Freshwater Mussel Surveys of the Vermilion River (Illinois Drainage) and Tributaries

Report from 2004 IDNR / IEPA Basin Survey

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October, 2004

Introduction

As part of an ongoing effort to assess and monitor the status of Illinois streams, the Illinois Department of Natural Resources (IDNR) and Illinois Environmental Protection Agency (IEPA) have cooperated in conducting stream basin surveys. Survey reports summarize the current status of Illinois streams through collection of physical and biological information from established stations basin-wide.

This report describes and summarizes the 2004 freshwater mussel surveys of the Vermilion River and tributary stations performed in conjunction with IDNR/IEPA basin surveys efforts. Inclusion of mussels into these basin surveys fills the final void in completing comprehensive basin monitoring programs that reflect the entire spectrum of abiotic and biotic stream resources.

The goals of integrating freshwater mussels into IDNR / IEPA basin surveys are:

1. Provide reliable and repeatable techniques for assessing qualitative and quantitative composition of the freshwater mussel community in sampled streams, and

2. Provide data for monitoring of freshwater mussel populations on a local, regional, and basin / watershed basis.

This survey was partially supported by a Wildlife Preservation Fund grant from the Illinois Department of Natural Resources, Office of Resource Conservation.

Methods and Materials

During the 2004 survey, freshwater mussel data was collected at 23 stations throughout the Vermilion River basin. Locations of sampling sites are listed in Appendix 1.

Mussel survey locations were almost always the same as IEPA stations. One exception was Scattering Point (DSH-02) southwest of Cornell. Here, water conditions necessitated mussel sampling 1 mile south (upstream) of the established station. Two additional stations were sampled in the basin - Wolf Creek, a tributary just NE of Streator in LaSalle County, and a mainstem Vermilion River station at Humiston City Park in Pontiac (not to be confused with the Vermilion River site at Humiston Woods Nature Preserve - a different station). The station at Humiston City Park was the location of the most recent live records of the state-listed spike in the basin.

Past and current freshwater mussel populations were assessed by collecting shell material at each sample station. Shell material was classified as recent dead or relict based on condition of best shell found. Live mussels were surveyed by hand grabbing and visual detection. Efforts covered all substrate types present at a station. All live mussels found were placed in mesh diver's bags or equivalent and held in the stream until processing. A species was considered extant at a station if it was represented by live individuals or recent dead shell material (Szafoni, 2001).

At 3 mainstem stations (DS-06, DS-10, & DS-07), timed diving supplemented hand grab techniques. Diving only was used at DS-06 due to uniformly deep water conditions. These stations had sufficient deep water areas that did not permit adequate survey work by hand grab techniques alone. Diving increased the number of live individuals found but did not increase the number of species recorded at the 2 sites where both techniques were used.

Effort was recorded as man-hours per station (Appendix 2). At least 2.0 man-hours were spent at each station though sometimes effort was higher, especially in mainstem sites. Effort ranged from 2.0 - 4.0 man-hours with a total of 56.6 man-hours of in-stream sampling. Based on site conditions, survey efficiency was estimated as fair, good, or high.

All live mussels and dead shells were identified to species and 1-2 voucher specimens per species were retained. Vouchers were deposited in the Illinois Natural History Survey Mollusk Collection. For each live individual, we recorded gender, where possible, shell length (mm), and number of growth rings. All non-vouchered live mussels were returned to the stream reach where they were collected. Common and scientific names follow Turgeon, et al. (1998).

Parameters recorded included extant and total species richness, presence of rare or listed species, and abundance estimates expressed as catch-per-unit-effort (CPUE). Recruitment for live species was determined by the presence of individuals with 3 or fewer growth rings. Smaller (i.e. younger) mussels are harder to locate by hand grab methods and large sample sizes can be needed to accurately assess population reproduction. However, a small sample size can provide evidence

of recruitment if it includes individuals that are small or possess few growth rings.

Finally, mussel resources were classified as unique, highly valued, moderate, limited, or restricted based on criteria outlined in Szafoni (2002).

Results

Basin-wide Totals

A total of 1133 live individuals of 21 species were recorded (Appendix 3). An additional 2 species, mucket and the state-listed spike, were noted as relict shell. These are discussed separately below.

Mucket is a widespread species of medium to large rivers. Historically, mucket has been reported from the mainstem Vermilion from Pontiac downstream to Ogelsby. This species was last reported live in the Vermilion in 1991. Past collections suggest it was never abundant but it prefers larger reaches where sampling is more difficult. Except for the Kankakee River basin, it is much less common today than in the past.

