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*MEDIONIDUS MCGLAMERIAE*, A NEW NAIAD  
FROM THE TOMBIGBEE RIVER, WITH  
NOTES ON OTHER NAIADS OF  
THAT DRAINAGE

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THE present study is based on about six hundred mussels collected by Miss Winnie McGlamery in October, 1935, from the Tombigbee River, at Epes, Sumter County, Alabama. At that time the water level was low, exposing a small bar which harbored most of the shells. This material was found to contain two small specimens of a hitherto undescribed species of *Medionidus*. The species is dedicated to the collector.

*Medionidus mcglameriae*, new species

DESCRIPTION.—Shell thin, small, oval in outline, somewhat swollen posteriorly. Posterior ridge low and well rounded, with a more or less prominent wing above the ridge. Beaks placed within anterior third of shell, but slightly raised above the hinge line. Beak sculpture not apparent because of erosion of the umbonal region. Anterior end of shell well rounded and somewhat cut away basally, giving the alate shell a wedge-shaped appearance laterally; posterior end broadly biangulate. Viewed from above the shell has a characteristic wedge shape with the greatest diameter at about the center

of the posterior ridge. The outline of the shell when viewed thus tends to be somewhat twisted. The epidermis has a yellow-green background crossed by numerous fine, undulating, often blotched, green rays, which are somewhat concentrated along the posterior half of the shell. Outer surface uneven, slightly reticulate, and crossed by prominent growth rests. Left valve with two inconspicuous, stumpy pseudocardinal teeth (the one just anterior to the umbone most prominent), and two rather remote, lamellar, curved laterals. Right valve with one blunt, prominent pseudocardinal and one prominent lateral, occasionally with a small spurious one above it. Nacre bluish white, thin, with relatively deep anterior muscle scars, and the posterior scars evident but shallow.

TYPE LOCALITY.—Tombigbee River, at Epes, Sumter County, Alabama. Type in the Museum of Zoology, University of Michigan; cotype in the Alabama Museum of Natural History, University of Alabama.

TABLE I  
DIMENSIONS IN MILLIMETERS

	Annulae	Length	Height	Diameter
Type .....	4	2.35	1.2	0.75
Cotype .....	3	2.10	1.0	0.50

Of the seven species previously recognized in the genus *Medionidus* there is none which is as distinctly alate as is *mcglameriae*. Evidently, *M. conradicus* is most closely related to *mcglameriae*, though there are several features present in this species that are completely lacking in the other. Such characters as the decided wing, the extreme wedge shape laterally and dorsally, the relatively small size of the shell, its thinness, and the delicacy of its teeth distinguish *mcglameriae* from related species of this group.

The fauna of the Tombigbee River is not well known. In early reports James Lewis (1876; 1877) mentioned species from the Black Warrior River, but no reference to the Tombigbee was made. More recently, A. A. Hinkley (1906) published a list of mussels he collected from the Tombigbee, at

Columbus. Studies of the naiads of several rivers have shown that species found in one portion of a drainage basin are often absent in another.

With this fact in mind the following distribution table is given. The two collecting stations, Columbus and Epes, were established by various parties at different times. Hinkley's list of 1906 is given in contrast to a list obtained by Calvin Goodrich and me when we visited the Tombigbee, at Columbus, in 1931. Hinkley apparently arrived at this station at a more favorable time for collecting than we did. Accumulated silt, turbidity, and high water made it impossible for us to collect adequate series. 'The specimens we obtained were gathered as dead shells on shoals and along the shore. In Table II the two lists of shells taken at Epes represent a collection made by W. J. Clench and me in 1933 and the series collected by Miss McGlamery more recently. The figures in the latter list are given to indicate relative abundance. The importance of collecting under favorable conditions is strikingly shown in the comparison of the total number of species contained in the two collections at this station. Approximately fifty species of mussels are credited to the main portion of the Tombigbee River.

