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Freshwater Naiads (Mussels) (Pelecypoda: Bivalvia) of Slate Creek, A Tributary of the Licking River, Kentucky

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ABSTRACT

During the summer and fall of 1981, collections of freshwater naiads (mussels) were made from 6 sites along Slate Creek, a tributary of the Licking River. Nineteen species of naiads were found. Two species, *Fusconaia maculata* and *Epioblasma triquetra*, are currently considered endangered, threatened, or rare in Kentucky. *Fusconaia maculata* is a rather rare shell in Slate Creek, but *Epioblasma triquetra* was extremely abundant throughout the stream. All other species reported are commonly found throughout Kentucky.

Slate Creek, a tributary of the South Fork of Licking River, is a rather short (approximate length 40 km) eastcentral Kentucky stream, but one which has a rich and diverse naiad fauna. The stream originates in the rolling hill region of Montgomery County, Kentucky approximately 12.8 km SE of Mount Sterling and meanders through Bath County to its confluence with the South Fork of the Licking River ca. 9.6 km E of Owingsville. Slate Creek rarely exceeds 2 m in depth and 10 m in width. The substrate is sand and cobble with an occasional stretch of ex-

posed bedrock. The water quality is quite good as no industries or urban centers are located within the drainage.

During the summer and fall of 1981, collections of freshwater naiads (mussels) were made at irregular intervals from 6 stream sites, mostly by picking in shallow waters (Table 1). Other records were derived from bank shell debris. No live specimens were taken when fresh dead material of equivalent species could be found and used as voucher specimens. Reference specimens are housed in the Marshall University Malacological Col-

Anodonta grandis (Lea)
Anodontoides ferns
Strophitus u. undul
Alasmidonta viridis
Lasmigona costata
Tritogonia verrucos
Quadrula quadrula
Quadrula pustulosa
Amblema plicata (S)
Fusconaia maculata
Fusconaia flava (Ha)
Elliptio dilatata (Re)
Ptychobranthus fas
Actinonaias carinat
Potamilus alatus (Si)
Villosa iris (Lea 182)
Lampsilis radiata h
(Barnes 1823)
Lampsilis ventricos
Epioblasma triquetra
Corbicula fluminea

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Museum of Zool
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Location

All sites are in

1. Slate Creek a
S of intersec
W of Owings
2. Slate Creek a
of KR 36.
3. Slate Creek a
ingsville.
4. Slate Creek a
ingsville/Frer
5. Slate Creek at
E of Owingsv
6. Slate Creek c
Owingsville,
of Slate Creek
ing River.

Di

A total of 19 sp
lected from Slate

TABLE 1.—FRESHWATER MUSSELS FOUND AT EACH SITE

Species	Sites					
	1	2	3	4	5	6
<i>Anodonta grandis</i> (Say 1829)						
<i>Anodontoides ferussacianus</i> (Lea 1834)	X	X	X	X	X	
<i>Strophitus u. undulatus</i> (Say 1817)				X		
<i>Alasmidonta viridis</i> (Rafinesque 1820) = <i>calceolus</i> (Lea 1830)	X	X	X	X		X
<i>Lasmigona costata</i> (Rafinesque 1820)	X	X	X	X	X	X
<i>Tritogonia verrucosa</i> (Rafinesque 1820)			X	X		X
<i>Quadrula quadrula</i> (Rafinesque 1820)			X			
<i>Quadrula pustulosa</i> (Lea 1831)			X			
<i>Amblema plicata</i> (Say 1817)		X	X			
<i>Fusconaia maculata</i> (Rafinesque 1820) = <i>subrotunda</i> (Lea 1831)	X	X	X	X	X	X
<i>Fusconaia flava</i> (Rafinesque 1820)			X		X	
<i>Elliptio dilatata</i> (Rafinesque 1820)	X	X	X	X	X	X
<i>Ptychobranchus fasciolaris</i> (Rafinesque 1820)		X	X	X	X	X
<i>Actinonaias carinata</i> (Barnes 1823)			X			
<i>Potamilus alatus</i> (Say 1817)			X			
<i>Villosa iris</i> (Lea 1829)			X			
<i>Lampsilis radiata luteola</i> (Lamarck 1819) = <i>siliquoidea</i> (Barnes 1823)	X	X		X		X
<i>Lampsilis ventricosa</i> (Barnes 1823)	X	X	X	X	X	X
<i>Epioblasma triquetra</i> (Rafinesque 1820)	X	X	X	X		X
<i>Corbicula fluminea</i> (Müller) was found at all stations.	X	X	X	X		X

lections and the Ohio State University Museum of Zoology. Scientific names are those in current usage by Stansbery (1).

Location of Collecting Sites

All sites are in Bath County, Kentucky.

1. Slate Creek at Stepstone Rd., 1.6 km S of intersection with US 60, 3.2 km W of Owingsville.
2. Slate Creek at Kendall Rd., 1.6 km W of KR 36.
3. Slate Creek at KR 36, 3.2 km S of Owingsville.
4. Slate Creek at I-64, 480 km E of Owingsville/Frenchburg exit on KR 36.
5. Slate Creek at bridge on US 60, 2.9 km E of Owingsville.
6. Slate Creek off KR 111, 8 km NE of Owingsville, 3.2 km from confluence of Slate Creek and South Fork of Licking River.

DISCUSSION

A total of 19 species of naiads was collected from Slate Creek. At all sites the

number of mussels present was phenomenal considering the small size of the stream.

Fusconaia maculata and *Epioblasma triquetra* are currently on the list of (Endangered, Threatened, and Rare Animals and Plants of Kentucky) (2). *Fusconaia maculata* is a rather rare shell in Slate Creek, but *E. triquetra* was found to be extremely abundant throughout the stream. All other species reported are commonly found throughout Kentucky. The exotic Asian clam (*Corbicula fluminea*) was found at all stations in large numbers.

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