The state-listed spike was last reported live in the Vermilion River watershed in 1988. Historically, spike has been reported from the entire mainstem Vermilion River as well as the South Fork Vermilion River north of Fairbury. Subsequent surveys at these stations as well as nearby areas of similar habitat from 1991 - 2000 have failed to find live individuals. All shell found since 1992 has been relict. It would appear that the spike has been extirpated from the Vermilion River basin though many areas of seemingly suitable habitat have not been surveyed.

Vermilion River Mainstem

A total of 20 species of freshwater mussels were observed in the Vermilion River stations; 15 were represented by extant individuals (Appendix 3). The number of extant species per site ranged from 5-12.

The most abundant species recorded in the Vermilion River were threeridge and mapleleaf, making up 55% of all live mussels.

The most widespread species were plain pocketbook, fragile papershell, white heelsplitter, and mapleleaf, recorded extant from at least 80% of all mainstem stations.

No extant state-listed species were recorded from the Vermilion River mainstem. The state-listed spike was recorded as relict shell at 3 of the 5 mainstem Vermilion River stations. The spike was

last reported live in the basin in 1988 near Cornell. Relict shells were reported from several staions in 1992, 1995, 2000.

A total of 250 mussels were collected during 16.75 man-hours of sampling on the mainstem Vermilion River with a mean of 14.9 mussels/man-hour. The number of live individuals per site ranged from 10 - 121.

Mussel abundance at individual stations ranged from low to high (CPUE 2.5 - 36 individuals/man-hour). At all stations, sampling efficiency was good to high suggesting that the data reflect mussel communities and stream conditions at those stations.

Recruitment ranged from zero at 2 stations to low at the remaining Vermilion River stations (Appendix 4). Given the difficulties detecting small individuals, it is difficult to assess recruitment when numbers of live individuals are small. Therefore, these estimates are conservative and may be higher.

Vermilion River Tributaries

A total of 20 species of freshwater mussels were observed in the Vermilion River tributary stations; 19 were represented by extant individuals (Appendix 3). Elktoe was only recorded by relict shell. The number of extant species per site ranged from 0 - 12.

The most abundant species recorded in the Vermilion River tributary stations were threeridge, Wabash pigtoe, white heelsplitter, and mapleleaf, making up 60% of all live mussels.

The most widespread species were fatmucket, giant floater, plain pocketbook, white heelsplitter, recorded extant from 53% of stations.

No state-listed species were recorded from the Vermilion River tributary stations. Of particular note was the abundance of ellipse at Otter Creek (DSB-) and its suggested abundance at Indian Creek (DSQ-03) and perhaps South Fork Vermilion @ Forrest (DSP-03) based on the number of fresh dead shells observed. While a fairly common species in the Fox River watershed, the ellipse is sporadic elsewhere in Illinois and is considered a species intolerant to habitat degradation.

A total of 883 mussels were collected during 39.83 man-hours of sampling on the Vermilion River tributary stations with a mean of 22.2 mussels/man-hour. The number of live individuals per site ranged from 0-365. One station, North Fork Vermilion River @ Collum (DSQ-03) accounted for 41% of all mussels found and supported 8 extant species. One station, Scattering Point (DSH-02), supported no extant species.

Mussel abundance at individual stations ranged from zero at 2 stations to very high at the North Fork of the Vermilion (CPUE 0.0 - 91.3 individuals/man-hour). Sampling efficiency ranged from

good to high suggesting that the data reflect mussel communities and stream conditions.

Recruitment was zero at 4 stations and moderate to high at 13 stations with the remaining 2 stations considered low (Appendix 4). A remarkable 12 stations exhibited recruitment for 50% or more species, with two stations exhibiting recruitment for every live species encountered.

Mussel Community Classification

Based on the data collected in the 2004 basin survey, numerous significant freshwater mussel resources exist in the Vermilion River basin (Table 1). A remarkable 10 of the 23 (@ 43%) stations supported mussel communities of statewide significance. The lower station on Rooks Creek (DSJ-01) supported a Unique mussel resource. Highly Valued mussel resources exist at two Vermilion River mainstem sites (DS-14 and Humiston City Park, Pontiac) and 7 tributary stations - Vermilion - Humiston Nature Center (DS-14), Vermilion - Humiston City Park (Pontiac), Otter Creek - Streator (DSB), Scattering Point - Flanagan (DSH), Indian Creek - Fairbury (DSPA-01), N. Fk. Vermilion - Cullom (DSQ-03), Kelly Creek - Cullom (DSQC) Felky Slough - Saunemin (DSQA-01), Wolf Creek - Streator.

