

SITE 2

Location: SE 1/4 Sec 26, T107N, R14W. South Fork; from dam on Silver Lake to 50 m upstream from confluence of Cascade Creek and South Fork.

DNR Fish Station Number: -

Date: 20 June 1988, 23 August 1988

Water Temperature: -, 73° F

Transect Location: 10 (20 June), 30, and 50 m upstream from confluence of Cascade Creek and South Fork

Range of the Mean Depth of Pool Transects: 10 - 16 cm.

Duration of Timed Search: -

SPECIES		Transect			Timed Search		
		L	H	W	L	H	W
<u>Alasmidonta marginata</u>	29 June	37.8	20.2	13.3			
		47.9	24.2	18.2			
	23 Aug	93.1	44.3	39.9			
		60.0	29.6	19.3			
		61.8	33.0	22.1			
		60.2	32.8	23.5			
		56.6	30.4	22.5			
		82.0	47.8	31.7			
	$\bar{m}$	62.5					
	SD	17.6					
<u>Lampsilis ventricosa</u>	20 June	35.1	25.6	13.5			
		101.7	69.9	48.7			
		130.3	78.2	51.6			
		96.7	67.1	43.2			
		84.3	63.0	44.6			
		62.3	41.4	26.3			
		148.4	95.9	66.0			
		116.4	87.9	56.9			
		96.8	63.6	47.2			
		99.3	75.2	42.4			
		46.6	32.2	13.0			
		100.4	72.2	45.8			
		47.1	31.0	18.0			
		120.4	74.4	56.0			
		129.7	83.1	63.1			
	23 Aug	123.1	76.2	50.2			
		104.0	71.3	46.3			
		93.1	61.3	38.0			
		138.6	92.9	58.1			

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>	122.1	79.0	53.2			
Continued	92.1	68.6	46.7			
	92.9	64.5	42.3			
	54.6	32.4	23.9			
	90.8	66.8	44.2			
	129.5	86.6	60.3			
	102.9	70.1	43.2			
	109.4	75.1	49.9			
	61.3	39.8	24.7			
	34.8	20.6	13.5			
	70.4	44.7	30.2			
	94.4	63.3	40.2			
	92.6	65.4	40.6			
	76.0	47.1	29.2			
	52.2	31.5	21.8			
	74.8	47.5	29.1			
	101.3	77.5	46.6			
	132.0	85.6	58.4			
	106.8	74.5	47.8			
	138.4	97.1	61.0			
	106.3	78.9	50.4			
	117.1	94.6	59.5			
	110.2	85.2	50.4			
	138.5	98.7	66.7			
	96.6	67.8	40.7			
	139.2	91.6	62.2			
	76.8	48.6	31.8			
	132.2	92.6	57.0			
	21.9	12.2	8.1			
	104.3	68.9	47.0			
	114.4	76.7	53.0			
	120.7	78.6	50.9			
	111.2	74.7	45.3			
	102.1	61.3	41.1			
	54.8	32.9	25.4			
	54.9	34.5	24.6			
	131.8	86.7	56.4			
	134.9	103.8	63.7			
	124.0	84.7	52.8			
	109.1	83.6	54.4			
	128.0	86.7	64.7			
	128.1	84.5	55.0			
	20.0	12.2	7.8			
	91.0	61.4	42.3			
	18.2	10.8	6.8			
	92.8	65.4	43.0			
	70.9	43.7	29.1			
	68.1	44.7	29.9			
	112.5	90.5	58.0			
	105.5	76.6	47.2			

		<u>Transect</u>			<u>Timed Search</u>		
		<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>		71.2	44.9	30.5			
Continued		53.0	33.0	22.8			
		111.7	80.4	53.3			
		108.6	84.6	53.1			
		73.6	46.0	31.0			
		115.5	73.3	56.0			
		123.8	82.0	56.7			
		<u>18.3</u>	10.5	6.8			
	<u>m</u>	95.0					
	SD	32.5					
<u>Lasmigona costata</u>	20 June	68.1	34.5	15.2			
<u>Lasmigona complanata</u>	23 Aug	70.4	54.1	20.8			
		65.1	51.1	18.0			
		<u>103.6</u>	70.0	34.6			
	<u>m</u>	79.7					
	SD	20.9					
<u>Strophitus undulatus</u>	20 June	91.8	46.0	33.1			
	23 Aug	106.8	56.5	40.1			
		89.4	46.6	32.9			
		108.0	52.5	42.4			
		<u>71.8</u>	39.5	23.6			
	<u>m</u>	93.6					
	SD	14.8					

Toxolasma parvus (dead only)

Anodonta grandis grandis (dead only)

RANDOM SEARCH (Presence noted)

Amblema plicata (dead)

Toxolasma parvus (live)

Lampsilis radiata siliquoidea (live)

SITE 3

Location: S 1/2 Sec 15, T106N, R15W. Salem Creek; from 30 m downstream to 150 m upstream from Olmsted Co. Hwy. 3 bridge.

DNR Fish Station Number: -

Date: 21 June 1988

Water Temperature: 80°F

Transect Location: 30 m upstream from bridge at bottom of pool.

Range of the Mean Depth of Pool Transects: 18 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

RANDOM SEARCH (Presence noted)

Anodontoides ferussacianus (live)

Lampsilis radiata siliquoidea (dead)

Amblyma plicata (dead)

Lasmigona compressa (live)

SITE 4

Location: NE 1/4 Sec 22, T106N, R16W. Salem Creek; 0-75 m upstream from old Dodge Co. Hwy. 5 bridge.

DNR Fish Station Number: -

Date: 21 June 1988

Water Temperature: 85° F

Transect Location: 50 m upstream from old bridge.

Range of the Mean Depth of Pool Transects: 10 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Venustaconcha ellipsiformis</u>	43.5	24.9	14.0			

RANDOM SEARCH (Presence noted)

Lasmigona complanata (dead)

Anodonta grandis grandis (dead)

Lampsilis radiata siliquoidea (live)

SITE 5

Location: Sec 26, T109N, R16W. North Branch Middle Fork; from 40 m downstream to 250 m upstream of township-road bridge located .25 miles south of Goodhue Co. Hwy. 11, 2.5 miles west of Pine Island.

DNR Fish Station Number: 1-B

Date: 22 June 1988

Water Temperature: 83° F

Transect Location: -

Range of the Mean Depth of Pool Transects: 18-74 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

RANDOM SEARCH (Presence noted)

Alasmidonta marginata? (dead)

SITE 6

Location: NE 1/4 Sec 6, T108N, R16W. North Branch Middle Fork; 0-200 m upstream from state-Hwy-57 bridge.

DNR Fish Station Number: 1-C

Date: 22 June 1988, 1 July 1988

Water Temperature: 83° F, 62° F

Transect Location: 50, 80, and 110 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 15-30 cm

Duration of Timed Search: 2 people, 20 minutes each

<u>SPECIES</u>	<u>Transect</u> (22 June)			<u>Timed Search</u> (1 July)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	47.8	26.0	15.0	68.1	35.0	26.6
				50.8	28.4	19.3
				49.7	27.7	21.4
				<u>46.8</u>	26.7	16.8
			<u>m</u>	53.8		
			SD	9.6		
<u>Lasmigona compressa</u>				76.9	43.5	21.1
				<u>75.1</u>	42.4	21.6
			<u>m</u>	7.6		
			SD	1.3		
<u>Lasmigona complanata</u>				69.3	50.0	18.8
				95.9	66.6	31.0
				104.9	75.1	33.0
				102.0	73.0	29.9
				106.2	71.4	33.1
				106.6	76.3	34.2
				113.9	79.4	36.8
				112.9	75.0	34.4
				113.0	74.3	37.5
				115.8	82.2	35.4
				117.3	84.5	38.4
				118.7	81.1	35.4
				116.5	81.4	35.5
				120.6	87.0	35.8
				122.5	84.5	49.0
				<u>122.7</u>	81.6	39.5
			<u>m</u>	109.9		
			SD	13.3		

Anodonta grandis grandis (dead only)

SITE 7

Location: On section line between NE 1/4 Sec 36 and NW 1/4 Sec 31, T109N, R18W. North Branch Middle Fork; one small pool located directly downstream of bridge located .25 miles south of Goodhue Co. Hwy 11. Streambed elsewhere was dry.

DNR Fish Station Number: 3

Date: 23 June 1988

Water Temperature: -

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 8

Location: NW 1/4 Sec 4, T108N, R17W. North Branch Middle Fork; from 140 m downstream to 150 m upstream of Township-Road bridge located on the Goodhue-Dodge county line.

DNR Fish Station Number: 2

Date: 23 June 1988

Water Temperature: 71° F

Transect Location: 150, 140, and 130 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 10-15 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	32.0	17.4	11.0			
	33.1	18.2	11.4			
	30.3	17.0	10.6			
	64.4	35.8	23.4			
	61.2	30.9	24.3			
	48.5	26.2	18.4			
	83.9	46.0	32.0			
	68.2	35.4	24.5			
	53.6	29.5	19.7			
	69.2	34.6	29.7			
	72.3	36.3	30.1			
	27.6	16.0	8.0			
	93.8	51.9	35.8			
	84.0	46.3	34.3			
	65.0	33.5	25.0			
	68.1	34.2	28.6			
	43.1	24.1	14.8			
	68.1	35.0	27.0			
	68.7	35.4	25.6			
	67.9	34.8	27.9			
	80.9	43.3	33.0			
	42.5	24.0	14.8			
	68.3	35.0	27.8			
	45.2	25.4	15.3			
	69.0	36.7	27.4			
	47.4	26.1	16.7			
	46.5	25.5	15.3			
	56.2	29.6	21.8			
	67.6	32.1	29.3			
	46.5	27.7	15.8			
<u>$\bar{m}$</u>	59.1					
<u>SD</u>	17.1					

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>	117.1	78.3	43.9			
	110.1	75.1	37.9			
	128.5	87.1	41.1			
	124.9	79.4	37.5			
	111.8	77.5	37.4			
	40.2	32.4	10.1			
	151.0	99.6	53.7			
	<u>79.9</u>	57.3	23.3			
$\bar{m}$	107.9					
SD	33.9					
<u>Anodonta grandis grandis</u>	33.6	46.4	84.2			
	48.3	27.1	14.3			
	53.4	30.7	18.3			
	<u>77.7</u>	43.4	29.5			
$\bar{m}$	53.2					
SD	18.3					

SITE 9

Location: NW 1/4, NE 1/4 Sec 31, T109N, R15W. North Branch Middle Fork; from 0-250 m downstream from transect (location noted below).

DNR Fish Station Number: 1-A

Date: 23 June 1988

Water Temperature: -

Transect Location: SW 1/4, NE 1/4, NW 1/4, NW 1/4, NE 1/4 Sec 31.

Range of the Mean Depth of Pool Transects: 15 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona compressa</u> (dead only)						

RANDOM SEARCH (Presence noted)

Anodontooides ferussacianus (dead)

Actionaias carinata? (dead)

Lasmigona compressa (live)

Venustaconcha ellipsiformis (dead)

Lasmigona complanata (dead)

SITE 10

Location: NE 1/4 Sec 12, T109N, R19W. North Fork; from 150 m downstream to 110 m upstream of first bridge located .25 miles south of state hwy 60W on Rice Co. Rd 26.

