hydronurus subcostatus* Sharp (s.s.) + *Hydronurus zamia* Fall (F 노ah S. Young) |

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**NEW AND INTERESTING PLANTS FOR THE ARKANSAS FLORA**

Several plants have been collected that have not been reported previously as occurring in the state or have been cited from a single location by Smith (1978). Plants known only from western or central Arkansas are now cited from the eastern part of the state.

The plants are listed alphabetically by families and genera. Fernald (1950), Radford et al (1968) and Steyermark (1963) have been used for plant identification. Nomenclature follows Kartesz and Kartesz (1980) and Smith (1978). The majority of the plants have been collected by the author and are on file in the Arkansas State University Herbarium (STAR) or have been collected by others and are cited accordingly.

**MONOCOTYLEDONEAE** (Monocotyledons)

Cyperaceae (Sedge Family)

*Carex albolutea* Schwein.

Craighead Co., west Jonesboro in wet area near rice mill. E. L. Richards, 7510; May 24, 1979. T14N, R3E, S10. Reported by Smith (1978) for Jefferson County and has been collected also in Clay and Garland counties (Gary Tucker, personal communication).


Lilaceae (Lily Family)

*Veratrum woodii* Robbins


Poaceae (Grass Family)

*Tridens eragrostoides* (Vasey & Scribn.) Nash

Phillips Co., edge of water below Storm Creek Lake. E. L. Richards, 4349; August 17, 1965. T1S, R3E, S20. Lemmas 2 mm long and lateral nerves not excurrent. Closest species is *Tridens flavus* (L.) Hitchcock. This plant is cited here as new to the state.

*Chloris virginia* Sw.

Craighead Co., edge of Jonesboro High School track complex. E. L. Richards, 5877; September 17, 1971. T14N, R4E, S19. This plant was reported by Smith (1970) for Arkansas County.


**ACKNOWLEDGMENTS**


DICOTYLEDONAE (Dicotyledons)
Caryophyllaceae (Pink Family)

*Cerastium semidecandrum* L.


*Dianthus deltoides* L.
Clay Co., railroad dump in Piggott. D. M. Hughes, 26; June 19, 1965. T20N, R8E, S10. Flowers pedicellate. Closest species is *Dianthus armeria* L. This plant is cited here as new to the state.

*Lychnis coronaria* (L.) Desr.
Cross Co., edge of woods and in roadside ditch. E. L. Richards, 8202; August 26, 1984. T8N, R4E, S18. Plant parts tomentose. Closest related species is *Lychnis alba* Mill. This plant is cited here as new to the state.

Plantaginaceae (Plantain Family)

*Plantago cordata* Lam.


**LITERATURE CITED**


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**PESTICIDE USE IN THE 1983 SOYBEAN CROP: REPORT OF A SURVEY OF ARKANSAS PRODUCERS**

The use of pesticides in agricultural crops has increased significantly in the past decade. Use of these chemicals is considered essential by agricultural producers to maintain a high level of crop production and quality. Farmers and non-farmers are concerned about the impact these products may have on the environment.

In response to the need for information to address both viewpoints, the U.S. Department of Agriculture established the National Agricultural Pesticide Impact Assessment Program (NAPIAP) in 1976. One of the primary objectives of NAPIAP is to conduct pesticide use surveys on economically important commodities in the state in order to promote informed decisions on pesticides that significantly benefit humans without causing unreasonable adverse effects on the environment.

Soybeans were selected as the first major commodity in which to survey pesticide use in Arkansas since they are grown on more land than any other crop (Crop and Livestock Reporting Service, 1984). The primary objective of the survey was to determine which pesticides were used in soybeans and how they were applied. Data on soybean production practices that affect the use of pesticides were also collected including irrigation, soil types, and crop rotation. This report focuses on pesticide use in soybeans. Results of the entire survey will be available in an Extension publication at a later date.

This survey, with only minor changes, was conducted following the methods described by Dillman (1978) and Christenson (1975). Names of five hundred soybean producers were randomly selected (Leedy, 1980) from County Extension mailing lists. The number of producers selected from each county was in direct proportion to the county’s soybean acreage in 1983 (Crop and Livestock Reporting Service, 1984). The number of producers surveyed exceeded the sample size recommended by Krijcik and Morgan (1970).

The 12-page questionnaires contained 37 questions and were printed in a small page (8 1/2" x 11") format (Dillman, 1978). They were mailed to producers on July 9, 1984, from the appropriate county Extension office. A postcard reminder was mailed to those producers who had not responded within the first week. When necessary, additional reminders (each containing a questionnaire) were sent after two and seven weeks had elapsed.

Questionnaires were returned to the state Extension office in business reply envelopes included with each mailout. Summaries of the data were made by State Extension Office personnel. A copy of the questionnaire is available from the author.

Producers returned 436 of the 500 questionnaires mailed out for an 87 percent return rate. Of the 436 returned, 399 completed all or part of the questionnaire. The remainder either had not planted soybeans in 1983 or chose not to answer the questionnaire. Those producers responding grew soybeans on 308,894 acres in 1983 which represents 8.1 percent of the soybeans planted that year (Crop and Livestock Reporting Service, 1984).