Table 1. Sampling station classification based on freshwater mussel resources.

RATING	SITE	POTENTIAL FACTORS PRESENT
Unique	Rooks Creek - Pontiac (DSJ-01)	Very high species richness &/or abundances, listed species present, high to very high recruitment
Highly Valued	Vermilion - Humiston Nature Center (DS-14) Vermilion - Humiston City Park (no basin code) Otter Creek - Streator (DSB) Scattering Point - Flanagan (DSH) Indian Creek - Fairbury (DSPA-01) N. Fk. Vermilion - Cullom (DSQ-03) Kelly Creek - Cullom (DSQC) Felky Slough - Saunemin (DSQA-01) Wolf Creek - Streator (no basin code)	High species richness and abundance; rare species present; moderate to very high recruitment
Moderate	Vermilion - Sandy Ford (DS-07) Prairie Creek - Streator (DSE-01) Mud Creek - Manville (DSG-01) Short Point - Cornell (DSHA) Pike Creek - Chenoa (DSJA-01) Wolf Creek - Pontiac (DSL-01) S. Fk. Vermilion - Forrest (DSP-03) Fivemile Creek - Saunemin (DSQB-01)	Good species numbers and abundances with rare species possibly present, recruitment for some species
Limited	Vermilion - McDowell (DS-06) Vermilion - Streator (DS-10) Long Point Creek - Long Point (DSF-01) Rooks Creek - Ocoya (DSJ)	Very low species and abundances; little or no indication of recruitment.
Restricted	Scattering Point - Cornell (DSH-02)	No live species or shell material present

References

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Figures and Appendices

Figure 1. Location of Freshwater Mussel Sampling Stations in Vermilion River Basin Survey, Summer, 2004

Appendix 1. Sampling Sites - Vermilion River and Tributaries, Summer, 2004

Appendix 2. Sampling Effort - Vermilion River and Tributaries, Summer, 2004

Appendix 3a & b. Freshwater Mussel Survey Results - Vermilion River and Tributaries, Summer, 2004

Appendix 4. Freshwater Mussel Survey Results Summary - Vermilion River and Tributaries, Summer, 2004

Appendix 5. Freshwater Mussel Common and Scientific Names

Appendix 1. Sample Station Locations

STREAM NAME	EPA CODE	COUNTY	TWP	RNG	1/4 SEC	LOCATION
Vermilion River	DS-06	Livingston	27N	6E	SW6	Co.Rd. #24 br 0.5 mi E of McDowell
Vermilion River	DS-14	Livingston	29N	4E	SW36	4 mi S of Cornell at Humiston Woods
Vermilion River	DS-10	Livingston	30N	3E	SE2	S. Edge of Streator off Rt 23
Vermilion River	DS-07	LaSalle	32N	3E	SW30	Co. Rd. #57 br 3 miles NE of Leonore
Otter Creek	DSB-03	LaSalle	31N	3E	SE13	1759 rd at Marilla Park N of Streator
Prairie Creek	DSE-01	Livingston	30N	3E	SE24	600E br 4 mi S of Streator
Long Point Creek	DSF-01	Livingston	29N	3E	SW2	450E Br 2.5 mi E of Long Point
Mud Creek	DSG-01	Livingston	30N	4E	SW34	Twp rd br 2.5 mi NW of Cornell
Scattering Point	DSH-02	Livingston	29N	4E	NW21	2.5 mi SW of Cornell
Scattering Point	DSH-03	Livingston	28N	4E	N7	2000N br 3 mi NE of Flanagan
Short Point	DSHA-01	Livingston	29N	4E	SE19	2350N br 3.5 mi SW of Cornell
Rooks Creek	DSJ-01	Livingston	28N	4E	NW10	E-W twp rd br 6 mi NW of Pontiac
Rooks Creek	DSJ-02	Livingston	27N	5E	SW8	1350N dead end 2.5 mi S of Pontiac (1 mi NE Ocoya)
Pike Creek	DSJA-01	Livingston	27N	4E	SW12	1300 N bridge 4 miles SW of Pontiac
Wolf Creek	DSL-01	Livingston	29N	5E	SW31	N-S twp rd br 5 mi NW of Pontiac
S. Fk. Vermilion River	DSP-03	Livingston	26N	7E	NW10	S edge of Forrest in city park
Indian Creek	DSPA-01	Livingston	26N	6E	SE16	Twp rd br 1.5 mi SW of Fairbury
N. Fk. Vermilion River	DSQ-03	Livingston	27N	8E	SW2	Twp rd br 3 mi S of Cullom
Fivemile Creek	DSQB-01	Livingston	28N	7E	SW33	Twp rd br 3 mi SW of Saunemin
Kelly Creek	DSQC-01	Ford County	27N	9E	NW8	1300E Br 4 mi SE of Cullom
Felky Slough	DSQA-01	Livingston	28N	6E	SE24	1700N rd br 4 mi W Saunemin
Otter Creek "Wolf Cree	DSB-01	LaSalle	31N	3E	SE15	N side of Streator
Vermilion River	none	Livingston	28N	5E	SW22	Humiston City Park, Pontiac