DNR Fish Station Number: 7

Date: 24 June 1988

Water Temperature: 70° F

Transect Location: 150 m downstream; 70, and 100 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 15-20 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	48.9	26.3	17.4			
	<u>61.8</u>	30.6	19.9			
<u>m</u>	55.4					
<u>SD</u>	9.1					
<u>Lasmigona compressa</u>	90.2	52.0	27.8			
<u>Anodonta grandis grandis</u>	83.4	44.5	25.6			

RANDOM SEARCH (Presence noted)

Lasmigona complanata (live)

SITE 11

Location: NE 1/4 Sec 1, T109N, R19W. Unnamed creek M-34-49-42;
pool, 76 cm deep, located just downstream from bridge, which is .75
miles No. of State Hwy 60 on Lamb Ave.

DNR Fish Station Number: 2

Date: 24 June 1988

Water Temperature: -

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
No mussels found						

SITE 12

Location: SE 1/2 Sec 5, T109N, R18W. Unnamed creek M-34-49-42; from 30 m downstream to 110 m upstream from first bridge that crosses creek on west edge of the town of Kenyon on State Hwy 60W.

DNR Fish Station Number: 1

Date: 27 June 1988

Water Temperature: 67° F

Transect Location: 100 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 46 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found

SITE 13

Location: SW 1/4 Sec 35, T110N, R18W. North Fork; 0-230 m upstream from transect (located at SE 1/4, SW 1/4, SW 1/4, SW 1/4 Sec 35).

DNR Fish Station Number: 6

Date: 27 June 1988

Water Temperature: 78° F

Transect Location: SE 1/4, SW 1/4, SW 1/4, SW 1/4 Sec 35 and 33 and 66 m upstream from first transect.

Range of the Mean Depth of Pool Transects: 25 cm-30 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Anodonta grandis grandis</u>	42.7	25.7	13.8	42.7	25.7	13.8
				18.8	15.4	4.3
				38.8	22.5	13.3
				31.9	19.2	9.2
				34.8	21.7	11.1
				36.3	23.4	10.9
				77.0	44.5	24.7
				73.1	40.1	23.9
				92.0	50.7	33.2
				104.5	54.0	35.3
				64.5	35.2	22.3
				96.5	51.5	35.2
				85.8	48.7	30.1
				77.1	42.7	26.0
				92.0	50.9	31.1
				89.9	49.3	32.6
			m	66.0		
			SD	27.8		
<u>Anodontoides</u>	37.0	21.5	11.8	57.1	30.5	20.7
<u>ferussacianus</u>	35.8	21.0	10.8	59.2	31.2	22.3
	28.0	18.2	8.0	54.7	28.3	18.4
	29.8	18.8	8.9	50.4	27.1	16.7
	30.1	19.2	9.3	57.3	29.2	19.9
	26.8	16.7	8.1	47.5	27.6	16.4
	26.2	17.3	7.9	55.3	28.5	20.8
	44.1	24.5	14.6	25.3	16.7	7.5
	45.2	26.0	14.4	27.1	17.1	7.6
	m			51.0	29.2	16.7
	SD			28.3	18.1	8.4
				27.5	17.3	7.8

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>A. ferussacianus</u>				23.0	15.4	6.6
Continued				28.1	17.1	7.9
				26.6	17.4	7.2
				25.5	16.6	7.3
				43.0	24.2	12.3
				23.2	15.1	6.5
				<u>26.2</u>	16.7	7.3
			<u>m</u>	38.8		
			SD	14.2		
<u>Lasmigona compressa</u>				88.1	49.8	26.9
				<u>84.8</u>	47.1	25.2
			<u>m</u>	86.4		
			SD	2.3		
<u>Venustaconcha</u> (dead only)						
<u>ellipsiformis</u>						(dead only)

RANDOM SEARCH (Presence noted)

Lasmigona complanata (dead)

Lampsilis radiata siliquoidea (dead)

SITE 14

Location: SE 1/4 Sec 36, T107N, R16W. Cascade Creek; 0-110 m
upstream from first bridge on Dodge Co. Hwy 17 south of Hwy 14.

DNR Fish Station Number: 4

Date: 28 June 1988

Water Temperature: 58° F

Transect Location: 80, and 100 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 10-30 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
No mussels found						

SITE 15

Location: NE 1/4 Sec 10, T106N, R15W. Cascade Creek; 0-160 m upstream from Olsted Co. Hwy-3-bridge.

DNR Fish Station Number: 3

Date: 28 June 1988, 23 August 1988

Water Temperature: 83° F, Creek dry on 23 August 1988.

Transect Location: 100 and 160 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 8-10 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u> (28 June)			<u>Timed Search</u> (23 Aug)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>						(dead only)
<u>Anodontoides ferussacianus</u>						(dead only)

RANDOM SEARCH (Presence noted) (28 June)

Anodonta grandis grandis (live)

Toxolasma parvus (live)

Anodontoides ferussacianus (live)

SITE 16

Location: NE 1/4 Sec 5, T106N, R14W. Cascade Creek; 0-200 m upstream of the 45th Ave. SW bridge (Rochester). Creek downstream of bridge is dry.

DNR Fish Station Number: 2

Date: 30 June 1988

Water Temperature: 66° F

Transect Location: 50 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 13 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	42.6	24.3	13.6			(dead only)

SITE 17

Location: NW 1/4 Sec 35, T107N, R14W. Cascade Creek; 0-250 m downstream from 7th St. NW bridge in Rochester.

DNR Fish Station Number: 1-B

Date: 30 June 1988

Water Temperature: 70° F

Transect Location: 30, and 100 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 15-23 cm

Duration of Timed Search: 2 people, 45 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>				99.0	70.3	34.2
<u>Anodonta grandis grandis</u>				97.3	52.3	35.2
<u>Venustaconcha ellipsiformis</u>				(dead only)		
<u>Anodontoides ferussacianus</u>				(dead only)		

RANDOM SEARCH (Presence noted)

Lampsilis radiata siliquoidea (dead)

SITE 18

Location: SE 1/4 Sec 26, T107N, R14W. Cascade Creek; from mouth of creek to concrete dam 210 m upstream.

DNR Fish Station Number: 1-A

Date: 30 June 1988

Water Temperature: 76° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona costata</u>						(dead only)
<u>Anodontoides ferussacianus</u>						(dead only)
<u>Anodonta grandis grandis</u>						(dead only)
<u>Venustaconcha ellipsiformis</u>						(dead only)
<u>Strophitus undulatus</u>						(dead only)

RANDOM SEARCH (Presence noted)

Lasmigona complanata (live)

SITE 19-A

Location: SE W 1/4 Sec 36, T110N, R17W. Shingle Creek; 0-60 m
downstream from the bridge on the road dividing Sec 1 and Sec 36.

DNR Fish Station Number: 2

Date: 1 July 1988

Water Temperature: 57° F

Transect Location: 40 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 20 cm

Duration of Timed Search: 2 people, 15 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found

SITE 19-B

Location: NE 1/4 Sec 36, T110N, R17W. Shingle Creek; 0-100 m upstream from bridge on State Hwy 60.

DNR Fish Station Number: 1

Date: 1 July 1988

Water Temperature: 78° F

Transect Location: 7, and 10 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 20-30 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	52.6	28.0	17.3	73.8	39.4	29.5
	<u>63.0</u>	32.2	24.7	56.5	28.4	20.0
<u>m</u>	57.8			53.9	27.4	19.9
SD	7.4			51.1	26.0	18.7
				51.7	26.6	17.3
				66.5	35.2	24.2
				50.6	26.1	18.2
				53.0	26.5	20.2
				66.9	34.0	23.9
				49.6	25.3	19.0
				57.4	30.8	20.7
				54.1	27.7	18.2
				54.5	30.0	18.1
				<u>57.5</u>	27.6	19.2
			<u>m</u>	56.9		
			SD	7.2		

Lasmigona compressa

(dead only)

SITE 20

Location: SE 1/4 Sec 30, T110N, R17W. North Fork; 0-100 m upstream from bridge on border between Sec 19 and Sec 30.

DNR Fish Station Number: 5

Date: 6 July 1988

Water Temperature: 80° F

Transect Location: 200 m upstream from bridge.

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides</u>	62.9	32.9	27.1	77.1	37.6	30.1
<u>ferussacianus</u>				69.0	35.9	28.5
				71.5	34.1	28.4
				69.9	33.8	26.3
				67.0	34.5	25.0
				65.4	32.7	24.4
				67.2	33.7	27.5
				65.2	31.3	25.4
				72.0	32.6	28.5
				64.2	33.4	24.0
				60.6	30.0	24.2
				68.5	33.4	27.2
				71.6	35.7	28.0
				66.0	33.8	23.2
				65.6	31.9	21.7
				56.2	29.4	20.9
				60.0	32.8	22.6
				57.8	31.0	21.5
				54.4	27.5	18.6
				74.5	33.8	27.1
				64.6	31.9	24.7
				58.9	28.2	23.5
				62.5	31.9	23.2
				55.3	28.9	21.1
				50.1	27.3	19.1
				47.3	25.3	16.7
				67.0	33.0	24.7
				36.4	20.5	12.1
				<u>31.5</u>	19.2	10.1
				<u>m</u>		
				62.0		
				<u>SD</u>		
				10.5		

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona compressa</u>				94.1	52.8	31.1
<u>Anodonta grandis grandis</u>	85.2	50.0	29.9	(dead only)		
<u>Lampsilis radiata siliquoidea</u>	(dead only)					
<u>Venustaconcha ellipsiformis</u>	(dead only)			69.7	37.0	25.5
<u>Lasmigona complanata</u>				(dead only)		

SITE 21

Location: SW 1/4 Sec 24, T110N, R17W. North Fork; 0-300 m downstream from bridge located 1.2 miles west of Hwy 57 on Goodhue Co. Hwy. 30.