Two records included in Hinkley's original list have been omitted in the table. He reported (1906: 52) *Micromya ogeecheensis* (Conrad) from the Tombigbee. This record is doubtful because *ogeecheensis* normally ranges in the Atlantic coastal streams of North Carolina, South Carolina, and Georgia but has never been authentically reported from Alabama or Mississippi. Another doubtful record is that of *Proptera alata* (Say) which must have been confused with *P. purpurata* (Lamarck), a closely related species common to the Gulf drainage basins of Alabama.

In recent years portions of the Tombigbee have become heavily silted. In 1931 Goodrich and I attempted to collect from the main river at Aberdeen. Silt was knee-deep on parts of the stream bed, and it was impossible to collect mussels by hand. Doubtless other zones of the river are similarly

TABLE II  
A LIST OF THE NAIADES IN THE TOMBIGBEE RIVER, EXCLUSIVE  
OF ITS TRIBUTARIES

Species	Columbus		Epes	
	1906	1931	1933	1935
<i>Fusconaia rubida</i> .....	.....	x	x	93
<i>Fusconaia ebennus</i> .....	x	.....	.....	91
<i>Fusconaia cerina</i> .....	x	.....	.....	.....
<i>Megaloniais gigantea</i> .....	.....	x	x	66
<i>Plectomerus trapezoides</i> .....	x	.....	.....	1
<i>Amblema perplicata</i> .....	x	x	.....	16
<i>Quadrula pustulosa</i> .....	x	x	x	89
<i>Quadrula aspera</i> .....	x	.....	.....	18
<i>Quadrula forsheyi</i> .....	.....	.....	x	.....
<i>Quadrula rumphiana</i> .....	x	x	.....	2
<i>Quadrula metanevra</i> .....	x	x	x	17
<i>Quadrula stapes</i> .....	x	.....	x	.....
<i>Tritigonia verrucosa</i> .....	.....	.....	.....	44
<i>Pleurobema cordatum plenum</i> .....	x	x	x	4
<i>Pleurobema marshalli</i> .....	.....	.....	.....	2
<i>Pleurobema tombigbeanum</i> .....	.....	.....	x	.....
<i>Pleurobema nucleopsis</i> .....	x	.....	.....	.....
<i>Pleurobema bulbosum</i> .....	x	.....	.....	.....
<i>Pleurobema nux</i> .....	x	.....	.....	.....
<i>Pleurobema taitianum</i> .....	x	.....	.....	.....
<i>Pleurobema curtum</i> .....	x	.....	.....	.....
<i>Pleurobema decisum</i> .....	x	.....	.....	.....
<i>Elliptio crassidens</i> .....	x	x	x	10
<i>Elliptio dilatatus</i> .....	x	.....	x	19
<i>Elliptio arctatus</i> .....	x	.....	.....	4
<i>Strophitus tombigbeensis</i> .....	x	.....	.....	2
<i>Lasmigona complanata</i> .....	x	.....	.....	.....
<i>Arcidens confragosus</i> .....	x	x	.....	.....
<i>Obliquaria reflexa</i> .....	x	x	.....	12
<i>Obovaria unicolor</i> .....	x	x	.....	7
<i>Obovaria castanea</i> .....	x	x	x	.....
<i>Plagiola lineolata</i> .....	x	x	x	26
<i>Leptodea fragilis</i> .....	x	x	.....	1
<i>Leptodea alabamensis</i> .....	.....	.....	.....	1
<i>Proptera purpurata</i> .....	.....	x	.....	8
<i>Carunculina parva</i> .....	x	.....	.....	.....
<i>Medionidus acutissimus</i> .....	x	.....	.....	2
<i>Medionidus meglameriae</i> .....	.....	.....	.....	1
<i>Ligumia recta latissima</i> .....	x	.....	.....	1
<i>Micromya lienosa</i> .....	x	x	.....	3
<i>Micromya concestator</i> .....	x	.....	.....	7
<i>Lampsilis anodontoides</i> .....	x	x	.....	52
<i>Lampsilis excavata</i> .....	x	x	x	25
<i>Lampsilis straminea</i> .....	.....	x	.....	.....
<i>Lampsilis hydiana</i> .....	x	.....	.....	.....
<i>Lampsilis affinis</i> .....	x	.....	.....	.....
<i>Lampsilis apicina</i> .....	x	.....	.....	.....
<i>Dysnomia metastriata</i> .....	.....	.....	.....	4
<i>Truncilla donaciformis</i> .....	x	.....	.....	1
<i>Truncilla truncata</i> .....	.....	x	.....	.....
Total number of species (50) .....	39	21	14	30