Appendix 2. Sample Station Description and Effort

STREAM	EPA CODE	GENERAL LOCATION	LOCATION	DATE	ORDER	COMMENTS	EFFORT	EFFICIENCY
Vermilion River	DS-06	0.5 mi E of McDowell	Co Rd #24	07/27/04	5	silty sand w/cobble	2.0 dive only	2
Vermilion River	DS-14	4 mi S of Cornell	Humiston Nature Center, across canoe launch	07/29/04	5	gravel w/cobble & sand	4.0	2
Vermilion River	DS-10	S. Edge of Streator	Up and downstream Carriage Lane RV Park	07/28/04	6	cobble w/gravel & sand; bedrock	2.25 wade, 1.5 dive	3
Vermilion River	DS-07	3 miles NE of Leonore	Sandy Ford Rd	07/27/04	6	gravel & cobble, well packed	3.0 wade, 1.0 dive	3
Otter Creek	DSB-03	N of Streator	Marilla Park	07/28/04	4	gravel & cobble w/sand,silt; veg common	2.5	3
Prairie Creek	DSE-01	S of Streator	4 mi S Streator, up and downstr 600E Rd	07/30/04	3	gravel/cobble/hardpan, sand/silt banks	2.0	3
Long Point Creek	DSF-01	2.5 mi E of Long Point	upstr 450E bridge	07/30/04	3	sand & silt w/gravel & sc cobble	2.0	3
Mud Creek	DSG-01	2.5 mi NW of Cornell	2 mi SE Manville Up and downstr 900E br	07/30/04	5	mud & silt over sand & gravel	2.0	3
Scattering Point	DSH-02	2.5 mi SW of Cornell	1 mi upstream DSH-02, upstream of 2250N rd	08/12/04	3	packed cobble w/sand & silt	2.0	3
Scattering Point	DSH-03	3 mi NE of Flanagan	upstream 2000N bridge	07/23/04	3	silty sand w/gravel	2.0	3
Short Point	DSHA-01	3.5 mi SW of Cornell	W of 700E between 2350N and 2400N	07/23/04	2	silty gravel & cobble; well packed	2:20	3
Rooks Creek	DSJ-01	6 mi NW of Pontiac	upstr 2000N rd	07/30/04	4	silt & sand shallows w/gravel/cobble channel	3.0	3
Rooks Creek	DSJ-02	2.5 mi S of Pontiac (1 mi NE Ocoya)	Accessed off private property W of Old rt 66	07/21/04	4	silty sand w/cobble	2.0	3
Pike Creek	DSJA-01	4 miles SW of Pontiac	downstream 1300N bridge	07/21/04	3	silty sand w/cobble	2.0	3
Wolf Creek	DSL-01	5 mi NW of Pontiac	upstream 1200E bridge	08/12/04	4	sandy silts & packed cobble	2.0	3
S. Fk. Vermilion River	DSP-03	S edge of Forrest	City Park, Forrest	07/16/04	3	gravel riffle/run, sand banks	2.0	2
Indian Creek	DSPA-01	1.5 mi SW of Fairbury	downstream 2075E bridge	07/16/04	4	gravel & cobble riffles; gravel & sand banks	2.0	2
N. Fk. Vermilion River	DSQ-03	3 mi S of Cullom	upstr 3400E bridge	07/29/04	5	clay w/silt & sand	4.0	3
Fivemile Creek	DSQB-01	3 mi SW of Saunemin	up and downstream 2600E	07/20/04	4	coarse sand & gravel	2.0	2
Kelly Creek	DSQC-01	4 mi SE of Cullom	upstream 1300E bridge	07/20/04	5	sand & silt, clay banks, veg common	2.0	3
Felky Slough	DSQA-01	4 mi W Saunemin	upstream 1700N bridge	07/16/04	3	gravel & sand w/claypan banks	2.0	3
Otter Creek "Wolf Cre	DSB-01	N side of Streator	downstream 1600E bridge	07/28/04	4	silt over sand & gravel	2	2
Vermilion River	none	Pontiac	Humiston city park	07/29/04	5	gravel & cobble w/sand,silt side channels; veg common	3	2