DNR Fish Station Number: 4

Date: 6 July 1988

Water Temperature: -

Transect Location: 300 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 13 cm

Duration of Timed Search: 2 people, 15 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	2.8	1.5	1.0	49.6	28.9	16.5
	<u>1.8</u>	1.0	.6	81.5	43.2	26.4
<u>m</u>	2.3			92.9	53.3	33.0
<u>SD</u>	.7			81.7	46.5	31.6
				90.2	48.4	31.4
				104.4	56.8	37.9
				80.1	41.8	26.7
				84.5	55.3	29.9
				70.4	38.2	22.1
				47.6	25.9	14.6
				78.4	40.4	28.7
				50.0	28.0	16.5
				45.8	24.9	15.1
				52.2	29.1	17.0
				69.2	37.9	23.0
				93.2	49.1	29.6
				79.2	42.3	26.6
				88.9	46.5	32.8
				97.1	51.6	38.3
				93.9	48.3	31.5
				101.2	55.2	38.0
				88.4	48.2	29.0
				72.8	39.1	21.7
				49.9	28.0	16.7
				85.2	45.9	27.6
				<u>42.0</u>	23.0	12.6
			<u>m</u>	75.8		
			<u>SD</u>	19.1		

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	2.1	1.2	.8	70.5	34.9	27.4
	1.6	.9	.5	72.0	37.3	27.2
	1.6	.9	.5	55.5	28.1	19.3
	1.5	.8	.5	56.6	30.7	21.2
	1.3	.7	.4	67.3	34.6	28.0
	1.7	1.0	.6	63.6	32.5	23.4
	<u>1.3</u>	.7	.4	67.4	34.6	26.4
<u>m</u>	1.6			51.4	28.4	19.4
SD	.3			50.5	27.2	18.3
				60.6	30.1	23.2
				60.6	33.2	21.4
				60.4	31.9	23.2
				39.3	21.4	12.0
				55.3	26.8	20.3
				53.3	28.6	19.1
				<u>45.8</u>	24.1	16.5
				58.1		
			<u>m</u>	9.0		
			SD			
<u>Lasmigona complanata</u>				70.7	55.0	21.1
<u>Lasmigona compressa</u>				95.9	50.9	32.8
				85.0	48.6	25.9
				92.8	51.9	28.7
				85.0	48.5	25.9
				81.6	47.6	25.3
				82.9	48.2	25.3
				91.9	50.6	28.7
				<u>82.4</u>	47.0	26.3
				77.2		
			<u>m</u>			
			SD	29.7		
<u>Venustaconcha ellipsiformis</u>	2.3	1.3	.8	66.9	37.4	23.5
				80.0	42.2	27.4
				66.7	35.4	22.7
				76.2	44.5	25.7
				68.6	37.8	25.7
				<u>63.5</u>	35.6	24.4
				70.3		
			<u>m</u>			
			SD	6.4		

SITE 22

Location: NE 1/4 Sec 6, T106N, R17W. Dodge Center Creek; 0-200 m upstream from Dodge Co. Hwy 5 bridge.

DNR Fish Station Number: 1-C

Date: 7 July 1988

Water Temperature: 89° F

Transect Location: 200 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 20 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>				127.7	84.1	40.8
				117.7	81.1	36.0
				114.5	81.0	34.3
				132.3	95.7	42.7
				124.5	83.6	41.9
				122.6	85.4	40.9
				117.4	82.0	40.9
				<u>121.0</u>	89.0	41.2
			<u>m</u>	122.2		
			SD	5.9		
<u>Lasmigona compressa</u>	87.2	50.7	24.8			
	<u>92.5</u>	52.4	27.9	87.2	50.7	24.8
	<u>m</u>					
	90.0					
	SD	3.7				
<u>Anodonta grandis grandis</u>	No size data			115.4	62.2	44.4
				<u>112.4</u>	61.2	39.9
			<u>m</u>	113.9		
			SD	2.1		
<u>Anodontoides ferussacianus</u>	61.4	30.4	20.8			
	65.3	30.9	24.9			
	<u>62.3</u>	31.8	21.5			
	<u>m</u>					
	63.0					
	SD	2.0				

SITE 23

Location: NE 1/4 Sec 4, T106N, R18W. Dodge Center Creek; 0-150 m downstream from concrete bridge located on border between T107N and T108N.

DNR Fish Station Number: 1-D

Date: 7 July 1988

Water Temperature: 87° F

Transect Location: 75 m downstream from concrete bridge.

Range of the Mean Depth of Pool Transects: 15 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>	103.8	72.8	32.2	(dead only)		
	<u>76.9</u>	59.4	19.8			
<u>m</u>	90.4					
SD	19.0					
<u>Anodonta grandis grandis</u>	79.2	42.8	25.9	(dead only)		
	81.5	42.8	28.3			
	76.7	44.1	26.1			
	64.3	32.8	20.0			
	<u>74.0</u>	38.8	26.8			
<u>m</u>	75.1					
SD	6.7					
<u>Anodontoides ferussacianus</u>	53.5	26.5	17.5	(dead only)		
	<u>36.4</u>	21.2	12.0			
<u>m</u>	45.0					
SD	12.1					

SITE 24

Location: Sec 8, T106N, R18W. Dodge Center Creek; 0-60 m upstream from Dodge Co. Rd-0 bridge.

DNR Fish Station Number: 2-A

Date: 8 July 1988

Water Temperature: 79° F

Transect Location: 60 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 25 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona compressa</u>				79.5	44.9	22.7
				75.2	42.7	22.8
				80.6	47.0	23.5
				<u>69.2</u>	42.4	21.8
			<u>m</u>	76.1		
			SD	5.2		
<u>Lasmigona complanata</u>				90.8	66.2	25.6
				<u>102.9</u>	69.0	31.5
			<u>m</u>	96.8		
			SD	8.6		
<u>Anodontoides ferussacianus</u>	49.1	25.9	16.3	58.4	28.3	21.4
	51.7	25.0	18.3	54.7	28.5	18.5
	49.0	24.1	15.6	66.8	31.5	24.4
	47.9	24.3	16.0	67.8	32.9	26.0
	49.6	26.0	15.8	61.4	32.9	20.1
	51.7	26.9	15.9	64.3	31.3	23.2
	52.6	26.9	17.6	52.2	25.9	19.7
	50.7	26.4	17.8	62.1	30.9	21.2
	49.2	26.4	16.0	56.8	31.2	18.6
	52.8	27.8	17.2	64.9	33.8	20.8
	54.8	28.2	17.7	61.8	31.0	22.1
	54.8	27.4	19.7	51.8	25.4	19.2
	51.5	27.4	18.1	65.7	31.6	23.7
	53.3	27.0	17.0	63.4	31.8	20.3
	49.0	25.6	16.0	52.2	27.1	18.5
	54.1	27.4	19.2	49.6	26.3	16.8
	57.0	29.2	20.8	48.0	25.8	15.7
	31.6	18.2	9.8	54.6	27.1	19.3
	46.4	24.0	15.7	53.8	27.8	19.0
	<u>47.6</u>	25.6	16.1	72.6	35.3	25.8
	<u>m</u>			52.1	26.5	19.0
	SD	5.2		53.0	26.5	20.8

<u>Transect</u>			<u>Timed Search</u>		
<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
			63.2	32.2	23.0
			52.6	26.5	17.7
			49.6	26.1	17.2
			54.1	28.0	18.1
			60.2	31.3	19.4
			63.7	33.9	21.1
			52.9	27.3	18.1
			50.3	25.4	18.1
			55.4	29.1	19.4
			70.1	33.5	25.4
			57.2	28.8	19.1
			60.0	30.4	20.0
			55.2	27.4	20.1
			61.8	30.7	21.8
			64.5	33.2	23.8
			59.7	32.2	20.9
			59.9	31.9	20.0
			56.0	27.0	18.1
			54.5	28.7	18.3
			61.1	31.2	20.2
			68.0	33.8	24.4
			48.5	25.5	16.1
			49.9	26.6	16.8
			56.9	31.2	19.6
			57.2	30.9	19.4
			51.4	26.4	16.8
			49.5	25.4	16.4
			50.9	27.2	16.4
			59.1	31.0	18.8
			61.7	30.6	22.2
			66.6	31.4	23.3
			62.1	33.6	20.6
			33.2	20.5	9.7
			30.0	18.3	8.6
			54.6	27.8	17.9
			49.1	25.0	17.3
			66.8	32.2	24.6
			66.5	35.7	22.9
			58.6	32.3	20.2
			31.3	17.8	9.2
			<u>56.8</u>		
			8.3		
<u>m</u>					
SD					

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>				88.3	47.0	30.4
				89.1	49.2	28.2
				90.6	47.2	30.4
				90.2	47.1	33.2
				60.9	32.7	19.3
				71.9	40.8	24.1
				81.4	43.5	25.3
				100.6	50.4	35.6
				95.8	51.2	36.1
				84.9	49.2	32.3
				92.9	49.9	33.4
				70.0	39.4	23.8
				91.3	51.7	20.5
				83.4	44.8	28.8
				67.4	35.0	23.9
				104.8	56.6	40.5
				35.9	20.9	10.4
				38.9	21.3	11.1
				97.6	55.2	33.4
				83.9	46.3	30.5
				77.3	44.1	27.1
				66.9	35.2	22.7
				96.9	51.1	36.3
				90.5	48.6	30.4
				86.9	46.7	29.2
				81.0	43.7	28.4
				65.0	34.6	22.1
				92.7	50.3	30.8
				91.0	48.8	33.3
				66.8	33.9	23.9
				<u>79.3</u>	41.5	27.8
			<u>m</u>	81.1		
			SD	16.2		

SITE 26

Location: NW 1/4 Sec 20, T106N, R18W. Dodge Center Creek; 0-70 m upstream from bridge located 1.2 miles east of border between Steele Co. and Dodge Co.

DNR Fish Station Number: 1-B

Date: 11 July 1988

Water Temperature: 69° F

Transect Location: 70 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 76 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Anodonta grandis grandis</u>	34.9	19.4	10.9	36.3	20.7	11.3
	<u>47.1</u>	26.8	15.1	67.9	36.8	23.1
$\bar{m}$	41.0			72.5	40.3	24.0
SD	8.6			82.2	42.4	24.9
				<u>78.3</u>	42.2	27.5
			$\bar{m}$	67.4		
			SD	18.2		
<u>Lasmigona compressa</u>				81.3	48.2	24.5
<u>Anodontoides ferussacianus</u>	65.7	32.9	23.6	49.0	25.2	16.8
	51.4	26.8	18.7	58.2	29.9	19.8
	54.7	26.8	19.6	51.8	27.4	18.0
	65.5	33.4	22.4	54.5	26.7	19.2
	53.6	27.6	17.4	47.1	25.2	15.8
	54.0	27.3	18.4	56.3	28.1	19.6
	<u>33.5</u>	18.6	11.0	68.3	32.5	25.1
$\bar{m}$	54.0			64.0	32.2	21.1
SD	10.8			58.4	30.8	20.2
				53.9	27.2	19.7
				55.7	29.0	19.1
				55.5	27.5	20.1
				69.0	34.4	24.9
				49.3	26.0	17.8
				56.1	27.0	20.3
				54.3	26.5	19.7
				50.1	26.6	16.2
				50.8	25.5	17.1
				49.3	25.1	16.4
				60.3	30.9	20.7
				61.6	31.5	22.6

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>				53.6	28.3	19.0
Continued				36.5	19.9	12.1
				49.4	25.6	16.4
				52.7	26.4	17.7
				31.8	18.7	9.3
				30.1	17.4	9.5
				31.9	18.0	9.6
				31.4	17.4	9.8
				<u>33.9</u>	18.6	10.1
			<u>m</u>	50.8		
			SD	10.7		

SITE 27

Location: NE 1/4 Sec 14, T107N, R17W. Dodge Center Creek; 0-416 m upstream from mouth of creek.

DNR Fish Station Number: 1-A

Date: 12 July 1988

Water Temperature: 68° F

Transect Location: 50, 60, and 70 m upstream from mouth of creek.

Range of the Mean Depth of Pool Transects: 46-61 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>			(dead)			-

RANDOM SEARCH (Presence noted)

Anodonta grandis grandis (dead)

Lasmigona complanata? (dead)

Anodontoides ferussacianus (live)

SITE 28

Location: SE 1/2 Sec 25, T110N, R13W. West Albany Creek; 0-180 m upstream from farmers fenceline on the border of sections 25 and 30.

DNR Fish Station Number: 2

Date: 13 July 1988

Water Temperature: 63° F

Transect Location: Pool habitat: 40, 50 and 60 m upstream from fence line. Riffle habitat: 160, 170, and 180 m upstream from fenceline.