affected. Under such conditions adequate collections can be made only by the use of proper dredging equipment or at a time when portions of the river bed are exposed during a low-water stage. Such heavy silting has a decidedly detrimental effect on the molluscan fauna. It is questionable whether areas which have been changed through silting still harbor the original mussel fauna. Possibly, in the future only such species as can maintain themselves in an environment altered by silting will remain in the Tombigbee. A knowledge of the original fauna is necessary, however, for zoogeographical studies of this region. Although the species list given in Table II may not be complete, it provides more adequate information for such studies.

Several species not included in Table II are reported from tributaries of the Tombigbee. The following three localities contain species representative of tributaries in this drainage.

I. Sipsey River, Elrod, Tuscaloosa Co., Alabama. Collected by H. H. Smith, September, 1911, and July, 1912.

<i>Fusconaia rubida</i>	<i>Micromya lienosa</i>
<i>Tritogonia verrucosa</i>	<i>Lampsilis claibornensis</i>
<i>Elliptio dilatatus</i>	<i>Lampsilis excavata</i>
<i>Obovaria unicolor</i>	<i>Lampsilis clarkiana</i>

II. Lubbub Creek, Reform, Pickens Co., Alabama. Collected by H. H. Smith, September 1 and 2, 1912.

<i>Strophitus spillmani</i>
<i>Lampsilis claibornensis</i>

III. Coalfire Creek, Coalfire, Pickens Co., Alabama. Collected by H. H. Smith, June 6, 1914.

<i>Fusconaia rubida</i>	<i>Micromya vibex</i>
<i>Pleurobema flavidulum</i>	<i>Micromya lienosa</i>
<i>Strophitus spillmani</i>	<i>Lampsilis claibornensis</i>
<i>Carunculina cromwelli</i>	

#### REFERENCES

HINKLEY, A. A.

1906 Some Shells from Mississippi and Alabama. *Nautilus*, 20: 52-55.

## LEWIS, JAMES

- 1876 Fauna of Alabama. 1. Fresh Water and Land Shells. Ala. Geol. Surv., Rept. of Progress for 1876, pp. 61-71, 89-93.  
1877 Unionidae of Ohio and Alabama. Proc. Acad. Nat. Sci. Phila., 1877, pp. 26-36.

## LINDAHL, JOSHUA

- 1906 Orthography of the Names of the Naiades. Journ. Cincinnati Soc. Nat. Hist., 20: 235-43.

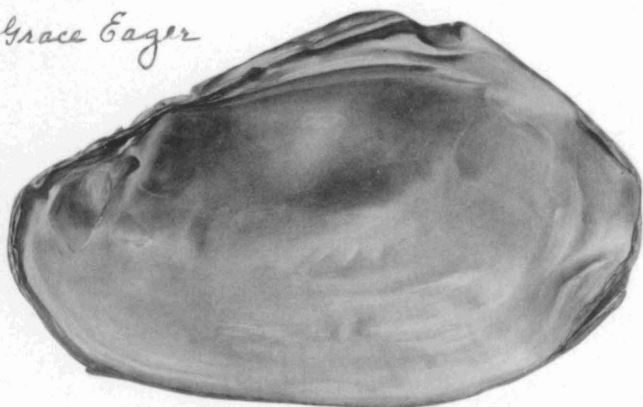
## SIMPSON, C. T.

- 1914 A Descriptive Catalogue of the Naiades, or Pearly Fresh-water Mussels. Detroit: Bryant Walker, pp. 245-53.

## PLATE I

*Medionidus mcglameriae*, new species.

*Grace Eger*



1 cm.