Appendix 3a. Survey Results - Mainstem Vermilion River Sites

Station	Verm	Verm	Verm	Verm	Vermillion	Verm
Species	McDowell	Cornell	Streator	Leonore	Humiston	Subtotals
	DS-06	DS-14	DS-10	DS-07	City Park	
Creek heelsplitter						0
Creeper		1		R	R	1
Cylindrical papershell						0
Deertoe			D	1		1
Elktoe		2		R	4	6
Ellipse		R			R	0
Fat Mucket		3			R	3
Flutedshell		5				5
Fragile papershell	1	6	1	1	12	20
Giant Floater	1		R		R	0
Lilliput			R?			0
Mapleleaf	D	24	2	D	17	43
Mucket		R				0
Paper pondshell			R		D	0
Pimpleback		11	R	R	15	26
Pink heelsplitter			1			1
Plain pocketbook	R	10	2	2	5	19
Pondhorn						0
Round pigtoe		4			1	5
Spike		R	R		2R	0
Threeridge	10	50	R		42	92
Wabash pigtoe	1	1		R	2	3
White heelsplitter	R	4	5	6	10	25
Unknown						0
Number of individuals	13	121	11	10	108	250
Number of extant spe	5	12	6	5	10	15
Total species	7	15	12	9	15	20
Man-hours	2	4	3.75	4	3	16.75
CPUE	6.5	30.3	2.9	2.5	36.0	14.9
Corbicula (live)	0	1	0	0	0	

Appendix 3b. Survey Results - Tributary Sites Vermilion River (IL)

Station	Otter	Prairie	Long	Mud	Scattering	Scattering	Short	Rooks	Rooks	Pike	Wolf	S Fk	Indian	N Fk	Fivemile	Kelly	Felky	Otter Creek	Trib
Species	Ck	Ck	Point Ck	Ck	Point	Point	Point	Ck	Ck	Ck	Ck	Verm Ri	Ck	Verm Ri	Ck	Ck	Slough	"Wolf Creek"	Subtotals
	DSB-03	DSE-01	DSF-01	DSG-01	DSH-02	DSH-03	DSHA-01	DSJ-01	DSJ-02	DSJA-01	DSL-01	DSP-03	DSPA-01	DSQ-03	DSQB-01	DSQC-01	DSQA-01	DSB-01	
Creek heelsplitter		R								R					1		5		6
Creeper	1					R	R	1	R	R		R	D	1		11	18		32
Cylindrical papershell		1	D	3	R	25	2		R	2R			R	R	1	3	4		39
Deertoe	D																		0
Elktoe																	R		0
Ellipse	20							1		R		3	2					1	27
Fat Mucket	9	3	D	5		45	1	15	R	1	4		R				1	R	84
Flutedshell								1											1
Fragile papershell	8													1		16		1	26
Giant Floater	1	14	R	3		23	14	6		4	9		R	4	R	8	3	2	91
Lilliput		3R				D	3			3R						2			5
Mapleleaf								2						80		19		R	101
Mucket																			0
Paper pondshell											1								1
Pimpleback								2						R		3			5
Pink heelsplitter																			0
Plain pocketbook	11	D						3	1		D		1	1		5	9	3	34
Pondhorn		D	R?			1	1							2R		1			3
Round pigtoe								1											1
Spike																			0
Threeridge					R		1	28	10			R	6	55		9	4		113
Wabash pigtoe								2				1	1	153	1	11	1		170
White heelsplitter	13	1		2				25	8	R	8	R	R	70	1	10	6	R	144
Unknown					R														0
Number of individuals	63	19	0	13	0	94	22	87	19	5	22	4	10	365	4	98	51	7	883
Number of extant species	8	6	2	4	0	5	6	12	3	2	5	2	5	8	4	12	9	4	19
Total species	8	8	4	4	3	6	7	12	6	8	5	5	9	11	5	12	10	7	20
Man-hours	2.5	2.0	2.0	2.0	2.0	2.0	2.3	3.0	2.0	2.0	2.0	2.0	2.0	4.0	2.0	2.0	2.0	2.0	39.8
CPUE	25.2	9.5	0.0	6.5	0.0	47.0	9.4	29.0	9.5	2.5	11.0	2.0	5.0	91.3	2.0	49.0	25.5	3.5	22.2
Corbicula (live)	0	0	0	0	0	0	1	0	1	0	0	2	2	1	1	1	0	0	