Range of the Mean Depth of Pool Transects: Pools: 13-15 cm
Riffle: 13-18 cm

Duration of Timed Search: 2 people, 20 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 29

Location: SW 1/4 Sec 29, T110N, R12W. West Albany Creek; 0-200 m upstream from point directly south of St. Patrick's Catholic Church on Sate Hwy 60.

DNR Fish Station Number: 1

Date: 13 July 1988.

Water Temperature: 68° F

Transect Location: Pool habitat-10, 25, and 35 m upstream from access.
Riffle habitat-90, 100, and 110 m upstream from access.

Range of the Mean Depth of Pool Transects: 20-46 cm

Mean Depth Range of Riffle Transects: 8-15 cm

Duration of Timed Search: 2 people, 15 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 30

Location: NE 1/4 Sec 14, NW 1/4 Sec 13, T109N, R12W. Middle Creek;
0-75 m upstream from Wabasha Co. Hwy 8 bridge.

DNR Fish Station Number: 2

Date: 14 July 1988.

Water Temperature: 55° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 31

Location: N 1/2 Sec 10, T109N, R12W. Long Creek; 0-200 m upstream from bridge.

DNR Fish Station Number: 1

Date: 14 July 1988.

Water Temperature: 63° F

Transect Location: Pool habitat - 30, 40, and 50 m upstream from bridge.
Riffle habitat - 97, 100, and 103 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 13-15 cm

Mean Depth Range of Riffle Transects: 15-18 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 32

Location: SE 1/4 Sec 32, T109N, R12W. Long Creek; 0-180 m upstream from bridge.

DNR Fish Station Number: 2-C

Date: 14 July 1988

Water Temperature: -

Transect Location: Pool - 172, 175, and 178 m upstream from bridge.
Riffle - 167 and 170 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 15-20 cm

Mean Depth Range of Riffle Transects: 8-10 cm

Duration of Timed Search: 2 people, 15 minutes each.

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 33

Location: NW 1/4 Sec 27, T109N, R12W. Long Creek; 0-80 m upstream
from concrete bridge located at end of dirt road running south off
of Wabasha Co. Hwy-8.

DNR Fish Station Number: 2-B

Date: 14 July 1988.

Water Temperature: -

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 34

Location: NE 1/4 Sec 22, T110N, R16W. North Fork; 0-295 m upstream
from point of access located at: NW 1/4, SE 1/4, NW 1/4, SE 1/4,
NW 1/4, NE 1/4 Sec. 22

DNR Fish Station Number: 3

Date: 15 July 1988

Water Temperature: 77° F

Transect Location: 235, 265, and 295 m upstream from access.

Range of the Mean Depth of Pool Transects: 7-31 cm

Duration of Timed Search: 2 people, 30 minutes each.

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona compressa</u>				80.1	46.4	25.4
<u>Anodonta grandis grandis</u>				90.5	49.7	33.8
<u>Anodontoides ferussacianus</u> *				34.6	19.8	11.3
	67.4	32.2	26.3	<u>63.4</u>	33.7	22.2
	<u>45.0</u>	17.0	9.0	<u>m</u> 49.0		
<u>m</u>	56.2			SD 20.4		
SD	15.8					

* 18 additional specimens were also found in timed search but
measurements were not taken.

SITE 35

Location: NW 1/4 Sec 1, T106N, R14W. Bear Creek; 0-205 m upstream
from access at dead end of 7th Ave. SE (Rochester).

DNR Fish Station Number: 1

Date: 18 July 1988

Water Temperature: 74° F

Transect Location: Pool: 145, 175, and 205 m upstream from access.
Riffle: 127, 130, and 133 m upstream from access.

Range of the Mean Depth of Pool Transects: 15-30 cm

Mean Depth Range of Riffle Transects: 10 cm

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 36

Location: S 1/2 Sec 14, T107N, R14W. South Fork; 0-800 m upstream from access located 1.5 miles No. of 37th St. on W. River Rd. (Rochester).

DNR Fish Station Number: 4

Date: 19 July 1988, 22 July 1988

Water Temperature: 73° F, 72° F

Transect Location: Pool - 340, 350, and 360 m upstream of access.
Riffle - 0, 3, and 6 m upstream of access.

Range of the Mean Depth of Pool Transects: 30-46 cm

Mean Depth Range of Riffle Transects: 15-18 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u> (22 July)			<u>Timed Search</u> (19 July)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata siligoidea</u>						(dead only)
<u>Lampsilis ventricosa</u>			(dead only)			(dead only)

RANDOM SEARCH (Presence noted) (19 July)

Alasmidonta marginata (dead)

Anodonta grandis grandis (dead)

SITE 37

Location: NE 1/4 Sec 20, T106N, R12W. Bear Creek; 0-265 m downstream from spring which erupts in old spring house.

DNR Fish Station Number: 3-B

Date: 20 July 1988

Water Temperature: 57° F

Transect Location: Pool - 157, 160, and 163 m downstream from spring house.
Riffle - 263, 265, and 267 m downstream from spring house.

Range of the Mean Depth of Pool Transects: 10-13 cm

Mean Depth Range of Riffle Transects: 8 cm

Duration of Timed Search: 2 people, 25 minutes each.

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 38

Location: NE 1/4 Sec 18, T106N, R12W. Bear Creek; 0-40 m upstream
from fence crossing stream.

DNR Fish Station Number: -

Date: 20 July 1988

Water Temperature: 69° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
No mussels found.						

SITE 39

Location: NW 1/4 Sec 14, T106N, R13W. Bear Creek; 0-200 m upstream from wooden bridge located off a short trail west of the rifle range.

DNR Fish Station Number: 2-B

Date: 20 July 1988

Water Temperature: 68° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 40

Location: SE 1/4 Sec 27, T109N, R14W. Lake Zumbro Dam; 0-50 m downstream from dam.

DNR Fish Station Number: -

Date: 21 July 1988

Water Temperature: 79° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 4 people, 120 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				107.7	63.6	48.2
				129.8	83.2	61.2
				89.0	50.2	34.3
				135.3	82.8	57.9
				130.1	82.4	61.4
				<u>84.2</u>	52.2	43.5
			<u>m</u>	112.7		
			SD	22.4		
<u>Anodonta grandis grandis</u>				163.2	98.3	60.2
				185.0	109.8	67.8
				173.6	94.4	71.2
				102.3	60.4	40.8
				136.3	86.0	52.2
				71.1	42.1	31.3
				135.3	81.3	53.1
				141.8	78.1	60.1
				<u>157.1</u>	94.7	60.5
			<u>m</u>	140.6		
			SD	35.7		
<u>Leptodea fragilis</u>				147.0	98.4	50.1
				162.8	103.4	54.4
				83.0	58.5	32.4
				<u>121.1</u>	74.5	35.7
			<u>m</u>	128.5		
			SD	34.8		
<u>Lasmigona complanata</u>				(dead only)		
<u>Actionaias carinata</u>				(dead only)		

SITE 41

Location: S 1/2 Sec 18, T109N, R12W. Zumbro River; 0-580 m upstream from Wabasha Co. Hwy 2 bridge.

DNR Fish Station Number: 2

Date: 21 July 1988, 29 July 1988

Water Temperature: 77° F,-

Transect Location: 10, 100, and 200 m upstream from Reads Park access.

Range of the Mean Depth of Pool Transects: 10-61 cm

Duration of Timed Search: 3 people, 60 minutes each

<u>SPECIES</u>		<u>Transect</u> (29 July)			<u>Timed Search</u> (21 July)		
		<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>	29 July	106.0	69.4	53.7	102.5	70.2	46.6
		<u>110.9</u>	74.8	57.3	<u>100.6</u>	69.5	49.8
	<u>m</u>	108.4			<u>m</u>	101.6	
	SD	3.5			SD	1.3	
<u>Leptodea fragilis</u>						(dead only)	
<u>Ligumia recta</u>						(dead only)	

SITE 42

Location: NE 1/4 Sec 14, T107N, R18W. South Branch Middle Fork;
0-230 m upstream from bridge on Dodge Co. Hwy 5.

DNR Fish Station Number: 7

Date: 23 July 1988

Water Temperature: 65° F

Transect Location: 70, 210, and 230 m upstream from Hwy 5 bridge.

Range of the Mean Depth of Pool Transects: 30.5 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	dead only			35.2	19.35	11.7
				<u>68.4</u>	37.63	28.0
			<u>m</u>	51.8		
			SD	23.5		
<u>Anodonta grandis grandis</u>	40.66	22.75	11.84	120.6	64.4	46.6

SITE 43

Location: SW 1/4 Sec 32, T108N, R17W. Milliken Creek; 0-200 m upstream from bridge on the old Chicago-Great-Western Railroad line.

DNR Fish Station Number: 4

Date: 23 July 1988

Water Temperature: 87° F

Transect Location: 100, 150, and 200 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 30-46 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	53.4	30.7	16.6	68.7	37.6	23.1
				67.6	36.2	23.3
				66.6	39.6	26.3
				<u>86.5</u>	45.2	28.4
			<u>m</u>	72.4		
			SD	9.5		
<u>Anodontoides ferussacianus</u>	41.4	22.0	15.0	26.2	16.0	8.2
	49.0	27.6	18.1	50.9	29.2	18.4
	<u>33.1</u>	21.4	12.9	35.0	20.0	12.2
	<u>m</u>	41.2		36.4	20.1	13.2
	SD	8.0		50.0	28.2	18.3
				44.0	24.4	16.5
				49.6	25.9	17.4
				46.4	24.9	17.9
				32.7	18.6	11.0
				<u>46.5</u>	27.0	15.8
			<u>m</u>	41.8		
			SD	8.6		
<u>Lampsilis radiata siliquoidea</u>				94.2	52.9	39.8

SITE 44

Location: NW 1/4 Sec 36, T108N, R17W. Milliken Creek; 140-1050 m downstream from bridge on Dodge County Hwy 9.

DNR Fish Station Number: 3

Date: 25 July 1988

Water Temperature: 67° F

Transect Location: 140, 145, and 150 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 8-13 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	65.0	35.2	23.8	65.8	34.9	22.4
				75.9	43.0	25.9
				42.5	25.6	13.5
				65.6	36.8	22.0
				30.1	17.6	9.1
				<u>68.8</u>	36.5	24.7
			<u>m</u>	58.1		
			SD	17.7		
<u>Anodontoides ferussacianus</u>	37.6	21.9	13.3	80.6	43.3	30.4
	41.5	23.0	14.7	42.2	23.4	14.4
	36.4	21.0	13.9	77.2	40.1	29.9
	42.1	23.1	15.6	46.9	25.7	15.6
	45.5	23.6	17.1	47.6	24.9	16.4
	38.9	22.9	13.7	59.3	32.2	22.7
	53.1	29.8	19.8	44.2	23.3	14.7
	41.0	23.1	14.1	58.6	30.81	23.2
	40.3	22.1	13.4	44.8	23.0	15.2
	38.0	20.8	13.7	56.7	31.8	21.5
	<u>38.3</u>	20.8	13.1	51.8	28.3	19.0
	<u>m</u>			44.4	25.2	13.5
	SD	4.7		50.2	26.0	18.2
				<u>50.6</u>	26.4	18.5
			<u>m</u>	53.9		
			SD	11.9		
<u>Lasmigona complanata</u>	52.1	42.4	14.0	124.4	84.4	36.8
				<u>86.2</u>	58.9	24.3
			<u>m</u>	150.3		
			SD	27.0		

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata siliquoidea</u>				108.4	59.3	40.6
				110.2	61.3	39.3
				115.0	59.8	41.1
				96.7	56.6	42.8
				<u>100.4</u>	57.5	37.0
			<u>m</u>	106.1		
			SD	7.4		

RANDOM SEARCH (Presence noted)

Lasmigona compressa (live)

SITE 45

Location: E 1/2 Sec 29, T108N, R16W. Milliken Creek; 480 m downstream from Dodge County Hwy 22 bridge to 300 m upstream from bridge.

