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## Dytiscidae from Randolph County, Arkansas

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## General Notes

## DYTISCIDAE FROM RANDOLPH COUNTY, ARKANSAS

The purpose of this paper is to present a list of the species and subspecies of Dytiscidae known to occur in Randolph County, Arkansas. This is the first such compilation for an Arkansas county, though other papers have reported the occurrence of various dytiscid species in Arkansas (Young, 1953; Anderson, 1971; Hilsenhoff, 1975, 1980; Matta and Wolfe, 1979, 1981; Harp and Harp, 1980; Roughley and Pengelly, 1981; Farris and Harp, 1982; Huggins and Harp, 1983). Randolph County was chosen because it encompasses parts of both the Ozark Plateau and the Mississippi Alluvial Plain. It was anticipated that this diversity would increase the number of dytiscid species available for collection.

Some information was taken from examination of specimens in the Arkansas State University Museum of Zoology (ASUMZ) Aquatic Macroinvertebrate Collection. However, most specimens were collected for this study with a Turtox Indestructible™ dip net, the typical procedure being to pass the net over the bottom of lentic waters, usually in the littoral zone, making several sweeps in rapid succession. A few specimens were collected by picking through gravel along the margins of streams and retrieving the beetles with forceps. One specimen was collected under the lights in a parking lot at night. An effort was made to sample every available habitat, in every season.

Collections were made at the following numbered stations on the designated dates:

- |  |          |  |           |
|--|----------|--|-----------|
| 1. Brown Lake (SW ¼ S20, T18N, R1E)                          | 4-IX-84  | 17. Woodland pond (S36, T19N, R2W)                           | 3-XI-84   |
| 2. Eleven Point River @ St Hwy 93 (NE ¼ S1, T20N, R2W)       | 8-IX-84  | 18. Temporary pool in woods (NE ¼ S34, T19N, R2W)            | 3-XI-84   |
| 3. Lake @ Old Davidsonville St Pk (S35, T18N, R1W)           | 8-IX-84  | 19. Creek fed by spring @ Ravenden Spgs (SE ¼ S6, T19N, R2W) | 3-XI-84   |
| 4. Baltz Lake (SE ¼ S22, T19N, R1E)                          | 9-IX-84  | 20. Same as No. 1  | 3-XI-84   |
| 5. Small Creek (SW ¼ S20, T20N, R1E)                         | 11-IX-84 | 21. Temporary pool beside St Hwy 261 (NW ¼ S15, T20N, R1E)   | 4-XI-84   |
| 6. Pond 1 mi N Pocahontas (NE ¼ S16, T19N, R1E)              | 11-IX-84 | 22. Permanent spring (NE ¼ S7, T20N, R1E)                    | 4-XI-84   |
| 7. Flooded rice field (NE ¼ S24, T19N, R1E)                  | 11-IX-84 | 23. Stock pond (SW ¼ S26, T20N, R1W)                         | 4-XI-84   |
| 8. Cypress Lateral @ St Hwy 90 (NE ¼ S13, T18N, R1E)         | 11-IX-84 | 24. Woodland pond (SW ¼ S26, T20N, R1E)                      | 12-III-85 |
| 9. Big Creek @ St Hwy 328 (NW ¼ S4, T20N, R2E)               | 20-IX-84 | 25. Temporary pool in grassy field (SW ¼ S26, T20N, R1E)     | 12-III-85 |
| 10. Temporary pool in dirt road (boundary S5-8, T20N, R3E)   | 20-IX-84 | 26. Temporary pool in woods (SE ¼ S20, T18N, R1E)            | 12-III-85 |
| 11. Janes Creek @ St Hwy 90 (SW ¼ S7, T19N, R2W)             | 23-IX-84 | 27. Pool left by receding Janes Creek (SW ¼ S7, T19N, R2W)   | 15-III-85 |
| 12. Janes Creek (SW ¼ S19, T20N, R2W)                        | 23-IX-84 | 28. Black River (SW ¼ S35, T18N, R1W)                        | 15-III-85 |
| 13. Stock pond (NW ¼ S28, T21N, R2W)                         | 23-IX-84 | 29. Fourche River 4 mi E Pocahontas @ U.S. Hwy 67            | 17-IX-76  |
| 14. Diles Creek @ St Hwy 93 (SE ¼ S21, T21N, R2W)            | 23-IX-84 | 30. Randolph County - exact location unknown                 | 4-IV-80   |
| 15. Oxbow lake beside Black River (NW ¼ S4, T18N, R2E)       | 23-IX-84 | 31. Randolph County - exact location unknown                 | 16-IV-80  |
| 16. Wal-Mart parking lot, under lights (SW ¼ S28, T19N, R1E) | 26-IX-84 | 32. Eleven Point River S St Hwy 93 (SE ¼ S1, T20N, R2W)      | 7-III-81  |

Thirty-two species and subspecies are known to occur in Randolph County (Table). This report extends the range of *Hydroporus ouachitus* from the Ouachita Mountains (Matta and Wolfe, 1981) northeast into the Ozark Plateau. The range of *Coptotomus lenticus* is extended somewhat to the southwest of that reported by Hilsenhoff (1980). Michael and Matta (1977) reported the range of *Ilybius oblitus* to be from Massachusetts to South Carolina. Our Randolph County specimens extend the range considerably westward.