Appendix 4. Data Summary & Index Scores

							INDEX SCORES					
		# Extant	Intolerant				Sp	Intolerant			MCI	Resource
Stream	EPA Code	species	species	CPUE	% recruit		Rich	Sp	CPUE	Recruit	Sum	Value
Vermilion River	DS-06	5	0	6.5	0%		3	1	2	1	7	L
Vermilion River	DS-14	12	1	30.3	25%		5	3	4	3	15	HV
Vermilion River	DS-10	6	0	2.9	0%		3	1	2	1	7	L
Vermilion River	DS-07	5	0	2.5	25%		3	1	2	3	9	M
Otter Creek	DSB-03	8	1	25.2	57%		4	3	3	5	15	HV
Prairie Creek	DSE-01	6	0	9.5	75%		3	1	2	5	11	M
Long Point Creek	DSF-01	2	0	0	0%		2	1	1	1	5	L
Mud Creek	DSG-01	4	0	6.5	25%		3	1	2	3	9	M
Scattering Point	DSH-02	0	0	0	0%		1	1	1	1	4	R
Scattering Point	DSH-03	5	0	47	75%		3	1	4	5	13	HV
Short Point	DSHA-01	6	0	9.43	50%		3	1	2	4	10	M
Rooks Creek	DSJ-01	12	2	29	8.3%		5	5	3	3	16	U
Rooks Creek	DSJ-02	3	0	9.5	0%		2	1	2	1	6	L
Pike Creek	DSJA-01	2	0	2.5	100%		2	1	2	5	10	M
Wolf Creek	DSL-01	5	0	11	50%		3	1	3	4	11	M
S. Fk. Vermilion River	DSP-03	2	1	2	0%		2	3	2	1	8	M
Indian Creek	DSPA-01	5	1	5	50%		3	3	2	4	12	HV
N. Fk. Vermilion River	DSQ-03	8	0	91.3	50%		4	1	5	4	14	HV
Fivemile Creek	DSQB-01	4	0	2	50%		3	1	2	4	10	M
Kelly Creek	DSQC-01	12	0	49	100%		5	1	4	5	15	HV
Felky Slough	DSQA-01	9	0	25.5	67%		4	1	3	5	13	HV
Otter Creek "Wolf Cree	DSB-01	4	1	3.5	50%		3	3	2	4	12	HV
Vermilion River	none	10	0	36	33%		5	1	4	4	14	HV

Appendix 5. Common and Scientific Names of Freshwater Mussels

Common Name	Scientific Name
Creek heelsplitter	*Lasmigona compressa*
Creeper	*Strophitus undulatus*
Cylindrical papershell	*Anodontoides ferussacianus*
Deertoe	*Truncilla truncata*
Elktoe	*Alasmidonta marginata*
Ellipse	*Venustachoncha ellipsiformes*
Fatmucket	*Lampsilis siliquoidea*
Fluted-shell	*Lasmigona costata*
Fragile papershell	*Leptodea fragilis*
Giant floater	*Pyganodon grandis*
Lilliput	*Toxolasma parvus*
Mapleleaf	*Quadrula quadrula*
Mucket	*Actinonaias ligamentina*
Paper pondshell	*Utterbackia imbecillus*
Pimpleback	*Quadrula pustulosa*
Pink heelsplitter	*Potamilus alatus*
Plain pocketbook	*Lampsilis cardium*
Pondhorn	*Uniomerus tetralasmus*
Round Pigtoe	*Pleurobema sintoxia*
Spike	***Elliptio dilatata***
Threeridge	*Amblema plicata*
Wabash pigtoe	*Fusconaia flava*
White heelsplitter	*Lasmigona complanata*

Bold = State-listed