DNR Fish Station Number: 2

Date: 25 July 1988

Water Temperature: 85° F

Transect Location: 430, 450, and 470 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 15 cm

Duration of Timed Search: 2 people, 45 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata siliquoidea</u>				80.4	50.0	33.0
<u>Lasmigona compressa</u>	81.2	45.6	25.3	56.1	33.6	16.1
				<u>76.8</u>	44.5	24.5
			<u>m</u>	66.4		
			SD	14.6		
<u>Anodontoides ferussacianus</u>						(dead only)
<u>Lasmigona complanata</u>						(dead only)

SITE 46

Location: NW 1/4 Sec 16, T108N, R16W. Milliken Creek; from fenceline located 600 m from mouth to 330 m upstream from fenceline.

DNR Fish Station Number: 1

Date: 26 July 1988

Water Temperature: 67° F

Transect Location: 20, 50, and 70 m upstream from fenceline

Range of the Mean Depth of Pool Transects: 8 cm-15 cm

Duration of Timed Search: 2 people, 45 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata siliquoidea</u>	(dead only)			79.2	46.4	35.1
				82.1	51.5	30.6
				86.7	50.6	31.0
				89.0	53.5	30.0
				89.4	52.5	31.1
				95.5	55.5	36.6
				95.6	53.9	33.8
				94.2	53.7	33.7
				93.4	55.1	34.1
				<u>88.3</u>	50.9	31.2
			<u>m</u>	89.3		
			SD	5.6		
<u>Lampsilis ventricosa</u>				118.1	81.2	51.9
<u>Strophitus undulatus</u>				26.8	14.7	9.0
<u>Lasmigona compressa</u>				83.0	49.6	26.6

SITE 47

Location: NW 1/4 Sec 17, T108N, R16W. Middle Fork; from culvert on Dodge Co. Hwy 24 located 2.4 km west of the junction of Dodge Co. Hwys 24 and 11 to 150 m upstream from the first bridge downstream from culvert.

DNR Fish Station Number: 3A

Date: 26 July 1988

Water Temperature: 73° F

Transect Location: 150, 200, and 235 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 20 cm-25 cm

Duration of Timed Search: 2 people, 20 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Anodonta grandis grandis</u>				106.5	54.7	35.4
				<u>101.9</u>	56.4	37.5
			$\bar{m}$	104.2		
			SD	3.2		
<u>Anodontoides ferussacianus</u>				87.9	46.8	32.4
				80.2	46.1	28.6
				63.6	33.1	25.3
				<u>61.2</u>	30.0	22.4
			$\bar{m}$	73.2		
			SD	12.9		
<u>Lasmigona compressa</u>				82.9	49.3	26.4
<u>Lampsilis ventricosa</u>				114.2	77.6	48.2
				<u>116.2</u>	79.0	53.2
			$\bar{m}$	115.2		
			SD	1.4		
<u>Venustaconcha ellipsiformis</u>	71.3	38.2	24.3	71.7	41.7	24.0
				73.0	40.3	24.5
				<u>71.2</u>	39.3	24.5
			$\bar{m}$	72.0		
			SD	.9		
<u>Strophitus undulatus</u>				82.3	44.6	25.6

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata siliquoidea</u>	105.8	61.4	40.2	92.1	52.2	33.1
				93.3	51.1	31.9
				95.1	47.7	35.6
				85.9	48.0	33.4
				97.3	52.8	35.8
				92.9	51.2	33.0
				111.0	61.4	46.2
				74.3	44.8	30.2
				94.2	51.9	34.9
				108.3	60.4	39.8
				94.6	56.1	32.7
				93.0	54.4	36.3
				85.9	53.1	35.0
				87.9	50.11	35.6
				95.8	57.2	42.3
				81.2	47.0	32.6
				96.5	54.9	41.4
				80.0	47.3	30.5
				86.5	49.1	33.0
				73.5	41.0	26.6
				75.4	46.9	28.6
				77.7	44.4	29.0
				<u>79.5</u>	48.4	28.8
			<u>m</u>	89.2		
			SD	10.0		
<u>Lasmigona complanata</u>				104.0	67.9	29.7
				127.9	84.4	36.2
				123.3	81.1	40.1
				124.7	90.4	38.0
				105.0	73.5	32.8
				121.7	83.3	36.4
				114.9	78.6	36.6
				104.3	73.8	30.9
				120.2	81.7	37.0
				123.3	89.9	40.2
				104.0	74.1	31.0
				124.4	87.0	40.1
				116.2	78.8	40.2
				105.7	75.5	35.4
				97.8	69.6	24.5
				116.4	84.0	36.7
				114.9	77.2	34.9
				106.4	70.6	31.6
				106.7	71.0	31.5
				108.4	80.5	32.0
				104.9	75.6	28.4
				111.8	75.6	35.0
				116.7	80.3	35.8
				124.4	88.4	42.2

<u>Transect</u>			<u>Timed Search</u>		
<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
			115.8	79.9	35.2
			<u>110.7</u>	77.4	32.0
		<u>-</u>	113.6		
		SD	8.4		

SITE 48

Location: NE 1/4 Sec 16, T108N, R17W. Middle Fork; 100-420 m upstream from the large boulder on the right ascending bank, upstream of the bridge on Dodge County Hwy 7.

DNR Fish Station Number: 4

Date: 27 July 1988

Water Temperature: 74° F

Transect Location: 100, 200, and 300 m from large boulder.

Range of the Mean Depth of Pool Transects: 8 cm-15 cm

Duration of Timed Search: 2 people, 45 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	16.1	9.5	5.3	110.0	62.2	41.0
				100.1	57.6	38.7
				87.8	48.6	31.5
				104.6	54.7	40.2
				105.1	56.6	40.1
				100.1	54.7	35.4
				93.1	53.2	36.5
				102.5	55.6	40.2
				<u>105.5</u>	55.8	36.3
			<u>m</u>	101.0		
			SD	6.8		
<u>Anodontoides ferussacianus</u>	74.8	36.3	32.0	72.6	36.3	31.8
				80.8	43.1	30.8
				<u>73.0</u>	38.5	27.6
			<u>m</u>	75.5		
			SD	4.6		
<u>Lampsilis radiata siliquoidea</u>				94.0	59.6	36.2
				89.6	53.4	33.9
				109.8	59.4	37.9
				99.1	56.3	38.9
				95.5	52.4	39.5
				83.7	46.1	29.8
				101.9	57.0	35.8
				70.3	41.7	23.4
				83.3	47.9	27.8
				80.3	46.2	28.9
				83.1	50.3	30.3
				<u>87.9</u>	50.9	35.0
			<u>m</u>	89.9		
			SD	10.8		

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				75.5	48.8	33.3
<u>Lasmigona complanata</u>	75.7	55.7	20.1	95.3	74.39	27.7
				125.4	89.2	39.6
				130.0	89.0	41.2
				140.2	93.2	48.0
				116.4	82.4	39.4
				104.4	76.0	35.0
				114.4	78.5	35.3
				128.0	84.9	43.5
				141.8	100.0	44.7
				145.4	97.5	43.5
				133.6	89.0	42.0
				133.0	90.9	43.3
				<u>33.1</u>	27.2	8.0
			<u>m</u>	118.5		
			SD	29.6		

SITE 49

Location: NW 1/4 Sec 5, T108N, R15W. Middle Fork; 0-340 m upstream from bridge on Olmsted County Hwy 3.

DNR Fish Station Number: 2-A

Date: 28 July 1988

Water Temperature: 79° F

Transect Location: 310, 320, and 330 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 10-25 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Lampsilis radiata siliquoidea</u>	83.4	50.1	32.4			
<u>Lampsilis ventricosa</u>				96.4	77.2	46.2
				113.6	76.8	47.8
				<u>101.9</u>	71.6	48.6
			$\bar{m}$	104.0		
			SD	8.8		
<u>Lasmigona complanata</u>	132.2	87.7	44.0	108.4	80.4	32.4
	121.9	91.8	40.6	118.3	81.4	37.8
	<u>109.4</u>	77.7	35.3	109.6	80.8	35.2
	$\bar{m}$			104.9	79.1	37.1
	SD	11.4		122.1	85.3	38.9
				121.8	92.0	41.8
				102.1	73.8	28.4
				110.9	79.7	29.9
				117.9	84.1	36.4
				<u>103.1</u>	72.2	30.4
			$\bar{m}$	111.9		
			SD	7.6		
<u>Strophitus undulatus</u>				79.4	46.6	28.8
				79.3	42.9	25.8
				<u>54.4</u>	27.5	19.3
			$\bar{m}$	71.0		
			SD	14.4		

SITE 51

Location: SE 1/4 Sec 13, T107N, R17W. South Branch Middle Fork; from the head of the riffle immediately downstream from old bridge abutment to 220 m upstream from abutment.

DNR Fish Station Number: 5

Date: 1 August 1988

Water Temperature: 78° F

Transect Location: 200, 210, and 220 m upstream from abutment.

Range of the Mean Depth of Pool Transects: 10 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Anodonta grandis grandis</u>						(dead only)
<u>Lampsilis radiata siliquoidea</u>						(dead only)
<u>Lampsilis ventricosa</u>						(dead only)
<u>Lasmigona complanata</u>			(dead only)	109.1	73.5	33.5
				113.2	77.5	35.5
				99.3	67.0	32.0
				122.6	90.1	40.1
				<u>106.6</u>	77.8	29.2
				110.2		
			m			
			SD	8.6		
<u>Lasmigona costata</u>						(dead only)
<u>Lasmigona compressa</u>				93.0	51.9	29.8
<u>Strophitus undulatus</u>						(dead only)
<u>Venustaconcha ellipsiformis</u>	64.5	35.4	22.4	64.6	35.0	23.5
	<u>70.7</u>	37.8	22.8	69.9	39.3	25.5
	m	67.6		67.0	37.1	25.1
	SD	4.4		64.5	36.0	21.8
				68.0	37.6	21.6
				62.0	33.8	21.9
				<u>72.3</u>	40.5	25.6
				66.9		
			m			
			SD	3.5		

RANDOM SEARCH (Presence noted)

Anodontoides ferussacianus (dead)

SITE 52

Location: SE 1/4 Sec 18, T107N, R15W. South Branch Middle Fork; from the head of the first riffle upstream of Olmsted County Hwy 5 to 280 m upstream from head of riffle.