Dytiscidae were most often taken from shallow waters with emergent vegetation, and were characteristically absent from swift waters. This agrees with the observations of Pennak (1978). *Laccophilus fasciatus rufus* and *Laccophilus proximus proximus* followed this general trend, being commonly collected in all types of lentic habitats. These observations agree with those of Michael and Matta (1977). However, other species exhibited discernible habitat preferences. Members of the *Heterosternota* group of *Hydroporus* (*H. ouachitus*, *H. pulcher*, and *H. wickhami*) were invariably collected along the margins of clear streams and were frequently found at the air-water interface among gravel. Matta and Wolfe (1981) described this same preference of habitat for these species. *Coptotomus venustus* was almost always taken from lakes, ponds and large pools in streams, and was especially numerous in swampy oxbow lakes. *Thermonectus basillaris* was often taken from temporary pools, a point also made by Michael and Matta (1977). The only specimen of *Agabus semivittatus* was collected from a spring. This is significant, for many ASUMZ specimens of this species, from other parts of the state, confirm a preference for the spring habitat. This differs from the small streams and sloughs reported as characteristic habitat by Michael and Matta (1977).

## ACKNOWLEDGMENTS

We gratefully acknowledge the assistance of David Lawson (*Agabus*, *Ilybius*), J. F. Matta (*Hydroporus*) and F. N. Young (*Uvarus*) in identifying some specimens.

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## Arkansas Academy of Science

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

TAXA	STATIONS
<i>Agabus confusus</i> (Blatchley)	30
<i>Agabus distictus</i> Crotch	17
<i>Agabus semioctatus</i> LeConte	22
<i>Bifenestus inaequalis</i> (LeConte)	1,6,10,11,15,20,25
* <i>Celesia hubbardi</i> Young	6
* <i>Coptotomus lentus</i> Hilsenhoff	13
<i>Coptotomus venustus</i> Say	1,4,6,7,8,11,12,13,15,20,21,23,26,26,28
<i>Cybiaster fimbriolatus fimbriolatus</i> (Say)	16
* <i>Graphoderus perplexus</i> Sharp	29
<i>Hydroporus cygnealis</i> Sharp	3,11
<i>Hydroporus lobatus</i> Sharp	17
<i>Hydroporus lynceus</i> Sharp	8
<i>Hydroporus ovatus</i> Matta & Wolfe	27
<i>Hydroporus pulcher</i> LeConte	5,9,12,14,19
<i>Hydroporus rufilabris</i> Sharp	3,9,11
<i>Hydroporus shermani</i> Fall	5,9,11,12,14
* <i>Hydroporus solitarius</i> Sharp	12,14,18
* <i>Hydroporus sordidus</i> Fall**	5,9,17
<i>Hydroporus tigrinus</i> Fall	31
<i>Hydroporus undulatus</i> Say	24,25,27
<i>Hydroporus vittatipennis</i> Gemminger & Von Harold	2,3,11,12,14,15,28
<i>Hydroporus wickhami</i> Zaitzev	2,5,11,12,14,19
<i>Hydrovatus punctulatus punctulatus</i> Melsheimer	4,6
<i>Hygrobia rubilis</i> (LeConte)	13
* <i>Hygrotus obliquus</i> Sharp	32
<i>Laccophilus fasciatus rufus</i> Melsheimer	5,7,8,9,10,11,13,17,21,23
<i>Laccophilus maculosus maculosus</i> Say	2,11,13
<i>Laccophilus proximus proximus</i> Say	2,3,4,6,7,8,9,10,11,13,17,21,23,25
<i>Neobidessus pallus pallus</i> (LeConte)	27
<i>Phormosoma basillaria</i> (Harris)	10,12,15,17,18,21
<i>Thermonatus ornaticollis</i> (Aube)	10,15,23
<i>Uvanus lachryalis</i> (Say)	1,11,13,14,15

\*\**Hydroporus rufilabris* Sharp (s.s.) = *Hydroporus sordidus* Fall (fide F. N. 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 albulatensis* Schwein.

Craighead Co., west Jonesboro in wet area near rice mill. E. L. Richards, 7510; May 24, 1979. T14N, R3E, S12. Reported by Smith (1978) for Jefferson County and has been collected also in Clay and Garland counties (Gary Tucker, personal communication).

Monroe Co., wet woods and flooded area. E. L. Richards, 6156; June 30, 1973. T2N, R3W, S27.

## Liliaceae (Lily Family)

*Veratrum woodii* Robbins

Fulton Co., east Mammouth Springs on steep hillside. E. L. Richards, 8250; June 30, 1984. T21N, R5W, S8. Reported in Smith (1978) for Logan and Polk counties.

## Poaceae (Grass Family)

*Tridens eragrostoides* (Vasey & Scribn.) Nash

Phillips Co., edge of water below Storm Creek Lake. E. L. Richards, 4350; August 17, 1965. T1S, R5E, 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 virgata* 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.

Phillips Co., edge of water below Storm Creek Lake. E. L. Richards, 4349; August 17, 1965. T1S, R5E, S20.