DNR Fish Station Number: 4

Date: 2 August 1988

Water Temperature: 81° F

Transect Location: 180, and 210 m upstream from head of riffle

Range of the Mean Depth of Pool Transects: 30 cm-36 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Actionaias carinata?</u>						(dead only)
<u>Anodonta grandis grandis</u>						(dead only)
<u>Lampsilis radiata siliguoidea</u>				98.6	57.8	35.0
<u>Lampsilis ventricosa</u>	93.0	61.5	41.7	112.2	74.5	55.9
<u>Lasmigona complanata</u>	132.1	85.7	44.2	109.4	81.8	30.9
	121.5	82.7	36.7			
<u>m</u>	126.8					
<u>SD</u>	7.5					
<u>Venustaconcha ellipsiformis</u>						(dead only)

RANDOM SEARCH (Presence noted)

Anodonta grandis grandis (live)

Venustaconcha ellipsiformis (live)

Strophitus undulatus (live)

Alasmidonta marginata (live)

SITE 53

Location: Sec 4, T105N, R15W. South Fork; 0-130 m upstream from the bridge on Olmsted County Hwy 3.

DNR Fish Station Number: -

Date: 3 August 1988

Water Temperature: 78° F

Transect Location: 100, 110, and 120 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 10 cm-20 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>	54.7	29.9	18.6	(dead only)		
<u>Lampsilis radiata siliquoidea</u>				90.4	51.0	31.5
<u>Lampsilis ventricosa</u>	101.9	77.4	46.8	90.1	64.0	39.8
	94.5	72.7	46.2	69.5	45.1	29.4
	98.2	73.1	50.8	111.5	75.2	49.7
	119.4	80.8	56.6	95.4	72.0	44.7
	<u>91.2</u>	68.0	43.7	96.3	73.4	46.5
<u>m</u>	101.0			106.4	72.3	50.3
<u>SD</u>	11.0			97.8	66.4	45.5
				97.4	68.1	48.3
				102.4	75.9	53.1
				99.4	70.9	48.6
				95.3	70.2	47.3
				104.8	71.0	54.9
				112.8	74.8	50.1
				100.6	77.0	52.4
				108.8	81.1	56.6
				122.6	83.0	55.7
				111.2	73.8	45.0
				100.5	71.4	48.0
				105.1	75.2	46.8
				89.4	66.1	44.6
				128.0	87.5	56.7
				102.8	68.3	46.4
				101.2	75.1	54.7
				109.0	72.3	49.0
				111.1	72.8	50.9
				120.3	91.2	62.6
				117.0	80.0	57.7
				106.7	69.8	50.8

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				125.8	85.2	58.1
Continued				92.1	63.0	41.2
				116.7	74.9	44.1
				107.5	77.9	51.5
				100.7	76.1	46.3
				127.1	89.4	55.6
				112.6	82.0	50.4
				106.0	82.0	52.4
				115.4	84.0	53.6
				115.7	78.3	48.2
				102.6	75.9	49.3
				125.6	88.4	57.5
				126.5	90.4	64.1
				100.1	78.0	51.8
				<u>121.4</u>	84.3	53.5
			<u>m</u>	107.2		
			SD	12.1		
<u>Lasmigona complanata</u>	70.2	55.4	17.2	94.5	67.4	30.4
	<u>84.7</u>	60.6	21.6	<u>101.2</u>	73.6	28.1
	<u>m</u>			<u>m</u>		
	77.5			97.9		
	SD			SD	4.7	
<u>Lasmigona compressa</u>					(dead only)	
<u>Strophitus undulatus</u>				68.9	36.6	23.1
				<u>70.4</u>	39.2	24.1
			<u>m</u>	69.7		
			SD	1.1		
<u>Venustaconcha ellipsiformis</u>				70.3	37.7	23.1
				56.7	30.8	20.6
				65.0	35.0	22.7
				82.7	46.9	29.9
				<u>80.2</u>	45.4	28.6
			<u>m</u>	71.0		
			SD	10.8		

RANDOM SEARCH (Presence noted)

Lasmigona compressa (live)

Anodonta grandis grandis (dead)

SITE 54

Location: SE 1/4 Sec 25, T106N, R15W and SW 1/4 Sec 30, T106N, R14W.
South Fork; 0-300 m upstream from Olmsted Co. Rd. 117 bridge which
is located .7 miles south of the junction of Co. Rds. 117 and 104.

DNR Fish Station Number: -

Date: 3 August 1988, 4 August 1988

Water Temperature: 83° F, 71° F

Transect Location: 263, 275, and 287 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 20 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u> (4 Aug)			<u>Timed Search</u> (3 Aug)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				104.9	74.9	47.8
<u>Lasmigona complanata</u>				98.6	73.8	31.9
<u>Anodontoides ferussacianus</u>				(dead only)		
<u>Venustaconcha ellipsiformis</u>				67.4	39.5	22.0
				67.1	39.5	23.1
				60.9	34.7	22.5
				<u>71.7</u>	39.9	26.1
			<u>m</u>	66.8		
			SD	4.4		
<u>Lasmigona compressa</u>				63.8	38.0	17.7
<u>Lampsilis radiata siligoidea</u>	73.7	44.0	22.5			

RANDOM SEARCH (Presence noted) (3 Aug)

Anodonta grandis grandis (dead)

SITE 55

Location: SE 1/4 Sec 9, T106N, R14W. South Fork; 0-150 m upstream from the first riffle upstream from the end of the dirt road that intersects Olmsted Co. Rd. 8 about .2 miles So. of the intersection of Olmsted Co. Rd. 8 and Rd. 25.

DNR Fish Station Number: -

Date: 4 August 1988

Water Temperature: 79° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>						(dead only)
<u>Lasmigona complanata</u>						(dead only)
<u>Venustaconcha ellipsiformis</u>						(dead only)

SITE 56

Location: SE 1/4 Sec 13, T106N, R14W. Willow Creek; 0-90 m upstream from confluence of tributary.

DNR Fish Station Number: 1

Date: 4 August 1988

Water Temperature: 82° F

Transect Location: 30, 60, and 90 m upstream from confluence of tributary.

Range of the Mean Depth of Pool Transects: 46 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>				75.0	39.2	28.0
				101.0	48.5	42.3
				<u>96.7</u>	47.4	44.5
			<u>m</u>	90.9		
			SD	13.9		

SITE 57

Location: NE 1/4 Sec 17, T108N, R14W. Middle Fork; 75-175 m downstream from Oronoco dam.

DNR Fish Station Number: -

Date: 5 August 1988

Water Temperature: 81° F

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 4 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				46.2	27.5	19.4
				118.2	82.6	51.5
				131.1	84.4	59.5
				129.0	89.4	53.1
				142.3	108.9	68.5
				121.1	94.3	54.4
				135.2	92.8	63.4
				113.1	73.9	48.6
				-	-	-
			<u>m</u>	117.0		
			SD	30.1		
<u>Lampsilis radiata siliquoidea</u>				115.8	66.1	45.5
				110.5	69.6	57.9
			<u>m</u>	113.2		
			SD	3.7		
<u>Strophitus undulatus</u>				92.7	51.2	32.5
				97.0	50.4	40.4
				90.1	51.3	33.8
				100.6	55.7	33.0
				83.5	46.1	31.4
				66.7	35.1	26.4
				86.7	44.0	34.6
				98.8	49.6	40.5
				88.9	47.1	36.2
				99.1	56.1	37.7
			<u>m</u>	90.4		
			SD	10.1		

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>				115.6	82.1	39.9
				131.9	95.6	42.3
				<u>121.3</u>	89.8	40.7
			<u>m</u>	122.9		
			SD	8.3		
<u>Anodonta grandis grandis</u>				87.0	49.0	33.8
				<u>69.1</u>	39.6	23.7
			<u>m</u>	78.1		
			SD	12.7		
<u>Alasmidonta marginata</u>				85.4	48.1	37.7
				104.4	55.9	40.5
				89.4	50.2	36.5
				<u>64.0</u>	31.3	27.2
			<u>m</u>	85.8		
			SD	16.7		
<u>Toxolasma parvus</u>				21.8	12.2	9.4
<u>Lasmigona costata</u>				No size data taken (deformed)		

SITE 58

Location: S 1/2 Sec 23, T106N, R14W. Willow Creek; 15-233 m upstream from 40th Street bridge in Rochester.

DNR Fish Station Number: 2

Date: 8 August 1988

Water Temperature: 74° F

Transect Location: 15, 25, and 35 m upstream of bridge.

Range of the Mean Depth of Pool Transects: 10-30 cm

Duration of Timed Search: 2 people, 35 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 59

Location: SW 1/4 Sec 23, T108N, R15W. South Branch Middle Fork; from 55 m upstream to 315 m downstream of Olmsted Co. Rd. 3 bridge.

DNR Fish Station Number: 1

Date: 9 August 1988, 12 August 1988

Water Temperature: 70° F, -

Transect Location: 45, 50, and 55 m upstream from bridge.

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 180 minutes per person.

<u>SPECIES</u>	<u>Transect</u> (9 Aug)			<u>Timed Search</u> (12 Aug)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lasmigona complanata</u>	(dead only)					
<u>Alasmidonta marginata</u>	70.0	39.6	30.0			
<u>Lampsilis ventricosa</u>				115.0	79.0	53.2
				<u>44.0</u>	25.9	19.6
			<u>m</u>	79.5		
			SD	50.2		
<u>Amblema plicata</u>				98.5	73.8	54.5
<u>Lasmigona compressa</u>				99.8	59.8	35.6
<u>Strophitus undulatus</u>				87.1	50.3	34.7

SITE 61

Location: SW 1/4 Sec 31, T107N, R13W. Silver Creek; a 5 m pool at bridge on Silver Creek Rd. in Rochester was searched. Streambed was otherwise dry.

DNR Fish Station Number: 2

Date: 10 August 1988

Water Temperature: -

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: -

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 63

Location: NW 1/4 Sec 35, T108N, R16W. Harcom Creek; 0-250 m upstream from Dodge Co. Rd. 11 bridge.

DNR Fish Station Number: 2

Date: 10 August 1988

Water Temperature: 72° F

Transect Location: 260, 267, and 272 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 8 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES	Transect			Timed Search		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodontoides ferussacianus</u>				59.9	31.6	20.9
				59.4	29.5	22.8
				57.2	31.0	20.0
				60.1	32.1	20.7
				62.0	30.8	23.0
				62.9	30.3	23.0
				62.8	31.2	23.2
				66.4	32.7	24.6
				63.8	32.2	24.4
				62.0	30.3	24.2
				55.6	30.5	21.2
				66.8	33.0	25.4
				<u>61.1</u>	30.9	22.4
			<u>m</u>	61.5		
			SD	3.2		

SITE 64

Location: SE 1/4 Sec 26, T108N, R14W. South Fork; from 12 m downstream, to 360 m upstream of Olmsted Co. Hwy 121 bridge.

DNR Fish Station Number: 1

Date: 12 August 1988

Water Temperature: 77° F

Transect Location: 6, and 12 m downstream from bridge.

Range of the Mean Depth of Pool Transects: 15 cm

Duration of Timed Search: 2 people, 60 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	12.0	6.6	3.6			
<u>Lampsilis ventricosa</u>						(dead only)
<u>Lasmigona complanata</u>						(dead only)

SITE 65

Location: NE 1/4 Sec 33, T110N, R15W. North Fork; from 45 m downstream to 220 m upstream of Goodhue Co. Hwy 10 bridge.

DNR Fish Station Number: -

Date: 15 August 1988

Water Temperature: 69° F

Transect Location: 25, and 45 m downstream of bridge.

Range of the Mean Depth of Pool Transects: 20-33 cm

Duration of Timed Search: 2 people, 60 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Lasmigona compressa</u>				83.9	49.1	28.5
<u>Anodontoides ferussacianus</u>	59.8	31.6	22.7	38.4	21.5	11.4
	49.9	27.3	17.3	40.9	22.8	12.7
	<u>34.9</u>	19.8	10.6	38.7	20.3	13.3
$\bar{m}$	48.2			38.9	20.0	12.6
SD	12.5			33.8	18.5	11.6
				36.0	19.2	11.5
				37.4	20.0	11.6
				39.7	21.0	12.0
				<u>57.7</u>	30.4	20.0
			$\bar{m}$	40.2		
			SD	6.9		
<u>Anodonta grandis grandis</u>						(dead only)
<u>Lampsilis radiata siliquoidea</u>						(dead only)
<u>Lasmigona complanata</u>						(dead only)

SITE 66

Location: SE 1/4 Sec 33, T109N, R15W. Middle Fork; 0-350 m upstream of concrete bridge located on a field road off U.S. Hwy 52 approximately 1.5 miles so. of Pine Island.

DNR Fish Station Number: 1-B

Date: 16 August 1988

Water Temperature: 75° F

Transect Location: 15, 32, and 48 m upstream of concrete bridge.

Range of the Mean Depth of Pool Transects: 8-25 cm

Duration of Timed Search: 2 people, 60 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Strophitus undulatus</u>				33.8	19.4	10.0
				26.0	15.1	7.6
				<u>50.3</u>	26.0	17.8
			m	36.7		
			SD	12.4		
<u>Lasmigona costata</u>						(dead only)
<u>Lampsilis ventricosa</u>						(dead only)
<u>Venustaconcha ellipsiformis</u>						(dead only)

RANDOM SEARCH (Presence noted)

Lasmigona complanata (dead)

SITE 67

Location: NW 1/4 Sec 9, T107N, R15W. South Branch Middle Fork; from 20 m upstream to 210 m downstream of Olmsted Co. Hwy 103 bridge.

DNR Fish Station Number: 3

Date: 16 August 1988, 18 August 1988

Water Temperature: 89° F, 78° F

Transect Location: 70, 140, and 210 m downstream of bridge.

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 75 minutes each

SPECIES		Transect			Timed Search		
		L	H	W	18 Aug		
<u>Lasmigona complanata</u>	16 Aug	122.0	83.4	37.0	87.3	63.3	23.9
		135.0	91.8	42.5	127.3	90.4	37.9
		118.7	90.1	37.4	123.3	87.5	37.2
	18 Aug	131.3	91.2	38.9	125.3	90.0	38.7
		<u>120.2</u>	87.9	38.4	131.2	90.1	40.4
	$\bar{m}$	125.4			112.4	80.5	30.4
	SD	7.3			114.2	80.7	36.2
					107.6	75.3	32.6
					121.7	84.5	37.8
					124.3	86.7	38.6
					140.5	101.7	50.2
					123.0	91.5	40.8
					128.9	93.5	42.4
					122.9	94.0	38.7
					124.8	90.9	38.7
					111.3	80.8	35.9
					115.0	79.0	33.9
					115.4	84.8	41.6
					135.1	98.8	41.0
					108.0	78.0	30.7
					127.5	92.7	47.0
					128.4	90.6	39.7
					137.4	95.6	42.7
					132.5	99.1	44.9
					125.7	97.7	38.3
					121.4	87.1	39.4
					133.6	93.4	44.2
					115.0	83.3	36.2
					119.4	87.2	38.0
					132.8	92.2	45.9
					132.5	93.6	40.7

				<u>Transect</u>			<u>Timed Search</u>			
				<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>	
<u>Lasmigona complanata</u>							129.9	91.5	38.6	
Continued							127.5	95.3	40.3	
							<u>109.3</u>	79.4	35.8	
						$\bar{m}$	122.7			
						SD	10.7			
<u>Alasmidonta marginata</u>				18 Aug	81.6	46.0	29.6	87.5	48.0	34.1
					<u>87.2</u>	47.9	33.0	72.6	39.9	29.5
				$\bar{m}$	84.4			78.7	42.4	30.5
				SD	4.0			<u>87.9</u>	44.1	28.6
						$\bar{m}$	81.7			
						SD	7.4			
<u>Lampsilis ventricosa</u>				18 Aug	38.8	25.4	17.0	90.9	68.8	44.5
					78.5	51.0	35.2	110.6	77.3	47.5
					94.2	65.2	38.4	113.4	75.9	49.8
					101.3	68.2	45.9	101.4	77.0	51.4
					115.7	80.0	52.5	126.2	87.9	53.8
					<u>106.0</u>	74.8	46.8	109.2	82.1	53.5
				$\bar{m}$	89.1			99.9	72.1	43.8
				SD	27.6			97.0	73.5	49.4
								99.0	79.4	49.5
								128.1	91.6	57.2
								132.3	91.0	61.1
								133.4	87.2	57.7
								135.5	95.1	63.3
								108.3	70.7	45.4
								120.5	84.8	51.2
								125.9	84.5	55.6
								<u>104.1</u>	76.6	47.0
						$\bar{m}$	113.9			
						SD	14.3			
<u>Lampsilis radiata siliquoidea</u>					95.6	55.2	33.9	81.6	49.9	31.7
								79.9	46.8	30.0
								91.7	57.2	37.2
								94.0	54.1	38.1
								108.5	58.4	42.9
								104.3	62.9	35.3
								95.8	60.3	41.6
								113.3	63.6	41.9
								<u>97.1</u>	53.0	34.0
						$\bar{m}$	96.2			
						SD	11.3			
<u>Venustaconcha ellipsiformis</u>				(dead only)				73.8	39.4	27.3
								78.3	45.4	30.8
								<u>75.7</u>	41.2	26.0
						$\bar{m}$	75.9			
						SD	2.3			

	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>				102.2	54.4	35.3
<u>Lasmigona costata</u>			(dead only)			(dead only)
<u>Strophitus undulatus</u>	78.3	42.5	27.9			(dead only)
<u>Anodontoides ferussacianus</u>						(dead only)

SITE 68

Location: Sec 27, T109N, R14W. Zumbro River; 420-450 m downstream from Lake Zumbro dam.

DNR Fish Station Number: -

Date: 17 August 1988

Water Temperature: 81° F

Transect Location: 420 m downstream of dam.

Range of the Mean Depth of Pool Transects: 25 cm

Duration of Timed Search: 4 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				106.8	74.2	55.1
				117.9	94.4	64.8
				120.7	91.8	59.0
				120.2	92.3	61.2
				117.2	91.8	66.2
				119.0	78.7	53.6
				123.6	89.9	70.5
				120.2	82.2	60.4
				114.4	69.9	56.1
				121.2	95.1	61.1
				<u>113.6</u>	85.2	58.5
			<u>m</u>	117.7		
			SD	4.7		
<u>Leptodea fragilis</u>				112.9	67.4	38.8
<u>Lasmigona complanata</u>				(dead only)		
<u>Anodonta grandis grandis</u>				(dead only)		
<u>Lampsilis radiata siliquoidea</u>				(dead only)		

SITE 69

Location: SE 1/4 Sec 22, T109N, R14W. Zumbro River; 0-380 m
downstream from dirt road access located .45 miles so. of junction
between Wabasha Co. Rd. 7 and Rd. 21.

DNR Fish Station Number: 3

Date: 17 August 1988

Water Temperature: -

Transect Location: 15 m downstream to 50 m upstream of steep sandy
bank.

Range of the Mean Depth of Pool Transects: 15-61 cm

Duration of Timed Search: 4 people, 30 minutes each
2 people, 90 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>	(dead only)			102.1	71.8	47.4
				98.1	65.4	49.0
				<u>129.8</u>	99.9	68.3
			<u>m</u>	110.0		
			SD	17.3		
<u>Anodonta grandis grandis</u>				92.5	55.7	39.3
				101.2	65.2	46.6
				78.3	46.6	30.1
				95.8	57.1	41.1
				106.4	64.4	40.7
				115.2	73.8	44.6
				90.6	49.4	39.4
				88.8	53.0	41.8
				75.4	46.8	32.7
				93.4	58.3	40.0
				<u>146.2</u>	89.5	64.3
			<u>m</u>	98.5		
			SD	19.5		
<u>Venustaconcha ellipsiformis?</u>	(dead only)					
<u>Lasmigona complanata</u>	47.5	37.1	13.0	(dead only)		
<u>Leptodea fragilis</u>				79.7	50.0	27.3
<u>Lasmigona costata</u>				110.3	61.3	32.3

SITE 70

Location: SE 1/4 Sec 10, T109N, R14W. Zumbro River; 0-75 m upstream from confluence with North Fork.

DNR Fish Station Number: -

Date: 17 August 1988

Water Temperature: 84° F

Transect Location: 5 m upstream of confluence with North Fork.

Range of the Mean Depth of Pool Transects: 400 cm

Duration of Timed Search: 4 people, 35 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>				128.9	80.8	51.5
<u>Proptera alata</u>					(dead only)	
<u>Lampsilis ventricosa</u>					(dead only)	
<u>Leptodea fragilis</u>					(dead only)	

SITE 71

Location: SE 1/4 Sec 5, T109N, R17W. Spring Creek; 10-100 m upstream from Goodhue Co. Rd. 12 bridge.

DNR Fish Station Number: 2

Date: 25 August 1988

Water Temperature: 65° F

Transect Location: 35, 43, and 51 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 13 cm

Duration of Timed Search: 2 people, 55 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>				43.8	23.5	12.7
				58.7	32.5	19.2
				85.4	46.5	29.3
				<u>88.3</u>	47.3	31.5
			<u>m</u>	69.1		
			SD	21.5		
<u>Anodontoides ferussacianus</u>				51.2	26.9	18.6
				48.9	24.9	17.8
				43.3	22.6	13.9
				<u>48.9</u>	25.1	19.1
			<u>m</u>	48.1		
			SD	3.4		

SITE 72

Location: SW 1/4 Sec 33, T110N, R17W. Spring Creek; 0-120 m upstream from head of riffle located at the bottom of a large pool (= 160 m long) just off State Hwy 60.

DNR Fish Station Number: 1-B

Date: 25 August 1988

Water Temperature: 64° F

Transect Location: 40, 80, and 120 m upstream of top of riffle.

Range of the Mean Depth of Pool Transects: 18-30 cm

Duration of Timed Search: 2 people, 30 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Anodonta grandis grandis</u>	50.3	28.6	17.8	44.7	23.9	14.3
	29.9	18.3	10.2	58.7	31.4	18.3
	36.2	21.7	12.4	56.0	31.7	18.6
	36.4	22.4	13.2	70.3	40.2	24.0
	67.2	36.8	24.3	75.0	41.2	26.1
	68.3	37.6	25.2	107.9	58.8	41.1
	99.3	56.1	42.0	106.4	56.8	38.0
	104.7	55.2	40.6	113.1	59.8	42.0
	58.5	32.2	21.1	<u>114.3</u>	57.3	47.6
	<u>120.1</u>	68.4	46.5	<u>m</u> 82.9		
	<u>m</u> 67.1			SD 27.5		
	SD 31.4					
<u>Anodontoides ferussacianus</u>	27.8	16.2	9.3	37.4	22.7	14.5
	<u>75.8</u>	41.6	32.6	<u>63.5</u>	33.1	26.0
	<u>m</u> 51.8			<u>m</u> 50.5		
	SD 33.9			SD 18.5		
<u>Lasmigona complanata</u>	128.2	87.7	41.1			

SITE 73

Location: S 1/2 Sec 12 and NE 1/4 Sec 13, T110N, R11W. Zumbro River;
400 m upstream to 300 m downstream of Kruger Park canoe access.

DNR Fish Station Number: 1

Date: 30 August 1988

Water Temperature: 66° F

Transect Location: 100, 200, and 300 m downstream of canoe access.

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 60 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>	(dead only)			120.8	88.3	58.9
				<u>71.7</u>	48.3	33.7
			<u>m</u>	96.3		
			SD	34.7		
<u>Lampsilis radiata siliquoidea</u>				125.5	66.6	60.9
<u>Anodonta grandis grandis</u>				104.0	67.3	45.1
<u>Leptodea fragilis</u>				(dead only)		
<u>Proptera alata</u>				(dead only)		

SITE 74

Location: S 1/2 Sec 22, T110N, R10W. Zumbro River; 0-300 m upstream of railroad bridge just north of Kellogg.

DNR Fish Station Number: -

Date: 31 August 1988

Water Temperature: 65° F

Transect Location: 100 m downstream of canoe access?

Range of the Mean Depth of Pool Transects: 20 cm

Duration of Timed Search: 2 people, 100 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				118.1	87.9	59.4
<u>Leptodea fragilis</u>			(dead only)			

SITE 75

Location: Sec 36/31, T110N, R12W/11W. Zumbro River; 0-100 m downstream, and 0-300 m upstream of Thielman canoe access.

DNR Fish Station Number: -

Date: 31 August 1988

Water Temperature: 71° F

Transect Location: 100 m downstream of canoe access.

Range of the Mean Depth of Pool Transects: 25 cm

Duration of Timed Search: 2 people, 60 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Leptodea fragilis</u>				90.8	64.2	26.4
<u>Lampsilis ventricosa</u>					(dead only)	
<u>Lampsilis radiata siliquoidea</u>					(dead only)	

SITE 76

Location: Sec 36, T108N, R14W. South Fork; 0-450 m downstream of bridge located in quarry just off Olmsted County Rd. 14.

DNR Fish Station Number: 2

Date: 1 September 1988, 6 September 1988

Water Temperature: 66° F

Transect Location: 405, 420, and 450 m downstream of bridge at quarry.

Range of the Mean Depth of Pool Transects: 20-25 cm

Duration of Timed Search: 2 people, 40 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u> (6 Sept)		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				66.1	45.0	33.1

RANDOM SEARCH (Presence noted) (1 Sept. 88)

Lampsilis radiata siliquoidea (dead)

SITE 77

Location: SE 1/4 Sec 21, T109N, R13W. Zumbro River; 0-300 m upstream of angler access on Wabasha Co. Rd. 68 located .3 miles northwest of the intersection of Wabasha Co. Rd. 11 and Wabasha Co. Rd. 68.

DNR Fish Station Number: -

Date: 1 September 1988, 7 September 1988

Water Temperature: 66° F, -

Transect Location: 100, 200, and 300 m upstream of angler access.

Range of the Mean Depth of Pool Transects: 28-30 cm

Duration of Timed Search: 2 people, 30 minutes each

SPECIES		Transect			Timed Search (1 Sept)		
		L	H	W	L	H	W
<u>Lampsilis ventricosa</u>	1 Sept	107.3	73.4	56.6	128.1	82.4	56.6
		99.1	69.9	58.5	119.4	89.0	71.1
		134.8	96.7	68.6	105.4	74.9	55.1
		118.2	77.5	53.5	118.1	80.8	56.8
		116.6	76.0	53.4	117.0	81.0	53.7
		116.1	87.8	59.8	128.4	87.4	62.5
		97.8	68.2	49.6	102.4	67.4	48.4
	7 Sept	104.3	73.8	49.4	123.0	78.9	56.8
		118.4	86.9	59.6	125.3	83.7	59.0
		11.3	7.1	4.2	m 118.6		
		111.0	82.0	57.2	SD 9.3		
		m					
		103.2					
		SD	32.2				
<u>Anodonta grandis grandis</u>					73.9	44.7	28.5
					90.5	57.9	36.8
					125.4	76.6	48.4
					m 69.5		
					SD 10.1		
<u>Lasmigona complanata</u>	1 Sept	(dead only)			(dead only)		
<u>Lasmigona costata</u>					(dead only)		
<u>Proptera alata</u>					110.6	78.9	32.4
					138.0	108.0	47.7
					m 124.3		
					SD 19.4		

		<u>Transect</u>			<u>Timed Search</u>		
		<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis radiata</u> <u>siliquoidea</u>	1 Sept	110.8	68.0	52.1			
<u>Leptodea fragilis</u>	7 Sept	(dead only)					

1s.

RANDOM SEARCH (Presence noted)

Anodontoides ferussacianus (live)

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1

5.7
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	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Lampsilis ventricosa</u>				153.9	103.9	74.4
				122.2	92.1	64.5
				117.7	82.0	79.5
				121.7	88.6	53.9
				118.7	96.7	63.2
				118.3	82.5	54.2
				131.1	89.8	64.6
				<u>128.8</u>	92.1	66.0
			<u>m</u>	126.6		
			SD	12.1		
<u>Lasmigona complanata</u>					(dead only)	
<u>Lasmigona costata</u>					(dead only)	

SITE 79

Location: NE 1/4 Sec 23, T107N, R14W. South Fork; 0-200 m upstream,
and 0-120 m downstream of 37th St. NW bridge (Rochester).

DNR Fish Station Number: -

Date: 2 September 1988, 6 September 1988

Water Temperature: 73° F, 57° F

Transect Location: 60, 90, and 120 m downstream of bridge.

Range of the Mean Depth of Pool Transects: 30 cm

Duration of Timed Search: 4 people, 30 minutes each, 2 people, 20
minutes each

SPECIES	Transect (6 Sept)			Timed Search (2 Sept)		
	L	H	W	L	H	W
<u>Alasmidonta marginata</u>	59.2	31.7	23.7	113.4	67.4	45.8
				80.7	41.1	30.0
			$\bar{m}$	97.1		
			SD	23.1		
<u>Strophitus undulatus</u>	65.1	35.3	26.4	87.1	43.9	29.8
	65.0	36.5	25.2	88.7	48.6	33.1
	68.7	36.8	23.2	$\bar{m}$ 87.9		
	$\bar{m}$ 66.3			SD 1.1		
	SD 2.1					
<u>Lampsilis ventricosa</u>	93.0	62.2	40.3	79.5	53.5	36.1
	63.8	39.1	27.8	88.9	58.5	40.7
	105.2	79.2	58.0	90.5	57.4	39.0
	63.6	40.4	27.0	103.1	71.2	46.1
	$\bar{m}$ 81.4			63.2	37.6	27.7
	SD 21.0			$\bar{m}$ 85.0		
				SD 14.8		
<u>Lasmigona complanata</u>				(dead only)		
<u>Anodonta grandis grandis</u>	93.0	51.1	39.4	(dead only)		
	94.0	55.5	37.5			
	$\bar{m}$ 93.5					
	SD .7					
<u>Lampsilis radiata siliquodia</u>				69.5	37.3	24.9
<u>Lasmigona costata</u>	58.9	36.6	19.1			

SITE 80

Location: SE 1/4 Sec 3, T109N, R12W. Zumbro River; 0-260 m upstream from mouth of Middle Creek.

DNR Fish Station Number: -

Date: 8 September 1988

Water Temperature: 62° F

Transect Location: 260 m upstream of mouth of Middle Creek.

Range of the Mean Depth of Pool Transects: 61 cm

Duration of Timed Search: 2 people, 60 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>
<u>Truncilla truncata</u>				52.1	42.0	29.8
<u>Anodonta grandis grandis</u>				135.3	86.8	56.1
<u>Lampsilis ventricosa</u>				115.6	76.3	53.1
				125.3	85.6	60.6
				124.0	86.6	56.9
				131.5	93.3	61.7
				111.1	81.5	54.6
				120.3	90.7	60.4
				134.5	86.5	61.2
				124.8	89.8	60.0
				139.4	92.7	62.5
				<u>92.6</u>	65.7	43.5
			<u>m</u>	121.9		
			SD	13.3		
<u>Lasmigona complanata</u>						(dead only)
<u>Leptodea fragilis</u>						(dead only)

SITE 81

Location: NW 1/4 Sec 22, T110N, R11W. Zumbro River; 0-230 m upstream
from Zumbro Bottoms canoe-access south of State Hwy 86.

DNR Fish Station Number: -

Date: 8 September 1988

Water Temperature: -

Transect Location: -

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 45 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 82

Location: NW 1/4 Sec 22, T107N, R16W. Masten Creek; 0-320 m upstream from Dodge Co. Rd. 15 bridge.

DNR Fish Station Number: 1

Date: 9 September 1988

Water Temperature: 62° F

Transect Location: 50, 60, and 70 m upstream from bridge.

Range of the Mean Depth of Pool Transects: -

Duration of Timed Search: 2 people, 20 minutes each

<u>SPECIES</u>	<u>Transect</u>			<u>Timed Search</u>		
	<u>L</u>	<u>H</u>	<u>W</u>	<u>L</u>	<u>H</u>	<u>W</u>

No mussels found.

SITE 83

Location: NE 1/4 Sec 11, T108N, R16W. Middle Fork; 20-200 m downstream, and 0-150 m upstream from bridge on Sec 11.

DNR Fish Station Number: 2-B

Date: 9 September 1988

Water Temperature: 67° F

Transect Location: 15, 50, and 75 m upstream from bridge.

Range of the Mean Depth of Pool Transects: 11 cm

Duration of Timed Search: 2 people, 45 minutes each

SPECIES	Transect			Timed Search		
	L	H	W	L	H	W
<u>Lampsilis ventricosa</u>	96.7	70.0	51.2	104.0	83.7	50.9
				118.4	81.6	54.9
				122.8	87.9	59.4
				<u>111.4</u>	83.2	52.2
			<u>m</u>	114.2		
			SD	8.2		
<u>Lasmigona complanata</u>	115.1	83.7	34.4	110.1	76.1	33.1
				<u>45.7</u>	35.3	11.5
			<u>m</u>	77.9		
			SD	45.5		
<u>Strophitus undulatus</u>	82.8	48.3	35.6	(dead only)		
<u>Lasmigona compressa</u>				98.1	55.0	30.6
<u>Lampsilis radiata siliquoidea</u>	95.1	53.7	35.6	81.6	49.1	30.9
				72.1	42.1	27.5
				<u>93.5</u>	54.7	34.4
			<u>m</u>	82.4		
			SD	10.7		
<u>Anodonta grandis grandis</u>	(dead only)			(dead only)		
<u>Anodontoides ferussacianus</u>				77.1	37.8	30.0
<u>Venustaconcha ellipsiformis?</u>				(dead only)		